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EDEXCEL A ECONOMICS: QUESTIONS BY TOPIC

Theme 1: Introduction to Markets and Market Failure

Edexcel A Level Economics A · Theme 1

340 questions · 1911 marks · Mark schemes included

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HOW TO USE THIS BOOKLET

Questions are grouped by specification sub-topic and run from the lowest mark tariff to the highest within each one.
Click any row below to jump straight to that sub-topic or question.
On every question page, click ANSWER in the top-right corner to jump to its mark scheme.
Diagrams, graphs, tables and data are printed exactly as they appeared in the original papers.

	QUESTION	SOURCE	MARKS	PAGE
1.1.2	**POSITIVE AND NORMATIVE ECONOMIC STATEMENTS**		14 Qs · 41 marks	11
1.	**Q1(a)**	AS Paper 1 June 2018	1	12
2.	**Q1(c)**	AS Paper 1 June 2018	1	13
3.	**Q3(b)**	AS Paper 1 June 2023	1	14
4.	**Q4(a)**	AS Paper 1 June 2024	1	15
5.	**Q1(a)**	A Level Paper 1 November 2021	1	16
6.	**Q1(b)**	AS Paper 1 June 2018	2	17
7.	**Q4(a)**	AS Paper 1 June 2022	3	18
8.	**Q1**	AS Paper 1 June 2018	4	19
9.	**Q4**	AS Paper 1 June 2022	4	21
10.	**Q4**	AS Paper 1 June 2024	4	22
11.	**Q6(d)**	AS Paper 1 June 2025	4	27
12.	**Q6(a)**	A Level Paper 1 June 2019	5	28
13.	**Q1**	A Level Paper 1 November 2021	5	32
14.	**Q1(a)**	A Level Paper 3 June 2023	5	34
1.1.3	**THE ECONOMIC PROBLEM**		12 Qs · 36 marks	37
15.	**Q1(b)**	AS Paper 1 June 2024	1	38
16.	**Q2(a)**	AS Paper 1 June 2024	1	39
17.	**Q1(a)**	AS Paper 1 June 2025	1	40
18.	**Q2(c)**	AS Paper 1 June 2024	2	41
19.	**Q1(a)**	AS Paper 1 June 2024	3	42
20.	**Q4(b)**	AS Paper 1 June 2024	3	43
21.	**Q1(b)**	AS Paper 1 June 2025	3	44
22.	**Q6(d)**	AS Paper 1 June 2018	4	45
23.	**Q1**	AS Paper 1 June 2024	4	49
24.	**Q1**	AS Paper 1 June 2025	4	50
25.	**Q2(a)**	A Level Paper 3 June 2019	5	51
26.	**Q6(a)**	AS Paper 1 June 2019	5	55
1.1.4	**PRODUCTION POSSIBILITY FRONTIERS**		14 Qs · 34 marks	59
27.	**Q1(b)**	AS Paper 1 June 2017	1	60
28.	**Q5(b)**	AS Paper 1 June 2023	1	61
29.	**Q2(b)**	AS Paper 1 June 2024	1	62
30.	**Q1(b)**	A Level Paper 1 June 2018	1	63

	QUESTION	SOURCE	MARKS	PAGE
31.	**Q2(c)**	A Level Paper 1 June 2023	1	**64**
32.	**Q1(a)**	A Level Paper 1 June 2018	2	**65**
33.	**Q1(c)**	A Level Paper 1 June 2018	2	**66**
34.	**Q2(a)**	A Level Paper 1 June 2023	2	**67**
35.	**Q2(b)**	A Level Paper 1 June 2023	2	**68**
36.	**Q1(a)**	AS Paper 1 June 2017	3	**69**
37.	**Q1**	AS Paper 1 June 2017	4	**70**
38.	**Q2**	AS Paper 1 June 2024	4	**72**
39.	**Q1**	A Level Paper 1 June 2018	5	**74**
40.	**Q2**	A Level Paper 1 June 2023	5	**76**
1.1.5	**SPECIALISATION AND THE DIVISION OF LABOUR**		14 Qs · 48 marks	**78**
41.	**Q1(a)**	AS Paper 1 June 2016	1	**79**
42.	**Q1(a)**	AS Paper 1 June 2019	1	**80**
43.	**Q3(a)**	AS Paper 1 June 2022	1	**81**
44.	**Q3(a)**	AS Paper 1 June 2023	1	**82**
45.	**Q3(c)**	AS Paper 1 June 2023	2	**83**
46.	**Q5(c)**	A Level Paper 1 June 2019	2	**84**
47.	**Q1(b)**	AS Paper 1 June 2016	3	**85**
48.	**Q1(b)**	AS Paper 1 June 2019	3	**86**
49.	**Q3(b)**	AS Paper 1 June 2022	3	**87**
50.	**Q1**	AS Paper 1 June 2016	4	**88**
51.	**Q1**	AS Paper 1 June 2019	4	**89**
52.	**Q3**	AS Paper 1 June 2022	4	**90**
53.	**Q3**	AS Paper 1 June 2023	4	**91**
54.	**Q6(e)**	AS Paper 1 June 2022	15	**92**
1.1.6	**FREE MARKET, MIXED AND COMMAND ECONOMIES**		23 Qs · 92 marks	**98**
55.	**Q1(a)**	AS Paper 1 October 2020	1	**99**
56.	**Q1(b)**	AS Paper 1 October 2020	1	**100**
57.	**Q4(b)**	AS Paper 1 June 2022	1	**101**
58.	**Q5(c)**	AS Paper 1 June 2023	1	**102**
59.	**Q3(a)**	AS Paper 1 June 2024	1	**103**
60.	**Q3(a)**	AS Paper 1 June 2025	1	**104**
61.	**Q3(b)**	AS Paper 1 June 2025	1	**105**
62.	**Q5(b)**	A Level Paper 1 June 2019	1	**106**
63.	**Q1(b)**	A Level Paper 1 June 2023	1	**107**
64.	**Q1(c)**	AS Paper 1 October 2020	2	**108**
65.	**Q5(a)**	AS Paper 1 June 2023	2	**109**
66.	**Q3(c)**	AS Paper 1 June 2025	2	**110**
67.	**Q5(a)**	A Level Paper 1 June 2019	2	**111**
68.	**Q3(b)**	AS Paper 1 June 2024	3	**112**

	QUESTION	SOURCE	MARKS	PAGE
69.	**Q1**	AS Paper 1 October 2020	4	**113**
70.	**Q5**	AS Paper 1 June 2023	4	**115**
71.	**Q3**	AS Paper 1 June 2024	4	**117**
72.	**Q3**	AS Paper 1 June 2025	4	**119**
73.	**Q5**	A Level Paper 1 June 2019	5	**120**
74.	**Q1**	A Level Paper 1 June 2023	5	**121**
75.	**Q6(c)**	AS Paper 1 June 2022	6	**123**
76.	**Q6(f)**	AS Paper 1 June 2017	20	**127**
77.	**Q6(f)**	AS Paper 1 October 2020	20	**133**
1.2.1	**RATIONAL DECISION MAKING**		18 Qs · 96 marks	**141**
78.	**Q4(b)**	AS Paper 1 June 2016	1	**142**
79.	**Q2(a)**	AS Paper 1 June 2017	1	**143**
80.	**Q2(c)**	AS Paper 1 June 2017	1	**144**
81.	**Q2(b)**	AS Paper 1 June 2017	2	**145**
82.	**Q4(a)**	AS Paper 1 June 2016	3	**146**
83.	**Q4**	AS Paper 1 June 2016	4	**147**
84.	**Q6(d)**	AS Paper 1 June 2016	4	**148**
85.	**Q2**	AS Paper 1 June 2017	4	**151**
86.	**Q6(d)**	AS Paper 1 June 2019	4	**152**
87.	**Q6(d)**	AS Paper 1 October 2020	4	**156**
88.	**Q6(a)**	A Level Paper 1 June 2018	5	**161**
89.	**Q6(a)**	A Level Paper 1 June 2025	5	**167**
90.	**Q1(b)**	A Level Paper 3 November 2021	8	**168**
91.	**Q6(b)**	AS Paper 1 June 2017	10	**172**
92.	**Q6(b)**	AS Paper 1 October 2020	10	**177**
93.	**Q6(b)**	AS Paper 1 June 2022	10	**184**
94.	**Q6(b)**	A Level Paper 1 June 2023	10	**189**
95.	**Q6(b)**	AS Paper 1 June 2025	10	**197**
1.2.2	**DEMAND**		4 Qs · 7 marks	**200**
96.	**Q2(c)**	AS Paper 1 June 2019	1	**201**
97.	**Q5(a)**	AS Paper 1 June 2025	1	**202**
98.	**Q2(b)**	A Level Paper 1 November 2021	1	**203**
99.	**Q5**	AS Paper 1 June 2025	4	**205**
1.2.3	**PRICE, INCOME AND CROSS ELASTICITIES OF DEMAND**		76 Qs · 362 marks	**207**
100.	**Q5(a)**	AS Paper 1 June 2016	1	**208**
101.	**Q2(b)**	AS Paper 1 June 2018	1	**209**
102.	**Q2(c)**	AS Paper 1 June 2018	1	**210**
103.	**Q4(a)**	AS Paper 1 June 2018	1	**211**
104.	**Q2(b)**	AS Paper 1 June 2019	1	**212**
105.	**Q3(a)**	AS Paper 1 June 2019	1	**213**

	QUESTION	SOURCE	MARKS	PAGE
106.	**Q5(a)**	AS Paper 1 June 2019	1	**214**
107.	**Q2(a)**	AS Paper 1 October 2020	1	**215**
108.	**Q2(b)**	AS Paper 1 June 2023	1	**216**
109.	**Q4(b)**	AS Paper 1 June 2023	1	**217**
110.	**Q5(b)**	AS Paper 1 June 2024	1	**218**
111.	**Q5(c)**	AS Paper 1 June 2024	1	**219**
112.	**Q2(b)**	AS Paper 1 June 2025	1	**220**
113.	**Q1(b)**	A Level Paper 1 June 2017	1	**221**
114.	**Q2(c)**	A Level Paper 1 June 2017	1	**223**
115.	**Q2(c)**	A Level Paper 1 June 2018	1	**224**
116.	**Q5(a)**	A Level Paper 1 June 2018	1	**225**
117.	**Q1(b)**	A Level Paper 1 June 2019	1	**226**
118.	**Q1(a)**	A Level Paper 1 June 2022	1	**227**
119.	**Q2(c)**	A Level Paper 1 June 2022	1	**228**
120.	**Q3(a)**	A Level Paper 1 June 2023	1	**229**
121.	**Q1(b)**	A Level Paper 1 June 2024	1	**230**
122.	**Q2(b)**	A Level Paper 1 June 2025	1	**231**
123.	**Q2(a)**	AS Paper 1 June 2018	2	**232**
124.	**Q5(a)**	AS Paper 1 June 2024	2	**233**
125.	**Q2(b)**	A Level Paper 1 June 2018	2	**234**
126.	**Q5(b)**	A Level Paper 1 June 2018	2	**235**
127.	**Q5(c)**	A Level Paper 1 June 2018	2	**236**
128.	**Q2(a)**	A Level Paper 1 June 2022	2	**237**
129.	**Q2(b)**	A Level Paper 1 June 2022	2	**238**
130.	**Q5(b)**	AS Paper 1 June 2016	3	**239**
131.	**Q4(b)**	AS Paper 1 June 2018	3	**240**
132.	**Q3(b)**	AS Paper 1 June 2019	3	**241**
133.	**Q5(b)**	AS Paper 1 June 2019	3	**242**
134.	**Q2(b)**	AS Paper 1 October 2020	3	**243**
135.	**Q2(a)**	AS Paper 1 June 2025	3	**244**
136.	**Q5**	AS Paper 1 June 2016	4	**245**
137.	**Q6(d)**	AS Paper 1 June 2017	4	**246**
138.	**Q2**	AS Paper 1 June 2018	4	**249**
139.	**Q4**	AS Paper 1 June 2018	4	**251**
140.	**Q3**	AS Paper 1 June 2019	4	**252**
141.	**Q5**	AS Paper 1 June 2019	4	**253**
142.	**Q2**	AS Paper 1 October 2020	4	**254**
143.	**Q6(d)**	AS Paper 1 June 2022	4	**255**
144.	**Q6(d)**	AS Paper 1 June 2023	4	**258**
145.	**Q5**	AS Paper 1 June 2024	4	**261**

	QUESTION	SOURCE	MARKS	PAGE
146.	**Q6(c)**	AS Paper 1 June 2024	4	**262**
147.	**Q2**	AS Paper 1 June 2025	4	**265**
148.	**Q2**	A Level Paper 1 June 2017	5	**266**
149.	**Q6(a)**	AS Paper 1 June 2017	5	**268**
150.	**Q5**	A Level Paper 1 June 2018	5	**271**
151.	**Q6(a)**	AS Paper 1 October 2020	5	**274**
152.	**Q1**	A Level Paper 1 June 2022	5	**279**
153.	**Q2**	A Level Paper 1 June 2022	5	**281**
154.	**Q3**	A Level Paper 1 June 2023	5	**283**
155.	**Q6(a)**	AS Paper 1 June 2023	5	**284**
156.	**Q1**	A Level Paper 1 June 2024	5	**287**
157.	**Q2**	A Level Paper 1 June 2024	5	**289**
158.	**Q1(a)**	A Level Paper 3 June 2024	5	**291**
159.	**Q6(a)**	AS Paper 1 June 2025	5	**298**
160.	**Q6(c)**	AS Paper 1 June 2017	6	**299**
161.	**Q6(d)**	AS Paper 1 June 2024	6	**302**
162.	**Q6(d)**	A Level Paper 1 June 2018	8	**305**
163.	**Q6(b)**	A Level Paper 1 October 2020	8	**310**
164.	**Q6(b)**	A Level Paper 1 June 2022	8	**314**
165.	**Q1(b)**	A Level Paper 3 June 2022	8	**318**
166.	**Q6(c)**	A Level Paper 1 June 2023	8	**323**
167.	**Q6(b)**	AS Paper 1 June 2016	10	**327**
168.	**Q6(c)**	A Level Paper 1 June 2025	12	**334**
169.	**Q6(e)**	AS Paper 1 June 2017	15	**337**
170.	**Q6(e)**	AS Paper 1 June 2019	15	**342**
171.	**Q6(e)**	AS Paper 1 October 2020	15	**349**
172.	**Q6(e)**	A Level Paper 1 November 2021	15	**357**
173.	**Q6(e)**	AS Paper 1 June 2023	15	**364**
174.	**Q1(e)**	A Level Paper 3 June 2018	25	**369**
175.	**Q7**	A Level Paper 1 October 2020	25	**377**
1.2.4	**SUPPLY**		2 Qs · 8 marks	**381**
176.	**Q5(b)**	AS Paper 1 June 2025	3	**382**
177.	**Q6(a)**	AS Paper 1 June 2022	5	**384**
1.2.5	**ELASTICITY OF SUPPLY**		13 Qs · 51 marks	**387**
178.	**Q5(b)**	AS Paper 1 June 2022	1	**388**
179.	**Q2(b)**	A Level Paper 1 June 2024	1	**389**
180.	**Q1(a)**	A Level Paper 1 June 2019	2	**390**
181.	**Q1(c)**	A Level Paper 1 June 2019	2	**391**
182.	**Q5(a)**	AS Paper 1 June 2022	3	**392**
183.	**Q2(a)**	AS Paper 1 June 2023	3	**393**

	QUESTION	SOURCE	MARKS	PAGE
184.	**Q5**	AS Paper 1 June 2022	4	**394**
185.	**Q2**	AS Paper 1 June 2023	4	**395**
186.	**Q6(a)**	AS Paper 1 June 2016	5	**397**
187.	**Q1**	A Level Paper 1 June 2019	5	**400**
188.	**Q2**	A Level Paper 1 June 2025	5	**402**
189.	**Q6(c)**	AS Paper 1 June 2025	6	**407**
190.	**Q6(b)**	AS Paper 1 June 2018	10	**408**
1.2.6	**PRICE DETERMINATION**		17 Qs · 67 marks	**414**
191.	**Q4(b)**	AS Paper 1 June 2017	1	**415**
192.	**Q5(b)**	AS Paper 1 June 2017	1	**416**
193.	**Q4(a)**	AS Paper 1 June 2025	1	**417**
194.	**Q2(b)**	A Level Paper 1 June 2019	1	**418**
195.	**Q4(a)**	AS Paper 1 June 2017	3	**419**
196.	**Q5(a)**	AS Paper 1 June 2017	3	**420**
197.	**Q4(a)**	AS Paper 1 June 2023	3	**421**
198.	**Q4(b)**	AS Paper 1 June 2025	3	**422**
199.	**Q4**	AS Paper 1 June 2017	4	**423**
200.	**Q5**	AS Paper 1 June 2017	4	**425**
201.	**Q4**	AS Paper 1 June 2023	4	**427**
202.	**Q4**	AS Paper 1 June 2025	4	**428**
203.	**Q1**	A Level Paper 1 June 2017	5	**429**
204.	**Q6(a)**	AS Paper 1 June 2018	5	**431**
205.	**Q2**	A Level Paper 1 June 2019	5	**435**
206.	**Q6(a)**	A Level Paper 1 June 2024	5	**437**
207.	**Q6(e)**	AS Paper 1 June 2018	15	**440**
1.2.7	**PRICE MECHANISM**		5 Qs · 23 marks	**447**
208.	**Q3(a)**	AS Paper 1 June 2018	1	**448**
209.	**Q3(c)**	AS Paper 1 June 2018	1	**449**
210.	**Q3(b)**	AS Paper 1 June 2018	2	**450**
211.	**Q3**	AS Paper 1 June 2018	4	**451**
212.	**Q6(e)**	AS Paper 1 June 2016	15	**453**
1.2.8	**CONSUMER AND PRODUCER SURPLUS**		7 Qs · 22 marks	**458**
213.	**Q4(c)**	A Level Paper 1 June 2023	1	**459**
214.	**Q2(a)**	AS Paper 1 June 2019	2	**460**
215.	**Q4(a)**	A Level Paper 1 June 2023	2	**461**
216.	**Q4(b)**	A Level Paper 1 June 2023	2	**462**
217.	**Q2**	AS Paper 1 June 2019	4	**463**
218.	**Q4**	A Level Paper 1 June 2023	5	**465**
219.	**Q6(c)**	AS Paper 1 June 2016	6	**467**

	QUESTION	SOURCE	MARKS	PAGE
1.2.9	**INDIRECT TAXES AND SUBSIDIES**		10 Qs · 30 marks	**470**
220.	**Q3(b)**	A Level Paper 1 June 2017	1	**471**
221.	**Q3(c)**	A Level Paper 1 June 2017	1	**472**
222.	**Q2(a)**	A Level Paper 1 June 2017	2	**473**
223.	**Q2(b)**	A Level Paper 1 June 2017	2	**474**
224.	**Q3(a)**	A Level Paper 1 June 2017	2	**475**
225.	**Q2(a)**	A Level Paper 1 June 2018	2	**476**
226.	**Q3**	A Level Paper 1 June 2017	5	**477**
227.	**Q2**	A Level Paper 1 June 2018	5	**479**
228.	**Q6(a)**	A Level Paper 1 October 2020	5	**482**
229.	**Q2**	A Level Paper 1 November 2021	5	**485**
1.2.10	**ALTERNATIVE VIEWS OF CONSUMER BEHAVIOUR**		5 Qs · 20 marks	**487**
230.	**Q3(b)**	A Level Paper 1 June 2018	1	**488**
231.	**Q3(a)**	A Level Paper 1 June 2018	2	**489**
232.	**Q3(c)**	A Level Paper 1 June 2018	2	**490**
233.	**Q3**	A Level Paper 1 June 2018	5	**491**
234.	**Q6(b)**	AS Paper 1 June 2024	10	**493**
1.3.2	**EXTERNALITIES**		35 Qs · 396 marks	**498**
235.	**Q2(a)**	AS Paper 1 June 2016	1	**499**
236.	**Q2(b)**	AS Paper 1 June 2016	1	**500**
237.	**Q3(a)**	AS Paper 1 June 2016	1	**501**
238.	**Q2(b)**	A Level Paper 1 October 2020	1	**502**
239.	**Q3(b)**	A Level Paper 1 June 2022	1	**503**
240.	**Q2(c)**	AS Paper 1 June 2016	2	**504**
241.	**Q3(b)**	AS Paper 1 June 2016	3	**505**
242.	**Q2**	AS Paper 1 June 2016	4	**506**
243.	**Q3**	AS Paper 1 June 2016	4	**507**
244.	**Q2**	A Level Paper 1 October 2020	5	**508**
245.	**Q3**	A Level Paper 1 June 2022	5	**509**
246.	**Q1(a)**	A Level Paper 3 June 2022	5	**510**
247.	**Q1(a)**	A Level Paper 3 June 2025	5	**517**
248.	**Q6(c)**	AS Paper 1 October 2020	6	**518**
249.	**Q6(b)**	AS Paper 1 June 2023	6	**524**
250.	**Q1(b)**	A Level Paper 3 June 2017	8	**527**
251.	**Q1(c)**	A Level Paper 3 June 2018	8	**532**
252.	**Q6(b)**	A Level Paper 1 November 2021	8	**538**
253.	**Q1(b)**	A Level Paper 3 June 2024	8	**543**
254.	**Q1(c)**	A Level Paper 3 October 2020	12	**548**
255.	**Q6(d)**	A Level Paper 1 June 2023	12	**554**
256.	**Q6(e)**	A Level Paper 1 June 2018	15	**559**

	QUESTION	SOURCE	MARKS	PAGE
257.	**Q6(e)**	A Level Paper 1 June 2024	15	**565**
258.	**Q6(e)**	AS Paper 1 June 2024	15	**571**
259.	**Q6(e)**	AS Paper 1 June 2025	15	**580**
260.	**Q6(f)**	AS Paper 1 June 2018	20	**583**
261.	**Q6(g)**	AS Paper 1 October 2020	20	**590**
262.	**Q6(f)**	AS Paper 1 June 2022	20	**598**
263.	**Q6(g)**	AS Paper 1 June 2023	20	**604**
264.	**Q7**	A Level Paper 1 June 2017	25	**610**
265.	**Q7**	A Level Paper 1 June 2018	25	**614**
266.	**Q1(e)**	A Level Paper 3 October 2020	25	**618**
267.	**Q8**	A Level Paper 1 June 2023	25	**625**
268.	**Q7**	A Level Paper 1 June 2025	25	**629**
269.	**Q8**	A Level Paper 1 June 2025	25	**633**
1.3.3	**PUBLIC GOODS**		10 Qs · 56 marks	**637**
270.	**Q5(a)**	AS Paper 1 June 2018	1	**638**
271.	**Q5(c)**	AS Paper 1 June 2018	1	**639**
272.	**Q1(a)**	AS Paper 1 June 2022	1	**640**
273.	**Q5(b)**	AS Paper 1 June 2018	2	**641**
274.	**Q1(b)**	AS Paper 1 June 2022	3	**642**
275.	**Q5**	AS Paper 1 June 2018	4	**643**
276.	**Q1**	AS Paper 1 June 2022	4	**644**
277.	**Q6(c)**	AS Paper 1 June 2019	10	**645**
278.	**Q6(c)**	AS Paper 1 June 2023	10	**651**
279.	**Q6(g)**	AS Paper 1 June 2016	20	**656**
1.3.4	**INFORMATION GAPS**		7 Qs · 58 marks	**662**
280.	**Q4(b)**	A Level Paper 1 June 2025	1	**663**
281.	**Q4**	A Level Paper 1 June 2025	5	**664**
282.	**Q6(c)**	AS Paper 1 June 2018	6	**666**
283.	**Q6(b)**	AS Paper 1 June 2019	6	**670**
284.	**Q6(d)**	A Level Paper 1 June 2017	10	**674**
285.	**Q6(c)**	A Level Paper 1 June 2019	10	**680**
286.	**Q6(g)**	AS Paper 1 June 2019	20	**686**
1.4.1	**GOVERNMENT INTERVENTION IN MARKETS**		48 Qs · 413 marks	**693**
287.	**Q3(a)**	AS Paper 1 June 2017	1	**694**
288.	**Q3(b)**	AS Paper 1 June 2017	1	**695**
289.	**Q4(a)**	AS Paper 1 June 2019	1	**696**
290.	**Q4(c)**	AS Paper 1 June 2019	1	**697**
291.	**Q3(a)**	AS Paper 1 October 2020	1	**698**
292.	**Q4(a)**	AS Paper 1 October 2020	1	**699**
293.	**Q5(c)**	AS Paper 1 October 2020	1	**700**

	QUESTION	SOURCE	MARKS	PAGE
294.	**Q2(a)**	AS Paper 1 June 2022	1	**701**
295.	**Q2(b)**	AS Paper 1 June 2022	1	**702**
296.	**Q1(a)**	AS Paper 1 June 2023	1	**703**
297.	**Q1(c)**	AS Paper 1 June 2023	1	**704**
298.	**Q1(b)**	A Level Paper 1 October 2020	1	**705**
299.	**Q3(b)**	A Level Paper 1 October 2020	1	**706**
300.	**Q3(a)**	A Level Paper 1 June 2025	1	**707**
301.	**Q3(c)**	AS Paper 1 June 2017	2	**708**
302.	**Q4(b)**	AS Paper 1 June 2019	2	**709**
303.	**Q5(b)**	AS Paper 1 October 2020	2	**710**
304.	**Q2(c)**	AS Paper 1 June 2022	2	**711**
305.	**Q1(b)**	AS Paper 1 June 2023	2	**712**
306.	**Q3(b)**	AS Paper 1 October 2020	3	**713**
307.	**Q4(b)**	AS Paper 1 October 2020	3	**714**
308.	**Q3**	AS Paper 1 June 2017	4	**715**
309.	**Q4**	AS Paper 1 June 2019	4	**716**
310.	**Q3**	AS Paper 1 October 2020	4	**718**
311.	**Q4**	AS Paper 1 October 2020	4	**720**
312.	**Q2**	AS Paper 1 June 2022	4	**722**
313.	**Q1**	AS Paper 1 June 2023	4	**724**
314.	**Q1**	A Level Paper 1 October 2020	5	**726**
315.	**Q3**	A Level Paper 1 October 2020	5	**727**
316.	**Q4**	A Level Paper 1 June 2024	5	**728**
317.	**Q3**	A Level Paper 1 June 2025	5	**729**
318.	**Q2(a)**	A Level Paper 3 June 2025	5	**733**
319.	**Q6(d)**	A Level Paper 1 November 2021	12	**734**
320.	**Q2(c)**	A Level Paper 3 June 2025	12	**742**
321.	**Q6(g)**	AS Paper 1 June 2018	20	**745**
322.	**Q6(f)**	AS Paper 1 June 2019	20	**752**
323.	**Q6(g)**	AS Paper 1 June 2022	20	**759**
324.	**Q6(f)**	AS Paper 1 June 2023	20	**765**
325.	**Q6(f)**	AS Paper 1 June 2024	20	**771**
326.	**Q6(g)**	AS Paper 1 June 2024	20	**777**
327.	**Q6(f)**	AS Paper 1 June 2025	20	**786**
328.	**Q6(g)**	AS Paper 1 June 2025	20	**793**
329.	**Q1(d)**	A Level Paper 3 June 2019	25	**797**
330.	**Q1(e)**	A Level Paper 3 June 2019	25	**804**
331.	**Q7**	A Level Paper 1 November 2021	25	**811**
332.	**Q1(e)**	A Level Paper 3 November 2021	25	**815**
333.	**Q1(e)**	A Level Paper 3 June 2022	25	**821**

	QUESTION	SOURCE	MARKS	PAGE
334.	**Q7**	A Level Paper 1 June 2023	25	**828**
1.4.2	**GOVERNMENT FAILURE**		6 Qs · 51 marks	**832**
335.	**Q5(a)**	AS Paper 1 October 2020	1	**833**
336.	**Q4(b)**	A Level Paper 1 June 2024	1	**834**
337.	**Q5**	AS Paper 1 October 2020	4	**835**
338.	**Q6(a)**	AS Paper 1 June 2024	5	**837**
339.	**Q6(f)**	AS Paper 1 June 2016	20	**840**
340.	**Q6(g)**	AS Paper 1 June 2017	20	**846**

QUESTIONS

340 questions · 1911 marks · 20 sub-topics

SUB-TOPIC 1.1.2

POSITIVE AND NORMATIVE ECONOMIC STATEMENTS

Sub-topic 1.1.2 · 14 questions · 41 marks · lowest tariff first

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 **Statement 1:** Cuba has a healthcare system with a patient to doctor ratio of 155:1.

Statement 2: Other countries ought to adopt a similar healthcare system to that which exists in Cuba.

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

(Total for Question 1(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 **Statement 1:** Cuba has a healthcare system with a patient to doctor ratio of 155:1.

Statement 2: Other countries ought to adopt a similar healthcare system to that which exists in Cuba.

(c) Define the term 'command economy'.

(1)

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(Total for Question 1(c) = 1 mark)

3 Disruption in the supply chains of essential goods and shortages of key medical products during the global health crisis have highlighted the links between countries and renewed the debate on the advantages and disadvantages of specialisation.

(Source: adapted from https://commonslibrary.parliament.uk/research-briefings/cbp-8978/)

(b) Which **one** of the following is a positive economic statement?

(1)

- ☒ **A** Disruption to global supply chains will reduce the level of trade
- ☒ **B** Supply chain disruption is the most important issue facing governments
- ☒ **C** The free market leads to the best allocation of resources
- ☒ **D** The government ought to increase healthcare spending

(Total for Question 3(b) = 1 mark)

4 Statement 1

Finland has schools with an average class size of 19.6

Statement 2

Other countries ought to set school class sizes similar to Finland.

(Source adapted from: https://www.oph.fi/en/news/2019)

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

(Total for Question 4(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Statement 1: Since Poland joined the European Union (EU) in 2004, over one million of its workforce have migrated to other countries in the EU.

Statement 2: Many engineers have left Poland for higher paid jobs in other countries in the EU.

(Source: https://www.forbes.com/sites/freylindsay/2019/08/09/polands-emigration-rate-is-falling-but-people-are-still-worried-about-the-brain-drain-bogeyman/#9550525792e6)

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

(Total for Question 1(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 **Statement 1:** Cuba has a healthcare system with a patient to doctor ratio of 155:1.

Statement 2: Other countries ought to adopt a similar healthcare system to that which exists in Cuba.

(b) Cuba's population is estimated to be 11 million. With reference to Statement 1 above, calculate the estimated number of doctors in Cuba. You are advised to show your working.

(2)

(Total for Question 1(b) = 2 marks)

4 A large number of people should be vaccinated against a new virus, so that even those who are not vaccinated will benefit.

(a) With reference to the statement above, explain the difference between positive and normative statements.

(3)

(Total for Question 4(a) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

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1 **Statement 1:** Cuba has a healthcare system with a patient to doctor ratio of 155:1.

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(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

(b) Cuba's population is estimated to be 11 million. With reference to Statement 1 above, calculate the estimated number of doctors in Cuba. You are advised to show your working.

(2)

(c) Define the term 'command economy'.

(1)

.....

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(Total for Question 1 = 4 marks)

4 A large number of people should be vaccinated against a new virus, so that even those who are not vaccinated will benefit.

(a) With reference to the statement above, explain the difference between positive and normative statements.

(3)

(b) Which **one** of the following explains how market failure might occur in a free market economy?

(1)

- ☒ **A** A net welfare loss results from intervention by the government
- ☒ **B** Firms enter the market in response to higher prices
- ☒ **C** Goods with positive externalities are underprovided
- ☒ **D** Prices rise when there is excess demand

(Total for Question 4 = 4 marks)

4 Statement 1

Finland has schools with an average class size of 19.6

Statement 2

Other countries ought to set school class sizes similar to Finland.

(Source adapted from: https://www.oph.fi/en/news/2019)

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

5% of total government spending in Finland is on education and therefore other areas of the economy have reduced funding as a result, including the military despite an increase in recent global conflicts.

(b) With reference to the information above, explain what is meant by 'opportunity cost'.

(3)

(Total for Question 4 = 4 marks)

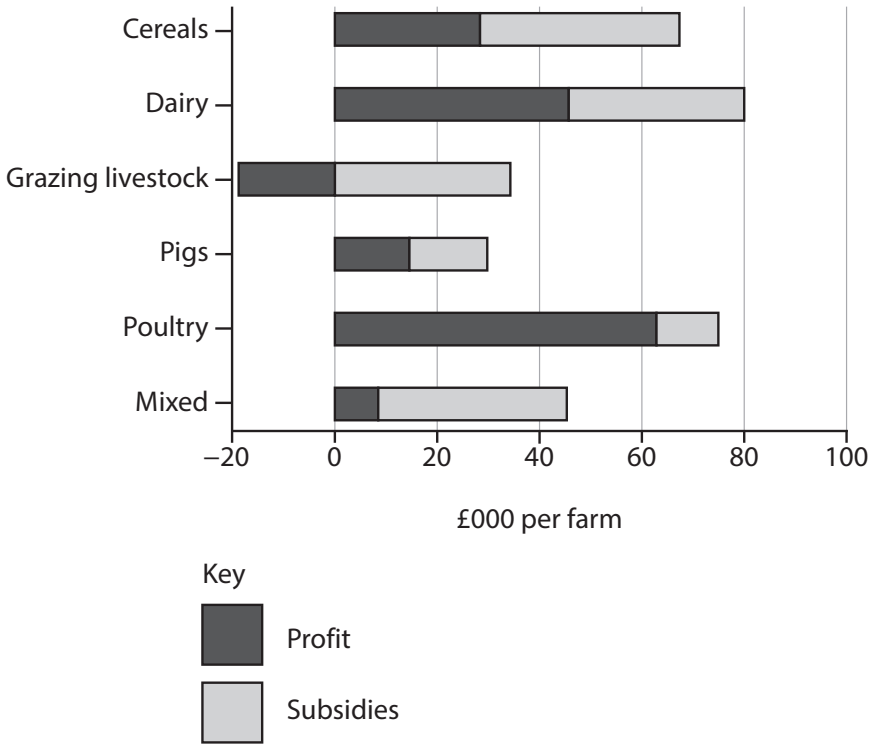
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

(d) Using examples from **either** Extract A or Extract B, explain what is meant by positive and normative economic statements.

(4)

SECTION B

Read Figures 1 and 2 and extracts (A to C) before answering Question 6.

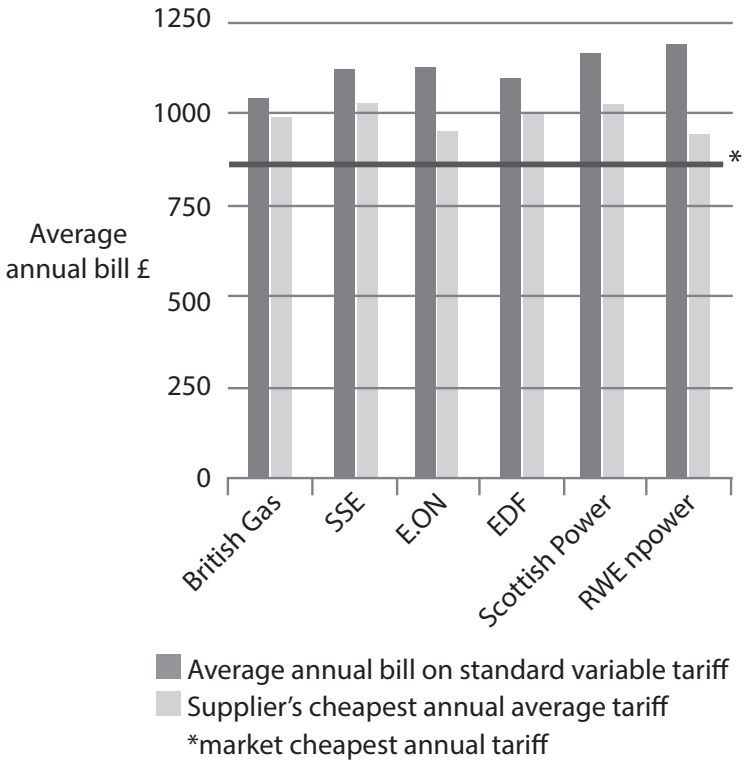
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

Energy and telecommunication markets in the UK

Figure 1: Average annual household bill from the Big Six UK energy suppliers, 2017



(Source: https://www.lovemoney.com/news/67298/standard-variable-tariff-compared-cheapest-deal-provider-savings)

Extract A

Energy price cap to fix 'broken' market in UK

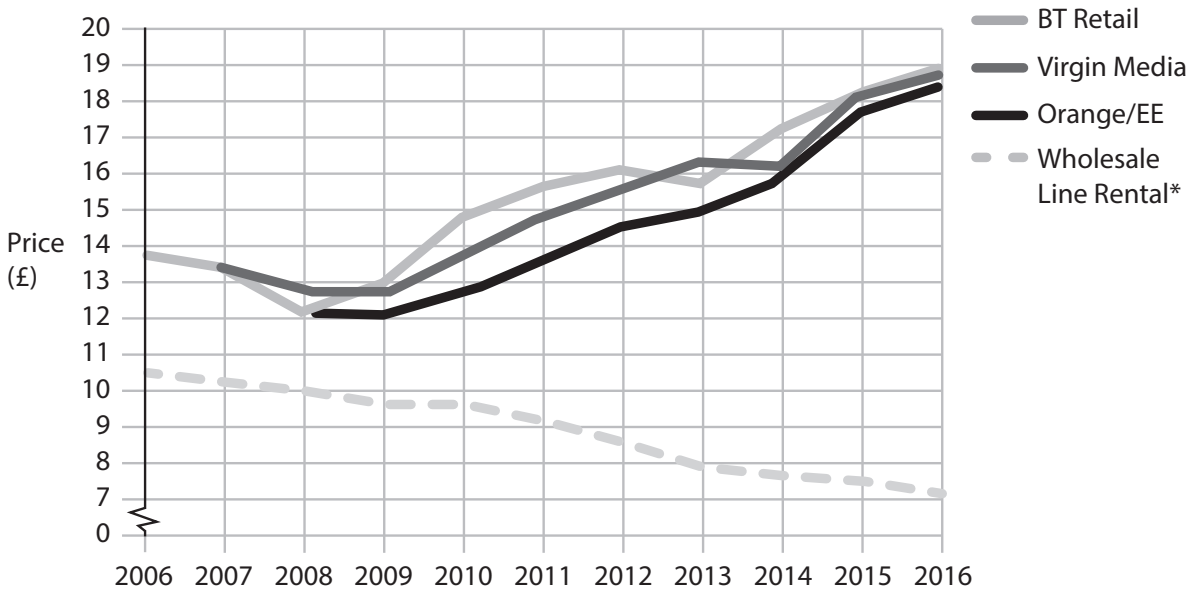
The Prime Minister recently said that the regulator Ofgem (Office of Gas and Electricity Markets) should limit electricity and gas suppliers' most expensive tariffs.

Under the planned new legislation, the energy bills of 11 million households will be capped for as long as five years. The government claimed this cap could save households up to £100 a year. This legislation would force Ofgem to change the licence conditions for energy suppliers so that they are required to cap electricity and gas prices. The measure will apply to anyone on a standard variable tariff, the expensive plans that customers are moved to when cheaper, fixed-price deals end. Ofgem will need to consult energy companies on how the cap is calculated, the government said. The Prime Minister repeated her claim that she had to act because the 'market is broken', a charge the big energy companies reject. "I have been clear that our broken energy market has to change – it has to offer fairer prices for millions of loyal customers who have been paying hundreds of pounds too much," she said.

However, Michael Lewis, chief executive of E.ON said "the government must guard against any unintended consequences that undermine customer service and push up prices as a whole. A price cap will not be good for customers. It will reduce competition and innovation". Smaller suppliers such as First Utility said the Big Six had only themselves to blame for the cap, because they had kept millions of people on standard variable tariffs.

(Source: adapted from 'UK puts energy efficiency at heart of climate change strategy', Adam Vaughan, Copyright Guardian News & Media Ltd 2017 https://www.theguardian.com/money/2017/oct/12/may-energy-price-cap-ofgem-electricity-gas-tariffs)

Figure 2: The monthly rental cost of a telephone landline



*Wholesale line rental – the rental price BT Openreach charges telephone service providers

(Source: https://www.ofcom.org.uk/about-ofcom/latest/features-and-news/landline-prices-review)

Extract B

BT profit rises

BT Group, which includes BT Openreach and BT Retail, reported a rise in profit as revenue increased following the integration of the consumer mobile business, EE. BT finalised the takeover of EE in August 2016, and the integration has resulted in BT controlling 35% of the mobile consumer market. The profit of the UK-based telecommunication group in its second quarter 2017 rose to £566 million.

BT Group chief executive Gavin Patterson said: "We will operate a multi-brand strategy with UK customers being able to choose a mix of BT, EE or Plusnet services, depending on which suits them best. The acquisition enables us to offer great value bundles of services and customers are set to be the winners as we compete for their business".

(Source: adapted from www.marketwatch.com (Oct 27 – 2016) and http://home.bt.com/news/bt-life/bt-to-retain-ee-brand-as-acquisition-confirmed-11364037422234)

Extract C

BT to slash landline charges for 1 million customers

Rental charges for landline-only customers – households with a telephone-only contract but no BT broadband – will fall from £18.99 to £11.99 per month after the regulator attacked existing deals as 'poor value for money'. This rental reduction will save a million landline-only customers £84 a year.

The regulator Ofcom (Office of Communications) said it stepped in because these bills for landline-only customers – nearly two-thirds of whom are over 65 – have "soared" in recent years. This is despite BT and other landline providers benefiting from significant cuts in the wholesale line rental cost of providing the service by BT Openreach. Many landline-only customers are elderly, and have been with BT for decades. Ofcom has focused on BT because it accounts for two-thirds of the UK's 1.5m landline-only customers.

A spokesperson for Ofcom said "This position [of dominance] has allowed BT to increase prices without much risk of losing customers, and other providers have followed BT's pricing lead. We expect BT's price cut to mean other providers will follow suit". Ofcom said that over three-quarters of BT's landline-only customers have never switched provider, which has left them a prime target for price rises. The regulator said that all major landline providers have increased their line rental charges by between 23% and 47% in recent years, while their own costs for providing the service have fallen about 27%. Ofcom said it is also looking at measures to help people shop around for better deals with more confidence.

(Source: adapted from 'BT to slash landline charges for 1m customers', Mark Sweney, Copyright Guardian News & Media Ltd 2017 https://www.theguardian.com/business/2017/oct/26/bt-to-slash-landline-charges-for-1m-customers)

(a) With reference to Extract A, explain the difference between a positive statement and a normative statement.

(5)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Statement 1: Since Poland joined the European Union (EU) in 2004, over one million of its workforce have migrated to other countries in the EU.

Statement 2: Many engineers have left Poland for higher paid jobs in other countries in the EU.

(Source: https://www.forbes.com/sites/freylindsay/2019/08/09/polands-emigration-rate-is-falling-but-people-are-still-worried-about-the-brain-drain-bogeyman/#9550525792e6)

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☐	**A**	Normative	Normative
☐	**B**	Normative	Positive
☐	**C**	Positive	Normative
☐	**D**	Positive	Positive

(b) Explain the likely impact of migration on the wage level of engineers in Poland.

(4)

(Total for Question 1 = 5 marks)

SECTION A

Read Figures 1 and 2 and the following extracts (A and B) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

The UK economy

Figure 1: UK gas prices in pence per therm, August 2002 to August 2022

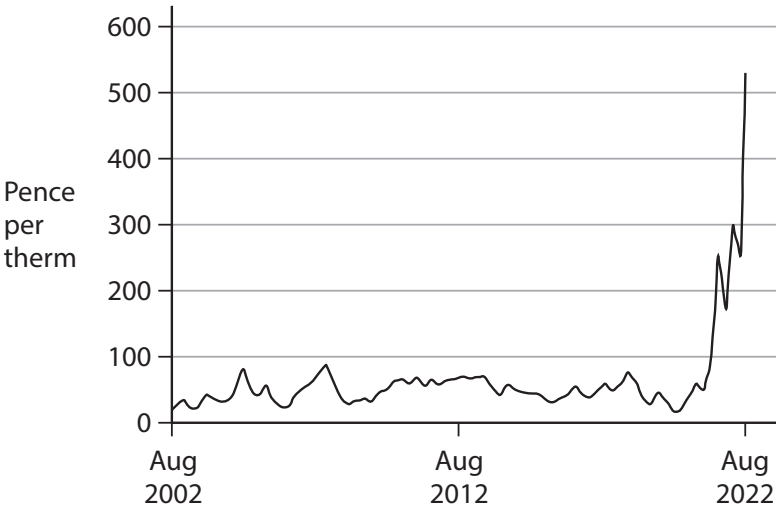
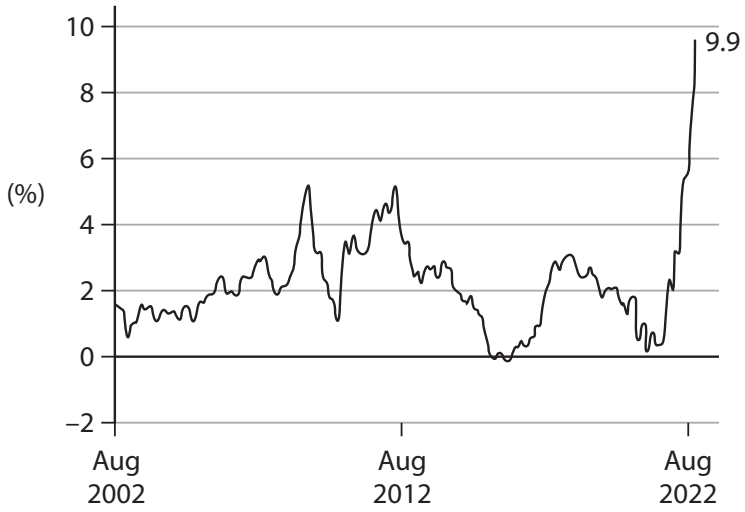


Figure 2: UK inflation, CPI, August 2002 to August 2022



Extract A

Fiscal policy changes in the UK, Autumn 2022

After many changes in policy, people earning above £150 000 will now no longer benefit from the tax cut in the September 2022 mini-budget, which proposed the removal of the 45% tax band. The proposed change in the main 20% standard rate of income tax moving to 19% has been postponed.

In April 2022, a 1.25% rise in national insurance contributions was implemented, labelled as a health and social care levy. It was cancelled in Autumn 2022. Britain's poorest households would have lost £7.56 a year from the national insurance rise. The richest 10% of households, earning an average of £108 000, would have lost £1 800.

Another measure in the Truss Government's £30 billion tax cut proposals that would have benefitted the rich, was the removal of the 2023 planned rise in corporation tax from 19% to 25%. The former chancellor wanted to cut the tax to 15% but this was the wrong time to do this. The former chancellor also removed the 2014 cap on bankers' bonuses, clearly an unfair decision at the time when public sector workers were told to accept pay caps to keep inflation under control.

The reflationary fiscal policy triggered warnings that the Monetary Policy Committee of the Bank of England would raise interest rates further – having already raised them from 0.1% in 2021 to 2.25% in September 2022. This meant an end to the fiscal rules set by the government in the recent past: debt to be falling as a share of national income by 2024 and no borrowing for day-to-day spending.

(Source: adapted from 'Tax cuts benefit high income earners the most' R Merrick The Independent: 19 September 2022 and FT Source: adapted from Sebastian Payne and Chris Giles in London 29 August 2022)

Extract B

Inequality to rise in the UK

The rising cost of living is expected to affect low-income families the most. Inflation in Autumn 2022 is expected to hit 14% for families in the poorest tenth of the income distribution, compared with 8% for families in the richest tenth, driven in large part by rising energy costs and food prices. Around half of the food consumed in the UK is imported, and the 20% fall in the value of the pound in 2022 has affected lower income groups more because food is a higher proportion of their spending. The government's decision to freeze benefits, rather than allowing them to rise in line with current inflation, means that the support provided is a real terms cut for families currently receiving high levels of benefits. A two-year freeze on energy price caps will now only last until April 2023, which would have kept the average energy bill at £2 500 rather than £3 500.

(Source: adapted from IFS Report: Living standards, poverty and inequality in the UK: July 2022 and https://www.ft.com/content/6de5b52e-64c8-4997-8939-e1c59172daa7?shareType=nongift)

(a) Explain the difference between a positive and a normative statement, using an example of each from Extract A.

(5)

SUB-TOPIC 1.1.3

THE ECONOMIC PROBLEM

Sub-topic 1.1.3 · 12 questions · 36 marks · lowest tariff first

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Scarcity of non-renewable resources, such as oil, is a key reason why alternative resources have been developed by economies. In recent years, within the energy market there has been a large increase in the production of wind power.

(b) Which **one** of the following best describes 'scarcity'?

(1)

☒ **A** An extension of the demand curve

☒ **B** Excess supply

☒ **C** Insufficient resources to satisfy wants

☒ **D** The misallocation of resources

(Total for Question 1 = 4 marks)

(Total for Question 1(b) = 1 mark)

2 Vanilla bean prices increased to a record $600 a kilogramme in 2018 after a cyclone hit the tropical island of Madagascar, damaging crops. Madagascar supplies 75% to 80% of the world vanilla bean market.

(a) Define the term 'supply.'

(1)

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(Total for Question 2(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 (a) Spending on capital goods in the UK rose by 4.8% in Quarter 4, 2022.

Which **one** of the following is an example of a capital good?

(1)

- ☒ **A** A computer
- ☒ **B** Savings in the bank
- ☒ **C** Shares in a company
- ☒ **D** Underground reserves of oil

(Total for Question 1(a) = 1 mark)

2 Vanilla bean prices increased to a record $600 a kilogramme in 2018 after a cyclone hit the tropical island of Madagascar, damaging crops. Madagascar supplies 75% to 80% of the world vanilla bean market.

(c) Annotate the diagram below to show the effect of the cyclone on the price of vanilla beans.

(2)

(Total for Question 2(c) = 2 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Scarcity of non-renewable resources, such as oil, is a key reason why alternative resources have been developed by economies. In recent years, within the energy market there has been a large increase in the production of wind power.

(a) With reference to the information provided, explain the distinction between renewable and non-renewable resources.

(3)

(Total for Question 1(a) = 3 marks)

4 Statement 1

Finland has schools with an average class size of 19.6

Statement 2

Other countries ought to set school class sizes similar to Finland.

(Source adapted from: https://www.oph.fi/en/news/2019)

5% of total government spending in Finland is on education and therefore other areas of the economy have reduced funding as a result, including the military despite an increase in recent global conflicts.

(b) With reference to the information above, explain what is meant by 'opportunity cost'.

(3)

(Total for Question 4(b) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

(b) Using an example from your own knowledge, explain the distinction between renewable and non-renewable resources.

(3)

(Total for Question 1(b) = 3 marks)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

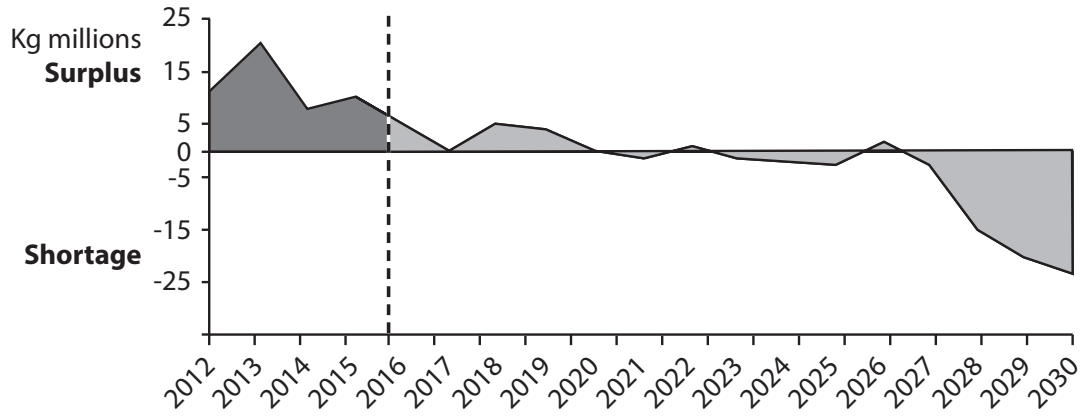
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

(d) Using examples from the information provided, explain what is meant by renewable and non-renewable energy.

(4)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Scarcity of non-renewable resources, such as oil, is a key reason why alternative resources have been developed by economies. In recent years, within the energy market there has been a large increase in the production of wind power.

(a) With reference to the information provided, explain the distinction between renewable and non-renewable resources.

(3)

(b) Which **one** of the following best describes 'scarcity'?

(1)

☒ **A** An extension of the demand curve

☒ **B** Excess supply

☒ **C** Insufficient resources to satisfy wants

☒ **D** The misallocation of resources

(Total for Question 1 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 (a) Spending on capital goods in the UK rose by 4.8% in Quarter 4, 2022.

Which **one** of the following is an example of a capital good?

(1)

- ☒ **A** A computer
- ☒ **B** Savings in the bank
- ☒ **C** Shares in a company
- ☒ **D** Underground reserves of oil

(b) Using an example from your own knowledge, explain the distinction between renewable and non-renewable resources.

(3)

(Total for Question 1 = 4 marks)

SECTION B

Read Figures 2, 3 and the following extracts (D to F) before answering Question 2.

Answer ALL Questions 2(a) to 2(c), and EITHER Question 2(d) OR 2(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 2

Mozambique

Figure 2: Interest rates (bank rate of the central bank) and inflation rates of selected African countries, 2017

Selected country	Central bank rate of interest	Inflation rate (CPI measure)
Congo (D.R.)	14%	13.8%
Ghana	21%	9.1%
Kenya	10%	10.1%
Malawi	18%	21.4%
Mozambique	**21.75%**	**18.0%**
Nigeria	14%	21.1%

(Source: official government websites, and other news sources, July 2017)

Extract D

Rising debt levels in Africa

Increases in national debt have brought several African governments towards a debt-servicing crisis when the repayment of debt and interest become unsustainable. Between 2010 and 2015, many sub-Saharan countries raised debt totalling more than £20 billion. Back then, with commodity prices soaring and foreign loans available at very low interest rates, everyone agreed that borrowing was the way to grow an economy with expansionary fiscal policy. Since 2015, some African governments – beneficiaries of big debt write-offs at the start of the century – have taken to private debt markets too eagerly, leaving them with heavy repayment schedules at a time of lower commodity prices.

Until recently, the International Monetary Fund (IMF) has played down African debt concerns, pointing to better management of public resources and greater transparency. But it was shaken by Mozambique's default on more than £2 billion of secret loans used to purchase a non-existent tuna-fishing fleet, raising fears of hidden debt in other African countries with similar levels of corruption. The median level of debt in sub-Saharan Africa had risen sharply from 34% of gross domestic product in 2013 to 48% in 2017. Although that is low by international standards, analysts said debt burdens were heavier than they appeared because of most African countries' low tax base. "The real thing to look for is debt to revenue, or debt-service as a percentage of government spending," said John Ashbourne, Africa Economist at Capital Economics. In several countries, he said, debt payments were above 20% of government revenue, with an opportunity cost in terms of government spending.

(Source: adapted from African debt worries intensify as levels near tipping point by David Pilling © Financial Times 2017 https://www.ft.com/content/939808dc-b4d8-11e7-a398-73d59db9e399)

Extract E

Mozambique's economic stability is being put to the test

The economy of Mozambique, which gained independence from Portugal in 1975, has continued to under-perform. Large-scale emigration, especially of skilled workers, economic dependence on South Africa, a severe drought, a prolonged civil war and political tensions have hindered the country's development. More than half of Mozambique's 26 million people continue to live below the poverty line.

GDP growth declined to 3.6% in 2016 due to fiscal tightening and a slowdown in foreign direct investment. A weak manufacturing sector employs just 3.2% of the population, and is made up of small enterprises (90%), many of which were set up with the aid of microfinance. Traditional export earnings dropped due to depressed global demand. In addition a wide-scale drought seriously affected agricultural production. Foreign currency inflows have weakened – as large-scale gas projects were put on hold, and 14 external lenders suspended direct budget support, as a lesson to be learned from the tuna-fleet scandal. The state budget deficit was 10.7% of GDP in 2017. High interest rates have reduced aggregate demand, and import costs added to inflation following further depreciation of Mozambique's currency, the *metical*, to a new low of 100 meticals to £1.

Mozambique needs urgently to improve its investment environment and confidence in its institutions. The World Economic Forum's global competitiveness ranking placed Mozambique 136 out of 137 countries.

Longer term, Mozambique's economic prospects are promising. There has been progress in talks on restoring international confidence in the government's running of the economy, leading to a lasting and sustainable agreement between rival political groups. The development of gas fields off Mozambique's coast discovered in 2011 is set to transform the economy, coming into production in the 2020s. A rise in coal and electricity exports should help growth to increase. But in the short term, it remains uncertain whether Mozambique can deliver badly needed economic stability.

(Source: adapted from http://www.africaneconomicoutlook.org/en/country-notes/mozambiqua and https://www.chathamhouse.org/expert/comment/mozambique-s-stability-being-put-test 6 October 2017 Dr Alex Vines OBE)

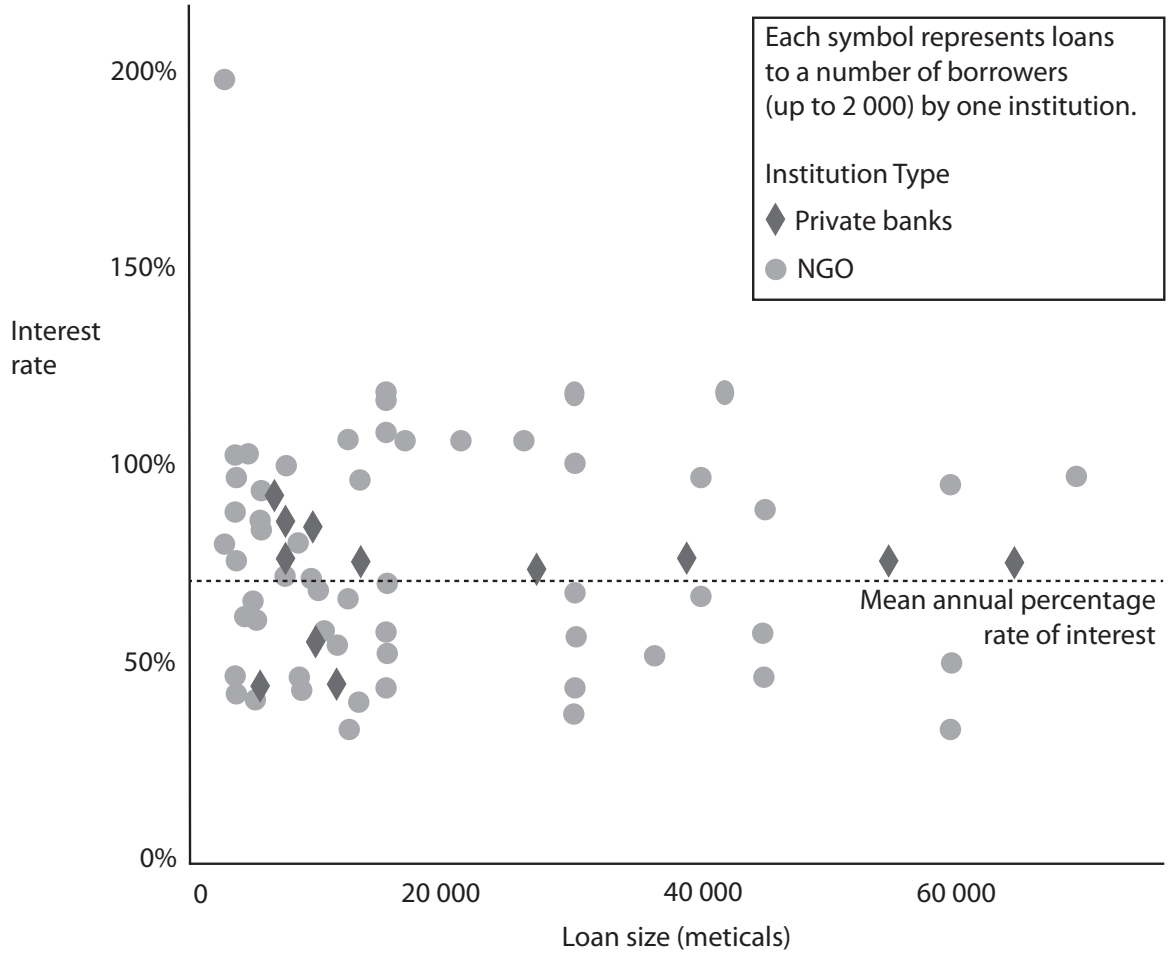
Extract F

Microfinance in Mozambique

Microfinance in Mozambique started in the late 1980s through projects initiated by international relief organisations. The sector has expanded to include many private banks and non-government organisations (NGOs), see Figure 3. This has resulted in wider use (over 100 000 borrowers) and many new business start-ups which could not have gained finance from any other source. Evidence suggests that there is unfulfilled demand for microfinance and a large potential for expansion.

(Source: adapted from http://www.mftransparency.org/microfinance-pricing/mozambique/)

Figure 3: The cost of microfinance loans in Mozambique, 2015



(Source: http://www.mftransparency.org/microfinance-pricing/mozambique/)

(a) With reference to Extract D line 21, explain why 'opportunity cost' is a problem for governments of developing countries when servicing debt.

(5)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

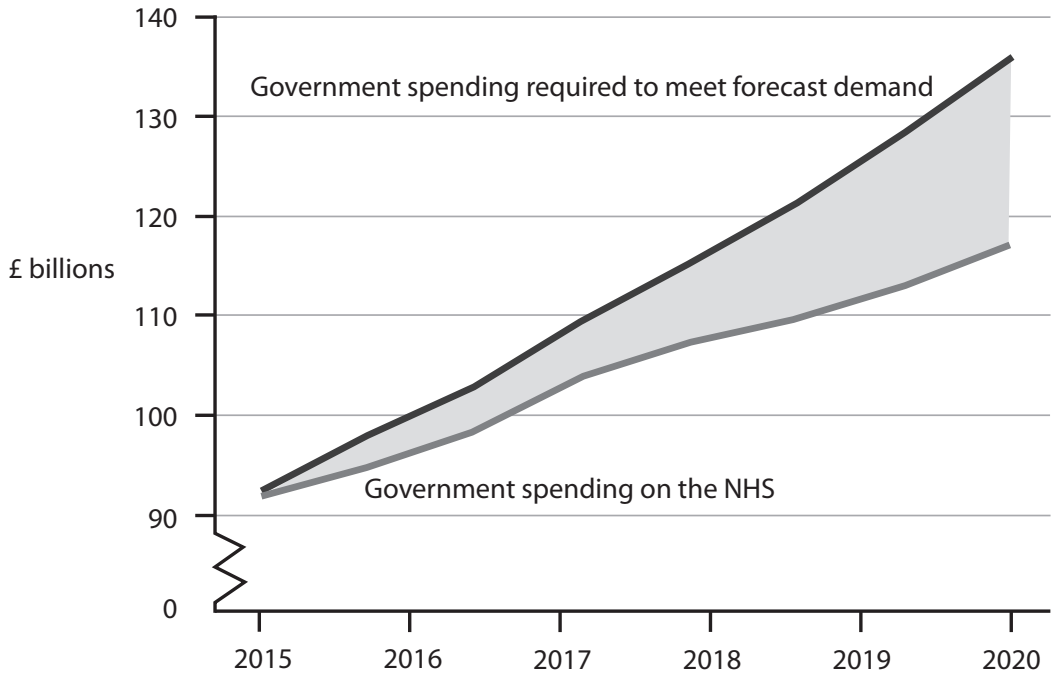
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

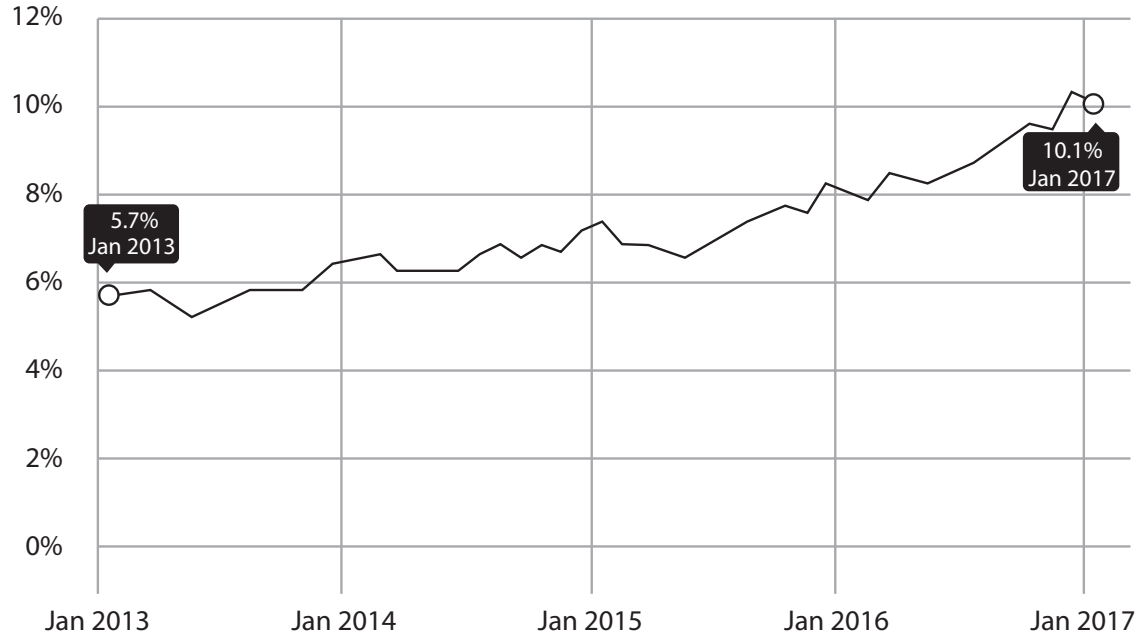
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

6 (a) With reference to Extract A and Figure 2, explain how the health care market in the UK illustrates the economic problem.

(5)

SUB-TOPIC 1.1.4

PRODUCTION POSSIBILITY FRONTIERS

Sub-topic 1.1.4 · 14 questions · 34 marks · lowest tariff first

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The production possibility frontier for an economy is shown in the table below.

Capital goods output (million units)	Consumer goods output (million units)	Opportunity cost
0	42	–
10	40	
20	36	
30	30	
40	22	
50	12	
60	0	

(b) Which **one** of the following is the most likely effect of an economy producing more capital goods?

(1)

☒ **A** Reduced specialisation of labour

☒ **B** A shift in the production possibility frontier

☒ **C** A reduction in marginal utility

☒ **D** A shift in demand for consumer goods

(Total for Question 1(b) = 1 mark)

5 During the global health crisis, 11.7 million jobs were furloughed, costing the UK Government £70 billion. This meant people were paid by the government 80% of their wages even though they did not work. Some private sector employers continued to pay the remaining 20%.

(Source: adapted from https://commonslibrary.parliament.uk/examining-the-end-of-the-furlough-scheme)

(b) The diagram shows the production possibility frontier of an economy. Assuming the economy is at point W, annotate the diagram to show the opportunity cost of producing more consumer goods.

(1)

(Total for Question 5(b) = 1 mark)

2 Vanilla bean prices increased to a record $600 a kilogramme in 2018 after a cyclone hit the tropical island of Madagascar, damaging crops. Madagascar supplies 75% to 80% of the world vanilla bean market.

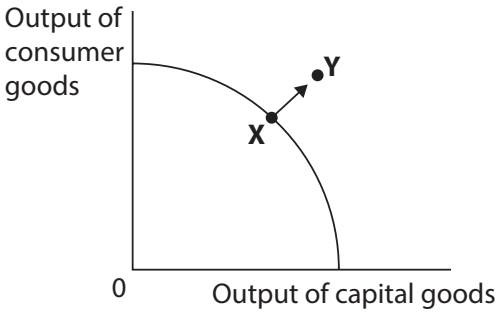
(a) Define the term 'supply.'

(1)

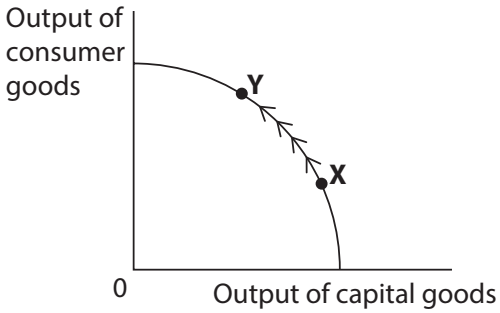
(b) The diagrams below show movements from position X to Y on production possibility frontiers. In which **one** of the diagrams does the movement from X to Y illustrate the most likely impact on Madagascar's economy of a natural disaster such as a cyclone?

(1)

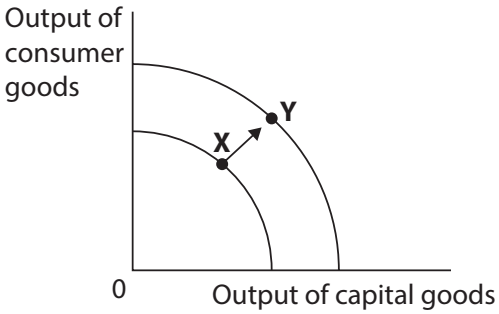
☒ **A**



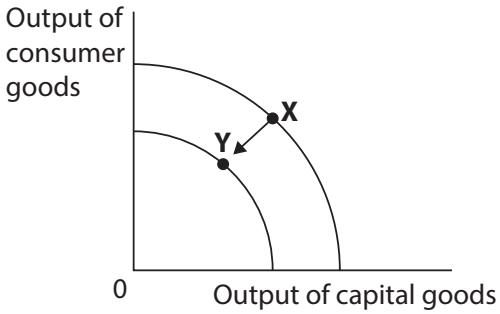
☒ **B**



☒ **C**



☒ **D**



SECTION A

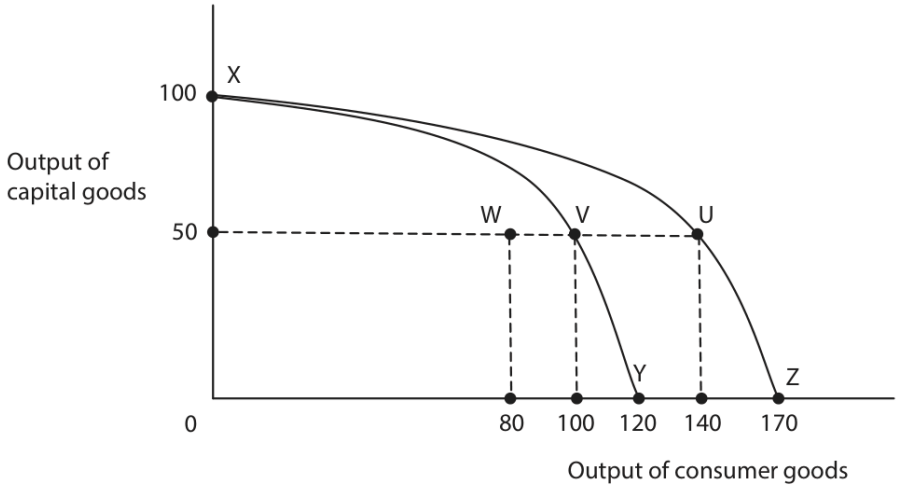
Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The diagram refers to production possibility frontiers for a country that produces capital goods and consumer goods.



Originally, the economy has a production possibility frontier shown by the line **XY**, operating at point **V**. The production possibility frontier then moves to **XZ**, operating at point **U**.

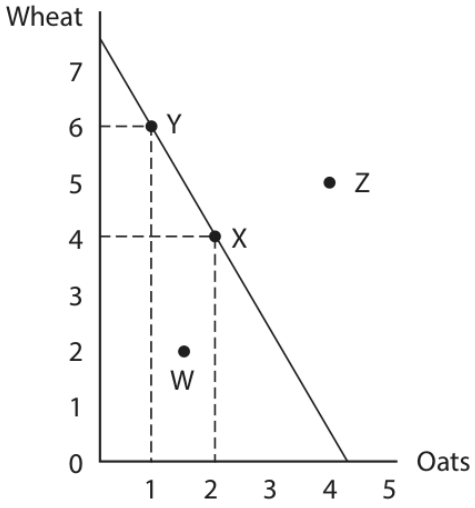
(b) Which **one** of the following was the most likely cause of the movement in the production possibility frontier from **XY** to **XZ**?

(1)

- ☒ **A** A reduction in unemployment in consumer goods industries
- ☒ **B** A rise in the cost of producing consumer goods
- ☒ **C** An increase in demand for consumer goods
- ☒ **D** A technological improvement in the production of consumer goods

(Total for Question 1(b) = 1 mark)

2 The production possibility frontier shows last year's harvest for a UK farmer at point X.



(c) Which **one** of the following would be most likely to help the farmer reach point Z?

An increase in

(1)

- ☒ **A** investment in milk production machinery
- ☒ **B** investment in modern farming technology
- ☒ **C** the demand for wheat
- ☒ **D** the price of oats

(Total for Question 2(c) = 1 mark)

SECTION A

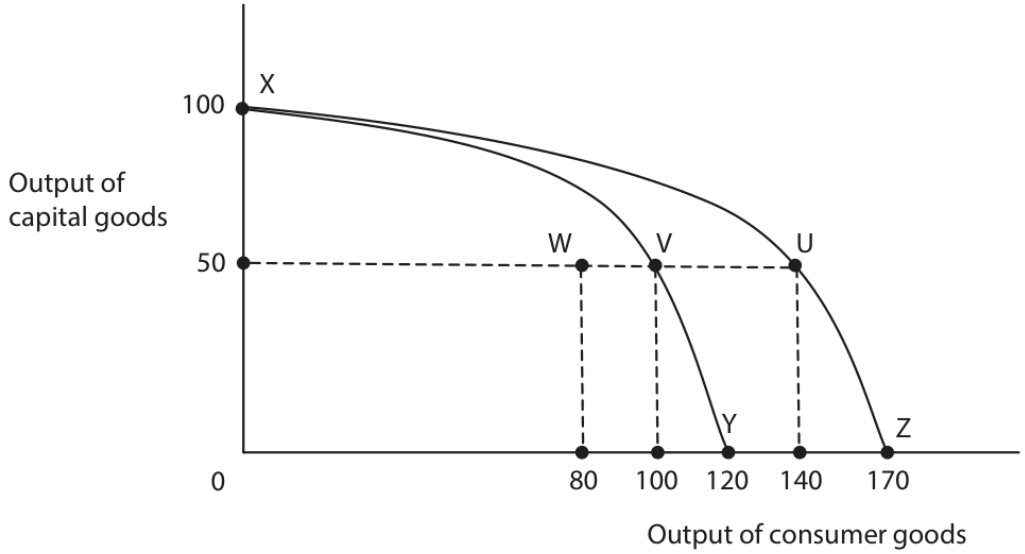
Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The diagram refers to production possibility frontiers for a country that produces capital goods and consumer goods.



Originally, the economy has a production possibility frontier shown by the line **XY**, operating at point **V**. The production possibility frontier then moves to **XZ**, operating at point **U**.

(a) Calculate the **original** and the **new** opportunity cost of producing 50 capital goods. You are advised to show your working.

(2)

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(Total for Question 1(a) = 2 marks)

SECTION A

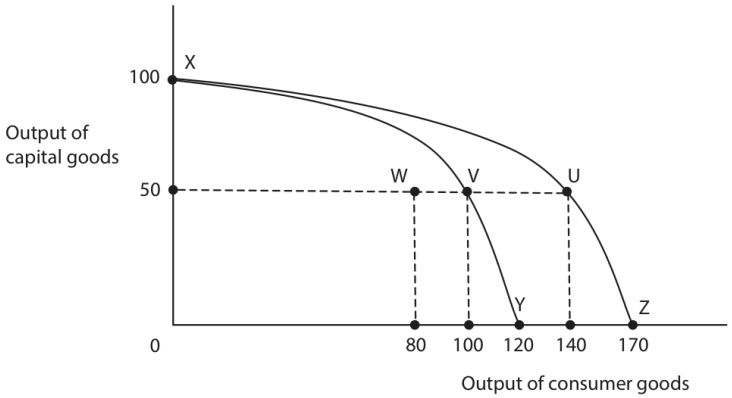
Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

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1 The diagram refers to production possibility frontiers for a country that produces capital goods and consumer goods.



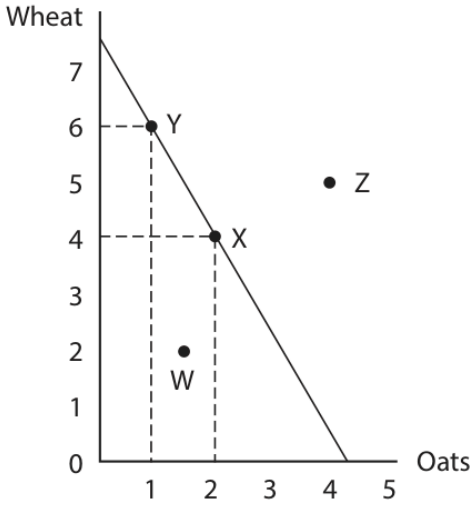
Originally, the economy has a production possibility frontier shown by the line **XY**, operating at point **V**. The production possibility frontier then moves to **XZ**, operating at point **U**.

(c) Explain **one** characteristic of the economy at position **W**.

(2)

(Total for Question 1(c) = 2 marks)

2 The production possibility frontier shows last year's harvest for a UK farmer at point X.



(a) Calculate the opportunity cost of the decision by the farmer to harvest 6 units of wheat this year at point Y (movement from point X to point Y).

(2)

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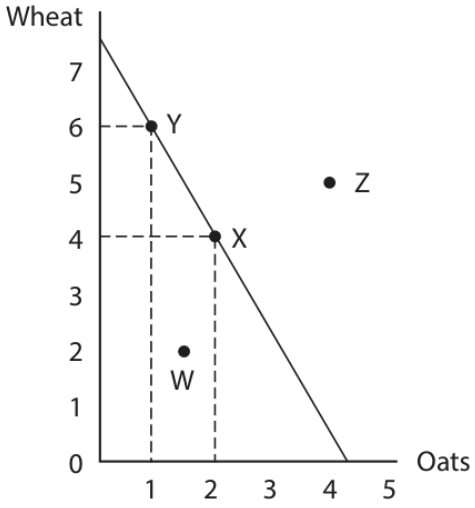
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(Total for Question 2(a) = 2 marks)

2 The production possibility frontier shows last year's harvest for a UK farmer at point X.



(b) Explain the impact on efficiency of producing at point W in the following year.

(2)

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(Total for Question 2(b) = 2 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The production possibility frontier for an economy is shown in the table below.

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0	42	–
10	40	
20	36	
30	30	
40	22	
50	12	
60	0	

(a) Explain, using marginal analysis from the table above, the concept of opportunity cost. (You may use the last column in answering the question.)

(3)

(Total for Question 1(a) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The production possibility frontier for an economy is shown in the table below.

Capital goods output (million units)	Consumer goods output (million units)	Opportunity cost
0	42	–
10	40	
20	36	
30	30	
40	22	
50	12	
60	0	

(a) Explain, using marginal analysis from the table above, the concept of opportunity cost. (You may use the last column in answering the question.)

(3)

(b) Which **one** of the following is the most likely effect of an economy producing more capital goods?

(1)

- ☒ **A** Reduced specialisation of labour
- ☒ **B** A shift in the production possibility frontier
- ☒ **C** A reduction in marginal utility
- ☒ **D** A shift in demand for consumer goods

(Total for Question 1 = 4 marks)

2 Vanilla bean prices increased to a record $600 a kilogramme in 2018 after a cyclone hit the tropical island of Madagascar, damaging crops. Madagascar supplies 75% to 80% of the world vanilla bean market.

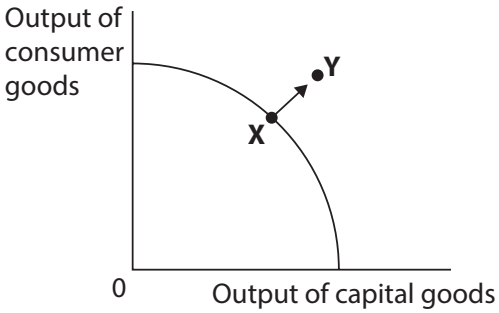
(a) Define the term 'supply.'

(1)

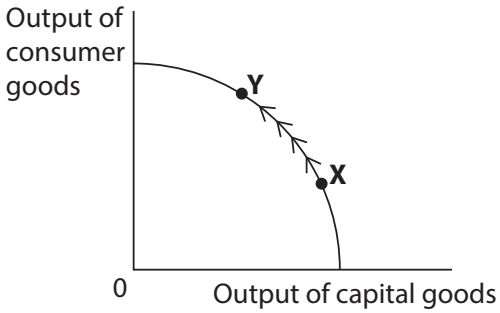
(b) The diagrams below show movements from position X to Y on production possibility frontiers. In which **one** of the diagrams does the movement from X to Y illustrate the most likely impact on Madagascar's economy of a natural disaster such as a cyclone?

(1)

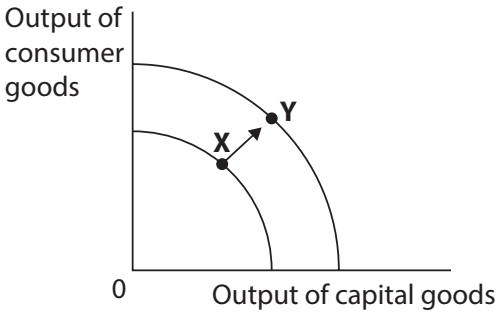
☒ **A**



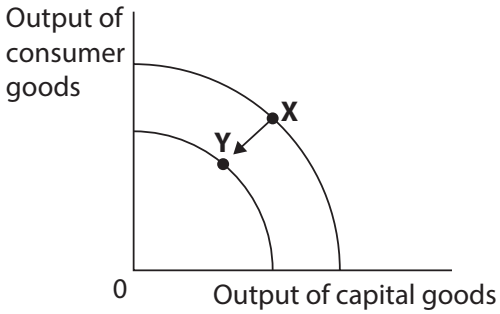
☒ **B**



☒ **C**

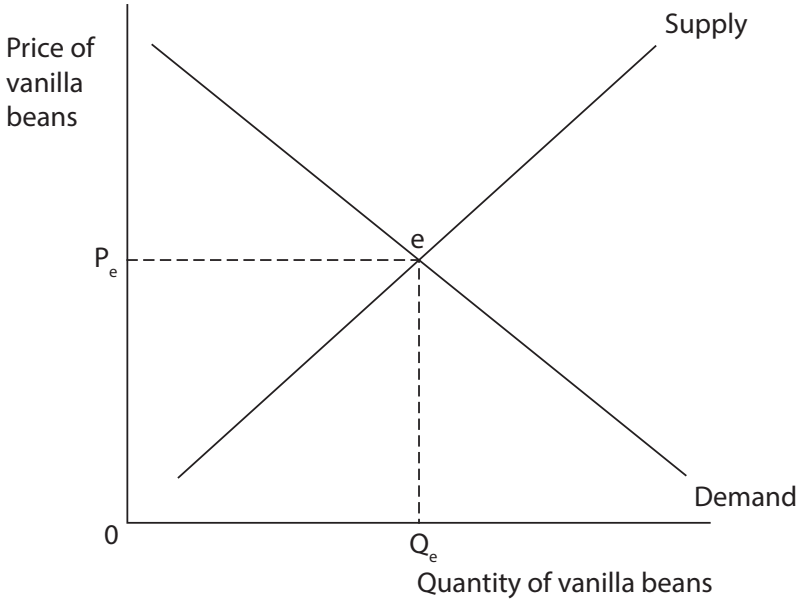


☒ **D**



(c) Annotate the diagram below to show the effect of the cyclone on the price of vanilla beans.

(2)



(Total for Question 2 = 4 marks)

SECTION A

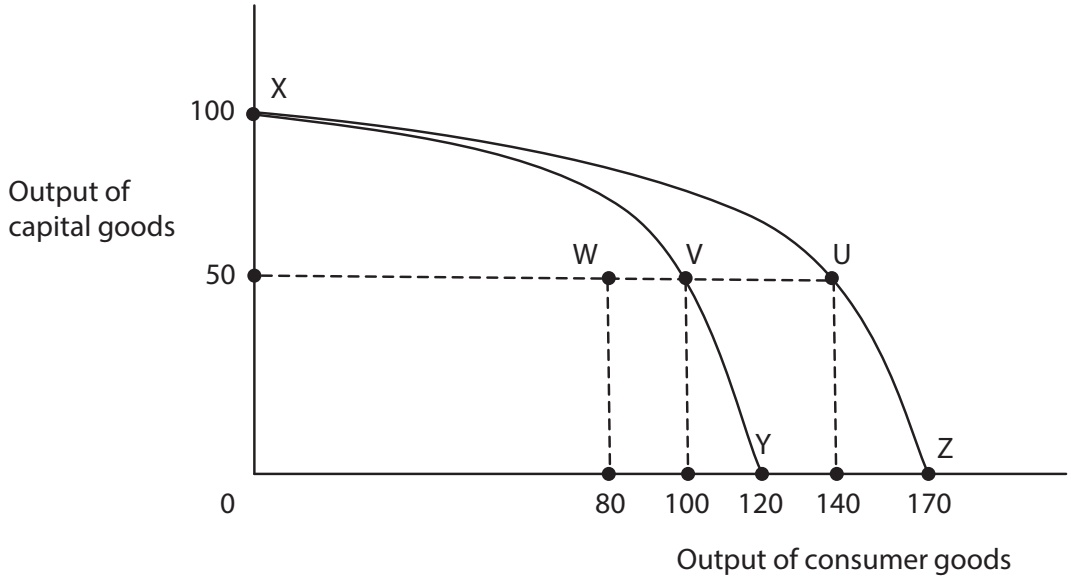
Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The diagram refers to production possibility frontiers for a country that produces capital goods and consumer goods.



Originally, the economy has a production possibility frontier shown by the line **XY**, operating at point **V**. The production possibility frontier then moves to **XZ**, operating at point **U**.

(a) Calculate the **original** and the **new** opportunity cost of producing 50 capital goods. You are advised to show your working.

(2)

(b) Which **one** of the following was the most likely cause of the movement in the production possibility frontier from **XY** to **XZ**?

(1)

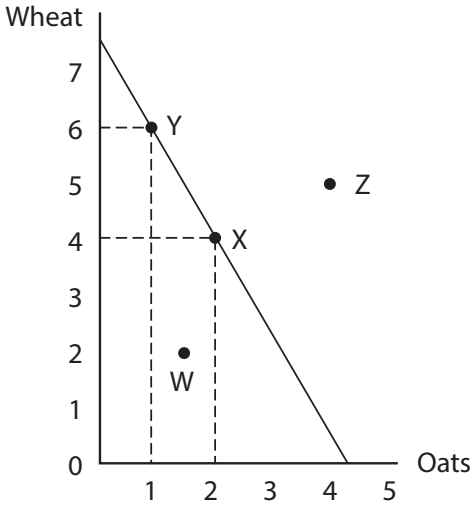
- ☒ **A** A reduction in unemployment in consumer goods industries
- ☒ **B** A rise in the cost of producing consumer goods
- ☒ **C** An increase in demand for consumer goods
- ☒ **D** A technological improvement in the production of consumer goods

(c) Explain **one** characteristic of the economy at position **W**.

(2)

(Total for Question 1 = 5 marks)

2 The production possibility frontier shows last year's harvest for a UK farmer at point X.



(a) Calculate the opportunity cost of the decision by the farmer to harvest 6 units of wheat this year at point Y (movement from point X to point Y).

(2)

(b) Explain the impact on efficiency of producing at point W in the following year.

(2)

(c) Which **one** of the following would be most likely to help the farmer reach point Z?

An increase in

(1)

- ☒ **A** investment in milk production machinery
- ☒ **B** investment in modern farming technology
- ☒ **C** the demand for wheat
- ☒ **D** the price of oats

(Total for Question 2 = 5 marks)

SUB-TOPIC 1.1.5

SPECIALISATION AND THE DIVISION OF LABOUR

Sub-topic 1.1.5 · 14 questions · 48 marks · lowest tariff first

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 (a) Which **one** of the following is the most likely consequence of an increase in the division of labour in the production of smartphones?

(1)

☒ **A** Decrease in boredom for smartphone workers

☒ **B** Decrease in use of specialised manufacturing equipment

☒ **C** Decrease in the cost per unit of smartphones

☒ **D** Increase in training costs per worker

(Total for Question 1(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Henry Ford designed his first moving assembly line in 1913, and revolutionised the car production process of the Ford Model T. This assembly line, at the first Ford factory, became the benchmark for mass production methods around the world.

(Source: adapted from https://www.ford.co.uk/experience-ford/history-and-heritage)

(a) The benefits of specialisation and division of labour are mostly associated with:

(1)

- ☒ **A** Adam Smith
- ☒ **B** Friedrich Hayek
- ☒ **C** John Maynard Keynes
- ☒ **D** Karl Marx

(Total for Question 1(a) = 1 mark)

3 The world's first cryptocurrency, Bitcoin is stored and exchanged securely on the internet through a digital ledger known as a blockchain. Bitcoins are divisible into smaller units known as satoshis.

(Source: https://www.coinbase.com/price/bitcoin)

(a) Which **one** of the following would be most likely to cause a country's currency to no longer be acceptable as a medium of exchange?

(1)

- ☒ **A** It becomes harder to counterfeit
- ☒ **B** It becomes unlimited in supply
- ☒ **C** It is issued in smaller denominations
- ☒ **D** It is more long lasting

(Total for Question 3(a) = 1 mark)

3 Disruption in the supply chains of essential goods and shortages of key medical products during the global health crisis have highlighted the links between countries and renewed the debate on the advantages and disadvantages of specialisation.

(Source: adapted from https://commonslibrary.parliament.uk/research-briefings/cbp-8978/)

(a) Define the term 'specialisation'.

(1)

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(Total for Question 3(a) = 1 mark)

3 Disruption in the supply chains of essential goods and shortages of key medical products during the global health crisis have highlighted the links between countries and renewed the debate on the advantages and disadvantages of specialisation.

(Source: adapted from https://commonslibrary.parliament.uk/research-briefings/cbp-8978/)

(c) Explain **one** likely advantage of specialising in the production of goods to trade.

(2)

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(Total for Question 3(c) = 2 marks)

5 Free market economics is being challenged. The arguments for and against are being increasingly discussed within many countries.

(c) Explain **one** advantage to a firm of using division of labour when organising its production process.

(2)

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(Total for Question 5(c) = 2 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

(b) Explain what function money has in improving specialisation in the production of smartphones.

(3)

(Total for Question 1(b) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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(Source: adapted from https://www.ford.co.uk/experience-ford/history-and-heritage)

(b) Explain **one** advantage of the division of labour in car production.

(3)

(Total for Question 1(b) = 3 marks)

3 The world's first cryptocurrency, Bitcoin is stored and exchanged securely on the internet through a digital ledger known as a blockchain. Bitcoins are divisible into smaller units known as satoshis.

(Source: https://www.coinbase.com/price/bitcoin)

(b) Explain how Bitcoin fulfils **one** function of money, apart from as a medium of exchange.

(3)

(Total for Question 3(b) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

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1 (a) Which **one** of the following is the most likely consequence of an increase in the division of labour in the production of smartphones?

(1)

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- ☒ **B** Decrease in use of specialised manufacturing equipment
- ☒ **C** Decrease in the cost per unit of smartphones
- ☒ **D** Increase in training costs per worker

(b) Explain what function money has in improving specialisation in the production of smartphones.

(3)

(Total for Question 1 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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(Source: adapted from https://www.ford.co.uk/experience-ford/history-and-heritage)

(a) The benefits of specialisation and division of labour are mostly associated with:

(1)

- ☒ **A** Adam Smith
- ☒ **B** Friedrich Hayek
- ☒ **C** John Maynard Keynes
- ☒ **D** Karl Marx

(b) Explain **one** advantage of the division of labour in car production.

(3)

(Total for Question 1 = 4 marks)

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(Source: https://www.coinbase.com/price/bitcoin)

(a) Which **one** of the following would be most likely to cause a country's currency to no longer be acceptable as a medium of exchange?

(1)

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- ☒ **C** It is issued in smaller denominations
- ☒ **D** It is more long lasting

(b) Explain how Bitcoin fulfils **one** function of money, apart from as a medium of exchange.

(3)

(Total for Question 3 = 4 marks)

3 Disruption in the supply chains of essential goods and shortages of key medical products during the global health crisis have highlighted the links between countries and renewed the debate on the advantages and disadvantages of specialisation.

(Source: adapted from https://commonslibrary.parliament.uk/research-briefings/cbp-8978/)

(a) Define the term 'specialisation'.

(1)

(b) Which **one** of the following is a positive economic statement?

(1)

- ☒ **A** Disruption to global supply chains will reduce the level of trade
- ☒ **B** Supply chain disruption is the most important issue facing governments
- ☒ **C** The free market leads to the best allocation of resources
- ☒ **D** The government ought to increase healthcare spending

(c) Explain **one** likely advantage of specialising in the production of goods to trade.

(2)

(Total for Question 3 = 4 marks)

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

The UK fishing industry employs about 24 000 people, more than half of them working in Scotland.

(e) Discuss the likely impacts on an economy of specialising in the fishing industry. Use a production possibility frontier diagram in your answer.

(15)

SUB-TOPIC 1.1.6

FREE MARKET, MIXED AND COMMAND ECONOMIES

Sub-topic 1.1.6 · 23 questions · 92 marks · lowest tariff first

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 (a) Define the term 'free market economy'.

(1)

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(Total for Question 1(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

(b) Which **one** of the following is the best example of the rationing function of the price mechanism?

(1)

☒ **A** An increase in demand, leading to a rise in price, will encourage new firms to enter the market

☒ **B** Changes in price provide information to both producers and consumers

☒ **C** If a product is scarce, a rise in price is likely to make the shortage worse

☒ **D** When there is a shortage of a product, the price will rise and discourage some consumers from buying the product

(Total for Question 1(b) = 1 mark)

4 A large number of people should be vaccinated against a new virus, so that even those who are not vaccinated will benefit.

(b) Which **one** of the following explains how market failure might occur in a free market economy?

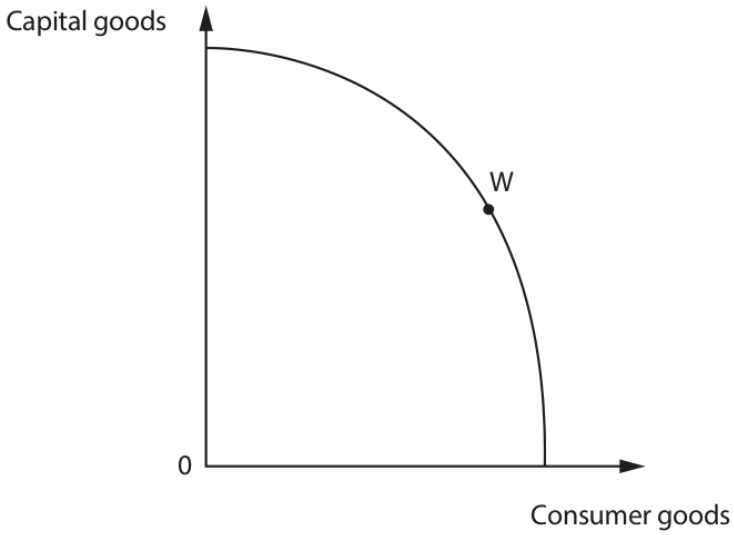
(1)

- ☒ **A** A net welfare loss results from intervention by the government
- ☒ **B** Firms enter the market in response to higher prices
- ☒ **C** Goods with positive externalities are underprovided
- ☒ **D** Prices rise when there is excess demand

(Total for Question 4(b) = 1 mark)

5 During the global health crisis, 11.7 million jobs were furloughed, costing the UK Government £70 billion. This meant people were paid by the government 80% of their wages even though they did not work. Some private sector employers continued to pay the remaining 20%.

(Source: adapted from https://commonslibrary.parliament.uk/examining-the-end-of-the-furlough-scheme)



(c) Which **one** of the following is a likely advantage of a command economy?

(1)

- ☒ **A** Low levels of unemployment
- ☒ **B** Price acts as a signal to allocate resources
- ☒ **C** Price controls cause shortages of goods
- ☒ **D** The profit motive gives firms the incentive to be more efficient

(Total for Question 5(c) = 1 mark)

3 Singapore is mainly a free market economy.

(a) Which **one** of the following statements about a free market economy is true?

(1)

- ☒ **A** It was supported by Karl Marx
- ☒ **B** The price mechanism allocates all resources
- ☒ **C** There are no externalities
- ☒ **D** The state owns all the resources

The education system in Singapore produces some of the highest achieving students in international education rankings, with its teenagers coming top in tests in mathematics, reading and science.

(Total for Question 3(a) = 1 mark)

3 (a) The economy of Singapore is a highly developed free market economy with some elements of government intervention.

Define the term 'free market'.

(1)

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(Total for Question 3(a) = 1 mark)

3 (a) The economy of Singapore is a highly developed free market economy with some elements of government intervention.

Define the term 'free market'.

(1)

(b) Which **one** of the following is the most likely reason why a free market fails to achieve the social optimum position?

(1)

- ☒ **A** Public goods are provided free of charge to users
- ☒ **B** There is overproduction of goods with external benefits
- ☒ **C** There is underconsumption of goods with external benefits
- ☒ **D** There is underproduction of goods with external costs

(c) Explain why public goods may not be provided by the private sector.

(2)

(Total for Question 3 = 4 marks)

5 Free market economics is being challenged. The arguments for and against are being increasingly discussed within many countries.

(b) Which **one** of the following statements is true?

(1)

- ☒ **A** Friedrich Hayek believed that the government should subsidise inefficient firms
- ☒ **B** Friedrich Hayek was a key advocate of command economies as a way of allocating resources
- ☒ **C** Karl Marx advocated allocating resources via the free market
- ☒ **D** Karl Marx criticised the private ownership of factors of production

Adam Smith described the benefits of specialisation and the division of labour.

(Total for Question 5(b) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant.
You may annotate and include diagrams in your answers.

1 In a major reform of its command economy, the Cuban government will allow small private businesses to operate in most fields. Free market economists have long called for the role of small business to be expanded to help jump-start the economy and to create jobs.

(Source adapted from: https://www.telegraph.co.uk/news/2021/02/07/cuba-allows-massive-expansion-private-businesses/)

(b) Which **one** of the following economic thinkers supported the idea of a command economy?

(1)

☒ **A** Adam Smith

☒ **B** Friedrich Hayek

☒ **C** John Maynard Keynes

☒ **D** Karl Marx

(Total for Question 1(b) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

(c) Explain **one** advantage of a free market economy compared to a command economy.

(2)

(Total for Question 1(c) = 2 marks)

5 During the global health crisis, 11.7 million jobs were furloughed, costing the UK Government £70 billion. This meant people were paid by the government 80% of their wages even though they did not work. Some private sector employers continued to pay the remaining 20%.

(Source: adapted from https://commonslibrary.parliament.uk/examining-the-end-of-the-furlough-scheme)

(a) With reference to the above information, define the term 'mixed economy'.

(2)

(Total for Question 5(a) = 2 marks)

3 (a) The economy of Singapore is a highly developed free market economy with some elements of government intervention.

Define the term 'free market'.

(1)

(b) Which **one** of the following is the most likely reason why a free market fails to achieve the social optimum position?

(1)

- ☒ **A** Public goods are provided free of charge to users
- ☒ **B** There is overproduction of goods with external benefits
- ☒ **C** There is underconsumption of goods with external benefits
- ☒ **D** There is underproduction of goods with external costs

(c) Explain why public goods may not be provided by the private sector.

(2)

(Total for Question 3 = 4 marks)

5 Free market economics is being challenged. The arguments for and against are being increasingly discussed within many countries.

(a) Explain how resources are allocated in a free market economy.

(2)

(Total for Question 5(a) = 2 marks)

3 Singapore is mainly a free market economy.

(b) Singapore's education system is provided by the state. With reference to the information above, explain why education is normally provided by the state.

(3)

(Total for Question 3(b) = 3 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 (a) Define the term 'free market economy'.

(1)

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(b) Which **one** of the following is the best example of the rationing function of the price mechanism?

(1)

☒ **A** An increase in demand, leading to a rise in price, will encourage new firms to enter the market

☒ **B** Changes in price provide information to both producers and consumers

☒ **C** If a product is scarce, a rise in price is likely to make the shortage worse

☒ **D** When there is a shortage of a product, the price will rise and discourage some consumers from buying the product

(c) Explain **one** advantage of a free market economy compared to a command economy.

(2)

(Total for Question 1 = 4 marks)

5 During the global health crisis, 11.7 million jobs were furloughed, costing the UK Government £70 billion. This meant people were paid by the government 80% of their wages even though they did not work. Some private sector employers continued to pay the remaining 20%.

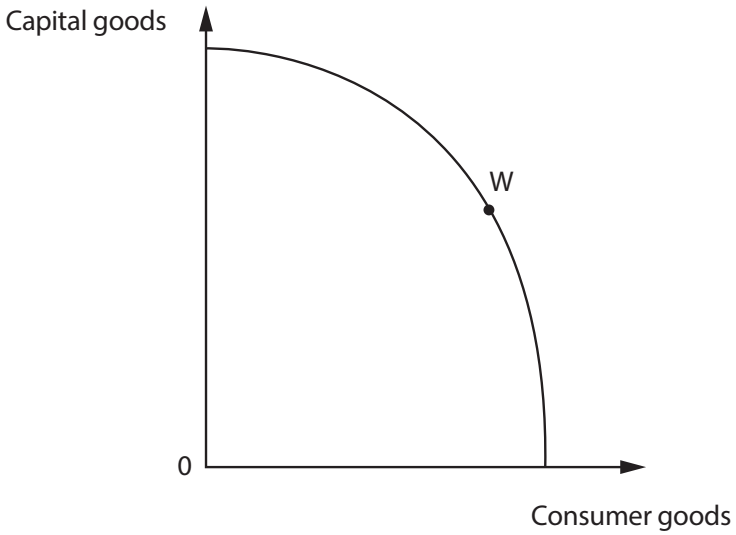
(Source: adapted from https://commonslibrary.parliament.uk/examining-the-end-of-the-furlough-scheme)

(a) With reference to the above information, define the term 'mixed economy'.

(2)

(b) The diagram shows the production possibility frontier of an economy. Assuming the economy is at point W, annotate the diagram to show the opportunity cost of producing more consumer goods.

(1)



(c) Which **one** of the following is a likely advantage of a command economy?

(1)

- ☒ **A** Low levels of unemployment
- ☒ **B** Price acts as a signal to allocate resources
- ☒ **C** Price controls cause shortages of goods
- ☒ **D** The profit motive gives firms the incentive to be more efficient

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

3 Singapore is mainly a free market economy.

(a) Which **one** of the following statements about a free market economy is true?

(1)

- ☒ **A** It was supported by Karl Marx
- ☒ **B** The price mechanism allocates all resources
- ☒ **C** There are no externalities
- ☒ **D** The state owns all the resources

The education system in Singapore produces some of the highest achieving students in international education rankings, with its teenagers coming top in tests in mathematics, reading and science.

(b) Singapore's education system is provided by the state. With reference to the information above, explain why education is normally provided by the state.

(3)

(Total for Question 3 = 4 marks)

3 (a) The economy of Singapore is a highly developed free market economy with some elements of government intervention.

Define the term 'free market'.

(1)

(b) Which **one** of the following is the most likely reason why a free market fails to achieve the social optimum position?

(1)

- ☒ **A** Public goods are provided free of charge to users
- ☒ **B** There is overproduction of goods with external benefits
- ☒ **C** There is underconsumption of goods with external benefits
- ☒ **D** There is underproduction of goods with external costs

(c) Explain why public goods may not be provided by the private sector.

(2)

(Total for Question 3 = 4 marks)

5 Free market economics is being challenged. The arguments for and against are being increasingly discussed within many countries.

(a) Explain how resources are allocated in a free market economy.

(2)

(b) Which **one** of the following statements is true?

(1)

- ☒ **A** Friedrich Hayek believed that the government should subsidise inefficient firms
- ☒ **B** Friedrich Hayek was a key advocate of command economies as a way of allocating resources
- ☒ **C** Karl Marx advocated allocating resources via the free market
- ☒ **D** Karl Marx criticised the private ownership of factors of production

Adam Smith described the benefits of specialisation and the division of labour.

(c) Explain **one** advantage to a firm of using division of labour when organising its production process.

(2)

(Total for Question 5 = 5 marks)

TOTAL FOR SECTION A = 25 MARKS

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant.
You may annotate and include diagrams in your answers.

1 In a major reform of its command economy, the Cuban government will allow small private businesses to operate in most fields. Free market economists have long called for the role of small business to be expanded to help jump-start the economy and to create jobs.

(Source adapted from: https://www.telegraph.co.uk/news/2021/02/07/cuba-allows-massive-expansion-private-businesses/)

(a) With reference to the information provided, explain **one** advantage of a free market economy.

(4)

(b) Which **one** of the following economic thinkers supported the idea of a command economy?

(1)

- ☒ **A** Adam Smith
- ☒ **B** Friedrich Hayek
- ☒ **C** John Maynard Keynes
- ☒ **D** Karl Marx

(Total for Question 1 = 5 marks)

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

(c) With reference to the information provided and your own knowledge, explain **two** characteristics of private ownership in a free market economy.

(6)

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

Q) 6 (f) Evaluate the possible advantages of a free market approach to cigarette consumption.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

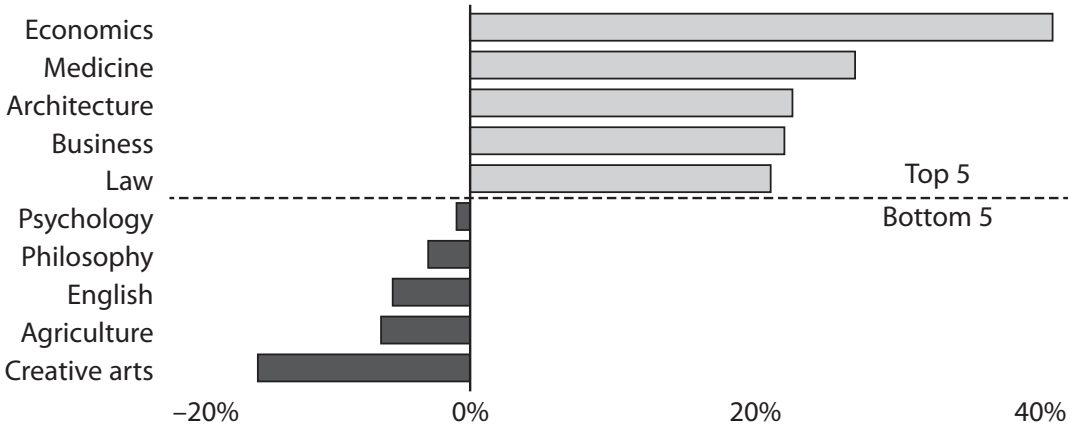
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

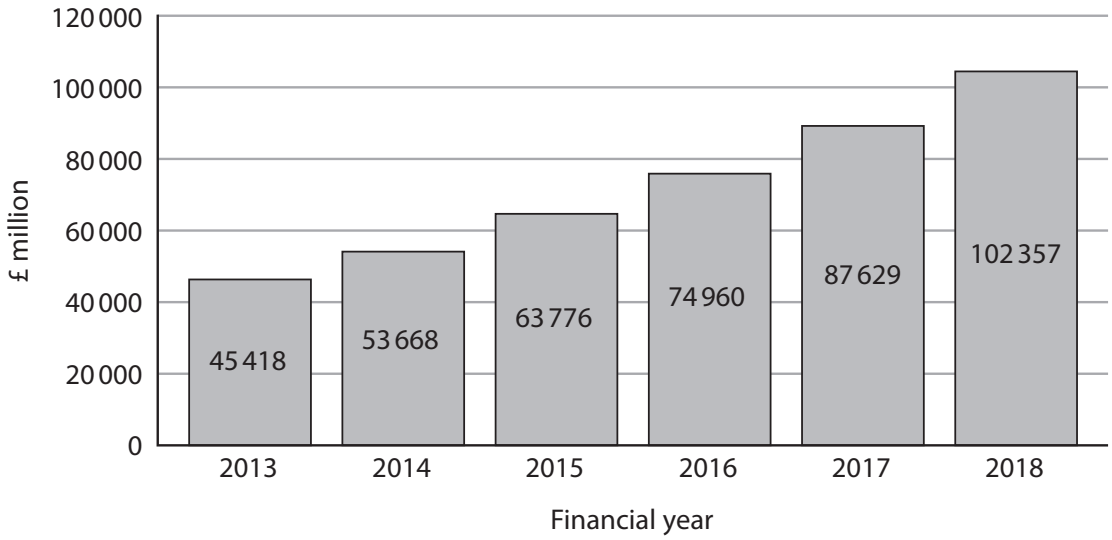
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



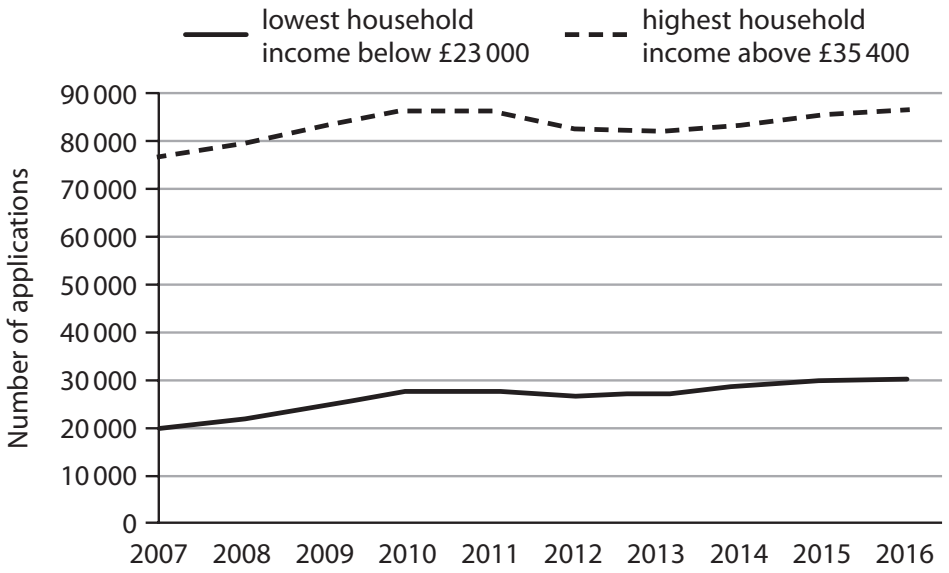
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

Q) 6 (f) Evaluate the possible advantages of a free market approach to providing services such as education.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SUB-TOPIC 1.2.1

RATIONAL DECISION MAKING

Sub-topic 1.2.1 · 18 questions · 96 marks · lowest tariff first

4 A restaurant in London offers an "all you can eat buffet for £8.99". At this price you can refill your plate as many times as you like.

(b) If the price of an "all you can eat buffet" fell from £8.99 to £6.99, which **one** of the following is likely to happen?

(1)

- ☒ **A** There is an extension in demand
- ☒ **B** The demand curve shifts to the left
- ☒ **C** The supply curve shifts to the left
- ☒ **D** There is a contraction in demand

(Total for Question 4(b) = 1 mark)

2 The table below shows UK wheat production between 2010 and 2015.

Year	Wheat production ('000 tonnes)	Index numbers of wheat production (2010 is base year)
2010	14 878	100
2011	15 257	
2012	13 261	
2013	11 921	80.1
2014	16 606	111.6
2015	16 129	108.4

(Source: adapted from https://www.gov.uk/government/uploads/system/uploadsattachment_data/file/466383/farming-statistics-2015-wheat-and-barley-production-uk.pdf)

(a) Define the term 'base year'.

(1)

.....

.....

(Total for Question 2(a) = 1 mark)

2 The table below shows UK wheat production between 2010 and 2015.

Year	Wheat production ('000 tonnes)	Index numbers of wheat production (2010 is base year)
2010	14 878	100
2011	15 257	
2012	13 261	
2013	11 921	80.1
2014	16 606	111.6
2015	16 129	108.4

(Source: adapted from https://www.gov.uk/government/uploads/system/uploadsattachment_data/file/466383/farming-statistics-2015-wheat-and-barley-production-uk.pdf)

(c) The percentage change in wheat production from 2014 to 2015 was:

(1)

☒ **A** 0.03

☒ **B** –2.87

☒ **C** –2.95

☒ **D** –477

(Total for Question 2(c) = 1 mark)

2 The table below shows UK wheat production between 2010 and 2015.

Year	Wheat production ('000 tonnes)	Index numbers of wheat production (2010 is base year)
2010	14 878	100
2011	15 257	
2012	13 261	
2013	11 921	80.1
2014	16 606	111.6
2015	16 129	108.4

(Source: adapted from https://www.gov.uk/government/uploads/system/uploadsattachment_data/file/466383/farming-statistics-2015-wheat-and-barley-production-uk.pdf)

(b) Calculate the index numbers for 2011 and 2012, using 2010 as the base year.

(2)

.....

.....

.....

.....

(Total for Question 2(b) = 2 marks)

4 A restaurant in London offers an "all you can eat buffet for £8.99". At this price you can refill your plate as many times as you like.

(a) With reference to the statement above explain what is meant by 'diminishing marginal utility'.

(3)

(Total for Question 4(a) = 3 marks)

4 A restaurant in London offers an "all you can eat buffet for £8.99". At this price you can refill your plate as many times as you like.

(a) With reference to the statement above explain what is meant by 'diminishing marginal utility'.

(3)

(b) If the price of an "all you can eat buffet" fell from £8.99 to £6.99, which **one** of the following is likely to happen?

(1)

☒ **A** There is an extension in demand

☒ **B** The demand curve shifts to the left

☒ **C** The supply curve shifts to the left

☒ **D** There is a contraction in demand

(Total for Question 4 = 4 marks)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

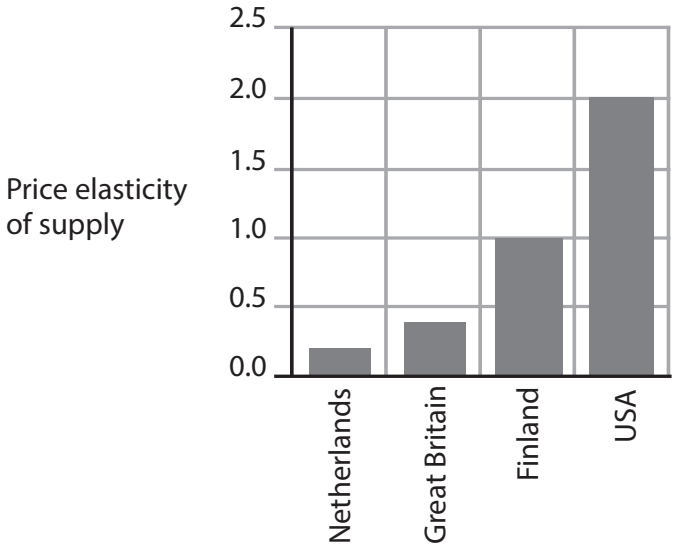
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

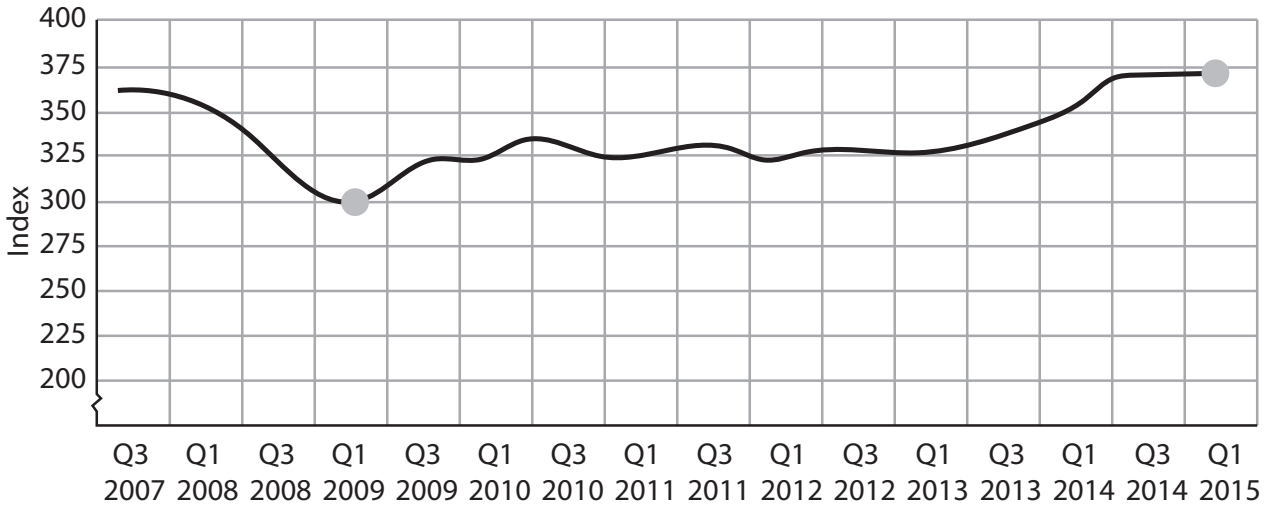
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

(d) With reference to Figure 2, calculate the percentage change in house prices between the first quarter of 2009 and the first quarter of 2015. You are advised to show your working.

(4)

2 The table below shows UK wheat production between 2010 and 2015.

Year	Wheat production ('000 tonnes)	Index numbers of wheat production (2010 is base year)
2010	14 878	100
2011	15 257	
2012	13 261	
2013	11 921	80.1
2014	16 606	111.6
2015	16 129	108.4

(Source: adapted from https://www.gov.uk/government/uploads/system/uploadsattachment_data/file/466383/farming-statistics-2015-wheat-and-barley-production-uk.pdf)

(a) Define the term 'base year'.

(1)

(b) Calculate the index numbers for 2011 and 2012, using 2010 as the base year.

(2)

(c) The percentage change in wheat production from 2014 to 2015 was:

(1)

- ☒ **A** 0.03
- ☒ **B** –2.87
- ☒ **C** –2.95
- ☒ **D** –477

(Total for Question 2 = 4 marks)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

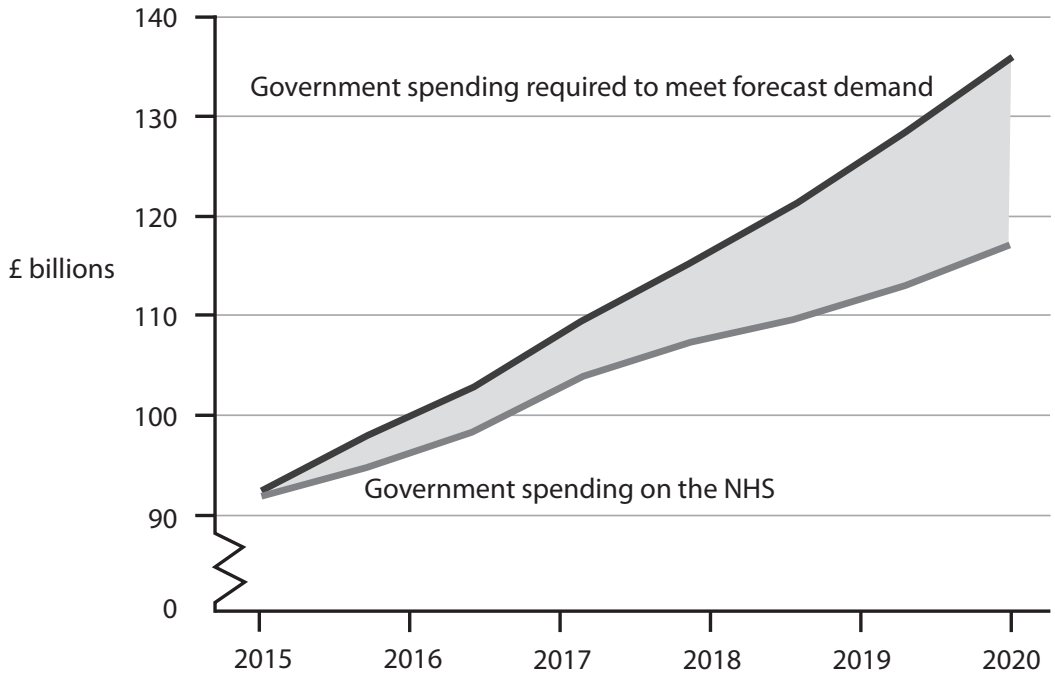
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

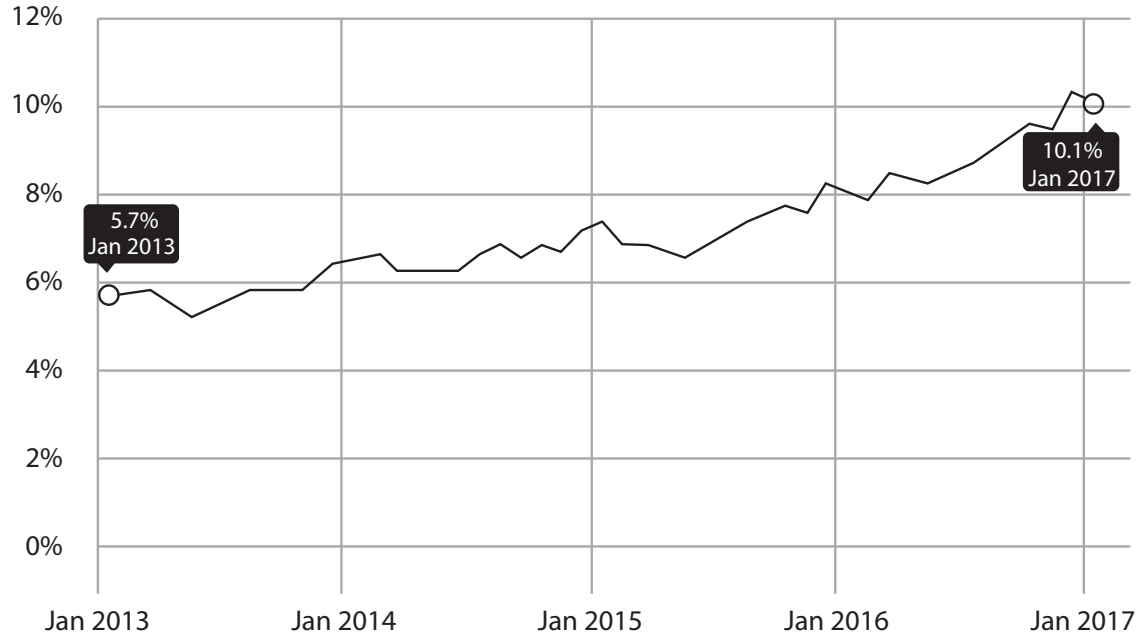
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

(d) Calculate the annual revenue raised by charging £12 per GP visit. Assume there will be 450 million GP visits per year and 90% of these will not be charged. You are advised to show your working.

(4)

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

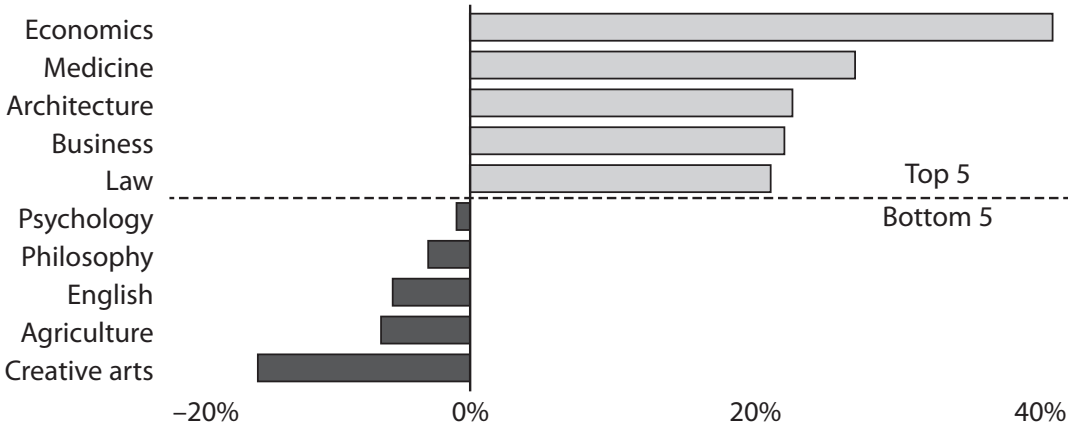
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

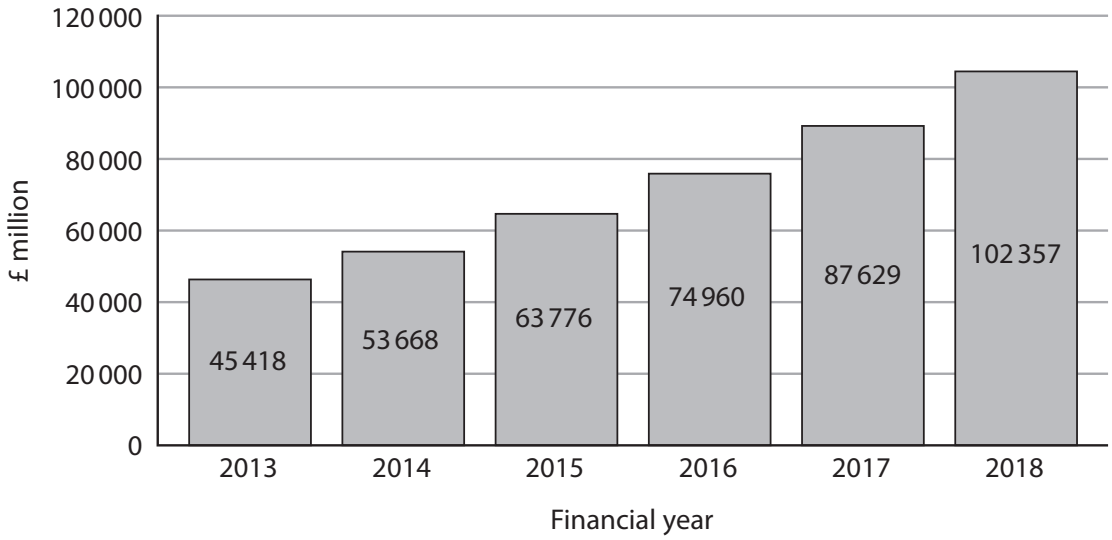
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



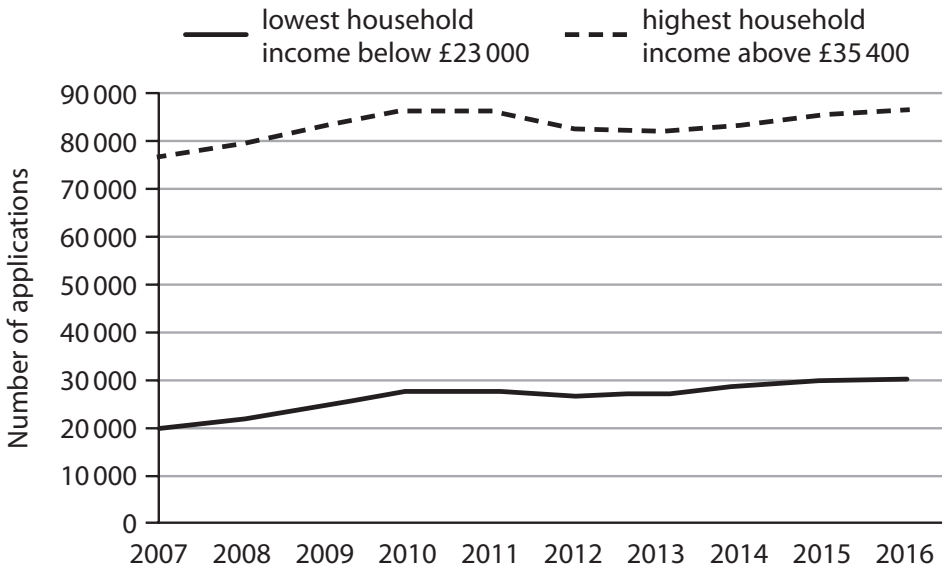
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

(d) With reference to Figure 2, calculate the percentage increase in outstanding student loans from 2013 to 2018. You are advised to show your working.

(4)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

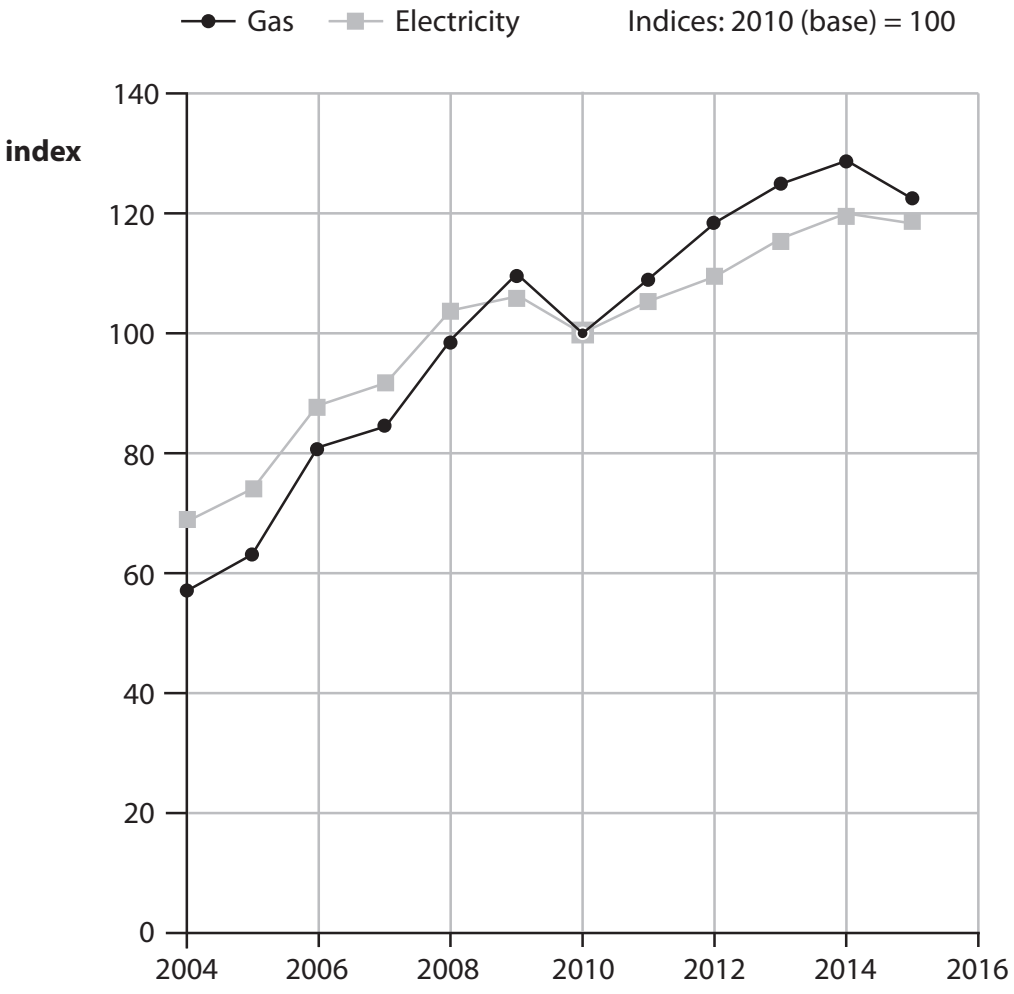
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK energy market

Figure 1: UK retail electricity and gas real price indices, 2004–2015



(Source: https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf)

Figure 2: UK retail electricity and gas supply: market share by company, 2016

Company	Electricity %	Gas %
British Gas	23	36
EON	16	13
SSE	16	13
EDF	12	8
Scottish Power	11	9
RWE (nPower)	10	9
Other companies	12	12
Total	**100**	**100**

(Sources: https://www.ofgem.gov.uk/chart/electricity-supply-market-shares-company-domestic-gb and https://www.ofgem.gov.uk/data-portal/retail-market-indicators)

Extract A

Competition and Markets Authority (CMA) report into the UK energy market

An investigation into the UK energy market by the CMA concluded that customers have been paying £1.4 billion a year more than they would in a fully competitive market. It found that 70% of domestic customers of the six largest energy firms were on an expensive standard rate. These customers could each save over £300 a year by switching to a cheaper deal but appear reluctant to do so.

However, the CMA investigation found no evidence of anti-competitive practices by firms. There has even been an increase in new entrant energy suppliers over recent years and their combined market share has reached 12% in both gas and electricity supply.

To protect consumers, the CMA has introduced various measures to open up and increase competition in the UK energy market. These include:

- the creation of a database designed to help consumers switch energy suppliers – rival suppliers can directly contact these customers
- the conversion of all homes to smart energy meters making it easier for customers to measure energy consumption and switch supplier
- new rules to protect the four million vulnerable customers using prepaid meters – this includes a temporary price cap until smart meters have been installed.

(Source: adapted from 'Competition and Markets Authority Final report into Energy Market Investigation' https://www.gov.uk/government/news/cma-publishes-final-energy-report-in-full)

Extract B

Proposals to regulate profits in the UK energy market

Currently energy retail companies make an average profit of 7% of total revenue. The Chairman of the Competition and Markets Authority (CMA) suggested that these profits are as much as five times higher than they should be, given the companies' limited role in marketing, metering and billing customers. He recommended a profit cap of 1.25% of total revenue.

However, Scottish Power criticised proposals for regulating profits saying that it would reduce investment in the energy industry and undermine long-term energy provision. The firm claimed that such a low rate of return is below the profit margin made by supermarkets.

All six large energy firms are vertically integrated – producing as well as distributing gas and electricity. This can provide efficiency benefits but also harm competition.

(Source: adapted from 'Profit cap doesn't fit with new investment, energy boss warns', by Robin Pagnamenta, *The Times*, 19th September 2016)

Extract C

Skills shortages in the UK energy sector

The energy sector is facing a skills shortage of engineers and technicians. Some 29% of employers in the gas and electricity industries report unfilled job vacancies compared with an average of 18% across all industries.

A lack of information and advice on career prospects for young people is partly to blame - many graduates have a negative image of the work involved. There is also a lack of students taking science, technology, engineering and maths-based subjects at school and university. Less than one-fifth of the energy sector's workforce are women.

The energy sector is characterised by an ageing workforce - data from the UK Labour Force Survey reveal that around two-thirds of workers are aged over 50. These cannot easily be replaced as a long time period is required for training and developing workers' skills in a highly regulated industry.

Urgent action is required by businesses and the government to reduce labour immobility to benefit the energy sector. This action could include policies to increase investment in training programmes, recruit skilled workers from overseas, change the industry image and deal with its ageing workforce.

(Source: adapted from 'Sector insights: skills and performance challenges in the energy sector', by the UK Commission for Employment and Skills, March 2015; https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/416998/15.03.25._Energy_SLMI_-_evidence_report.pdf)

(a) With reference to Figure 1, explain **one** likely reason for the overall trend in the real price of gas and electricity.

(5)

Sources for use with SECTION B

Read the following figure (1) and extracts (A to C) before answering Question 6.

Question 6

Digital markets

Figure 1: UK sales of selected best-selling video games, 2022

Name of game	Game publisher	Sales (quantity)	Game price
FIFA 23	Electronic Arts (EA)	2 530 510	£59.99
COD: MW II	Activision	1 675 323	£59.99
Mario Kart 8	Nintendo	426 748	£39.99
Gran Turismo 7	Sony	356 630	£69.99
Minecraft	Microsoft	219 679	£14.99

(Source: adapted from https://www.statista.com/statistics/274072/most-popular-games-in-the-united-kingdom-uk-by-unit-sales)

Extract A

Digital markets

Digital markets refer to firms producing and buying information technology services. Examples include digital banking, online retailing, computer games and mobile applications (apps). The emergence of digital markets has brought about increased competition across a wide range of products and services. They have also been beneficial for consumers who now have greater choice and access to higher-quality products at lower prices, for example, fashion clothing and language tuition. But while the digital revolution has enabled greater competition, it also presents some challenges for competition law enforcement.

(Source: adapted from https://pearsonblog.campaignserver.co.uk/digital-markets-reform-of-competition-laws/)

Extract B

Addictive video games

When consumers want to play a new video game, there are three payment options to access the full gaming experience. There is the price for the game (see Figure 1), the subscription fee to play online with friends (e.g. £13.99 a month) and there are many in-game purchases. For example, a Spiderman 'skin' which costs £9.99 enhances the appearance of the player. The high prices do not seem to deter many new buyers, especially in markets such as sports and multi-player action games. 40% of the world's population are online gamers. Young players spend up to 10–16 hours a day on their games due to the addictive nature of the games.

The video games can take up to five years to develop and cost over £150 million to produce with 200 full time employees working on the software. Starting salaries for software developers can be £100 000. However, some simple video games and apps cost as little as £23 000 to develop and take about six months.

All the major firms – EA, Microsoft, Nintendo and Sony – offer subscriptions that give access to new game releases. The US technology company, Microsoft, is one of the dominant firms in the market for subscription services. In October 2023, it merged with the game designer, Activision, which already owns one of the world's most popular video games (see Figure 1). The £65 billion merger is the largest in the history of the video games industry. However, Sony is concerned that the Microsoft-Activision merger may restrict access to popular video games owned by Microsoft and therefore reduce competition.

(Source: adapted from https://www.theguardian.com/technology/2023/apr/26/what-does-uks-ban-on-microsofts-activision-blizzard-takeover-mean-for-gaming?)

Extract C

The growth of automation

Automation is the use of technology to perform tasks previously carried out by humans. Automation has the potential to bring great economic benefits to both consumers and firms, contributing up to £12 trillion to global GDP by 2030. This extra income will also create demand for many new jobs. However, there are also concerns that it could displace many existing workers.

Financial services jobs are most at risk from automation in the shorter term and transport jobs, such as train drivers, in the longer run. For example, the growth of online banking has already led to the closure of many high street bank branches. By the mid-2030s, up to 30% of all jobs could be automated, with slightly more impact on men.

Another form of revenue for Microsoft is the artificial intelligence (AI) program ChatGPT. The growth of AI will require highly skilled workers such as trainers and engineers. Microsoft's annual gross profit for 2023 was £146 billion, a 7.69% increase on 2022.

(Source: adapted from https://www.economist.com/business/2023/03/26/big-tech-and-the-pursuit-of-ai-dominance)

6 (a) With reference to Extract A, explain **one** likely impact of the growth of digital markets on allocative efficiency.

(5)

SECTION A

Read extracts A and B before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Hand car wash (HCW) firms in the UK

Extract A

What is the true human cost of your £5 hand car wash (HCW)?

The UK's hand car washes (HCWs) are extremely price competitive, but they have also been linked to modern slavery. Are they ever fair for workers?

There is little agreement about how many HCWs there are in the UK. Estimates range from 10 000 to 20 000. This lack of accurate information about the industry makes government regulation very difficult. Automated car washes, with their fierce rotating bristles, used to be the first option for drivers in a hurry. Now there is more choice. While the economy slows and incomes fail to keep up with inflation, demand for HCWs has grown. Many people see paying £5 for a car washed by someone else, rather than cleaning it at home, as a small expense which yields a high utility. But what is the true cost of a £5 car wash – and what should we be paying?

The growth of HCWs is partly the result of changes in the structure of industry in the UK. Many petrol stations have closed as drivers fill up at supermarkets. Garages and their forecourts have closed as cars become more reliable and locked into service agreements. The available sites for HCWs have therefore increased significantly and rents have fallen.

HCW entrepreneurs have identified available land and have benefitted from changes in the labour market, partly as a result of EU migration. UK drivers are now able to obtain cheap and effective hand car washing. For many migrants, car washes are a first job. "They accept car washing for a short period while they improve their language skills and move into other industries," says Ian Clark, a professor of work and employment at Nottingham Business School. "But there are also car-wash workers without networks who are in a dead end, working there for long periods."

Many drivers are only interested in getting the cheapest wash. If the price is very low, it probably means that workers are receiving less than the minimum wage and working in poor conditions. Crude calculations illustrate the problem. A £5 HCW employing five workers for 10 hours a day would need to wash 79 cars a day to just cover the wage costs. This assumes the workers are paid the minimum wage. This is one car every seven and a half minutes. Even if the profit can be higher on valet services, the price of which can be as little as £12 for a full inside-and-out clean, it's hard to see how a car wash price as low as £5 pays a living wage. This ignores all other costs which HCWs incur such as business rates and rent.

Evidence from car-wash workers is limited but Clark and others have been able to build a picture of some of the tougher conditions on drenched forecourts. "Like nail bars and small garment manufacturers, car washes are what we call 'hard-to-reach places,'" Clark explains. As part of the research, Clark and his team spoke to workers from 45 HCWs in the Midlands.

Clark and his team met and observed workers who lacked waterproof boots or trousers, or hi-vis jackets and gloves. "They're spraying around hydrochloric acid solution for alloy wheels, breathing in the vapour and fumes," Clark says. Some workers were paid a little over half the minimum wage.

(Source adapted from: https://www.theguardian.com/world/2018/jul/16/true-human-cost-5-pound-hand-car-wash-modern-slavery)

Extract B

Government intervention in the HCW industry

There are three main areas of government intervention that might impact on labour intensive firms such as HCWs:

First, there is the planning issue which focuses on the impact on the environment, for example, the disposal and recycling of waste water and chemicals. There could be planning regulations to prevent the use of tarmac rather than concrete on forecourts. Tarmac allows waste water and chemicals to seep into the sub soil. It could also be a requirement to have a sludge trap to stop the waste entering waterways.

Second, there is the health and safety issue for workers. Prolonged exposure to chemicals and lack of protective clothing puts the health of workers at risk. Performance targets could involve minimum levels of protective clothing and rest breaks for the workers.

Third, there is the issue of tax. The informal nature of the business type makes tax evasion easier.

Not all UK HCWs violate regulations. There are legitimate, regulated HCW firms as well as examples of good practice by independent outlets. One national supermarket, Tesco, has banned all independent hand car washes from its car parks. It is now in a partnership agreement with national car wash operator Waves. It uses a WashMark certificate of quality and compliance which was introduced by the industry to improve working conditions. Other major supermarkets are considering similar changes. One adviser believes £9 is a reasonable minimum price for a basic wash. Some pressure groups have developed a mobile phone app where evidence of unreasonable conditions can be reported by drivers.

Involving drivers in the issue, and making them demand fairer car washes, creates an incentive for good businesses to improve practices and come forward to get a WashMark certificate.

(Source adapted from: https://www.parliament.uk/documents/commons-committees/environmental-audit/Hand-Car-Wash-evidence.pdf research into HCWs by Professor Ian Clark, Nottingham Business School May 2018)

(b) Examine **two** reasons why the demand for HCWs increases during a period when consumer 'incomes fail to keep up with inflation' (Extract A line 8).

(8)

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

(b) With reference to the information provided and your own knowledge, assess the view that tobacco consumers switching to e-cigarettes is an example of rational behaviour.

(10)

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

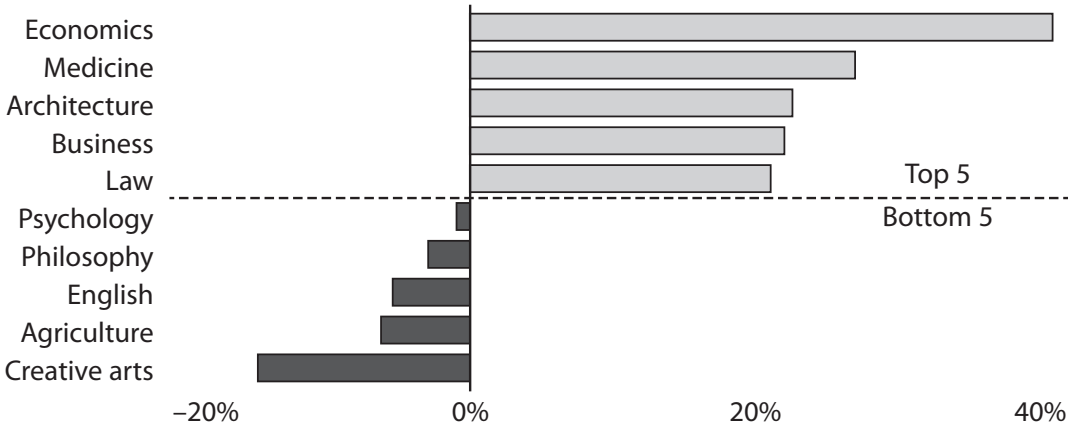
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

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Question 6

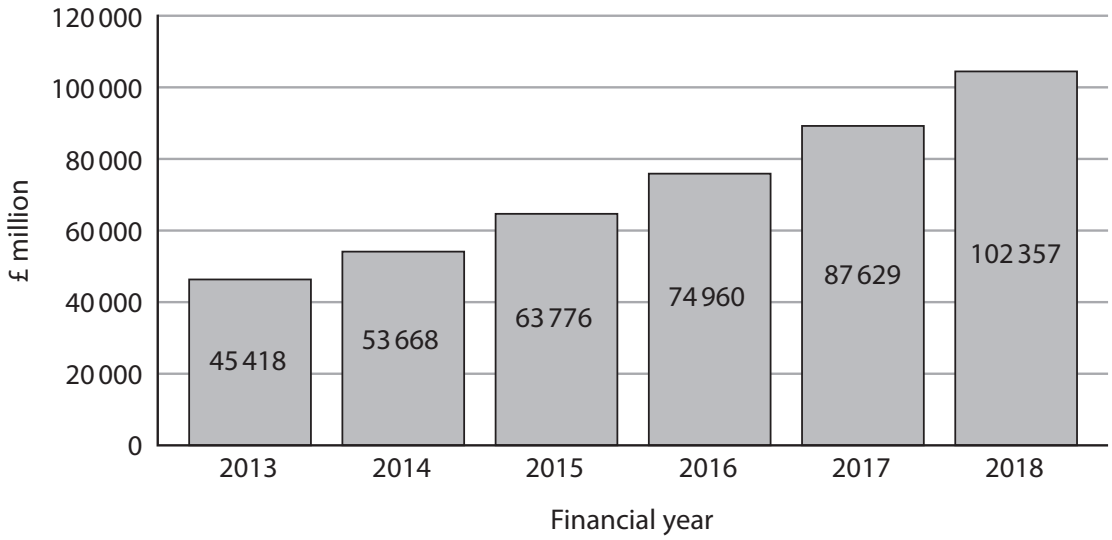
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



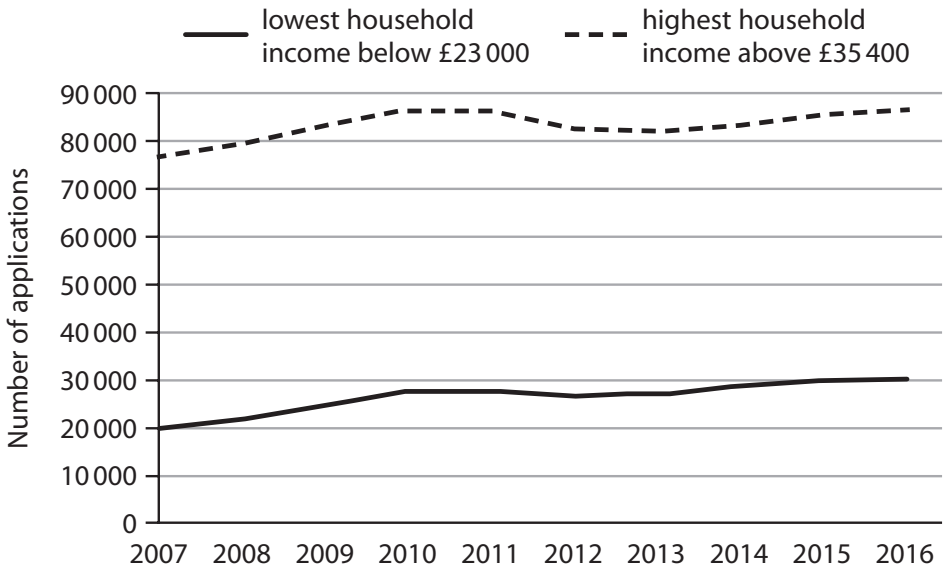
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

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(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

According to Extract B, the drop-out rate of students from low-income households is much higher than that of high-income households.

(b) Assess the likely impact of these drop-out rates on the allocation of resources within an economy.

(10)

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

According to Extract B, lines 15–16, 'fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit'.

(b) Assess whether it is rational for fishing companies to behave in this way.

(10)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK online streaming services market

Figure 1: Market share of UK online streaming services

	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Amazon Prime Video	37.9%	41.1%	45.0%	27.1%	25.9%
Disney+	16.0%	17.7%	19.3%	14.1%	21.5%
Netflix	15.0%	10.5%	5.0%	9.4%	4.5%
NOW	11.3%	11.2%	5.6%	11.0%	11.1%
AppleTV+	4.0%	5.5%	7.3%	9.2%	9.9%
BritBox	4.0%	3.0%	5.7%	6.0%	5.9%
Others	11.8	11.0%	12.1%	23.2%	21.2%

(Source adapted from: Kantar, Worldpanel Division Geotech 2022)

Figure 2: UK online streaming services – monthly fees

Streaming service provider	**September 2022**
Netflix premium (4 users/ultra HD*)	£15.99
Netflix standard (2 users/HD)	£10.99
Netflix basic (single user/non HD**)	£6.99
Amazon Prime Video	£8.99
Amazon Prime Video – Student price	£4.49
Disney+	£7.99
AppleTV+	£4.99

*This is the highest quality picture currently available

** This is the basic quality picture

(Source adapted from: https://www.radiotimes.com/tv/what-to-watch-tv/best-streaming-service-uk/)

Extract A

How Netflix makes use of behavioural science

In the last few years, companies have been trying to find ways to attract the attention of customers. Various streaming platforms such as Netflix, Amazon, and YouTube use 'nudges' to influence consumer behaviour. The 'next-up' feature on Netflix or 'auto-play' on YouTube has been subject to research that relates it to binge-watching. Binge-watching is the practice of viewing for a prolonged period, multiple episodes of a TV show or several films in rapid succession.

Similarly, the policy of offering a one-month free subscription under the label of 'free trial' requires credit card information to turn the forgetful subscriber into a potential paying one. Following this strategy, Netflix has expanded to 190 countries in just seven years and according to the Wall Street Journal, the company generated total revenue of over $5.2 billion in 2019, which was an increase from 2018 of around $4 billion.

However, 2022 data shows that consumers, increasingly worried about the rising cost of living, are turning their back on Netflix. With a reported cancellation of over 200 000 subscriptions in the first quarter and another two million forecast to leave by the end of the year. Subscribers are rethinking their commitment to the streaming services that grew their numbers sharply during the home-based months of the global health crisis. Netflix subscribers have also quoted a decline in value for money and satisfaction with the quality of the shows as key motives for cancellation.

Disney now see higher satisfaction rankings than Netflix across the quality of shows, amount of original content, number of new-release films, variety of classic films and amount of kids' content. Forecast cancellation rates for Disney+ fell to an all-time low of 3.2%.

(Source adapted from: https://www.novanudge.com/post/sludge-on-demand-how-netflix-makes-use-of-behavioural-science
https://www.theguardian.com/media/2022/apr/20/netflix-shares-fall-losing-subscribers)

Extract B

The economics of price discrimination

Throughout 2022, Netflix, a 100-billion-dollar company, increased prices in the US, Canada, the UK and Ireland (most of which saw similar price increases in 2021, too). In sharp contrast, Netflix recently announced it was reducing its prices in India (standard/2-user 499 rupees a month, equivalent to £5.42) in a bid to compete with Disney+ and Prime.

UK students currently enrolled in a college or university who have a valid student email address can join Prime Student through the Amazon website. This gives them nearly 50% off a standard Prime membership and many other exclusive benefits.

(Source adapted from: https://help.netflix.com/en/node/24926/in)

Extract C

Educational Website and TV Programmes

BBC Bitesize is a learning platform created by the BBC in 1998. The online study resource allows parents to teach their children from home, using ready-made lesson plans and study guides with questions for all ages. The revision sessions are free to watch and they are available for children aged five up to their late teens. The guides are written by teachers and subject experts, so they are reliable and follow the National Curriculum. Last year Bitesize attracted around two million weekly unique browsers with a peak week of 3.3 million in the GCSE exam period.

Oak National Academy is a freely available learning resource website created for pupils aged four to sixteen. Launched in 2020, as a response to the global health crisis, the website includes lesson slides, video lessons, worksheets, and quizzes conforming to the national curriculum in England. Ministers have set aside £43 million to fund the Oak National Academy over the next three years.

(Source adapted from: https://www.bbc.co.uk/bitesize/articles/zmjdhbk
https://www.structural-learning.com/post/oak-academy-a-teachers-guide#:~:text=Oak%20National%20Academy%20is%20a,the%20national%20curriculum%20of%20England)

(b) With reference to the information provided, assess whether Netflix subscribers behave rationally.

(10)

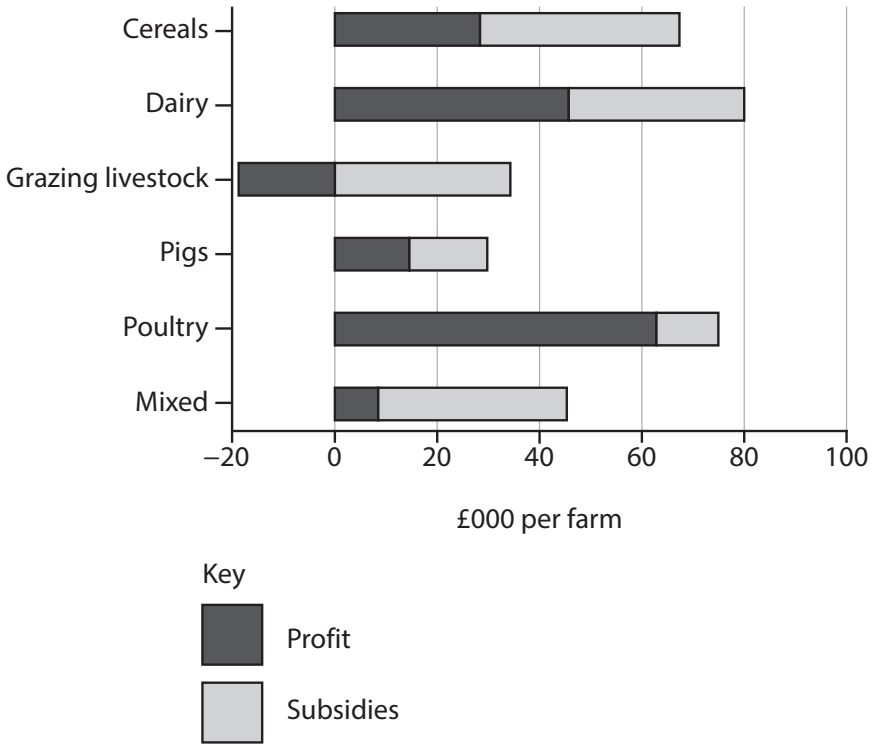
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

(b) With reference to the information provided and your own knowledge, assess the view that consumers switching to meat-substitute products is an example of rational behaviour.

(10)

SUB-TOPIC 1.2.2

DEMAND

Sub-topic 1.2.2 · 4 questions · 7 marks · lowest tariff first

2 The consensus that diesel emissions are bad for health has led to many cities planning to ban diesel vehicles from their centres. The mayors of Paris, Mexico City, Madrid and Athens have said they intend to ban these vehicles by 2025.

(Source: adapted from http://www.autoexpress.co.uk/car-news/consumer-news/98747/diesel-ban-clean-air-zone-expansion-could-see-diesel-cars-charged-to)

(c) Define the term 'demand'.

(1)

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(Total for Question 2(c) = 1 mark)

5 In March 2019, 458 054 new car registrations were made, which subsequently fell by 44% in March 2020 due to the impact of the global health crisis. Demand for new vehicles can change quickly and can be caused by a variety of factors.

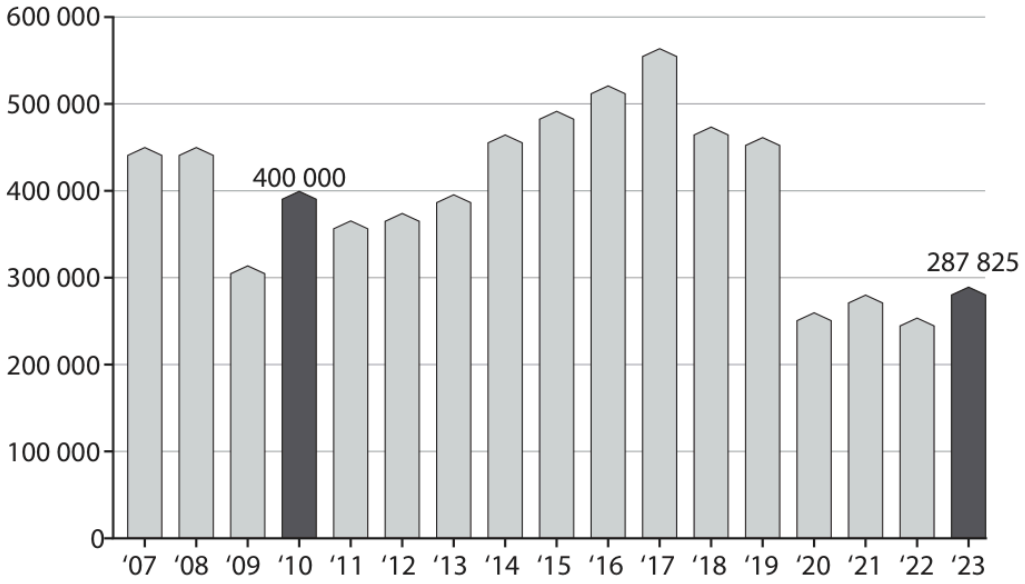
(Source: adapted from https://fleetworld.co.uk/uk-new-car-registrations-slump-44-in-march/)

(a) Which **one** of the following factors may cause a shift in demand for new cars?

(1)

- ☒ **A** Advertising
- ☒ **B** Cost of production
- ☒ **C** Indirect taxes
- ☒ **D** Subsidy to producers

March new car registrations 2007 to 2023



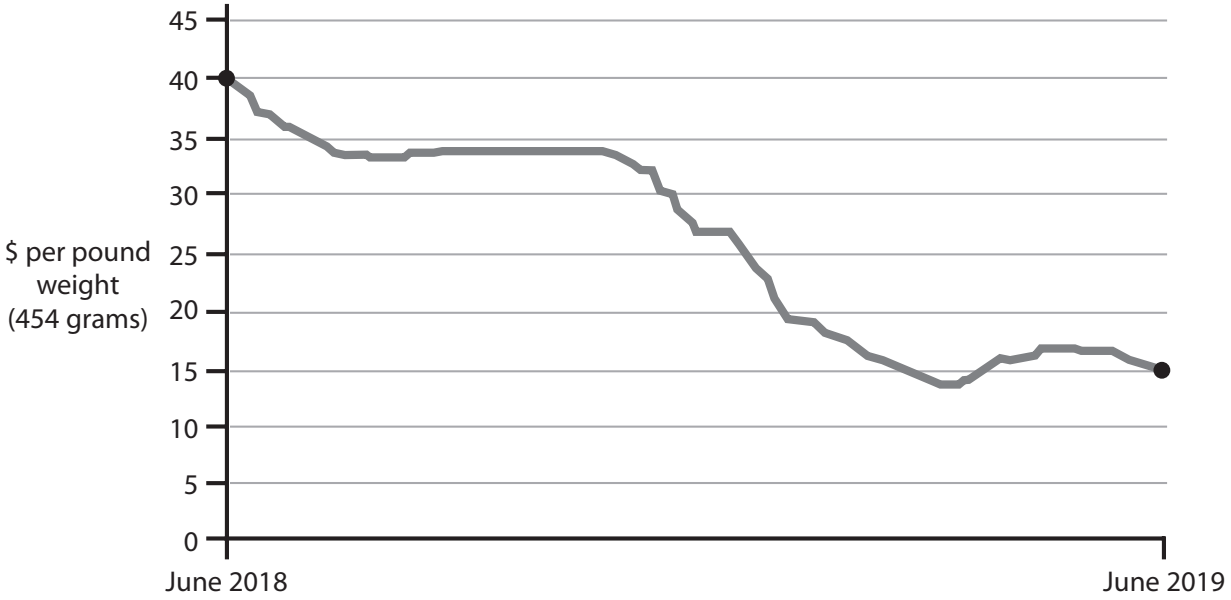
(Source: adapted from https://www.smmt.co.uk/vehicle-data/car-registrations/)

(Total for Question 5(a) = 1 mark)

2 Cobalt is a key metal used in the batteries of electric cars. China is the world's largest producer of electric cars but has recently cut subsidies to its manufacturers.

The Democratic Republic of the Congo (DRC) produces more than 60% of the world's supply of cobalt, from its small-scale mines. Many new small mines opened in 2018 as a result of improved expectations of profit.

The following graph shows the price of cobalt between June 2018 and June 2019.



(a) With reference to the information provided, draw a supply and demand diagram to show why the price of cobalt fell between June 2018 and June 2019.

(4)



(b) Between June 2018 and June 2019 the price of cobalt fell by:

(1)

- ☒ **A** 25%
- ☒ **B** 37.5%
- ☒ **C** 62.5%
- ☒ **D** 166.7%

(Total for Question 2 = 5 marks)

5 In March 2019, 458 054 new car registrations were made, which subsequently fell by 44% in March 2020 due to the impact of the global health crisis. Demand for new vehicles can change quickly and can be caused by a variety of factors.

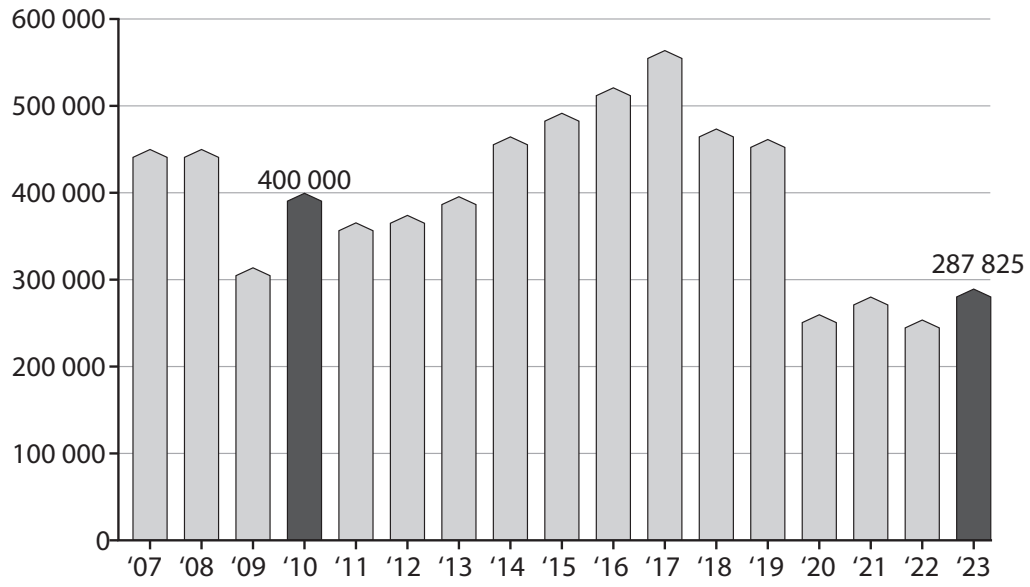
(Source: adapted from https://fleetworld.co.uk/uk-new-car-registrations-slump-44-in-march/)

(a) Which **one** of the following factors may cause a shift in demand for new cars?

(1)

- ☒ **A** Advertising
- ☒ **B** Cost of production
- ☒ **C** Indirect taxes
- ☒ **D** Subsidy to producers

March new car registrations 2007 to 2023



(Source: adapted from https://www.smmt.co.uk/vehicle-data/car-registrations/)

(b) The diagram on the previous page shows new car registrations in March from 2007 to 2023. Using 2010 as the base year, calculate the index number for 2023.

(3)

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SUB-TOPIC 1.2.3

PRICE, INCOME AND CROSS ELASTICITIES OF DEMAND

Sub-topic 1.2.3 · 76 questions · 362 marks · lowest tariff first

5 "Since peaking at 132p a litre in July 2014, petrol prices have fallen by 20%".

(Source: adapted from UK petrol prices cut again, L Elliott, The Guardian 12-1-15
http://www.theguardian.com/business/2015/jan/12/oil-slump-uk-petrol-prices-fall)

(a) What is the expected percentage change in the quantity of petrol demanded if the price elasticity of demand is –0.2?

(1)

☒ **A** –0.4%

☒ **B** +0.4%

☒ **C** –4%

☒ **D** +4%

(Total for Question 5(a) = 1 mark)

2 In February 2016 the Daily Mail newspaper increased its price from 60p to 65p. By August 2016 its sales had fallen by 5.41%.

(b) Which **one** of the following is most likely to be a determinant of price elasticity of demand for the Daily Mail newspaper?

(1)

- ☒ **A** Availability of rival newspapers
- ☒ **B** Change in population size
- ☒ **C** Decrease in the cost of producing the Daily Mail newspaper
- ☒ **D** Expected rise in the price of the Daily Mail newspaper

(Total for Question 2(b) = 1 mark)

2 In February 2016 the Daily Mail newspaper increased its price from 60p to 65p. By August 2016 its sales had fallen by 5.41%.

(c) Define the term 'ceteris paribus'.

(1)

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(Total for Question 2(c) = 1 mark)

4 Between 2013 and 2015, median household income in the UK increased from £24 200 to £25 700. Over the same period the demand for bus travel fell by 3%.

(a) Which **one** of the following is the most accurate explanation of the term 'median household income'?

(1)

- ☒ **A** The difference between the highest level of household income and the lowest level of household income
- ☒ **B** The middle household income after placing all household incomes in numerical order
- ☒ **C** The most frequently occurring level of household income
- ☒ **D** Total household income divided by the number of households

(Total for Question 4(a) = 1 mark)

2 The consensus that diesel emissions are bad for health has led to many cities planning to ban diesel vehicles from their centres. The mayors of Paris, Mexico City, Madrid and Athens have said they intend to ban these vehicles by 2025.

(Source: adapted from http://www.autoexpress.co.uk/car-news/consumer-news/98747/diesel-ban-clean-air-zone-expansion-could-see-diesel-cars-charged-to)

(b) A ban on diesel vehicles in city centres will reduce the demand for diesel fuel. This is because:

(1)

- ☒ **A** consumers are irrational
- ☒ **B** consumers expect the price of diesel to rise
- ☒ **C** the goods are complements
- ☒ **D** the goods are substitutes

(Total for Question 2(b) = 1 mark)

3 Amazon Prime, Netflix and NowTV all charge £7.99 per month for streaming very similar film and television services.

(a) The most likely cross price elasticity of demand for close substitutes is:

(1)

- ☒ **A** – 2.1
- ☒ **B** – 0.1
- ☒ **C** + 0.1
- ☒ **D** + 2.1

In 2016 the average cinema ticket price in the UK was £7.41, and there were 19.1 million tickets sales. The price elasticity of demand was estimated to be –0.5.

(Total for Question 3(a) = 1 mark)

5

	2015	2017
Average weekly pocket money for children aged under 10 years	£7	£8.75

In the UK, Freddo is a popular chocolate snack bought by children who are under 10 years old. Freddo's income elasticity of demand is estimated to be –0.1.

(a) Calculate the percentage change in quantity demanded for Freddos between 2015 and 2017, ceteris paribus:

(1)

- ☒ **A** –0.8%
- ☒ **B** –2%
- ☒ **C** –2.5%
- ☒ **D** –25%

(Total for Question 5(a) = 1 mark)

2 (a) The income elasticity of demand for bus travel is estimated to be –1.5.
This implies that:

(1)

- ☒ **A** a 10% increase in fares will lead to a 15% decrease in passengers
- ☒ **B** as unemployment falls, more people will use buses
- ☒ **C** bus travel has a negative cross elasticity of demand compared to rail travel
- ☒ **D** bus travel is an inferior good

(Total for Question 2(a) = 1 mark)

2 The world's largest producer of natural gas is the USA. In 2021 production fell even though the price increased.

(b) The table below shows estimates of the price elasticity of supply and price elasticity of demand for gas.

	Natural Gas
Price elasticity of supply	+0.14
Price elasticity of demand	−0.10

(Source: adapted from http://www.usaee.org/usaee2013/submissions/Abs/Ponce_Neumann_Elasticities_gas_supply.pdf, http://www.mackinac.org/1247)

Which **one** of the following can be inferred from the table?

(1)

- ☒ **A** A 10% increase in the price of gas would cause a more than 10% increase in the supply
- ☒ **B** Gas is a normal good with income inelastic demand
- ☒ **C** The demand and supply of gas are both price inelastic
- ☒ **D** The demand for gas is more responsive to changes in price than supply

(Total for Question 2(b) = 1 mark)

4 During 2021 the UK experienced severe shortages of crisps, petrol and many other items.

(Source: adapted from https://www.independent.co.uk/news/business/news/uk-shortages-covid-brexit-supply-chain-b1968458.html)

Esso, Tesco and Sainsbury's all charge £1.48 for a litre of petrol.

(b) Which **one** of the following is the most likely cross price elasticity of demand for close substitutes?

(1)

- ☒ **A** – 2.1
- ☒ **B** – 0.1
- ☒ **C** + 0.1
- ☒ **D** + 2.1

(Total for Question 4(b) = 1 mark)

5 Chief Executive Elon Musk said "affordability" was the biggest barrier to Tesla reaching a far larger market. Before recent price cuts for its electric vehicles, he said, "We weren't sure about what the price elasticity of demand was for Tesla. We found that even small changes in price have a big impact on demand."

(Source adapted from: https://www.ft.com/)

(b) Define the term '*ceteris paribus*'.

(1)

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(Total for Question 5(b) = 1 mark)

5 Chief Executive Elon Musk said "affordability" was the biggest barrier to Tesla reaching a far larger market. Before recent price cuts for its electric vehicles, he said, "We weren't sure about what the price elasticity of demand was for Tesla. We found that even small changes in price have a big impact on demand."

(Source adapted from: https://www.ft.com/)

(c) Which **one** of the following is most likely to be a determinant of price elasticity of demand for the Model 3 electric vehicle?

(1)

- ☒ **A** Availability of substitute electric vehicles
- ☒ **B** Change in population size
- ☒ **C** Increase in the cost of steel
- ☒ **D** Number of unsold Model 3 electric vehicles

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

(Total for Question 5(c) = 1 mark)

2 (a) In 2021, a bakery sold 2.5 million sausage rolls per week at the price of £1.00 each. In 2022 the price increased to £1.20. The price elasticity of demand was estimated to be –0.2.

Calculate the new quantity of sausage rolls sold per week in 2022 after the price increased, ceteris paribus.

(3)

(b) Which **one** of the following is the most appropriate description of the price elasticity of demand of –0.2?

(1)

- ☒ **A** Perfectly inelastic
- ☒ **B** Relatively elastic
- ☒ **C** Relatively inelastic
- ☒ **D** Unitary elastic

(Total for Question 2 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The table shows market data for e-cigarette kits. The original equilibrium price is £23.

Price £	Quantity demanded per month (000)	Quantity supplied per month (000)	New quantity demanded per month (000)	New quantity supplied per month (000)
25	5	9		
24	6	8		
23	7	7		
22	8	6		
21	9	5		

As a result of a successful advertising campaign, demand increased by 3 000 e-cigarette kits at all prices. At the same time production costs fell leading to an increase in supply of 1000 e-cigarette kits at all prices.

(a) Calculate the new equilibrium price and quantity following the successful advertising campaign and the fall in production costs. Use the last two columns for your working.

(4)

(b) Research conducted in New Zealand in 2014 estimated the cross elasticity of demand for e-cigarettes to be 0.16 in response to changes in the price of tobacco. This implies that a 5% increase in the price of tobacco will cause the percentage change in demand for e-cigarettes to be:

(1)

- ☒ **A** -31.25
- ☒ **B** -0.16
- ☒ **C** 0.8
- ☒ **D** 31.25

(Total for Question 1 = 5 marks)

2 Between 2010 and 2015 the average price of tea in the UK increased from £7.20 per kilo to £8.48 per kilo. Over the same period the quantity of tea purchased fell from 97 million kilos to 76 million kilos.

(Source: http://www.theguardian.com/lifeandstyle/shortcuts/2015/aug/05/brew-do-you-think-you-are-why-tea-needs-to-copy-coffee-in-order-to-survive)

(c) Estimates for the demand for black tea in the UK suggest that it is an inferior good. This implies it has a negative:

(1)

- ☒ **A** cross elasticity of demand
- ☒ **B** income elasticity of demand
- ☒ **C** price elasticity of demand
- ☒ **D** price elasticity of supply

(Total for Question 2(c) = 1 mark)

2 The number of individual weekly ticket sales from UK National Lottery games operated by Camelot was 73 million in the financial year 2015–2016.

The sale price of each lottery ticket was £2. This figure included 24 pence of tax revenue on each ticket sold.

In 2016 a coastal flood defence scheme was completed at Broomhill Sands in Kent, protecting people, homes and businesses. A £30 million grant from the National Lottery paid for the scheme.

(Source: https://www.gov.uk/government/news/30-million-project-set-to-reduce-flood-risk-in-kent)

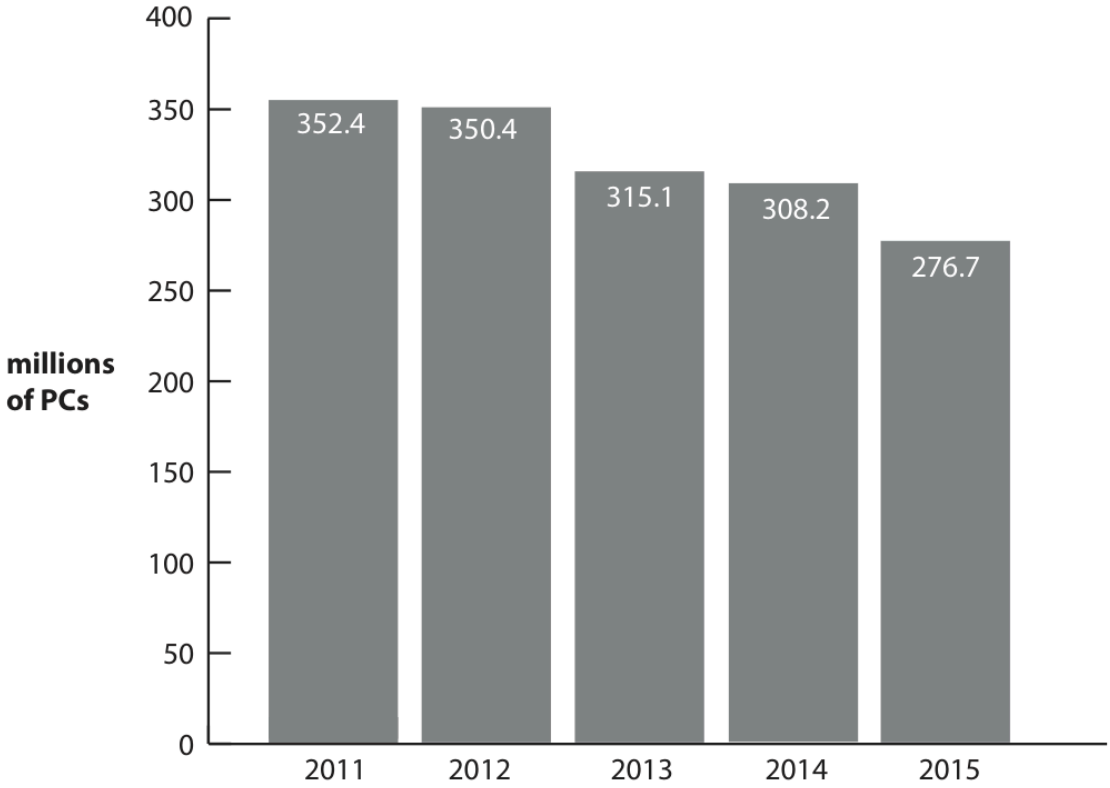
(c) The most likely reason for this grant is to ensure the:

(1)

- ☒ **A** exclusivity of Broomhill Sands
- ☒ **B** provision of a private good
- ☒ **C** provision of a public good
- ☒ **D** rivalry of Broomhill Sands

(Total for Question 2(c) = 1 mark)

5 The following graph shows the global sales of personal computers (PCs) between 2011 and 2015.



(Source: adapted from IDC and reported in *The Times*, 14th January 2016)

(a) The percentage decrease in sales of PCs between 2011 and 2015 is:

(1)

- ☒ **A** 21.5
- ☒ **B** 27.3
- ☒ **C** 31.5
- ☒ **D** 75.7

(Total for Question 5(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Between 2016 and 2017 the average price of new build houses in the UK rose by an estimated 5.4%.

Year	Quantity of UK new house builds
2016	134 612
2017	162 880

(Source: http://www.telegraph.co.uk/business/2017/05/25/number-new-homes-built-hits-highest-level-since-financial-crisis/)

(b) A 2.5% increase in new build house prices in one region of the UK causes a 10% increase in the number of houses built. Ceteris paribus, this suggests that supply of new house builds is:

(1)

- ☒ **A** perfectly price elastic
- ☒ **B** perfectly price inelastic
- ☒ **C** relatively price elastic
- ☒ **D** relatively price inelastic

(Total for Question 1(b) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Disney+ is a streaming service that distributes films and television series produced by the Walt Disney Studios.

	Disney+ subscribers (million)
November 2019	10
December 2019	26.5
February 2020	28.6
April 2020	50

(Source adapted from: https://www.businessofapps.com/data/disney-plus-statistics/)

(a) *Ceteris paribus*, the most likely consequence of the above data is that Disney+ will experience an increase in its:

(1)

☒ **A** fixed costs

☒ **B** income elasticity of demand

☒ **C** price elasticity of demand

☒ **D** revenue

(Total for Question 1(a) = 1 mark)

2 The table below shows data on the drinks market in Chile in 2017.

Price elasticity of demand for sweetened drinks	−1.37
Cross price elasticity of demand for bottled water in response to a price change in sweetened drinks	+0.63

(Source: adapted from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4098-x)

(c) Using the data on page 4, which **one** of the following is most likely?

(1)

		A decrease in the price of sweetened drinks will have the following effect on revenue:	Sweetened drinks and bottled water are:
☒	**A**	Decrease	Complements
☒	**B**	Decrease	Substitutes
☒	**C**	Increase	Complements
☒	**D**	Increase	Substitutes

(Total for Question 2(c) = 1 mark)

3 A luxury brownie baker is faced with falling demand as incomes fall.

(a) The likely income elasticity of demand for a luxury good is:

(1)

- ☒ **A** −3.40
- ☒ **B** −0.74
- ☒ **C** +0.74
- ☒ **D** +3.40

(Total for Question 3(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant.
You may annotate and include diagrams in your answers.

1 The table below shows price elasticity of demand for bus tickets in London 2021

Age	Price elasticity of demand
18+ Student	–0.7
Adult	–0.4

(Source adapted from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669090/youth-travel-concessions-price-elasticity.pdf and https://tfl.gov.uk/fares/find-fares/bus-and-tram-fares#on-this-page-4)

(b) In 2021, the adult 7-day bus ticket was £21.90. Bus ticket prices in London in 2022 increased by 4.8%. Ceteris paribus, which **one** of the following is the percentage decrease in the 7-day bus ticket demand by adults?

(1)

☒ **A** 0.08

☒ **B** 1.92

☒ **C** 3.36

☒ **D** 12.00

(Total for Question 1(b) = 1 mark)

2 In 2022 the UK government provided 130 new licences for North Sea oil and gas exploration, in order to reduce energy prices. However, companies can take 20 years to begin to extract oil. Furthermore, they often have to continue producing oil even when prices fall because the equipment has no other uses.

(Source: adapted from https://www.theguardian.com/environment/2022/dec/12/uk-ministers-face-legal-challenge-over-north-sea-oil-and-gas-licences)

(b) The cross elasticity of demand for petrol cars with respect to the price of diesel cars is estimated to be +0.64.

Which **one** of the following is the most likely impact if the price of diesel cars falls by 10%?

(1)

☒ **A** The price of petrol cars falls by 6.4%

☒ **B** The price of petrol cars rises by 64%

☒ **C** The quantity demanded of petrol cars falls by 6.4%

☒ **D** The quantity demanded of petrol cars rises by 64%

(Total for Question 2(b) = 1 mark)

2 In February 2016 the Daily Mail newspaper increased its price from 60p to 65p. By August 2016 its sales had fallen by 5.41%.

(a) Ceteris paribus, calculate the price elasticity of demand for the Daily Mail newspaper over this period. You are advised to show your working.

(2)

(Total for Question 2(a) = 2 marks)

5 Chief Executive Elon Musk said "affordability" was the biggest barrier to Tesla reaching a far larger market. Before recent price cuts for its electric vehicles, he said, "We weren't sure about what the price elasticity of demand was for Tesla. We found that even small changes in price have a big impact on demand."

(Source adapted from: https://www.ft.com/)

(a) In June 2023, Tesla further reduced the price of its Model 3 vehicle by £4 200 from £42 990. It has been forecast that the price cut will lead to a 15% increase in demand. *Ceteris paribus*, calculate the price elasticity of demand for the Model 3. You are advised to show your working.

(2)

(Total for Question 5(a) = 2 marks)

2 The number of individual weekly ticket sales from UK National Lottery games operated by Camelot was 73 million in the financial year 2015–2016.

The sale price of each lottery ticket was £2. This figure included 24 pence of tax revenue on each ticket sold.

Research conducted for HMRC estimated the cross elasticity of demand for using gaming machines to be 1.28 in response to changes in the price of national lottery tickets.

(Source: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322845/report313.pdf)

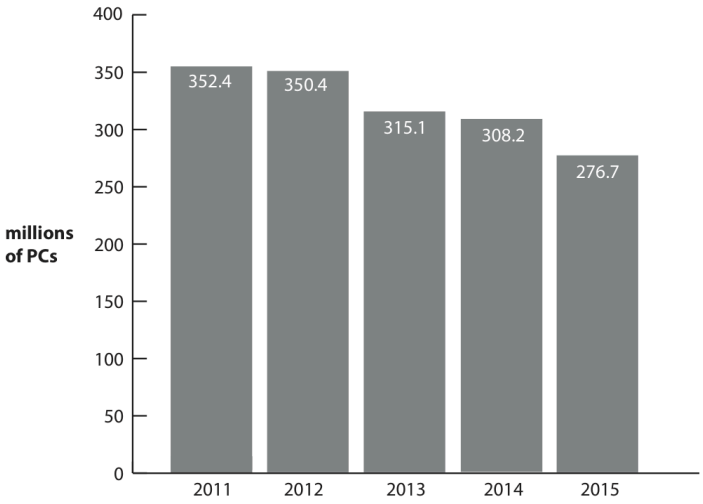
In October 2013 Camelot increased the price of a national lottery ticket from £1 to £2.

(b) Explain the likely impact of the price increase of national lottery tickets on the demand for using gaming machines.

(2)

(Total for Question 2(b) = 2 marks)

5 The following graph shows the global sales of personal computers (PCs) between 2011 and 2015.



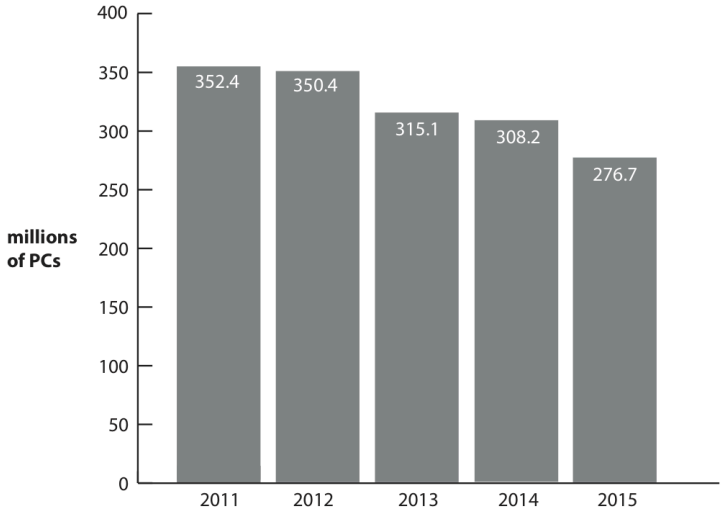
(Source: adapted from IDC and reported in *The Times*, 14th January 2016)

(b) Explain **one** likely reason for the decrease in sales of PCs.

(2)

(Total for Question 5(b) = 2 marks)

5 The following graph shows the global sales of personal computers (PCs) between 2011 and 2015.



(Source: adapted from IDC and reported in *The Times*, 14th January 2016)

The following table shows global sales of PCs by company in 2015.

Company	Sales of PCs (million)
Lenovo	57 182
HP	53 534
Dell	39 049
Apple	20 794
Acer Group	19 680
Others	86 461
Total	**276 700**

(Source: IDC, reported in *The Times*, 14th January 2016)

(c) Calculate the five-firm concentration ratio. You are advised to show your working.

(2)

(Total for Question 5(c) = 2 marks)

2 The table below shows data on the drinks market in Chile in 2017.

Price elasticity of demand for sweetened drinks	−1.37
Cross price elasticity of demand for bottled water in response to a price change in sweetened drinks	+0.63

(Source: adapted from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4098-x)

(a) The price of sweetened drinks increases by 5%. *Ceteris paribus*, calculate the percentage change in the quantity demanded for sweetened drinks. You are advised to show your working.

(2)

(Total for Question 2(a) = 2 marks)

2 The table below shows data on the drinks market in Chile in 2017.

Price elasticity of demand for sweetened drinks	−1.37
Cross price elasticity of demand for bottled water in response to a price change in sweetened drinks	+0.63

(Source: adapted from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4098-x)

(b) The price of sweetened drinks increases by 5%. *Ceteris paribus*, calculate the percentage change in the quantity demanded for bottled water. You are advised to show your working.

(2)

(Total for Question 2(b) = 2 marks)

5 "Since peaking at 132p a litre in July 2014, petrol prices have fallen by 20%".

(Source: adapted from UK petrol prices cut again, L Elliott, The Guardian 12-1-15
http://www.theguardian.com/business/2015/jan/12/oil-slump-uk-petrol-prices-fall)

(b) The price elasticity of demand for petrol is –0.2. Explain the change to the total revenue of petrol stations as a result of cutting their prices.

(3)

(Total for Question 5(b) = 3 marks)

4 Between 2013 and 2015, median household income in the UK increased from £24 200 to £25 700. Over the same period the demand for bus travel fell by 3%.

(b) Using the data provided, explain whether bus travel is a normal good or an inferior good.

(3)

(Total for Question 4(b) = 3 marks)

3 Amazon Prime, Netflix and NowTV all charge £7.99 per month for streaming very similar film and television services.

(b) Calculate the new total revenue if prices were raised by 3% in 2017 to £7.63, if everything else remained unchanged. You are advised to show your working.

(3)

(Total for Question 3(b) = 3 marks)

5

	2015	2017
Average weekly pocket money for children aged under 10 years	£7	£8.75

In the UK, Freddo is a popular chocolate snack bought by children who are under 10 years old. Freddo's income elasticity of demand is estimated to be –0.1.

(b) Explain **one** reason why the income elasticity of demand is significant to the producer of Freddos.

(3)

(Total for Question 5(b) = 3 marks)

2 (a) The income elasticity of demand for bus travel is estimated to be –1.5.
This implies that:

(1)

- ☒ **A** a 10% increase in fares will lead to a 15% decrease in passengers
- ☒ **B** as unemployment falls, more people will use buses
- ☒ **C** bus travel has a negative cross elasticity of demand compared to rail travel
- ☒ **D** bus travel is an inferior good

(b) Explain why a firm might try to reduce the price elasticity of demand for its products.

(3)

(Total for Question 2 = 4 marks)

2 (a) In 2021, a bakery sold 2.5 million sausage rolls per week at the price of £1.00 each. In 2022 the price increased to £1.20. The price elasticity of demand was estimated to be –0.2.

Calculate the new quantity of sausage rolls sold per week in 2022 after the price increased, ceteris paribus.

(3)

(Total for Question 2(a) = 3 marks)

5 "Since peaking at 132p a litre in July 2014, petrol prices have fallen by 20%".

(Source: adapted from UK petrol prices cut again, L Elliott, The Guardian 12-1-15 http://www.theguardian.com/business/2015/jan/12/oil-slump-uk-petrol-prices-fall)

(a) What is the expected percentage change in the quantity of petrol demanded if the price elasticity of demand is –0.2?

(1)

- ☒ **A** –0.4%
- ☒ **B** +0.4%
- ☒ **C** –4%
- ☒ **D** +4%

(b) The price elasticity of demand for petrol is –0.2. Explain the change to the total revenue of petrol stations as a result of cutting their prices.

(3)

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

(d) With reference to Extract A, lines 11–13, calculate the price elasticity of demand for tobacco cigarettes in high-income countries and in low-middle-income countries. You are advised to show your working.

(4)

High-income countries

Low-middle-income countries

2 In February 2016 the Daily Mail newspaper increased its price from 60p to 65p. By August 2016 its sales had fallen by 5.41%.

(a) Ceteris paribus, calculate the price elasticity of demand for the Daily Mail newspaper over this period. You are advised to show your working.

(2)

(b) Which **one** of the following is most likely to be a determinant of price elasticity of demand for the Daily Mail newspaper?

(1)

- ☒ **A** Availability of rival newspapers
- ☒ **B** Change in population size
- ☒ **C** Decrease in the cost of producing the Daily Mail newspaper
- ☒ **D** Expected rise in the price of the Daily Mail newspaper

(c) Define the term 'ceteris paribus'.

(1)

.....

.....

.....

.....

.....

(Total for Question 2 = 4 marks)

4 Between 2013 and 2015, median household income in the UK increased from £24 200 to £25 700. Over the same period the demand for bus travel fell by 3%.

(a) Which **one** of the following is the most accurate explanation of the term 'median household income'?

(1)

- ☒ **A** The difference between the highest level of household income and the lowest level of household income
- ☒ **B** The middle household income after placing all household incomes in numerical order
- ☒ **C** The most frequently occurring level of household income
- ☒ **D** Total household income divided by the number of households

(b) Using the data provided, explain whether bus travel is a normal good or an inferior good.

(3)

(Total for Question 4 = 4 marks)

3 Amazon Prime, Netflix and NowTV all charge £7.99 per month for streaming very similar film and television services.

(a) The most likely cross price elasticity of demand for close substitutes is:

(1)

- ☒ **A** – 2.1
- ☒ **B** – 0.1
- ☒ **C** + 0.1
- ☒ **D** + 2.1

In 2016 the average cinema ticket price in the UK was £7.41, and there were 19.1 million tickets sales. The price elasticity of demand was estimated to be –0.5.

(b) Calculate the new total revenue if prices were raised by 3% in 2017 to £7.63, if everything else remained unchanged. You are advised to show your working.

(3)

(Total for Question 3 = 4 marks)

5

	2015	2017
Average weekly pocket money for children aged under 10 years	£7	£8.75

In the UK, Freddo is a popular chocolate snack bought by children who are under 10 years old. Freddo's income elasticity of demand is estimated to be –0.1.

(a) Calculate the percentage change in quantity demanded for Freddos between 2015 and 2017, ceteris paribus:

(1)

- ☒ **A** –0.8%
- ☒ **B** –2%
- ☒ **C** –2.5%
- ☒ **D** –25%

(b) Explain **one** reason why the income elasticity of demand is significant to the producer of Freddos.

(3)

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

2 (a) The income elasticity of demand for bus travel is estimated to be –1.5.
This implies that:

(1)

- ☒ **A** a 10% increase in fares will lead to a 15% decrease in passengers
- ☒ **B** as unemployment falls, more people will use buses
- ☒ **C** bus travel has a negative cross elasticity of demand compared to rail travel
- ☒ **D** bus travel is an inferior good

(b) Explain why a firm might try to reduce the price elasticity of demand for its products.

(3)

(Total for Question 2 = 4 marks)

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

Fish and chips are complementary goods with an estimated cross elasticity of demand of –8. Currently 950 000 bags of chips are sold in UK fish and chip shops each day.

(d) With reference to the information provided, calculate the new quantity demanded of bags of chips from fish and chip shops, following a 2% increase in the price of fish. You are advised to show your working.

(4)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

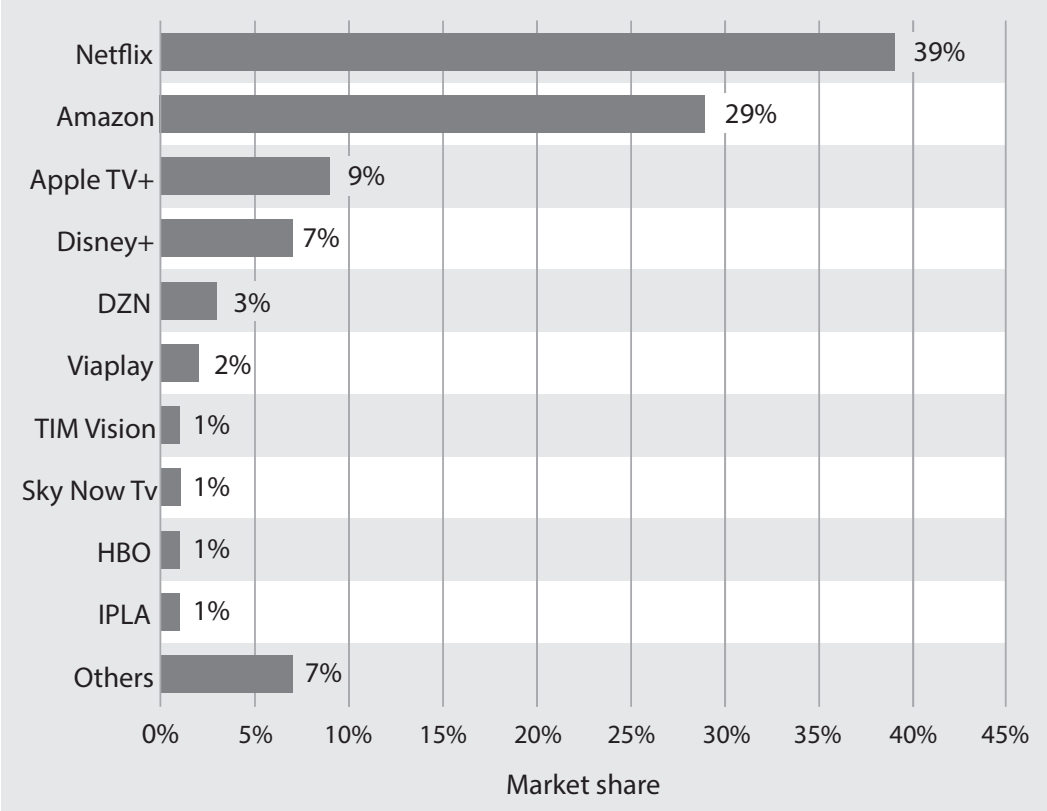
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

(d) Using examples from the information provided, explain what is meant by both 'substitutes' and 'complementary goods'.

(4)

5 Chief Executive Elon Musk said "affordability" was the biggest barrier to Tesla reaching a far larger market. Before recent price cuts for its electric vehicles, he said, "We weren't sure about what the price elasticity of demand was for Tesla. We found that even small changes in price have a big impact on demand."

(Source adapted from: https://www.ft.com/)

(a) In June 2023, Tesla further reduced the price of its Model 3 vehicle by £4 200 from £42 990. It has been forecast that the price cut will lead to a 15% increase in demand. *Ceteris paribus*, calculate the price elasticity of demand for the Model 3. You are advised to show your working.

(2)

(b) Define the term '*ceteris paribus*'.

(1)

(c) Which **one** of the following is most likely to be a determinant of price elasticity of demand for the Model 3 electric vehicle?

(1)

- ☒ **A** Availability of substitute electric vehicles
- ☒ **B** Change in population size
- ☒ **C** Increase in the cost of steel
- ☒ **D** Number of unsold Model 3 electric vehicles

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

(c) With reference to Extract A, explain the likely numerical value for the income elasticity of demand for reusable cleaning products.

(4)

2 (a) In 2021, a bakery sold 2.5 million sausage rolls per week at the price of £1.00 each. In 2022 the price increased to £1.20. The price elasticity of demand was estimated to be –0.2.

Calculate the new quantity of sausage rolls sold per week in 2022 after the price increased, ceteris paribus.

(3)

(b) Which **one** of the following is the most appropriate description of the price elasticity of demand of –0.2?

(1)

- ☒ **A** Perfectly inelastic
- ☒ **B** Relatively elastic
- ☒ **C** Relatively inelastic
- ☒ **D** Unitary elastic

(Total for Question 2 = 4 marks)

2 Between 2010 and 2015 the average price of tea in the UK increased from £7.20 per kilo to £8.48 per kilo. Over the same period the quantity of tea purchased fell from 97 million kilos to 76 million kilos.

(Source: http://www.theguardian.com/lifeandstyle/shortcuts/2015/aug/05/brew-do-you-think-you-are-why-tea-needs-to-copy-coffee-in-order-to-survive)

(a) Assume that the change in the quantity of tea purchased was only caused by the change in the price of tea. Calculate the price elasticity of demand for tea in response to the rise in its price. You are advised to show your working.

(2)

(b) Calculate the change in total sales revenue for UK tea retailers between 2010 and 2015. You are advised to show your working.

(2)

(c) Estimates for the demand for black tea in the UK suggest that it is an inferior good. This implies it has a negative:

(1)

- ☒ **A** cross elasticity of demand
- ☒ **B** income elasticity of demand
- ☒ **C** price elasticity of demand
- ☒ **D** price elasticity of supply

(Total for Question 2 = 5 marks)

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

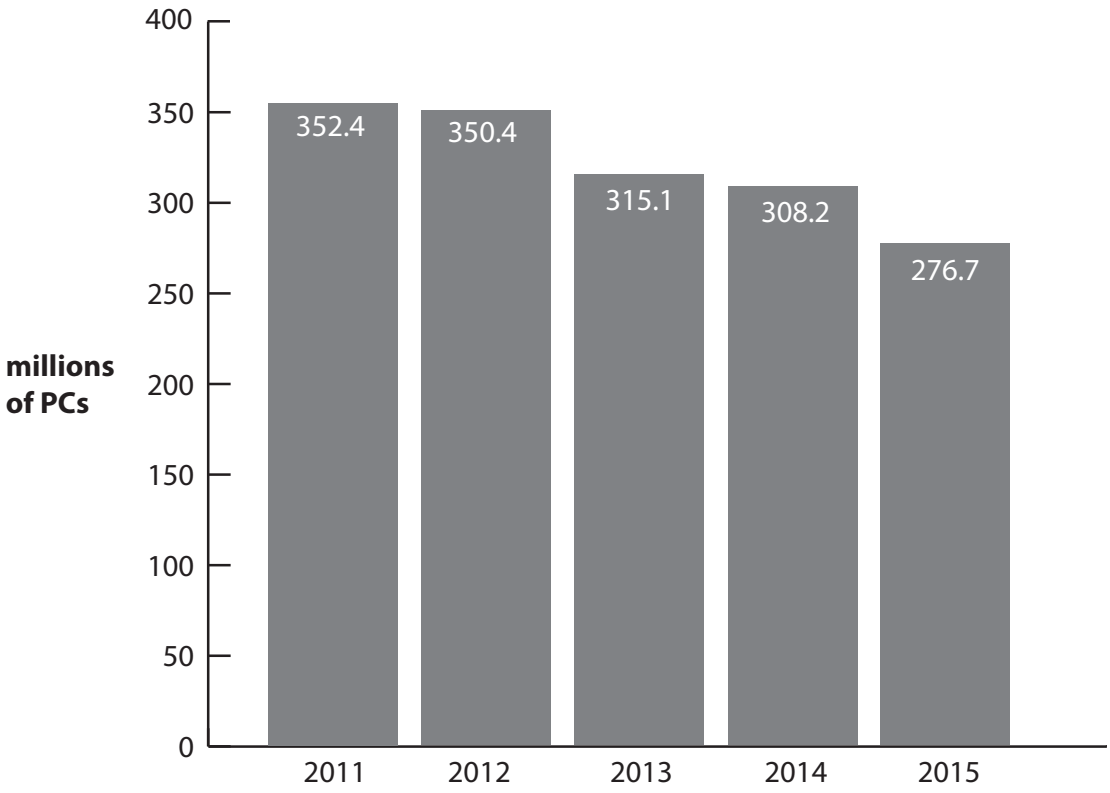
We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

6 (a) Explain why 'bans on tobacco advertising' (Extract A, line 7) may result in a decrease in the revenue of tobacco firms. Include a supply and demand diagram in your answer.

(5)

5 The following graph shows the global sales of personal computers (PCs) between 2011 and 2015.



(Source: adapted from IDC and reported in *The Times*, 14th January 2016)

(a) The percentage decrease in sales of PCs between 2011 and 2015 is:

(1)

- ☒ **A** 21.5
- ☒ **B** 27.3
- ☒ **C** 31.5
- ☒ **D** 75.7

(b) Explain **one** likely reason for the decrease in sales of PCs.

(2)

The following table shows global sales of PCs by company in 2015.

Company	Sales of PCs (million)
Lenovo	57 182
HP	53 534
Dell	39 049
Apple	20 794
Acer Group	19 680
Others	86 461
Total	**276 700**

(Source: IDC, reported in *The Times*, 14th January 2016)

(c) Calculate the five-firm concentration ratio. You are advised to show your working.

(2)

(Total for Question 5 = 5 marks)

TOTAL FOR SECTION A = 25 MARKS

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

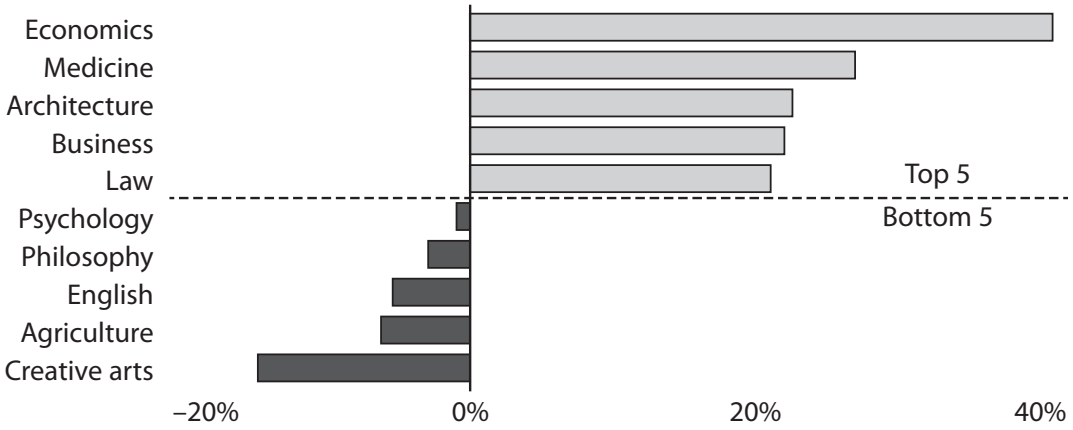
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

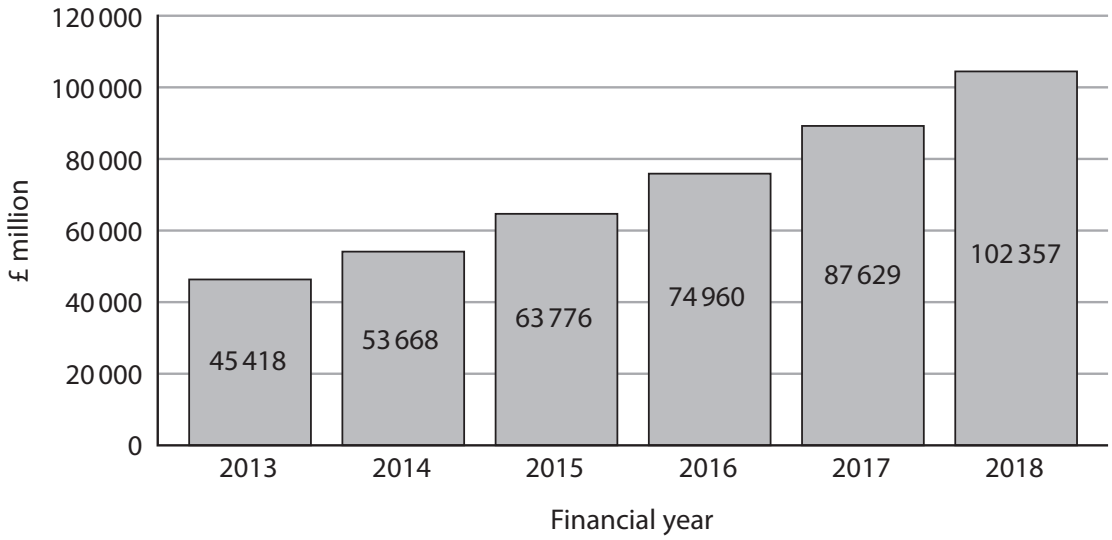
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



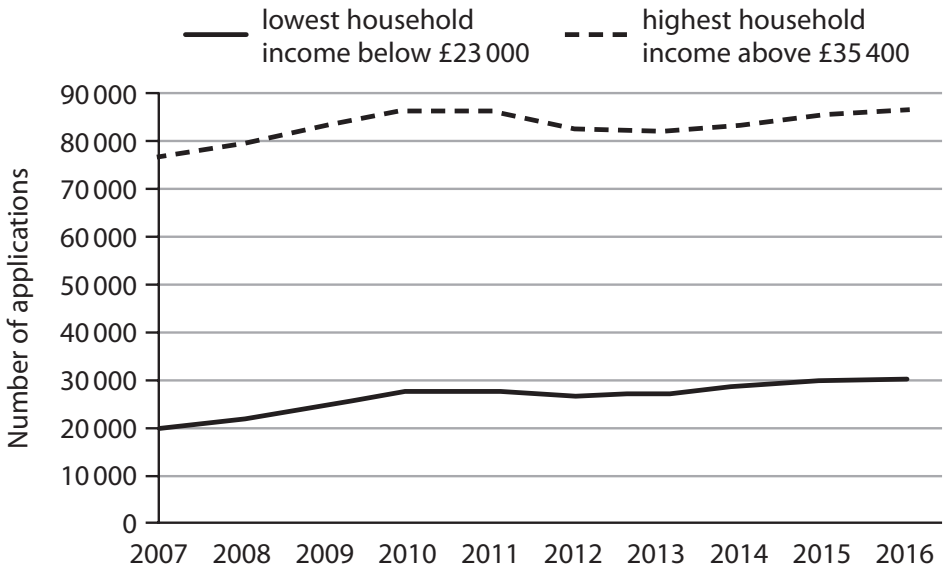
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

6 (a) Explain why 'the price elasticity of demand for higher education is about –0.5' may be of relevance to English universities.

Refer to Extract A in your answer.

(5)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Disney+ is a streaming service that distributes films and television series produced by the Walt Disney Studios.

	Disney+ subscribers (million)
November 2019	10
December 2019	26.5
February 2020	28.6
April 2020	50

(Source adapted from: https://www.businessofapps.com/data/disney-plus-statistics/)

(a) *Ceteris paribus*, the most likely consequence of the above data is that Disney+ will experience an increase in its:

(1)

- ☒ **A** fixed costs
- ☒ **B** income elasticity of demand
- ☒ **C** price elasticity of demand
- ☒ **D** revenue

(b) Draw a supply and demand diagram to show the likely effect of the change in the number of subscribers on the market equilibrium for Disney+ services.

(4)



(Total for Question 1 = 5 marks)

2 The table below shows data on the drinks market in Chile in 2017.

Price elasticity of demand for sweetened drinks	–1.37
Cross price elasticity of demand for bottled water in response to a price change in sweetened drinks	+0.63

(Source: adapted from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4098-x)

(a) The price of sweetened drinks increases by 5%. *Ceteris paribus*, calculate the percentage change in the quantity demanded for sweetened drinks. You are advised to show your working.

(2)

(b) The price of sweetened drinks increases by 5%. *Ceteris paribus*, calculate the percentage change in the quantity demanded for bottled water. You are advised to show your working.

(2)

(c) Using the data on page 4, which **one** of the following is most likely?

(1)

		A decrease in the price of sweetened drinks will have the following effect on revenue:	Sweetened drinks and bottled water are:
☒	**A**	Decrease	Complements
☒	**B**	Decrease	Substitutes
☒	**C**	Increase	Complements
☒	**D**	Increase	Substitutes

(Total for Question 2 = 5 marks)

3 A luxury brownie baker is faced with falling demand as incomes fall.

(a) The likely income elasticity of demand for a luxury good is:

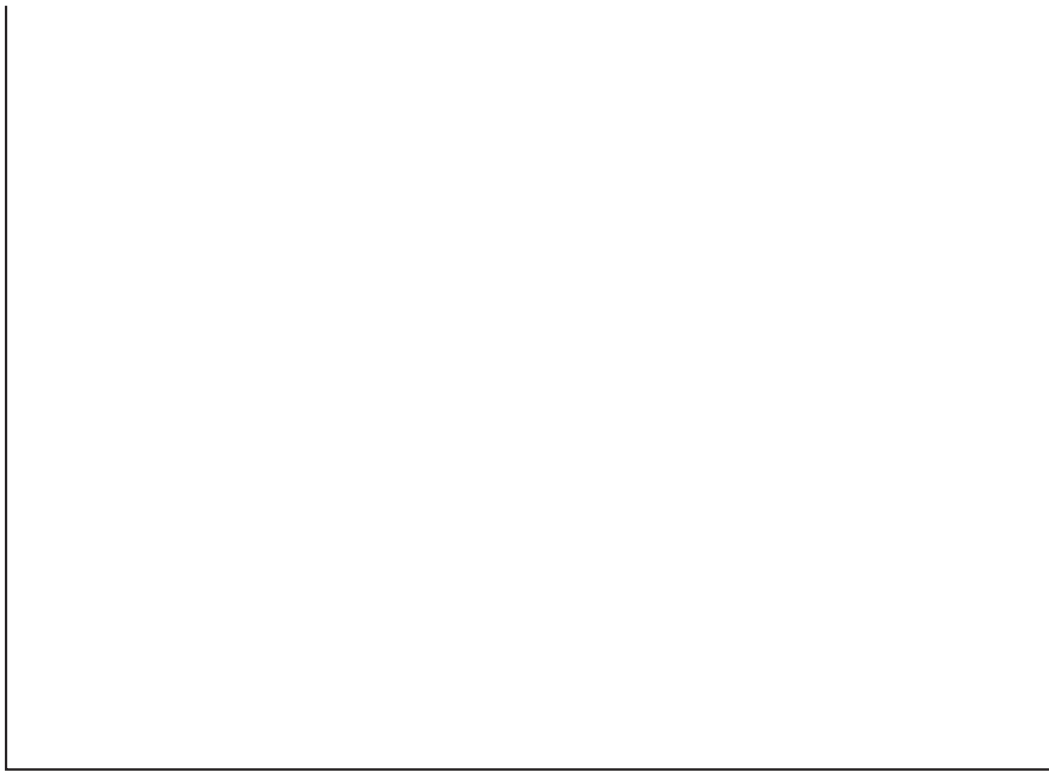
(1)

- ☒ **A** –3.40
- ☒ **B** –0.74
- ☒ **C** +0.74
- ☒ **D** +3.40

(b) Small local bakeries have many of the characteristics of monopolistic competition.

Draw the short run profit maximising equilibrium of a **loss-making** luxury brownie baker.

(4)



(Total for Question 3 = 5 marks)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

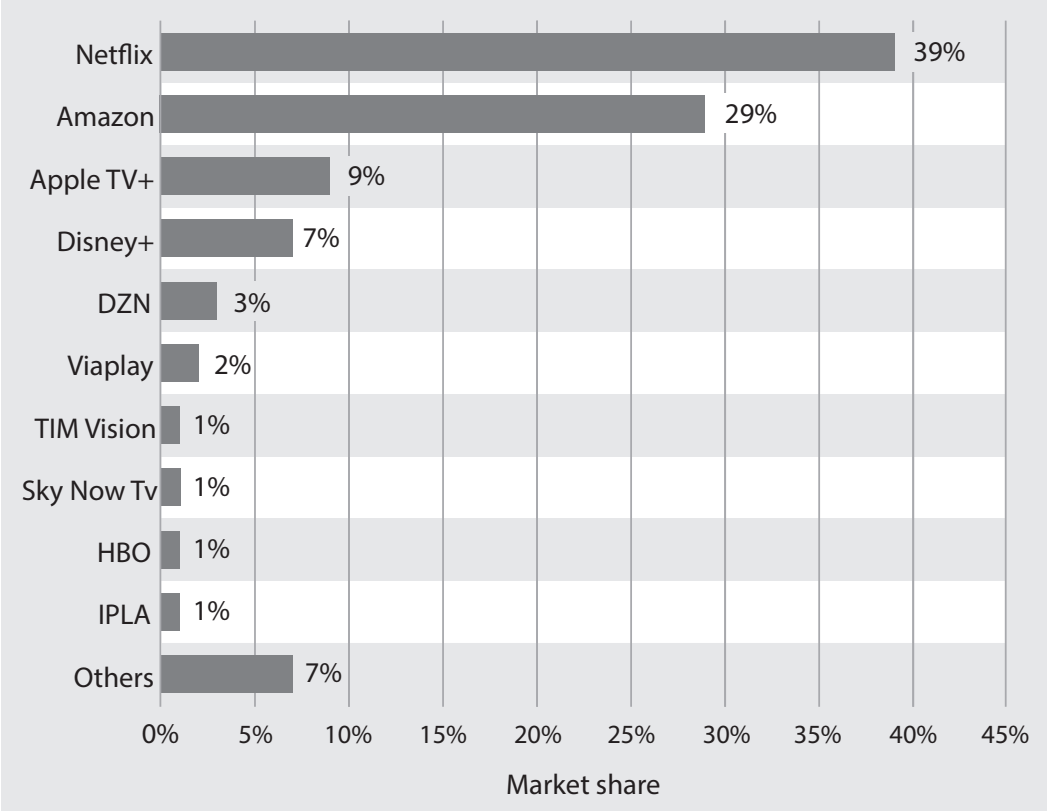
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

6 (a) With reference to Figure 1 and Extract A, explain the relationship between price elasticity of demand and total revenue.

(5)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant.
You may annotate and include diagrams in your answers.

1 The table below shows price elasticity of demand for bus tickets in London 2021

Age	Price elasticity of demand
18+ Student	–0.7
Adult	–0.4

(Source adapted from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669090/youth-travel-concessions-price-elasticity.pdf and https://tfl.gov.uk/fares/find-fares/bus-and-tram-fares#on-this-page-4)

(a) Explain **one** likely reason for the difference in the price elasticity of demand for the 18+ student bus ticket and the adult bus ticket.

(4)

(b) In 2021, the adult 7-day bus ticket was £21.90. Bus ticket prices in London in 2022 increased by 4.8%. Ceteris paribus, which **one** of the following is the percentage decrease in the 7-day bus ticket demand by adults?

(1)

- ☒ **A** 0.08
- ☒ **B** 1.92
- ☒ **C** 3.36
- ☒ **D** 12.00

(Total for Question 1 = 5 marks)

2 The table below shows price elasticity of supply for housing in the US in 2020.

US State	Price elasticity of supply
New York	+0.5
Texas	+1.8

(Source adapted from: https://bankunderground.co.uk/2020/02/25/the-declining-elasticity-of-us-housing-supply/)

(a) With reference to the data above, explain **one** likely reason for the difference in the price elasticity of supply.

(4)

(b) In Texas the price elasticity of supply is +1.8.
Which **one** of the following is the percentage increase in price if the quantity of housing supplied in Texas is increased by 12%?

(1)

- ☒ **A** 0.15
- ☒ **B** 1.50
- ☒ **C** 6.67
- ☒ **D** 21.60

(Total for Question 2 = 5 marks)

SECTION A

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

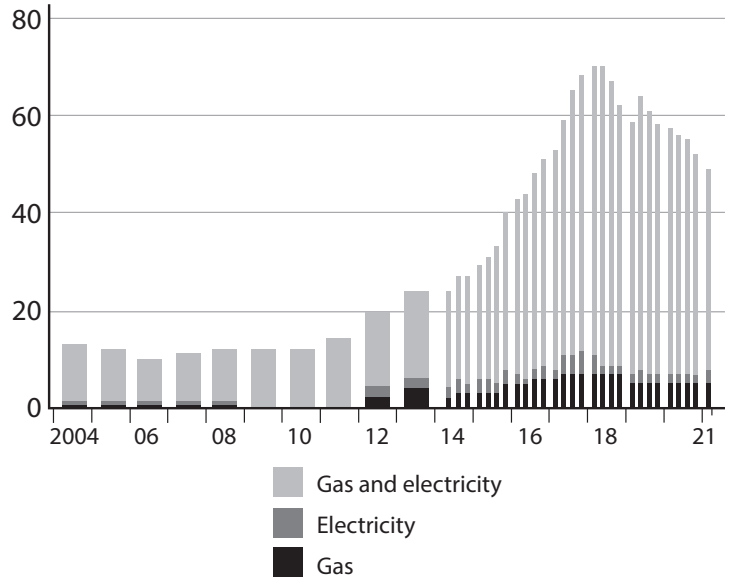
Question 1

The energy market

Figure 1: UK wholesale gas prices per therm, 2021, in pence



Figure 2: Number of firms supplying gas and electricity in the UK, 2004–2021



Extract A

Rising gas prices

UK consumers are some of the biggest users of gas. 85% of homes use gas central heating, and gas generates a third of the country's electricity. North Sea gas is running out – and as Britain has replaced coal-fired energy production with wind power in order to reduce carbon emissions, it has become dependent on gas imports.

Almost all UK businesses face significant rises in fuel costs over the next few months, and there is no substitute for energy, at least in the short run – an almost perfect example of price inelastic demand.

(Source: adapted from https://www.theecoexperts.co.uk/blog/reasons-for-uk-gas-price-increase)

Extract B

The UK gas market is broken

During the past decade the government has allowed new entrants into the retail energy market with business models that left them ill-prepared to achieve long term business growth. Now the UK must choose between letting its energy market collapse and offering large subsidies for energy retailers.

The problem began in the 1980s and 1990s, when privatisation created an oligopolistic energy market dominated by the "Big Six", which paid their shareholders high dividends and their bosses excessive salaries. The government responded to anger over high energy bills with further liberalisation. Some of the new entrants were innovative, such as Bulb, which offered consumption-tracking apps, and Octopus, which discouraged consumption when demand was high with dynamic pricing. But most were under-capitalised and produced no energy, merely buying it on global wholesale markets and selling it on. Some paid little attention to ensuring continuity of supply or forward buying of gas.

The constraints on energy retailers worsened in 2017 with the closure of a big gas-storage facility, which left the UK able to store just 2% of its annual demand. Other big gas importing countries, by contrast, can store 20%–30%. The risks rose further in 2019, when the government capped consumer prices in response to continued complaints about high energy bills.

The perfect storm came in the summer of 2021. As economies opened up, global demand for energy rose. Gas supply in Russia, a big producer, was disrupted, and unusually calm weather reduced UK wind turbine energy production to 11% of capacity. In August Ofgem, the industry regulator, said that from October the firms would be able to raise prices for households by 54%. But since then the wholesale price of gas paid by UK energy firms has risen by more than 70%. The result is that UK energy firms are tied into contracts to supply gas to households at far less than they must pay to get it.

(Source: adapted from https://www.economist.com/britain/britains-gas-market-is-broken/)

Extract C

The gender pay gap in the oil and gas industry

Despite best efforts to try to attract more women into the oil and gas industry, females are still hugely under-represented in science, technology, engineering and maths careers, whether school leavers, graduates or experienced workers. Women hold under 25% of careers in these areas, and typically hold more non-technical roles, which can attract lower salaries than technical disciplines.

There is an even smaller female representation in the offshore workforce (3.6%) e.g. working on rigs in the North Sea, an area that pays higher salaries than onshore work. Despite continued efforts there is still a lack of female applications. Only 5% of the applications to the technical apprentice programme were female, of which half withdrew their applications at the first stage of the recruitment process.

There is also a low representation of females in senior leadership roles within the oil and gas industry, especially in technical positions. Women also generally take up part-time positions which are typically lower paid. This has resulted in the oil and gas industry having an average gap in hourly pay of 25%.

In the majority of developed countries, women have made substantial progress in the labour market since the 1970s, with both wages and labour force participation increasing relative to that for men. Notwithstanding these large improvements, women still earn less than 'comparable' men in all developed countries and, since the 2000s, progress for women in the labour market seems to have slowed.

(Source: adapted from https://www.harbourenergy.com/media/2a2nmavb/chr-18311-01-gender-pay-gap-2020-v6-final.pdf and https://ftp.iza.org/dp10975.pdf)

(a) With reference to Figure 1 and Extract A, explain what is meant by 'price inelastic demand' (line 8).

(5)

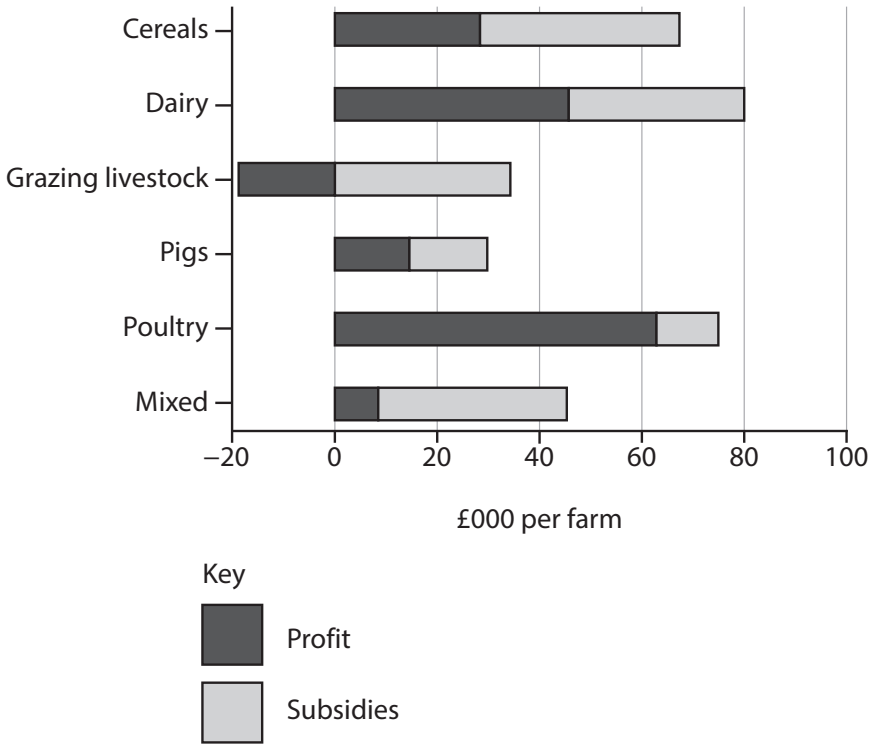
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

6 (a) With reference to Extract B, explain why the change to meat-substitute products may result in an increase in the revenue of food companies. Refer to the concept of price elasticity of demand in your answer.

(5)

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

Tobacco cigarettes and e-cigarettes are considered to be substitutes.

(c) Explain how changes in the price of tobacco cigarettes may affect the demand for e-cigarettes over time.

(6)

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

(d) With reference to Extract C, explain how incentives to use reusable coffee cups may lead to a fall in demand for single-use cups.

(6)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

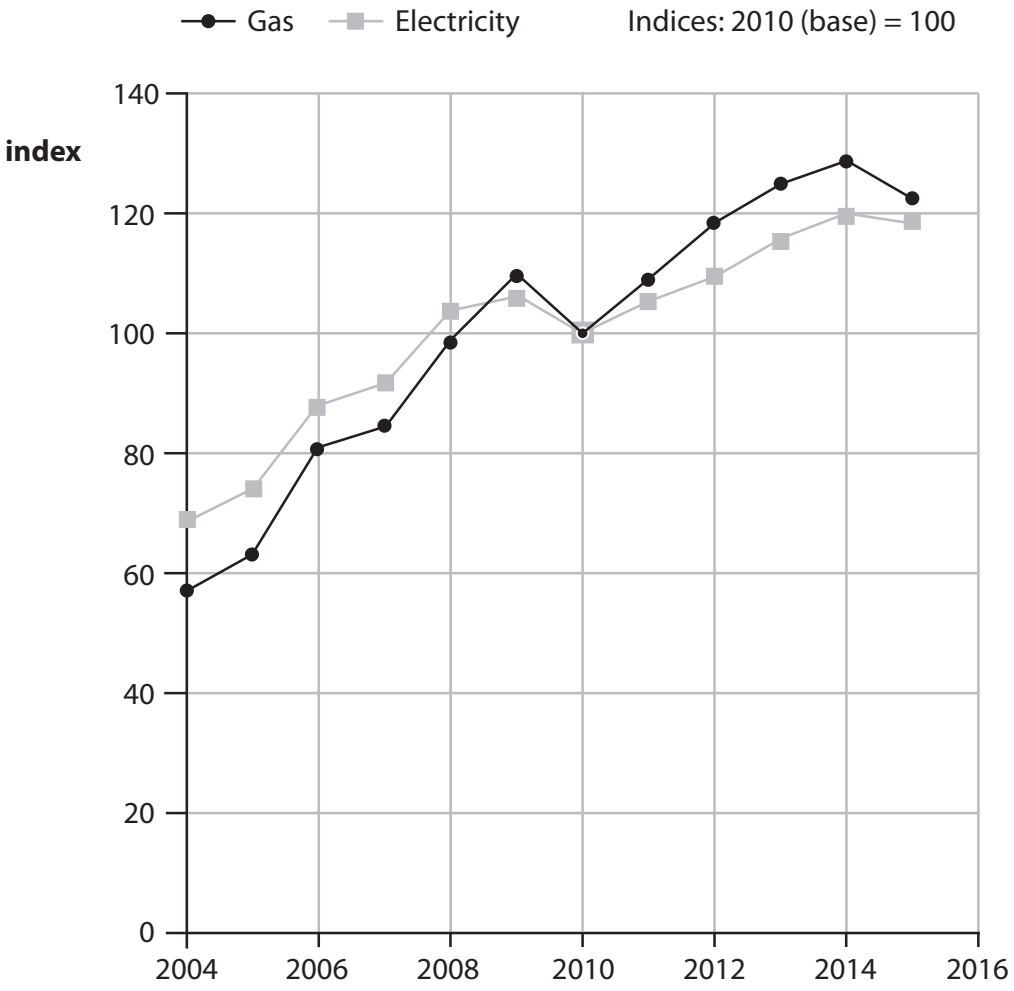
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK energy market

Figure 1: UK retail electricity and gas real price indices, 2004–2015



(Source: https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf)

Figure 2: UK retail electricity and gas supply: market share by company, 2016

Company	Electricity %	Gas %
British Gas	23	36
EON	16	13
SSE	16	13
EDF	12	8
Scottish Power	11	9
RWE (nPower)	10	9
Other companies	12	12
Total	**100**	**100**

(Sources: https://www.ofgem.gov.uk/chart/electricity-supply-market-shares-company-domestic-gb and https://www.ofgem.gov.uk/data-portal/retail-market-indicators)

Extract A

Competition and Markets Authority (CMA) report into the UK energy market

An investigation into the UK energy market by the CMA concluded that customers have been paying £1.4 billion a year more than they would in a fully competitive market. It found that 70% of domestic customers of the six largest energy firms were on an expensive standard rate. These customers could each save over £300 a year by switching to a cheaper deal but appear reluctant to do so.

However, the CMA investigation found no evidence of anti-competitive practices by firms. There has even been an increase in new entrant energy suppliers over recent years and their combined market share has reached 12% in both gas and electricity supply.

To protect consumers, the CMA has introduced various measures to open up and increase competition in the UK energy market. These include:

- the creation of a database designed to help consumers switch energy suppliers – rival suppliers can directly contact these customers
- the conversion of all homes to smart energy meters making it easier for customers to measure energy consumption and switch supplier
- new rules to protect the four million vulnerable customers using prepaid meters – this includes a temporary price cap until smart meters have been installed.

(Source: adapted from 'Competition and Markets Authority Final report into Energy Market Investigation' https://www.gov.uk/government/news/cma-publishes-final-energy-report-in-full)

Extract B

Proposals to regulate profits in the UK energy market

Currently energy retail companies make an average profit of 7% of total revenue. The Chairman of the Competition and Markets Authority (CMA) suggested that these profits are as much as five times higher than they should be, given the companies' limited role in marketing, metering and billing customers. He recommended a profit cap of 1.25% of total revenue.

However, Scottish Power criticised proposals for regulating profits saying that it would reduce investment in the energy industry and undermine long-term energy provision. The firm claimed that such a low rate of return is below the profit margin made by supermarkets.

All six large energy firms are vertically integrated – producing as well as distributing gas and electricity. This can provide efficiency benefits but also harm competition.

(Source: adapted from 'Profit cap doesn't fit with new investment, energy boss warns', by Robin Pagnamenta, *The Times*, 19th September 2016)

Extract C

Skills shortages in the UK energy sector

The energy sector is facing a skills shortage of engineers and technicians. Some 29% of employers in the gas and electricity industries report unfilled job vacancies compared with an average of 18% across all industries.

A lack of information and advice on career prospects for young people is partly to blame - many graduates have a negative image of the work involved. There is also a lack of students taking science, technology, engineering and maths-based subjects at school and university. Less than one-fifth of the energy sector's workforce are women.

The energy sector is characterised by an ageing workforce - data from the UK Labour Force Survey reveal that around two-thirds of workers are aged over 50. These cannot easily be replaced as a long time period is required for training and developing workers' skills in a highly regulated industry.

Urgent action is required by businesses and the government to reduce labour immobility to benefit the energy sector. This action could include policies to increase investment in training programmes, recruit skilled workers from overseas, change the industry image and deal with its ageing workforce.

(Source: adapted from 'Sector insights: skills and performance challenges in the energy sector', by the UK Commission for Employment and Skills, March 2015; https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/416998/15.03.25._Energy_SLMI_-_evidence_report.pdf)

The price elasticity of demand for electricity in the UK is estimated to be –0.35 in the short run and –0.85 in the long run.

(d) With reference to Extract A and your own knowledge, examine **two** possible reasons for the change in price elasticity of demand for electricity over time.

(8)

SECTION B

Read Figures 1, 2 and 3 and the following extracts (A and B) before answering Question 6.

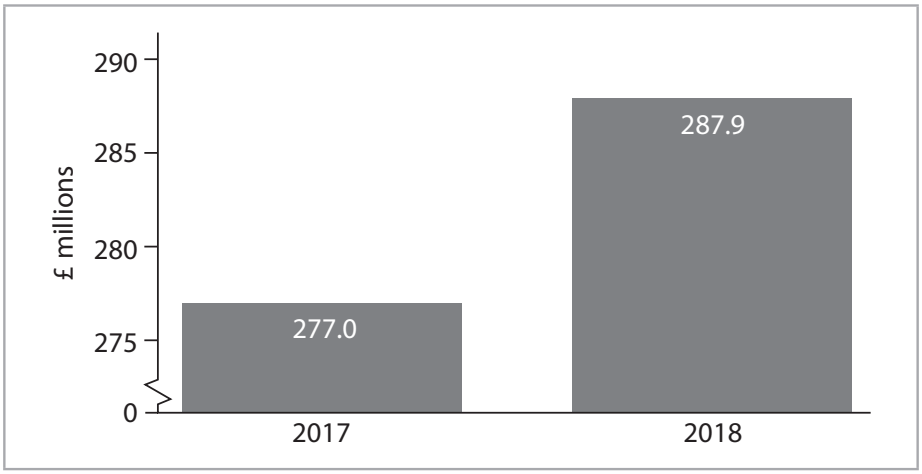
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

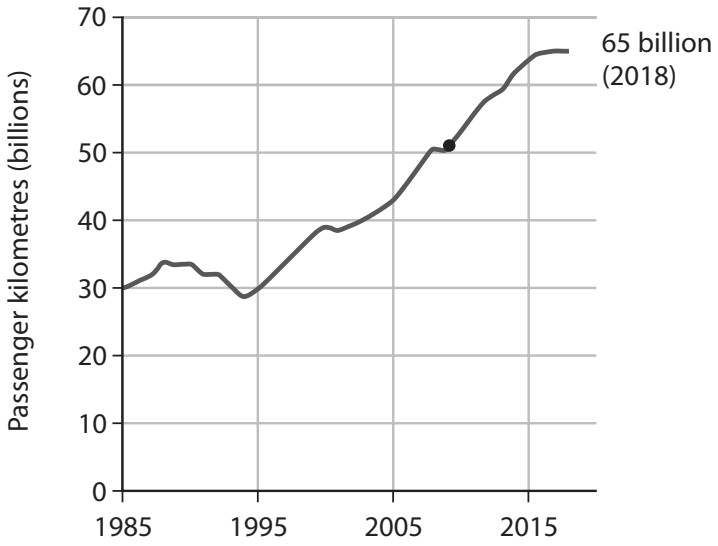
The UK Rail Industry

Figure 1: UK government subsidy to Northern, a train operating company in Northern England



(Source adapted from: https://www.theyworkforyou.com/wrans/?id=2018-10-18.181280.h)

Figure 2: Rail passenger kilometres travelled per year in the UK, billions



(Source adapted from: fullfact.org)

Figure 3: Price of a single off-peak train journey, Edinburgh to Leeds Saturday 22nd December 2018 19:00 hours

Adult	Young Persons (16–25) Railcard
£105.30	£69.50

(Source: https://www.lner.co.uk/buy-tickets/booking-engine)

Extract A

The case for nationalisation

Privatisation has not made the rail industry cheaper to operate, despite the promise from one government source that it would see private companies bringing: "more competition, greater efficiency and a wider choice of services".

One reason, suggest the critics, is fragmentation. Instead of pushing British Rail into the private sector as a single supplier the government chose to break it into three components of track, train operators and rolling stock i.e. the trains and carriages. This has encouraged each part of the rail industry to prioritise its own profits rather than collaborating to improve the system.

Privatisation, meanwhile, never really worked. The rail network of 2 500 stations and 32 000 km of tracks was renationalised in 2001. This has encouraged the government's transport secretary, a supporter of private sector involvement, to argue that the state Network Rail monopoly should be removed so that companies can bid to build new rail lines to upgrade the railway.

The privately-owned train operators are now the subject of fierce criticism, due to overcrowding and cancelled services. Private companies are supposed to compete to win a bid to be the train operator for a region for a short number of years. However in recent years the number of private companies bidding or renewing their contract as rail operators has fallen. In May 2018 the government rescued the East Coast line by renationalising it. The line had been run by the private rail operator Virgin Rail, which was suffering lower passenger numbers and revenue than forecast.

Some argue that there is a simple solution: reunite track and train in the only feasible manner, nationalisation.

(Source adapted from: https://www.ft.com/content/d82848ca-f7ba-11e7-88f7-5465a6ce1a00)

Extract B

Southern Rail boss paid £495 000

The Chief Executive of Southern Rail, the private-sector train operator that has become associated with delays, losses, cancellations and strikes, was paid £495 000 last year. This increased calls for nationalisation and a maximum wage for executives at companies with government contracts. In contrast the average base pay for a train driver in the UK is £47 705, although they can earn up to £63 000.

Nearly a third of Southern Rail trains were late in 2016 as it tried to deal with a labour dispute that involved extensive strike action. The rail trade unions are opposed to planned changes to the role of train guards, which they claim will put passenger safety at risk.

(Source adapted from: Rob Davies, The Guardian 10 April 2017
https://www.theguardian.com/business/2017/apr/10/southern-rail-boss-double-pay-rise)

(b) With reference to Figure 2, examine **two** possible factors which may have influenced demand for rail travel since 2008.

(8)

SECTION B

Read Figures 1 and 2 and extracts A and B before answering Question 6.

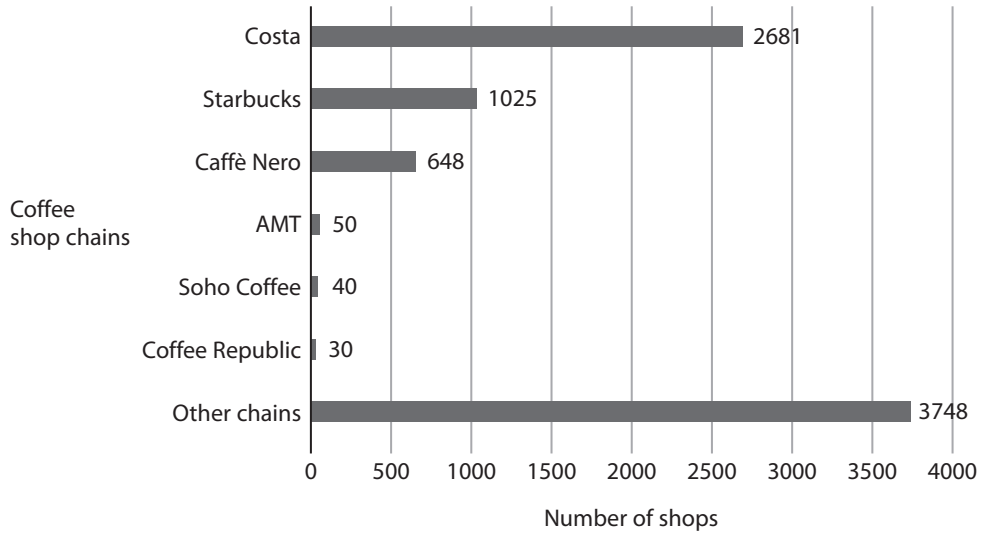
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

UK branded coffee shop chains market

Figure 1: Branded coffee shops by number of shops in the UK in 2021



(Source: adapted from https://www.statista.com/statistics/297863/leading-coffee-shop-chains-in-the-united-kingdom-uk-store-number/)

Figure 2: International coffee price (Arabica bean), US dollars per kilogram

Month	Price	Change
Jan 2020	3.13	–
Feb 2020	2.99	–4.47%
Mar 2020	3.27	9.36%
Apr 2020	3.41	4.28%
May 2020	3.30	–3.23%
Jun 2020	3.12	–5.45%
Jul 2020	3.24	3.85%
Aug 2020	3.60	11.11%
Sep 2020	3.67	1.94%
Oct 2020	3.35	–8.72%
Nov 2020	3.31	–1.19%
Dec 2020	3.48	5.14%

(Source: adapted from https://www.indexmundi.com/commodities/?commodity=other-mild-arabicas-coffee&months=12)

Extract A

Tough market conditions for coffee shops – but coffee quality is king

UK coffee shop chains have experienced slow growth opportunities and rising costs. In 2019 the UK market leader, Costa Coffee, opened over 60% fewer stores than in 2018, while Starbucks opened just three new stores overall in 2019.

By 2020, many costs were rising: staff shortages meant rising wages for baristas (trained coffeemakers), a 6.2% National Minimum Wage increase for over 25-year-olds and rising rents.

In a challenging UK economy, consumers placed coffee quality ahead of convenient location when choosing a coffee shop. This demonstrates the need for coffee shops to match rising expectations in the UK's increasingly crowded coffee shop market in order to stay competitive. Independent coffee shops (total 25 892 shops in 2020) remain a threat to the branded coffee shops as they pursue a unique luxury experience for customers. This will often focus on the atmosphere and customer service, luxury food and drink ranges and being a part of the local community. Independent coffee shops run on average profit as low as 2% of revenue, and many go out of business as new chains arrive in a locality.

In January 2020, Coca-Cola finalised its £3.9 billion takeover of market leader, Costa Coffee. The Coca-Cola company's stated aims are to maximise long-term returns to shareholders while being mindful of overall responsibilities such as supporting sustainable communities. Major brands, such as Costa, continue to lead coffee shop expansion in 2020 as competition intensifies.

(Source: adapted from https://www.worldcoffeeportal.com/Latest/InsightAnalysis/2020/February/5-UK-coffee-shop-market-dynamics-to-watch-in-2020)

Extract B

Greggs aiming for 'coffee shop experience'

Greggs is looking to increase its branded coffee shop market share after the British bakery chain achieved record profits and overtook Starbucks in the amount of coffee it served in the UK. Although Greggs will continue to focus on the food-to-go market, it will be investing in better coffee machines and providing WiFi. It wants one in three new outlets to have more seating. The company believes that it has the ability to take market share in two ways, by expanding its coffee range and at the same time enhancing the coffee shop experience. Greggs is modelling its plan on rival chain Pret A Manger, which has changed from focusing on food-to-go sales to mainly eating in. Greggs has transformed itself from an unremarkable seller of bread and pastries into one of the UK's most popular food-on-the-go chains, in part thanks to its embrace of vegan, gluten-free and healthy options as well as clever marketing that have changed its image.

(Source: adapted from Financial Times, 3 March 2020 https://www.ft.com/content/6fb6d73a-5d24-11ea-8033-fa40a0d65a98)

(b) With reference to Figure 2 and your understanding of price elasticity, examine **two** factors that may cause significant changes in the international price of coffee beans.

(8)

SECTION A

Read Figure 1 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

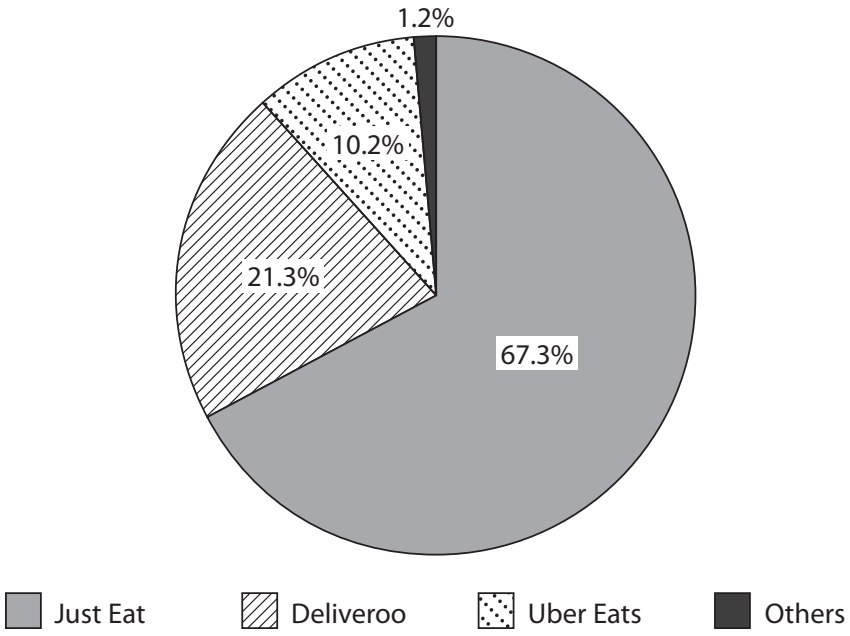
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

The food delivery industry

Figure 1: Market share for third-party food delivery services in the UK, 2019



(Source: adapted from https://onefourzerogroup.com/the-takeaway-takeover/)

Extract A

National Minimum Wage rises are more significant for 23 to 25-year-olds

In 2021, the National Minimum Wage main rate, also known as the National Living Wage, rose by 2.2% to £8.91, following a 6.2% rise in 2020. By reducing the age at which people are eligible for the National Living Wage to 23 in 2021, it is estimated that an additional 7.5% of 23 to 25-year-olds could get a 71p an hour pay rise. This amounts to an 8.7% increase, which may cause further financial worries for employers.

(Source: adapted from https://www.ndna.org.uk/NDNA/News/Latest_news/2020/Minimum_wages_to_rise_by_inflation_in_April.aspx)

Extract B

What is the true cost of the food delivery service?

The food delivery industry has boomed in recent years. Just Eat, Uber Eats and Deliveroo all offer very similar services – third-party food delivery firms that take up to 30% of the price of restaurant meals and deliver them to customers within a certain radius. The average spend per customer is around £15 with a £5 delivery fee, about five times more expensive than cooking at home and the same price as eating in the restaurant. Cash rich, time poor professionals increasingly turn to food delivery.

Food delivery comes with many layers of packaging. In the UK, there are 200 million meals annually with around 1.4 billion individual pieces of plastic for heat retention and protection when travelling, but does it really have to be plastic? People tend to order more food, often high in fat, sugar and salt, and don't even have to get up from their sofa.

But there are concerns that the delivery firms are exploiting employees who have no alternative. There is an issue of low pay and informal contracts. Delivery drivers are classed as 'independent contractors', and therefore not subject to some employment rights including a guaranteed minimum wage, sick pay, pensions or holiday pay. Drivers are paid either a flat hourly rate, or a fee per delivery. Factors such as delivery distance, speed, how busy it is and whether there are multiple drop-offs are all factored into how much a driver is paid. Deliveroo says its wages amount to around £10 per hour, but drivers say that during 2020 their pay has been as low as £1 per hour. Drivers are not paid extra for petrol or to maintain their vehicles. Many drivers are recent immigrants or students, who do not have property or savings to fall back on.

The government could address this with widening minimum pay legislation to contracted workers, by setting codes of practice, or by setting recommended wage targets. Furthermore, there are health and safety issues for workers. Vehicle safety checks, length of shifts and safety equipment are of concern. However, there are still people who take benefit from working flexibility.

(Source: adapted from https://www.theguardian.com/australia-news/2020/oct/25/home-food-delivery-what-is-the-most-ethical-way-to-order-in and https://digitalcommons.molloy.edu/cgi/viewcontent.cgi?article=1043&context=bus_fac)

Extract C

Integration in the third-party food delivery industry

The Competition and Markets Authority (CMA) is watching carefully to prevent any one firm having complete control of the food delivery industry. Just Eat, the market leader, agreed to merge with successful Dutch firm Takeaway.com in 2020, creating a new European leader by revenues. It also bought Grubhub in the US, with 20 million active users. Just Eat uses an aggressive pricing strategy, undercutting delivery fees below the average cost of other firms in the market, that will force them to merge in order to gain some economies of scale.

Amazon, having failed with its own delivery company Amazon Restaurants in 2018, has bought 16% of Deliveroo. The CMA took over a year to agree to the partial integration, on the argument that Deliveroo would close down without external investment. Amazon has unique expertise in marketing, increasing customer share and, most importantly, efficiency in delivering things. Food delivery is often uneconomical because a single household puts in a single order from a single restaurant at any one time. Tech companies such as Amazon can improve the business: once a meal has been ordered, an app often moves that restaurant to the top of the rankings for that neighbourhood, in the hope of getting a second and third delivery.

So why do restaurants turn to these delivery firms? The sheer volume of customers these delivery firms can hold makes it a difficult deal to turn down. But resentment from small business restaurant owners, angry at being wholly dependent on tech companies, is growing. Most restaurants would prefer that customers come in and pick up their orders themselves because they do not have to pay the 30% commission. Restaurant profit margins are small, and the effects of a 20% fall in the external value of the pound since 2016 on food costs are significant, given that over half of their food and drink is sourced outside the UK.

(Source: adapted from https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 https://www.ft.com/content/edf8a144-a101-4ef8-80e3-7d2f1565d35c and https://www.thisismoney.co.uk/money/markets/article-8138703/Uber-set-sell-takeaway-division-rival-Deliveroo-two-years.html and https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 and https://www.ft.com/content/bed7c4d8-28c1-11ea-9a4f-963f0ec7e134 and https://www.economist.com/1843/2021/01/26/gulp-the-secret-economics-of-food-delivery)

(b) With reference to Extract B, examine whether the demand for delivered food is price inelastic **and** income elastic.

(8)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK online streaming services market

Figure 1: Market share of UK online streaming services

	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Amazon Prime Video	37.9%	41.1%	45.0%	27.1%	25.9%
Disney+	16.0%	17.7%	19.3%	14.1%	21.5%
Netflix	15.0%	10.5%	5.0%	9.4%	4.5%
NOW	11.3%	11.2%	5.6%	11.0%	11.1%
AppleTV+	4.0%	5.5%	7.3%	9.2%	9.9%
BritBox	4.0%	3.0%	5.7%	6.0%	5.9%
Others	11.8	11.0%	12.1%	23.2%	21.2%

(Source adapted from: Kantar, Worldpanel Division Geotech 2022)

Figure 2: UK online streaming services – monthly fees

Streaming service provider	**September 2022**
Netflix premium (4 users/ultra HD*)	£15.99
Netflix standard (2 users/HD)	£10.99
Netflix basic (single user/non HD**)	£6.99
Amazon Prime Video	£8.99
Amazon Prime Video – Student price	£4.49
Disney+	£7.99
AppleTV+	£4.99

*This is the highest quality picture currently available

** This is the basic quality picture

(Source adapted from: https://www.radiotimes.com/tv/what-to-watch-tv/best-streaming-service-uk/)

Extract A

How Netflix makes use of behavioural science

In the last few years, companies have been trying to find ways to attract the attention of customers. Various streaming platforms such as Netflix, Amazon, and YouTube use 'nudges' to influence consumer behaviour. The 'next-up' feature on Netflix or 'auto-play' on YouTube has been subject to research that relates it to binge-watching. Binge-watching is the practice of viewing for a prolonged period, multiple episodes of a TV show or several films in rapid succession.

Similarly, the policy of offering a one-month free subscription under the label of 'free trial' requires credit card information to turn the forgetful subscriber into a potential paying one. Following this strategy, Netflix has expanded to 190 countries in just seven years and according to the Wall Street Journal, the company generated total revenue of over $5.2 billion in 2019, which was an increase from 2018 of around $4 billion.

However, 2022 data shows that consumers, increasingly worried about the rising cost of living, are turning their back on Netflix. With a reported cancellation of over 200 000 subscriptions in the first quarter and another two million forecast to leave by the end of the year. Subscribers are rethinking their commitment to the streaming services that grew their numbers sharply during the home-based months of the global health crisis. Netflix subscribers have also quoted a decline in value for money and satisfaction with the quality of the shows as key motives for cancellation.

Disney now see higher satisfaction rankings than Netflix across the quality of shows, amount of original content, number of new-release films, variety of classic films and amount of kids' content. Forecast cancellation rates for Disney+ fell to an all-time low of 3.2%.

(Source adapted from: https://www.novanudge.com/post/sludge-on-demand-how-netflix-makes-use-of-behavioural-science
https://www.theguardian.com/media/2022/apr/20/netflix-shares-fall-losing-subscribers)

Extract B

The economics of price discrimination

Throughout 2022, Netflix, a 100-billion-dollar company, increased prices in the US, Canada, the UK and Ireland (most of which saw similar price increases in 2021, too). In sharp contrast, Netflix recently announced it was reducing its prices in India (standard/2-user 499 rupees a month, equivalent to £5.42) in a bid to compete with Disney+ and Prime.

UK students currently enrolled in a college or university who have a valid student email address can join Prime Student through the Amazon website. This gives them nearly 50% off a standard Prime membership and many other exclusive benefits.

(Source adapted from: https://help.netflix.com/en/node/24926/in)

Extract C

Educational Website and TV Programmes

BBC Bitesize is a learning platform created by the BBC in 1998. The online study resource allows parents to teach their children from home, using ready-made lesson plans and study guides with questions for all ages. The revision sessions are free to watch and they are available for children aged five up to their late teens. The guides are written by teachers and subject experts, so they are reliable and follow the National Curriculum. Last year Bitesize attracted around two million weekly unique browsers with a peak week of 3.3 million in the GCSE exam period.

Oak National Academy is a freely available learning resource website created for pupils aged four to sixteen. Launched in 2020, as a response to the global health crisis, the website includes lesson slides, video lessons, worksheets, and quizzes conforming to the national curriculum in England. Ministers have set aside £43 million to fund the Oak National Academy over the next three years.

(Source adapted from: https://www.bbc.co.uk/bitesize/articles/zmjdhbk
https://www.structural-learning.com/post/oak-academy-a-teachers-guide#:~:text=Oak%20National%20Academy%20is%20a,the%20national%20curriculum%20of%20England)

(c) With reference to the information provided, examine the likely numerical value of the cross elasticity of demand between UK online streaming services.

(8)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

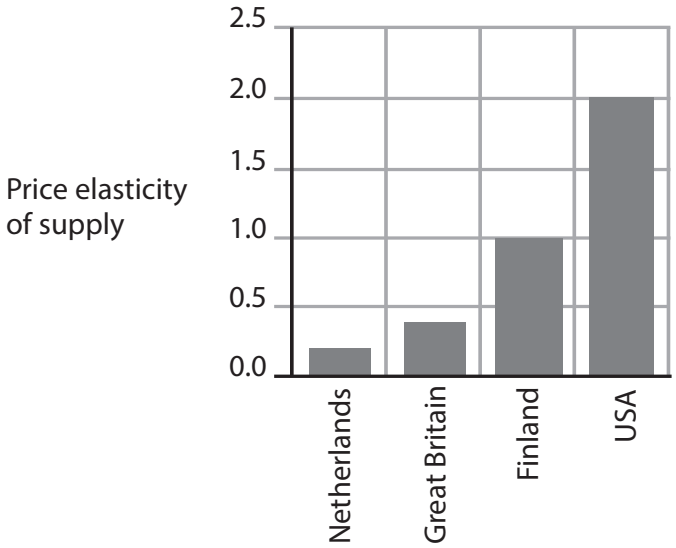
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

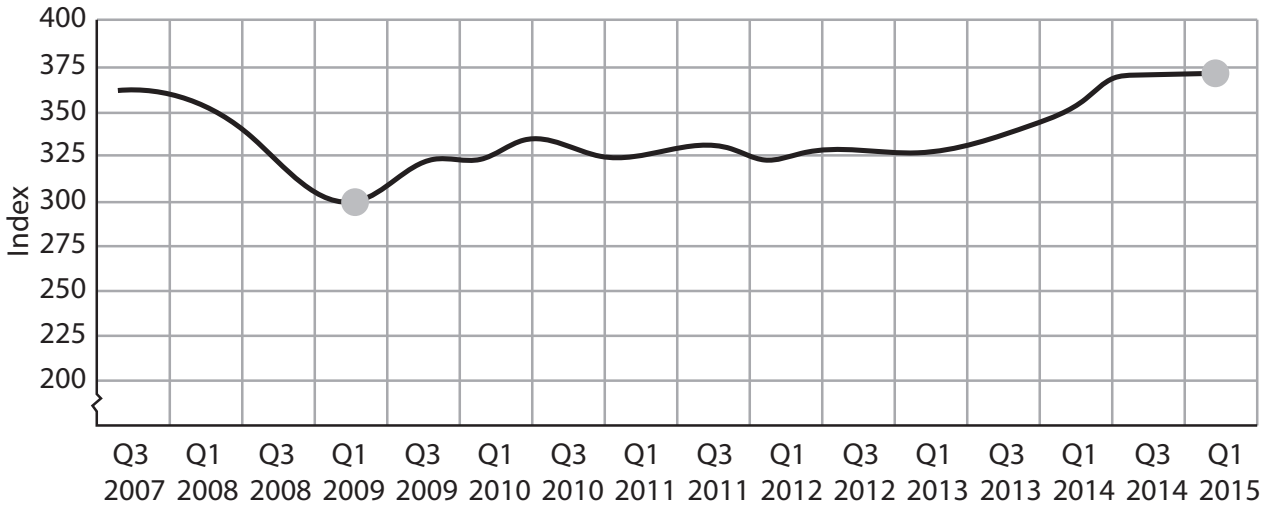
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

(b) With reference to Extract A, assess the likely impact of the Help to Buy scheme on the market for rented properties in the UK.

(10)

Sources for use with SECTION B

Read the following figure (1) and extracts (A to C) before answering Question 6.

Question 6

Digital markets

Figure 1: UK sales of selected best-selling video games, 2022

Name of game	Game publisher	Sales (quantity)	Game price
FIFA 23	Electronic Arts (EA)	2 530 510	£59.99
COD: MW II	Activision	1 675 323	£59.99
Mario Kart 8	Nintendo	426 748	£39.99
Gran Turismo 7	Sony	356 630	£69.99
Minecraft	Microsoft	219 679	£14.99

(Source: adapted from https://www.statista.com/statistics/274072/most-popular-games-in-the-united-kingdom-uk-by-unit-sales)

Extract A

Digital markets

Digital markets refer to firms producing and buying information technology services. Examples include digital banking, online retailing, computer games and mobile applications (apps). The emergence of digital markets has brought about increased competition across a wide range of products and services. They have also been beneficial for consumers who now have greater choice and access to higher-quality products at lower prices, for example, fashion clothing and language tuition. But while the digital revolution has enabled greater competition, it also presents some challenges for competition law enforcement.

(Source: adapted from https://pearsonblog.campaignserver.co.uk/digital-markets-reform-of-competition-laws/)

Extract B

Addictive video games

When consumers want to play a new video game, there are three payment options to access the full gaming experience. There is the price for the game (see Figure 1), the subscription fee to play online with friends (e.g. £13.99 a month) and there are many in-game purchases. For example, a Spiderman 'skin' which costs £9.99 enhances the appearance of the player. The high prices do not seem to deter many new buyers, especially in markets such as sports and multi-player action games. 40% of the world's population are online gamers. Young players spend up to 10–16 hours a day on their games due to the addictive nature of the games.

The video games can take up to five years to develop and cost over £150 million to produce with 200 full time employees working on the software. Starting salaries for software developers can be £100 000. However, some simple video games and apps cost as little as £23 000 to develop and take about six months.

All the major firms – EA, Microsoft, Nintendo and Sony – offer subscriptions that give access to new game releases. The US technology company, Microsoft, is one of the dominant firms in the market for subscription services. In October 2023, it merged with the game designer, Activision, which already owns one of the world's most popular video games (see Figure 1). The £65 billion merger is the largest in the history of the video games industry. However, Sony is concerned that the Microsoft-Activision merger may restrict access to popular video games owned by Microsoft and therefore reduce competition.

(Source: adapted from https://www.theguardian.com/technology/2023/apr/26/what-does-uks-ban-on-microsofts-activision-blizzard-takeover-mean-for-gaming?)

Extract C

The growth of automation

Automation is the use of technology to perform tasks previously carried out by humans. Automation has the potential to bring great economic benefits to both consumers and firms, contributing up to £12 trillion to global GDP by 2030. This extra income will also create demand for many new jobs. However, there are also concerns that it could displace many existing workers.

Financial services jobs are most at risk from automation in the shorter term and transport jobs, such as train drivers, in the longer run. For example, the growth of online banking has already led to the closure of many high street bank branches. By the mid-2030s, up to 30% of all jobs could be automated, with slightly more impact on men.

Another form of revenue for Microsoft is the artificial intelligence (AI) program ChatGPT. The growth of AI will require highly skilled workers such as trainers and engineers. Microsoft's annual gross profit for 2023 was £146 billion, a 7.69% increase on 2022.

(Source: adapted from https://www.economist.com/business/2023/03/26/big-tech-and-the-pursuit-of-ai-dominance)

(c) With reference to the information provided, discuss whether the price elasticity of demand for video games is elastic or inelastic.

(12)

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

(e) With reference to Figure 1, assess the likely reasons for the difference in price elasticity of demand for tobacco cigarettes and e-cigarettes.

(15)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

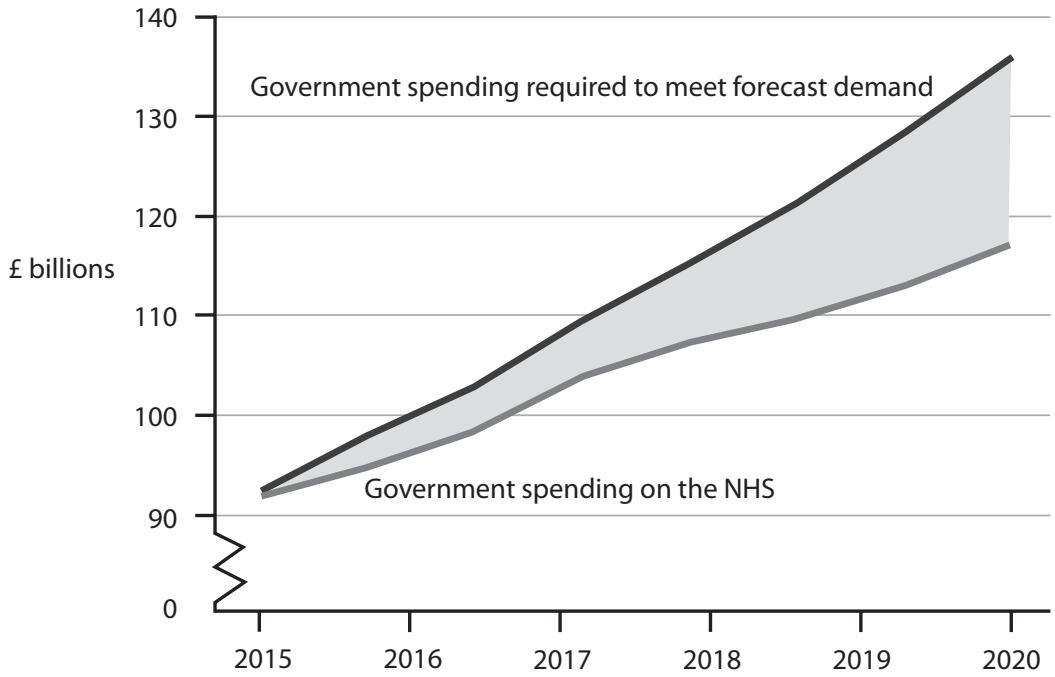
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

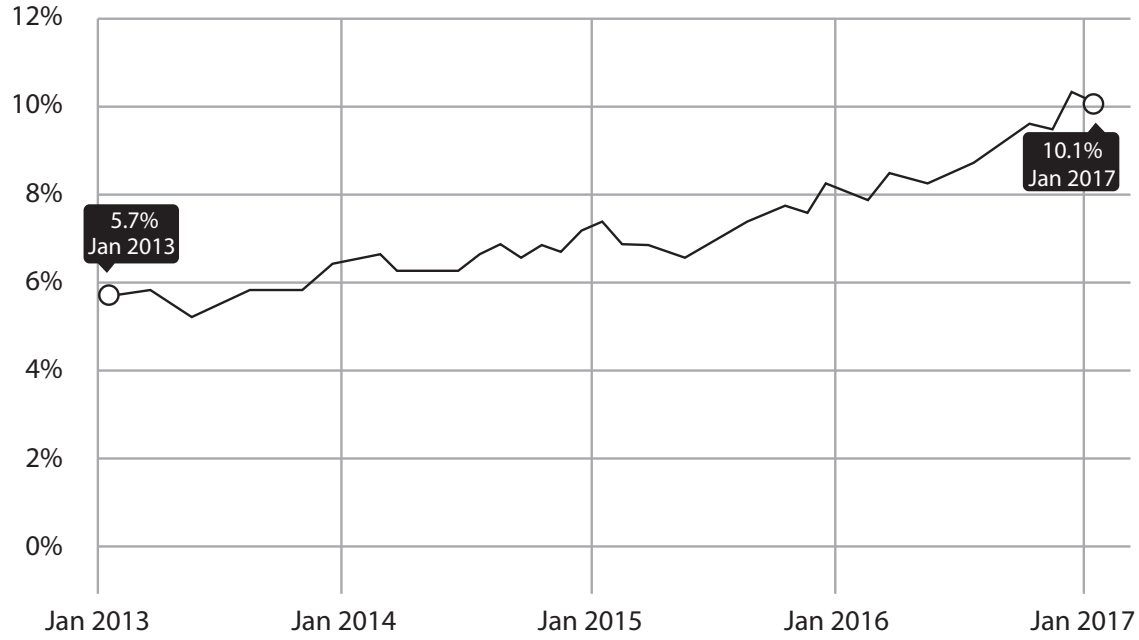
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

(e) Discuss likely reasons why the prices of treatments in private sector hospitals are increasing. Draw a supply and demand diagram to support your answer.

(15)

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

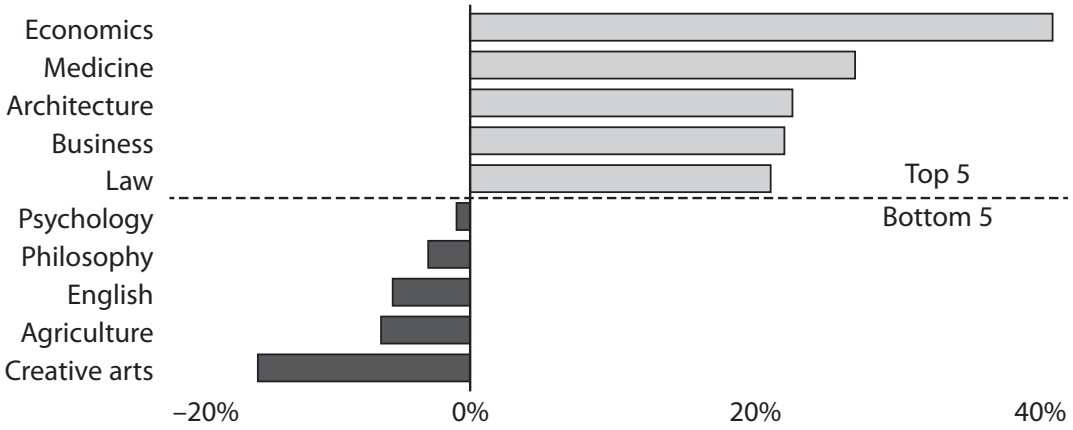
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

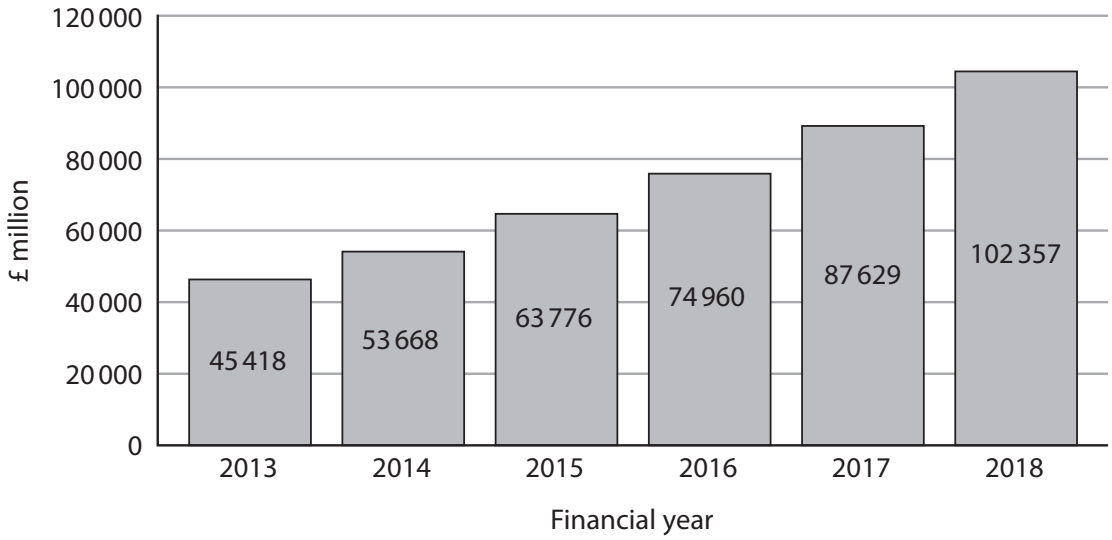
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



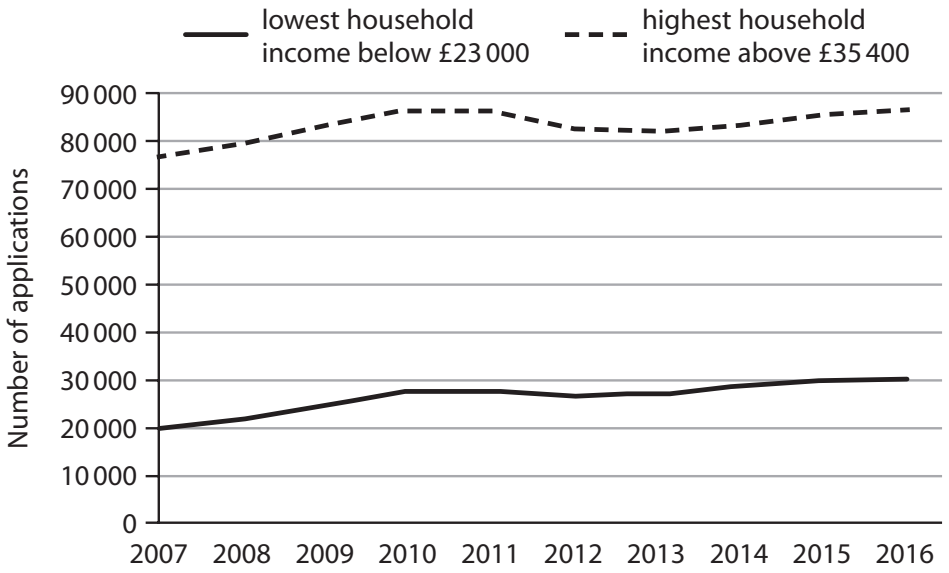
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

(e) With reference to Figure 1 and Extract A, discuss the benefits of allowing universities to charge higher tuition fees for some degree courses.

(15)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

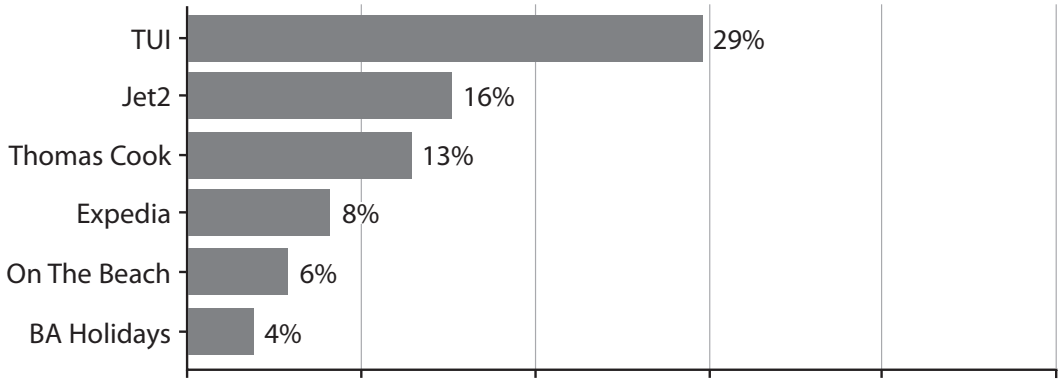
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The travel and tourism industry

Figure 1: Package holiday market share of the six largest providers, booked by UK residents, 2019



(Source adapted from: https://knowledge.sharescope.co.uk/2019/10/16/finding-companies-that-control-their-own-destinies/The Times/ATOL)

Figure 2: Jet2 package holiday prices to Sorrento

Price before Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,576** Per person price **£788**

Price 12 hours after Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,648** Per person price **£824**

Data accessed: 22nd and 23rd September 2019

Extract A

Marginal productivity of cabin crew

Cabin crew are responsible for loading passengers and providing in-flight meals. United Airlines is planning to reduce the number of its cabin crew members onboard international flights. The airline currently operates its planes with one more cabin crew member than its competitors. The marginal productivity of this additional crew member may be low. By reducing the number of its cabin crew members United Airlines will be able to operate more efficiently and compete more effectively.

(Source adapted from: https://simpleflying.com/united-airlines-to-reduce-number-of-crew-on-international-flights/)

Extract B

Thomas Cook's environmental impact

Thomas Cook Group plc's operations included its airline and 560 high street travel agents providing flights, hotels and package holidays.

The environmental impact of the travel industry is significant. It accounts for 8% of all global carbon emissions. Thomas Cook recognised the risks presented by climate change and actively engaged in reducing their airline emissions. Its plans included using more efficient aircraft and using lower-carbon fuel. In 2018, Thomas Cook was included in the top 10 of the world's most fuel-efficient airlines.

(Source adapted from: https://www.thomascookgroup.com/investors/insight_external_assest/Thomas+Cook+Sustainability+Report+2018.pdf)

Extract C

Why did Thomas Cook shut down?

Thomas Cook Group plc ceased trading on 23 September 2019. The collapse of Thomas Cook left 600 000 travellers stranded overseas and approximately 21 000 worldwide employees were left without a job.

Thomas Cook's management said that the failure of rescue talks between banks, shareholders and the UK Government meant it had no choice but to shut down the business.

But in truth the tour operator's problems go back much further. A disastrous merger in 2007, increased debts, the internet revolution in holiday booking and Brexit uncertainty all contributed to the failure of the business.

In 2007 it merged with MyTravel. Thomas Cook directors had an objective of rapid company growth over short-term profitability. The merger was supposed to create a European giant, promising £75 million-a-year cost savings and a springboard to challenge emerging internet rivals. In reality, Thomas Cook was merging with a company that had only made a profit once in the previous six years, and the deal left the Group with huge debts. In May 2019, the firm reported a £1.5 billion loss.

The role of the management in Thomas Cook's collapse is being investigated by the UK Government. Thomas Cook executives' salaries and bonuses have been questioned. Directors received salaries totalling £20 million in the five years before its collapse. The Chief Executive Officer (CEO) earned a £500 000 cash bonus in 2017 and about £8.5 million in his five years with the company. It seems that around £4 million of this was in the form of shares. The share price reached £1.46 in 2018, but each share is now worthless.

The CEO said that the directors had worked "exhaustively" to rescue Thomas Cook and create a long-term turnaround strategy. "It is a matter of profound regret to me and the rest of the board that we were not successful."

The UK prime minister admitted that the government refused to grant £150 million as a subsidy to help rescue Thomas Cook in the short run. The UK prime minister stated: "Clearly, that is a lot of taxpayers' money and sets up, as people will appreciate, a moral hazard in the case of future such commercial difficulties that companies face. I have questions about whether it's right that the directors, or whoever, the board, should pay themselves large sums when businesses can go down the tubes like that. One is driven to reflect on whether the directors of these companies are properly incentivised to sort such matters out".

(Source adapted from: https://www.theguardian.com/business/2019/sep/23/thomas-cook-as-the-world-turned-the-sun-ceased-to-shine-on-venerable-tour-operator

and https://www.ft.com/content/a7dd2554-de23-11e9-b112-9624ec9edc59)

(e) With reference to the information provided, discuss the decision by Jet2 to increase its package holiday prices.

(15)

(Total for Question 6 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

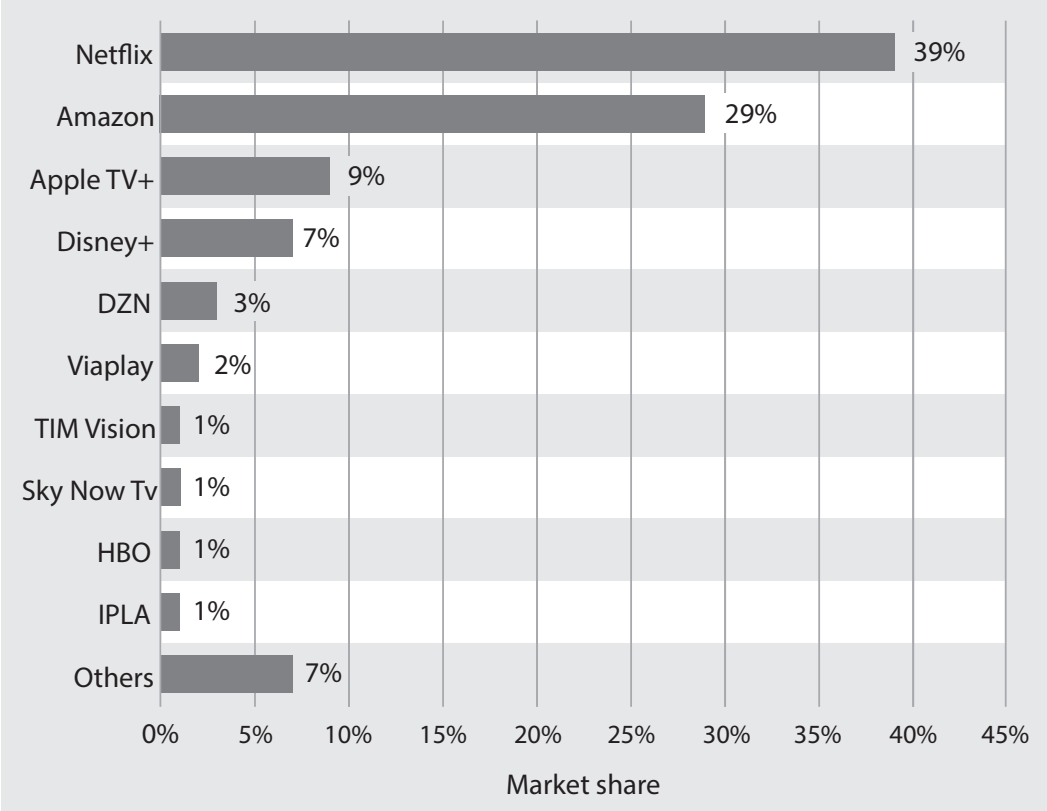
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

(e) Discuss likely reasons why the market price of streaming television content is increasing. Draw a supply and demand diagram to support your answer.

(15)

SECTION A

Read Figures 1 to 3 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

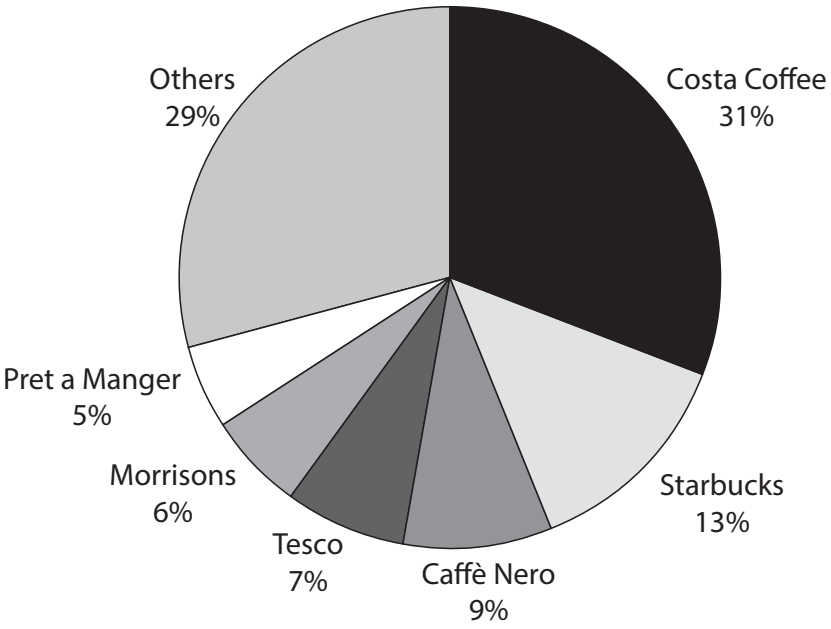
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

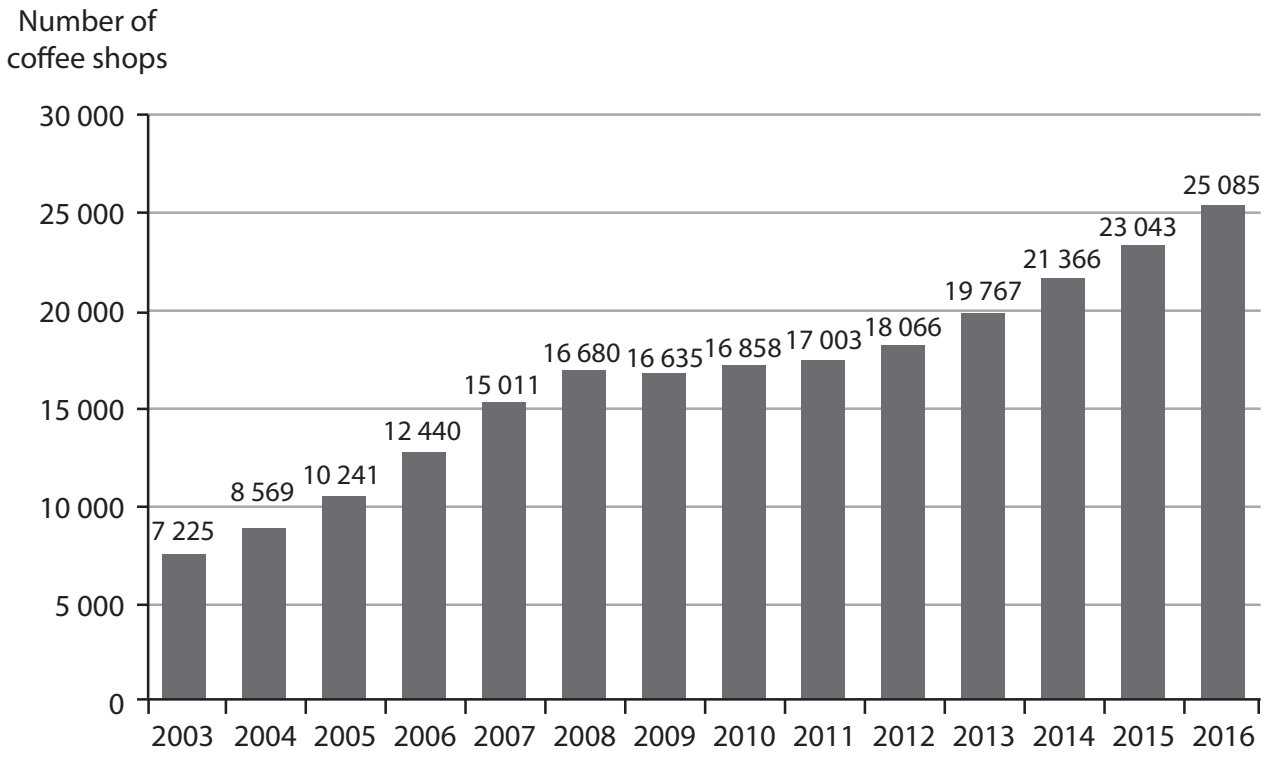
Branded coffee shops

Figure 1: Market share of UK branded coffee shops, 2015, percentages



(Source: http://metro.co.uk/2015/12/14/the-uks-most-popular-coffee-shop-has-been-revealed-5564569/)

Figure 2: Number of Starbucks coffee shops worldwide, 2003–2016



(Source: https://www.statista.com/statistics/266465/number-of-starbucks-stores-worldwide/)

Figure 3: Price comparison in selected London coffee retailers, February 2017

Coffee style	Starbucks	Costa Coffee	Caffè Nero	Greggs	McDonald's
Espresso Double	£2.00	£2.00	£1.70	£1.65	£0.99
Latte Medium	£2.60	£2.50	£2.50	£1.80	£1.79
Latte Large	£2.80	£2.70	£2.80	£2.10	£2.09

(Source: data collected from coffee shops in Holborn, London on 25 February 2017)

Extract A

Starbucks in Britain – a loss-making business?

Coffee shops are among the most profitable parts of the food and drink industry, and few are doing quite as well as Starbucks, a US-based transnational company. Starbucks may be complaining of adverse global market conditions but that did not stop the world's biggest coffee chain from reporting record annual profits in 2016. It made a profit of almost US$4.2 billion for the year, up 16% on 2015. That was mainly the result of a strong performance in its biggest market, America, where revenue rose 11%. The fastest growth was in the China and Asia Pacific region, with revenue up 23%. Howard Schultz, the CEO of Starbucks, said its Chinese coffee shops were the most efficient and profitable. While Starbucks still makes most of its profit in the US, Mr Schultz has said expansion in China will secure its future for "decades to come" and announced plans to more than double the number of shops in China to 5 000 by 2021.

However its British subsidiary, at first glance, appears to be doing less well. It has announced its first ever profit in Britain in 2015 – of just £1 million – despite opening its first coffee shop in the UK in 1998. It now has 849 UK outlets. The main reason why Starbucks has reported persistent losses in the UK is not due to a lack of demand for its coffee, but to minimise its tax bill. It is claimed that some of Starbucks' revenue earned in the UK is transferred to its Dutch subsidiary, which is charged lower rates of tax.

Starbucks is not finding life as easy in Britain as in the USA. It faces competition from home-grown chains such as Costa and Caffè Nero. Accusations of tax avoidance have also damaged Starbucks' sales to the benefit of its competitors. A survey found that a third less people rated Starbucks as their preferred coffee shop than they did before the tax-avoidance allegations were first published.

These issues have forced Starbucks to change its strategy. It has slowed down its expansion plans in the UK and has closed 67 underperforming coffee shops over the past year. It has also tried to repair its reputation by transferring its European headquarters from Amsterdam to London.

(Sources: adapted from *The Economist* 14 February 2015 http://www.economist.com/news/business-and-finance/21643271-tax and Starbucks company report 2016 and http://s21.q4cdn.com/369030626/files/doc_financials/2015/Starbucks-Fiscal-2015_Financial-Highlights.pdf)

Extract B

Tax on disposable coffee cups?

Two and a half billion disposable cups are thrown away every year in the UK, that is, seven million every day. Only one in 400 is recycled. The UK Environment Minister has suggested that a coffee cup tax could work in a similar manner to the plastic bag charge. The 5 pence a bag charge has led to an 85% reduction in the number of bags being given out since October 2015. It is estimated that introducing a tax on disposable coffee cups would cut usage by two billion every year. One environment spokesperson, Kate Parminter, said: "We've seen how dramatically a small charge has affected public behaviour when it comes to the plastic bags and it is clearly time to extend it to coffee cups. Most people purchase a tea or coffee and throw away the cup without even thinking about it, but a charge would increase our awareness of the environmental impact."

In response, another MP welcomed her comments but said he did not believe a tax was the solution. He said: "My initial reaction is charging 5p or 10p for the cup will not work. It will not encourage people to take their own cups in if a coffee goes up from £2.60 to £2.65. I suspect a more technological answer is what we need – either the composition of the disposable cups being changed so they're more easily recyclable, or changing the technology in the recycling."

Disposable coffee cups contain a plastic coating inside the cups which prevent them from becoming soggy, making them difficult to recycle. There are just two specialist facilities in the UK that have the required equipment to separate plastic from paper for recycling. Almost no recycled paper is used in the production of disposable cups, meaning that some 43 000 trees must be cut down annually to keep up with the demand. CO_2 emissions of around 83 000 tonnes are generated every year for their production.

(Sources: adapted from http://www.independent.co.uk/news/uk/politics/disposable-coffee-cups-could-be-taxed-like-plastic-bags-environment-minister-says-a6938126.html 05/09/16 and https://www.cchdaily.co.uk/lib-dems-call-5p-plastic-bag-tax-coffee-cups)

Extract C

German city of Freiburg takes action on cutting the use of disposable coffee cups

The 'Freiburg cup', made from dishwasher-proof plastic, can be reused hundreds of times. Cups are issued with a one-euro deposit, and can be returned to any of the participating coffee shops in the German city. The cups, which are provided to coffee shops by local councils, are washed in the cafés and bakeries that have signed up to the scheme before being reused. 56 coffee retailers have signed up, and 10 000 cups are being used.

One of the main obstacles facing a wider-reaching scheme, however, is the number of café chains in Germany that are unwilling to use unbranded multi-use cups, particularly Starbucks and McDonald's. Starbucks already offers a discounted coffee for customers with a multi-use cup, but only if it is bearing the unmistakable Starbucks logo.

(Source: adapted from http://www.dw.com/en/germanys-love-for-coffee-to-go-leaves-environmental-groups-demanding-action/a-36689719)

Q) 1 (e) With reference to the information provided and your own knowledge, evaluate the microeconomic and macroeconomic effects of increased UK demand for coffee at branded coffee shops.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

7 The International Energy Agency has predicted that oil use by cars will peak in 2025 because of the increasing number of drivers switching to electric vehicles.
(Source adapted from: https://www.thetimes.co.uk)

Q) Evaluate the likely microeconomic consequences of consumers shifting from vehicles powered by fuel obtained from oil to electric-powered vehicles.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SUB-TOPIC 1.2.4

SUPPLY

Sub-topic 1.2.4 · 2 questions · 8 marks · lowest tariff first

5 In March 2019, 458 054 new car registrations were made, which subsequently fell by 44% in March 2020 due to the impact of the global health crisis. Demand for new vehicles can change quickly and can be caused by a variety of factors.

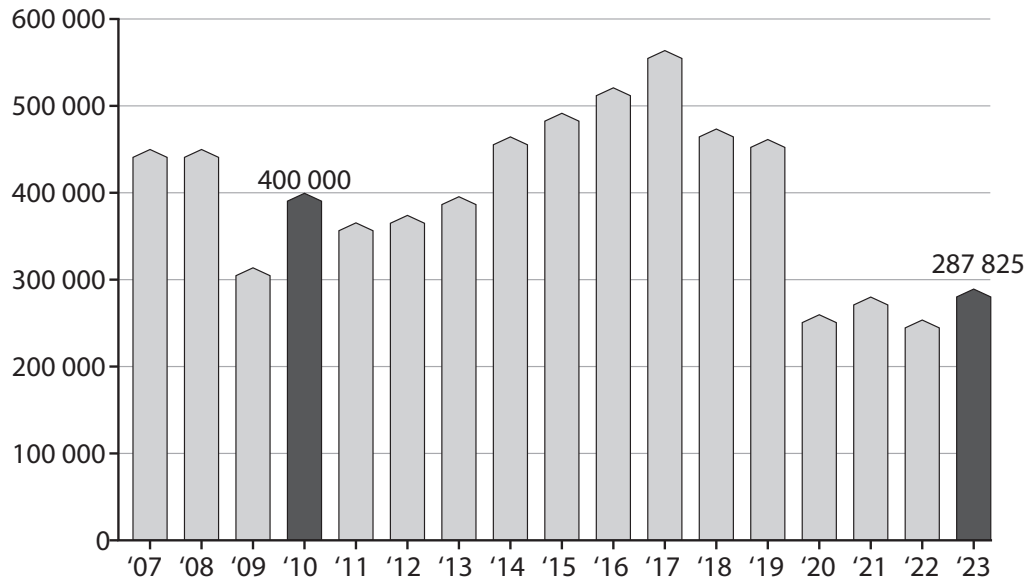
(Source: adapted from https://fleetworld.co.uk/uk-new-car-registrations-slump-44-in-march/)

(a) Which **one** of the following factors may cause a shift in demand for new cars?

(1)

- ☒ **A** Advertising
- ☒ **B** Cost of production
- ☒ **C** Indirect taxes
- ☒ **D** Subsidy to producers

March new car registrations 2007 to 2023



(Source: adapted from https://www.smmt.co.uk/vehicle-data/car-registrations/)

(b) The diagram on the previous page shows new car registrations in March from 2007 to 2023. Using 2010 as the base year, calculate the index number for 2023.

(3)

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

6 (a) Explain the likely impact of the new 2020 TACs on the price of cod. Include a supply and demand diagram in your answer.

(5)

SUB-TOPIC 1.2.5

ELASTICITY OF SUPPLY

Sub-topic 1.2.5 · 13 questions · 51 marks · lowest tariff first

5 In March 2020, a substantial increase in the demand for flour resulted in the retail price of flour increasing. Despite the price rises, the supply of flour failed to keep up with the increased demand.

(b) A manufacturer has estimated that the price elasticity of supply of ice cream is +1.5. If the demand for ice cream rises and the price increases by 10%, which **one** of the following is the resulting percentage change in supply?

(1)

☒ **A** 0.15%

☒ **B** 1.5%

☒ **C** 6.67%

☒ **D** 15%

(Total for Question 5(b) = 1 mark)

2 The table below shows price elasticity of supply for housing in the US in 2020.

US State	Price elasticity of supply
New York	+0.5
Texas	+1.8

(Source adapted from: https://bankunderground.co.uk/2020/02/25/the-declining-elasticity-of-us-housing-supply/)

(b) In Texas the price elasticity of supply is +1.8.
Which **one** of the following is the percentage increase in price if the quantity of housing supplied in Texas is increased by 12%?

(1)

☒ **A** 0.15

☒ **B** 1.50

☒ **C** 6.67

☒ **D** 21.60

(Total for Question 2(b) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Between 2016 and 2017 the average price of new build houses in the UK rose by an estimated 5.4%.

Year	Quantity of UK new house builds
2016	134 612
2017	162 880

(Source: http://www.telegraph.co.uk/business/2017/05/25/number-new-homes-built-hits-highest-level-since-financial-crisis/)

(a) With reference to the data provided, calculate the price elasticity of supply for new house builds between 2016 and 2017. You are advised to show your workings.

(2)

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(Total for Question 1(a) = 2 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Between 2016 and 2017 the average price of new build houses in the UK rose by an estimated 5.4%.

Year	Quantity of UK new house builds
2016	134 612
2017	162 880

(Source: http://www.telegraph.co.uk/business/2017/05/25/number-new-homes-built-hits-highest-level-since-financial-crisis/)

(c) Explain **one** factor that is likely to determine the price elasticity of supply of new house builds.

(2)

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(Total for Question 1(c) = 2 marks)

5 In March 2020, a substantial increase in the demand for flour resulted in the retail price of flour increasing. Despite the price rises, the supply of flour failed to keep up with the increased demand.

(a) Explain **one** reason why flour producers might find it difficult to increase quantity supplied in the short run.

(3)

(Total for Question 5(a) = 3 marks)

2 The world's largest producer of natural gas is the USA. In 2021 production fell even though the price increased.

(a) Using the data provided, explain **one** likely factor that may influence the price elasticity of supply of gas.

(3)

(Total for Question 2(a) = 3 marks)

5 In March 2020, a substantial increase in the demand for flour resulted in the retail price of flour increasing. Despite the price rises, the supply of flour failed to keep up with the increased demand.

(a) Explain **one** reason why flour producers might find it difficult to increase quantity supplied in the short run.

(3)

(b) A manufacturer has estimated that the price elasticity of supply of ice cream is +1.5. If the demand for ice cream rises and the price increases by 10%, which **one** of the following is the resulting percentage change in supply?

(1)

☒ **A** 0.15%

☒ **B** 1.5%

☒ **C** 6.67%

☒ **D** 15%

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

2 The world's largest producer of natural gas is the USA. In 2021 production fell even though the price increased.

(a) Using the data provided, explain **one** likely factor that may influence the price elasticity of supply of gas.

(3)

(b) The table below shows estimates of the price elasticity of supply and price elasticity of demand for gas.

	Natural Gas
Price elasticity of supply	+0.14
Price elasticity of demand	−0.10

(Source: adapted from http://www.usaee.org/usaee2013/submissions/Abs/Ponce_Neumann_Elasticities_gas_supply.pdf, http://www.mackinac.org/1247)

Which **one** of the following can be inferred from the table?

(1)

☒ **A** A 10% increase in the price of gas would cause a more than 10% increase in the supply

☒ **B** Gas is a normal good with income inelastic demand

☒ **C** The demand and supply of gas are both price inelastic

☒ **D** The demand for gas is more responsive to changes in price than supply

(Total for Question 2 = 4 marks)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

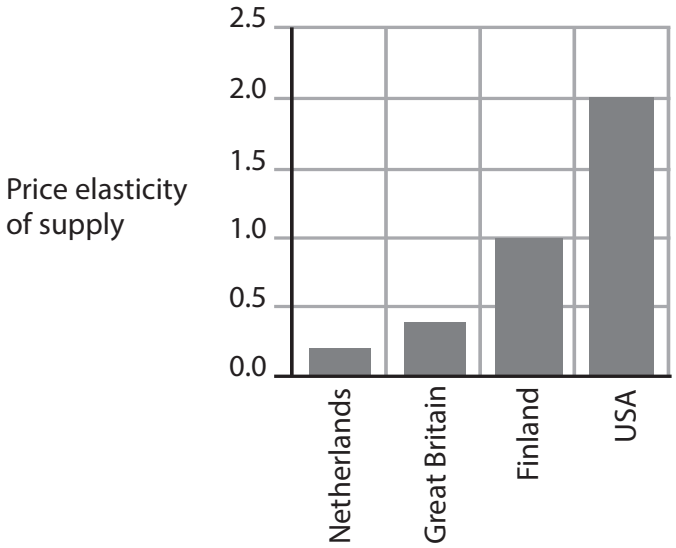
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

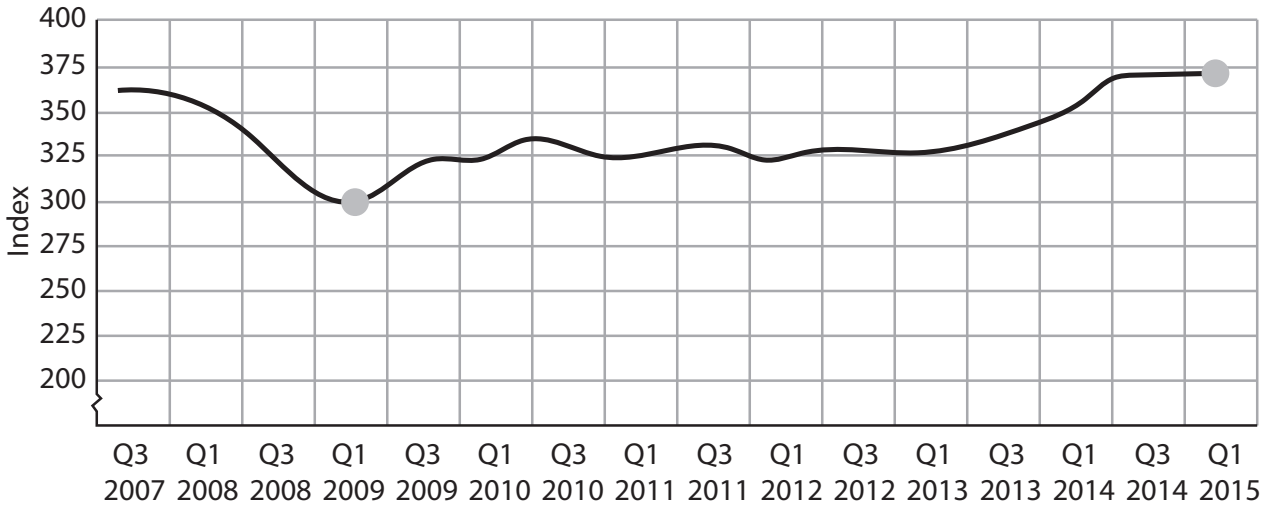
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

6 (a) With reference to Figure 1, explain **one** possible reason for the differences in price elasticity of supply of new housing between countries.

(5)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Between 2016 and 2017 the average price of new build houses in the UK rose by an estimated 5.4%.

Year	Quantity of UK new house builds
2016	134 612
2017	162 880

(Source: http://www.telegraph.co.uk/business/2017/05/25/number-new-homes-built-hits-highest-level-since-financial-crisis/)

(a) With reference to the data provided, calculate the price elasticity of supply for new house builds between 2016 and 2017. You are advised to show your workings.

(2)

(b) A 2.5% increase in new build house prices in one region of the UK causes a 10% increase in the number of houses built. Ceteris paribus, this suggests that supply of new house builds is:

(1)

- ☐ **A** perfectly price elastic
- ☐ **B** perfectly price inelastic
- ☐ **C** relatively price elastic
- ☐ **D** relatively price inelastic

(c) Explain **one** factor that is likely to determine the price elasticity of supply of new house builds.

(2)

(Total for Question 1 = 5 marks)

2 In 2022 the UK government provided 130 new licences for North Sea oil and gas exploration, in order to reduce energy prices. However, companies can take 20 years to begin to extract oil. Furthermore, they often have to continue producing oil even when prices fall because the equipment has no other uses.

(Source: adapted from https://www.theguardian.com/environment/2022/dec/12/uk-ministers-face-legal-challenge-over-north-sea-oil-and-gas-licences)

(a) With reference to the data above, explain the likely numerical value of the price elasticity of supply for oil.

(4)

(b) The cross elasticity of demand for petrol cars with respect to the price of diesel cars is estimated to be +0.64.

Which **one** of the following is the most likely impact if the price of diesel cars falls by 10%?

(1)

- ☒ **A** The price of petrol cars falls by 6.4%
- ☒ **B** The price of petrol cars rises by 64%
- ☒ **C** The quantity demanded of petrol cars falls by 6.4%
- ☒ **D** The quantity demanded of petrol cars rises by 64%

(Total for Question 2 = 5 marks)

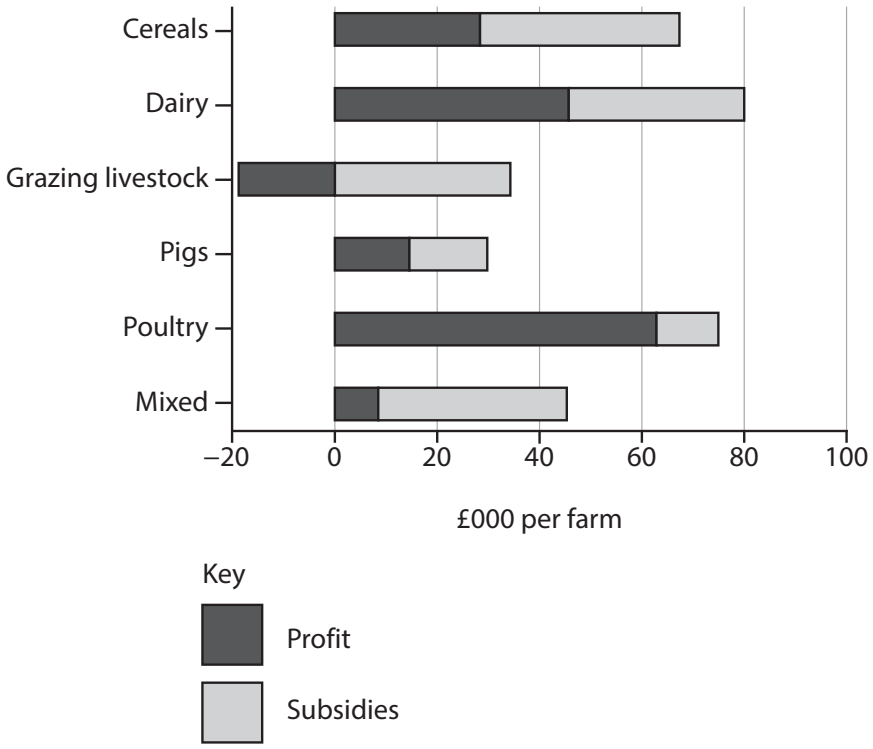
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

(c) With reference to the last paragraph of Extract B, explain **two** factors which are likely to influence price elasticity of supply.

(6)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

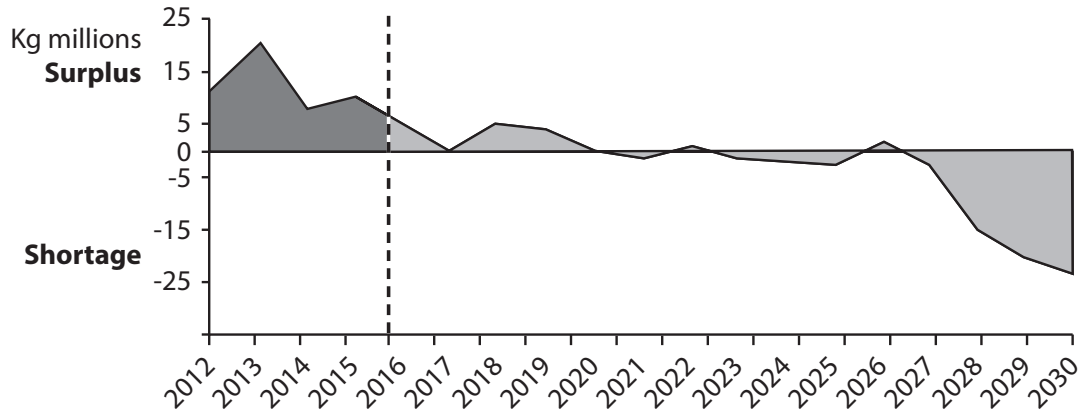
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

(b) With reference to Extract A and your own knowledge, assess whether the supply of uranium is likely to be price elastic or price inelastic.

(10)

SUB-TOPIC 1.2.6

PRICE DETERMINATION

Sub-topic 1.2.6 · 17 questions · 67 marks · lowest tariff first

4 The excess supply of carbon steel has recently caused its global price to fall below $530 per tonne.

(Source: adapted from http://www.meps.co.uk/allproducts%20steel%20price.htm)

Steel production leads to high levels of carbon emissions.

(b) Which **one** of the following is likely to result in an increase in carbon emissions?

(1)

- ☒ **A** Introducing a tradable pollution permits scheme
- ☒ **B** Shutting down steel factories
- ☒ **C** Subsidising the steel industry to install cleaner technology
- ☒ **D** Reducing indirect taxes on steel products

(Total for Question 4(b) = 1 mark)

5 Universities UK raised concerns about the proposal to reduce the maximum tuition fees (fee cap) for undergraduate courses in England from £9 000 to £6 000. It stated "This unfunded proposal to reduce the fee cap would damage the quality of experience our universities could deliver to students and remove opportunities for those seeking to benefit from a university education".

(Source: adapted from tuition fees 2015 Times letter Universities UK http://www.universitiesuk.ac.uk/highereducation/Pages/UUKboardFeesLetter.aspx#.VjoQRbfhDIU)

(b) Which **one** of the following statements is correct?

(1)

- ☒ **A** The marginal social benefits exceed the marginal private benefits from university education
- ☒ **B** University education is an inferior good
- ☒ **C** University education is a public good
- ☒ **D** The social optimum equilibrium quantity is less than the market equilibrium quantity for university education

(Total for Question 5(b) = 1 mark)

4 (a) During the period from October to December 2022, production of coffee beans in the Philippines increased by 2.7% from the same quarter in 2021.

Which **one** of the following is most likely to cause a shift to the right of the supply curve?

(1)

- ☒ **A** A decrease in the demand for coffee
- ☒ **B** A subsidy to coffee bean producers
- ☒ **C** A tax on coffee bean production
- ☒ **D** The cost of production rises

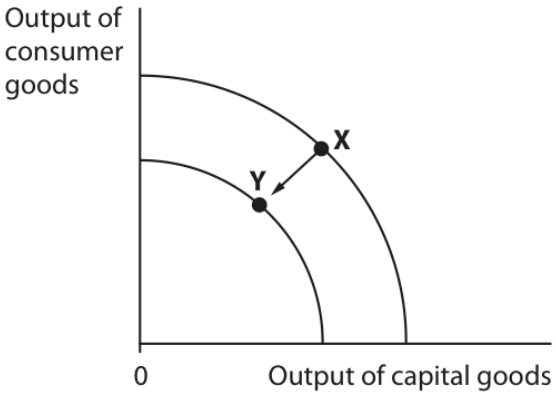
(Total for Question 4(a) = 1 mark)

2 In August 2017 Hurricane Harvey caused the closure of nearly a quarter of the oil production capacity in the United States.

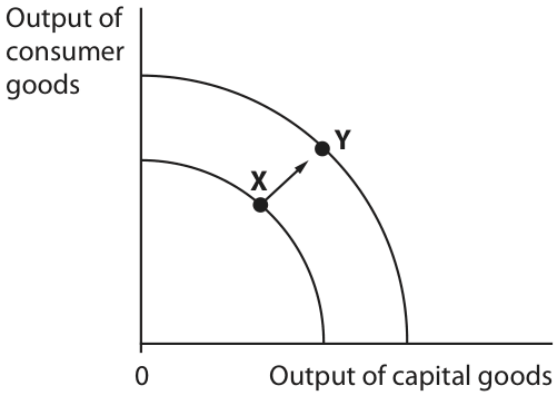
(b) The diagrams show movements from position X to Y on production possibility frontiers. In which **one** of the diagrams does the movement from X to Y illustrate the most likely impact on the US economy of a natural disaster such as Hurricane Harvey?

(1)

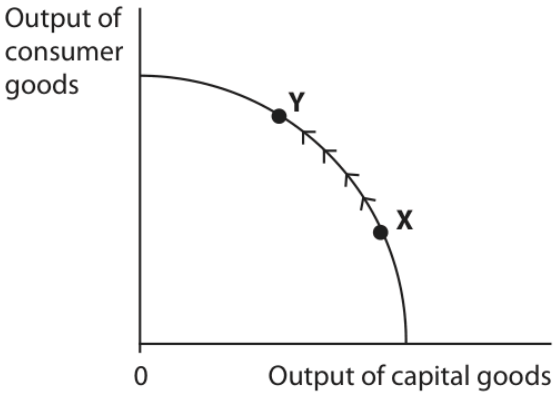
☒ **A**



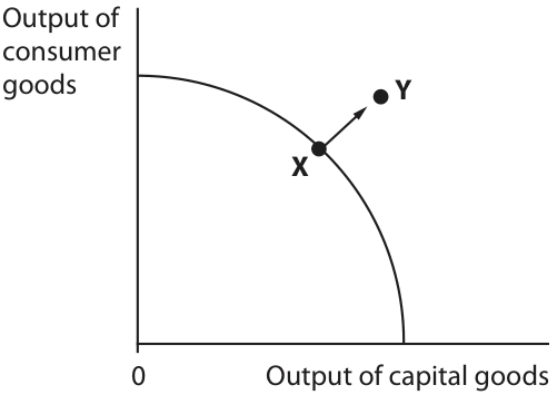
☒ **B**



☒ **C**



☒ **D**



(Total for Question 2(b) = 1 mark)

4 The excess supply of carbon steel has recently caused its global price to fall below $530 per tonne.

(Source: adapted from http://www.meps.co.uk/allproducts%20steel%20price.htm)

(a) Explain how the price mechanism responds to excess supply in a free market.

(3)

(Total for Question 4(a) = 3 marks)

5 Universities UK raised concerns about the proposal to reduce the maximum tuition fees (fee cap) for undergraduate courses in England from £9 000 to £6 000. It stated "This unfunded proposal to reduce the fee cap would damage the quality of experience our universities could deliver to students and remove opportunities for those seeking to benefit from a university education".

(Source: adapted from tuition fees 2015 Times letter Universities UK http://www.universitiesuk.ac.uk/highereducation/Pages/UUKboardFeesLetter.aspx#.VjoQRbfhDIU)

(a) Explain why reducing the tuition fee cap may result in excess demand for university places.

(3)

(Total for Question 5(a) = 3 marks)

4 During 2021 the UK experienced severe shortages of crisps, petrol and many other items.

(Source: adapted from https://www.independent.co.uk/news/business/news/uk-shortages-covid-brexit-supply-chain-b1968458.html)

(a) Explain **one** reason why it is rational for a firm to raise prices when there is excess demand.

(3)

(Total for Question 4(a) = 3 marks)

4 (a) During the period from October to December 2022, production of coffee beans in the Philippines increased by 2.7% from the same quarter in 2021.

Which **one** of the following is most likely to cause a shift to the right of the supply curve?

(1)

- ☒ **A** A decrease in the demand for coffee
- ☒ **B** A subsidy to coffee bean producers
- ☒ **C** A tax on coffee bean production
- ☒ **D** The cost of production rises

(b) Explain how the operation of market forces will eliminate an excess supply of coffee.

(3)

(Total for Question 4 = 4 marks)

4 The excess supply of carbon steel has recently caused its global price to fall below $530 per tonne.

(Source: adapted from http://www.meps.co.uk/allproducts%20steel%20price.htm)

(a) Explain how the price mechanism responds to excess supply in a free market.

(3)

Steel production leads to high levels of carbon emissions.

(b) Which **one** of the following is likely to result in an increase in carbon emissions?

(1)

- ☒ **A** Introducing a tradable pollution permits scheme
- ☒ **B** Shutting down steel factories
- ☒ **C** Subsidising the steel industry to install cleaner technology
- ☒ **D** Reducing indirect taxes on steel products

(Total for Question 4 = 4 marks)

5 Universities UK raised concerns about the proposal to reduce the maximum tuition fees (fee cap) for undergraduate courses in England from £9 000 to £6 000. It stated "This unfunded proposal to reduce the fee cap would damage the quality of experience our universities could deliver to students and remove opportunities for those seeking to benefit from a university education".

(Source: adapted from tuition fees 2015 Times letter Universities UK http://www.universitiesuk.ac.uk/highereducation/Pages/UUKboardFeesLetter.aspx#.VjoQRbfhDIU)

(a) Explain why reducing the tuition fee cap may result in excess demand for university places.

(3)

(b) Which **one** of the following statements is correct?

(1)

- ☒ **A** The marginal social benefits exceed the marginal private benefits from university education
- ☒ **B** University education is an inferior good
- ☒ **C** University education is a public good
- ☒ **D** The social optimum equilibrium quantity is less than the market equilibrium quantity for university education

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

4 During 2021 the UK experienced severe shortages of crisps, petrol and many other items.

(Source: adapted from https://www.independent.co.uk/news/business/news/uk-shortages-covid-brexit-supply-chain-b1968458.html)

(a) Explain **one** reason why it is rational for a firm to raise prices when there is excess demand.

(3)

Esso, Tesco and Sainsbury's all charge £ 1.48 for a litre of petrol.

(b) Which **one** of the following is the most likely cross price elasticity of demand for close substitutes?

(1)

- ☒ **A** – 2.1
- ☒ **B** – 0.1
- ☒ **C** + 0.1
- ☒ **D** + 2.1

(Total for Question 4 = 4 marks)

4 (a) During the period from October to December 2022, production of coffee beans in the Philippines increased by 2.7% from the same quarter in 2021.

Which **one** of the following is most likely to cause a shift to the right of the supply curve?

(1)

- ☒ **A** A decrease in the demand for coffee
- ☒ **B** A subsidy to coffee bean producers
- ☒ **C** A tax on coffee bean production
- ☒ **D** The cost of production rises

(b) Explain how the operation of market forces will eliminate an excess supply of coffee.

(3)

(Total for Question 4 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 The table shows market data for e-cigarette kits. The original equilibrium price is £23.

Price £	Quantity demanded per month (000)	Quantity supplied per month (000)	New quantity demanded per month (000)	New quantity supplied per month (000)
25	5	9		
24	6	8		
23	7	7		
22	8	6		
21	9	5		

As a result of a successful advertising campaign, demand increased by 3 000 e-cigarette kits at all prices. At the same time production costs fell leading to an increase in supply of 1000 e-cigarette kits at all prices.

(a) Calculate the new equilibrium price and quantity following the successful advertising campaign and the fall in production costs. Use the last two columns for your working.

(4)

(b) Research conducted in New Zealand in 2014 estimated the cross elasticity of demand for e-cigarettes to be 0.16 in response to changes in the price of tobacco. This implies that a 5% increase in the price of tobacco will cause the percentage change in demand for e-cigarettes to be:

(1)

- ☒ **A** -31.25
- ☒ **B** -0.16
- ☒ **C** 0.8
- ☒ **D** 31.25

(Total for Question 1 = 5 marks)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

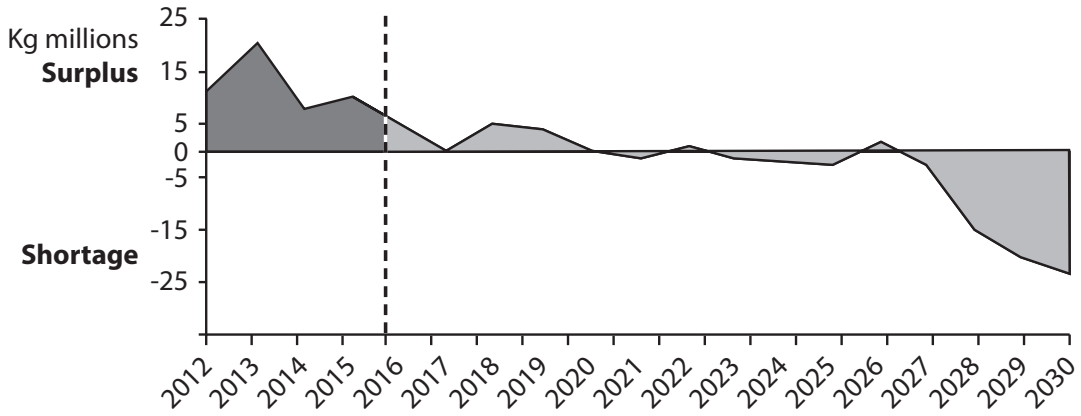
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

6 (a) With reference to Figure 1 and Extract A, explain why the price of uranium has 'fallen to a 13-year low' (Extract A, lines 2 and 3) in 2016. Include a supply and demand diagram in your answer.

(5)

2 In August 2017 Hurricane Harvey caused the closure of nearly a quarter of the oil production capacity in the United States.

(a) Draw a supply and demand diagram to show the likely microeconomic effects of the hurricane on the US oil market.

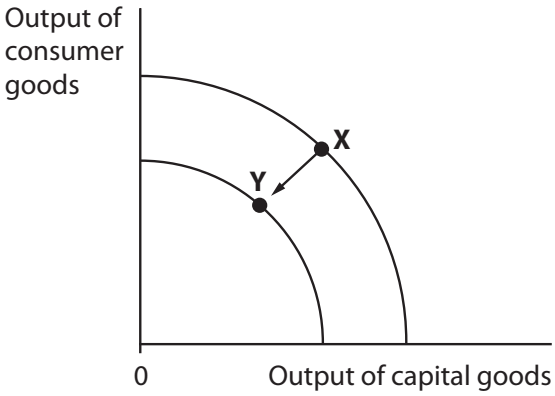
(4)



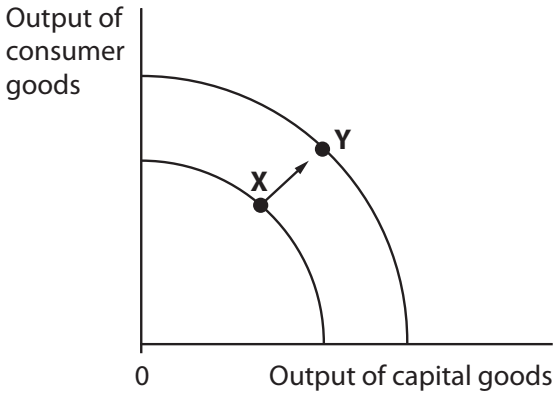
(b) The diagrams show movements from position X to Y on production possibility frontiers. In which **one** of the diagrams does the movement from X to Y illustrate the most likely impact on the US economy of a natural disaster such as Hurricane Harvey?

(1)

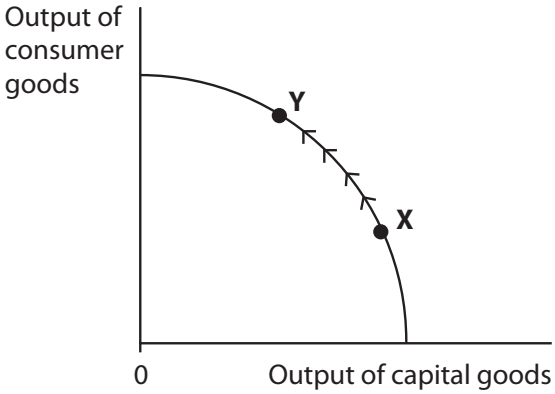
☒ **A**



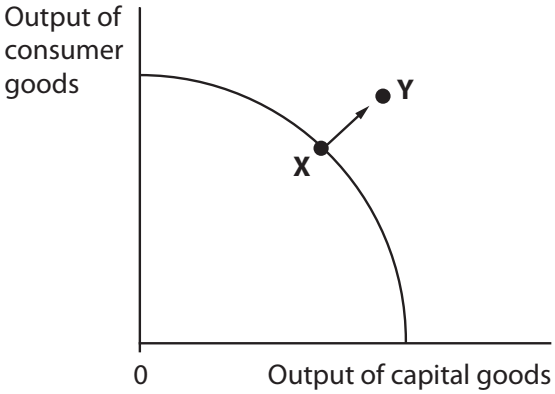
☒ **B**



☒ **C**



☒ **D**



(Total for Question 2 = 5 marks)

SECTION B

Read the following extracts (A to D) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The electronics industry

Extract A

Rising prices of electronics devices

Computer chips act as the "brain" in all electronic devices. Makers of electronic devices face significant increases in the price of computer chips as they try to source enough components, including games consoles, computers and smartphones. The price of some computer chips has jumped from $0.20 each to more than $1. The prices of electronic devices have risen for a range of reasons, including higher material costs and the growing popularity of home entertainment.

(Source: adapted from https://www.ft.com/content/8c718a74-cd95-4b2d-ac0e-de0682e4e3cd)

Extract B

Labour shortages in the electronics industry

Every year, highly skilled and experienced employees in the electronics industry retire. The current tight labour market has made an already difficult problem of hiring suitable engineering and computing graduates worse, especially since the nature of the industry is becoming increasingly technical. As production becomes more automated, electronics jobs are more likely to require problem solving and analysis than just assembling skills. However, artificial intelligence and other new technologies can help fill some of the skills gap. In addition, by giving hazardous, repetitive, grimy work to robots, human beings can focus on more creative, analytic tasks.

(Source: adapted from https://www.ericsson.com/en/blog/2021/12/manufacturing-problems-that-keep-ceos-awake-at-night)

Extract C

Serious concerns over merger

The Competition and Markets Authority (CMA) has said the takeover of the Cambridge-based computer chip designer Arm by its US rival Nvidia raises serious competition concerns. It has launched an in-depth investigation into the £29.5 billion deal. The CMA said the merger could reduce choice for firms reliant on computer chips, pushing up prices of products including cars, games consoles and mobile phones. In addition, severe global shortages of computer chips has disrupted the manufacture of a range of electronic goods pushing up costs for firms.

Despite this, large electronics firms benefit from economies of scale and are able to finance high-risk innovation and global advertising.

(Source adapted from: https://www.theguardian.com/business/2021/aug/20/watchdog-expresses-concerns-over-nvidias-takeover-of-uk-chip-designer-arm)

Extract D

The growing problem of electronic waste

Electronic waste is the fastest growing element of the world's household waste problem. The problem in the UK is particularly bad. The country produces 24.9 kg a person a year – nearly 10 kg more than the EU average. In 2018, 1.2 million tonnes of electrical devices were sold in the UK, and 500 000 tonnes made it to recycling centres. Some appliances are more likely to be recycled than others. The recycling rate for big appliances, such as fridges and cookers, is about 80%. Of small appliances, barely one in five makes it to the recycling centre. As items such as toasters, hairdryers and headphones fit into household bins, they are not often taken to a recycling centre. This causes many problems, such as hazardous substances contaminating soil, water pollution and other external costs.

Policy makers have a long list of options to combat this problem including stricter regulation, environmental education, taxation and financial incentives. In some countries, for example, household rubbish is weighed and recycling initiatives are subsidised.

(Source adapted from: https://www.ft.com/content/26e1aa74-2261-11ea-92da-f0c92e957a96)

6 (a) With reference to Extract A, explain the likely reasons for the change in price of electronic devices. Include a supply and demand diagram in your answer.

(5)

SECTION B

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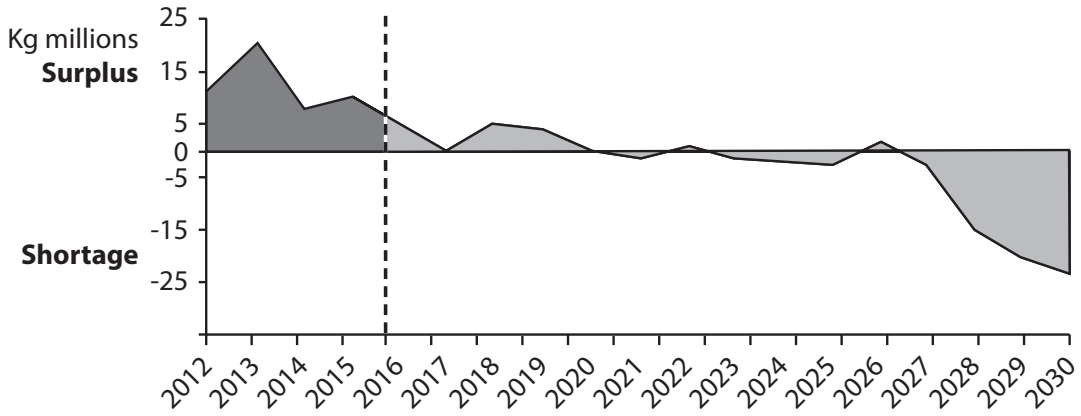
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Energy markets

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The UK Government has announced that it might introduce maximum price controls on energy used by households.

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Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

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The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

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(Source: adapted from www.sternreview.org.uk/)

The UK Government is considering introducing a maximum price for energy.

(e) Discuss the likely microeconomic effects of this decision on energy producers **and** consumers. Include a supply and demand diagram in your answer.

(15)

SUB-TOPIC 1.2.7

PRICE MECHANISM

Sub-topic 1.2.7 · 5 questions · 23 marks · lowest tariff first

3 In the UK charges for dental treatment vary. For example, the following charges can be made for a tooth filling:

- National Health Service (NHS) dental treatment £50.50
- Private dental treatment £95–£700

A dentist can choose to offer NHS treatment, private treatment or both.

(a) Using the data above, which **one** of the following is a function of the price mechanism in the market for private dental care?

(1)

- ☒ **A** Acting as a signal to dentists when deciding whether to provide private dental treatment
- ☒ **B** Eliminating a shortage of private dentists by allowing the price of private treatment to fall
- ☒ **C** Encouraging government intervention to set dental care targets
- ☒ **D** Incentivising private dentists to offer only NHS treatment

(Total for Question 3(a) = 1 mark)

3 In the UK charges for dental treatment vary. For example, the following charges can be made for a tooth filling:

- National Health Service (NHS) dental treatment £50.50
- Private dental treatment £95–£700

A dentist can choose to offer NHS treatment, private treatment or both.

(c) Define the term 'asymmetric information'.

(1)

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(Total for Question 3(c) = 1 mark)

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(b) Explain **one** possible reason why the state provides NHS dental treatment.

(2)

(Total for Question 3(b) = 2 marks)

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(b) Explain **one** possible reason why the state provides NHS dental treatment.

(2)

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(1)

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(Total for Question 3 = 4 marks)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

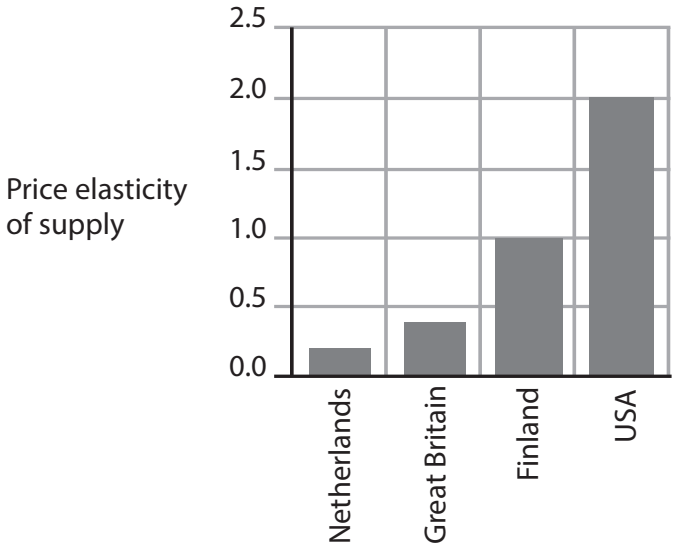
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

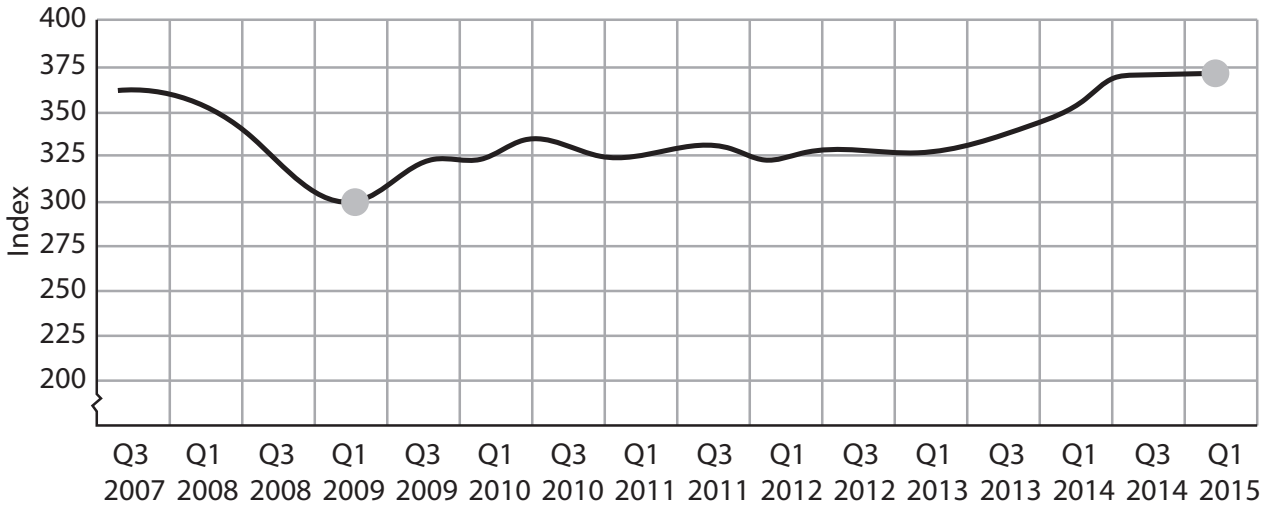
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

(e) With reference to Figures 1 and 2 and your own knowledge, discuss the functions of the price mechanism in allocating housing.

(15)

SUB-TOPIC 1.2.8

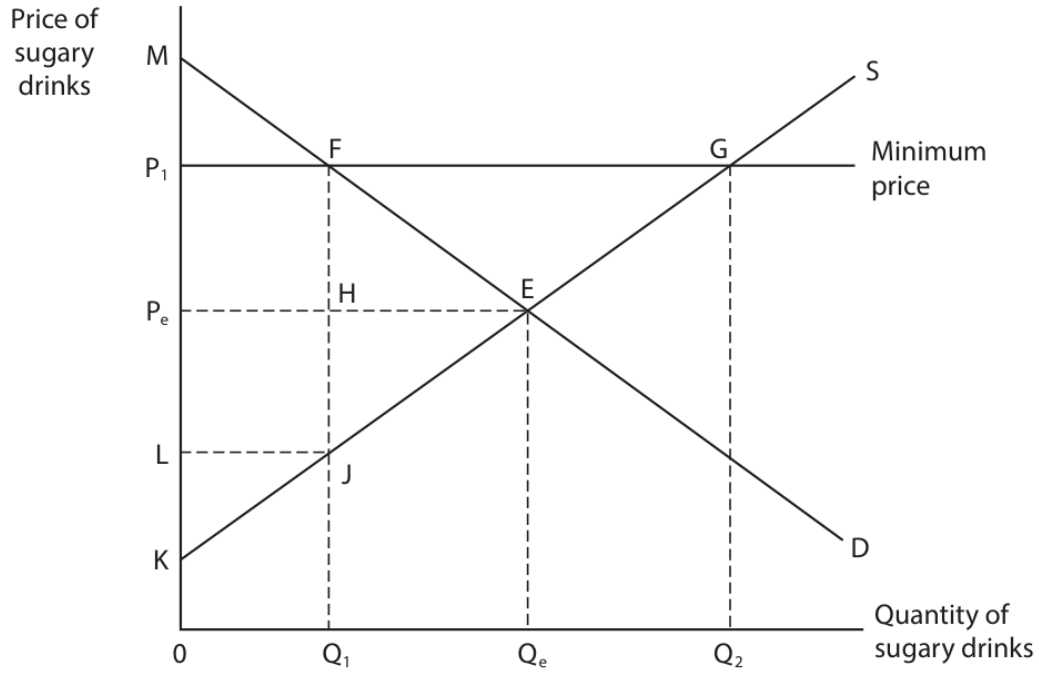
CONSUMER AND PRODUCER SURPLUS

Sub-topic 1.2.8 · 7 questions · 22 marks · lowest tariff first

4 An annual season ticket for a train journey between London and Reading is planned to increase from £5 044 to £5 664 in 2023.

(Source adapted from: https://commonslibrary.parliament.uk/how-much-could-rail-fares-increase-by-in-2023-and-why)

The diagram below shows the demand and supply for sugary drinks.



(c) Which **one** of the following areas represents the *change* in producer surplus when a minimum price is imposed?

(1)

- ☒ **A** FEP_eP_1
- ☒ **B** FMP_1
- ☒ **C** GEP_eP_1
- ☒ **D** GKP_1

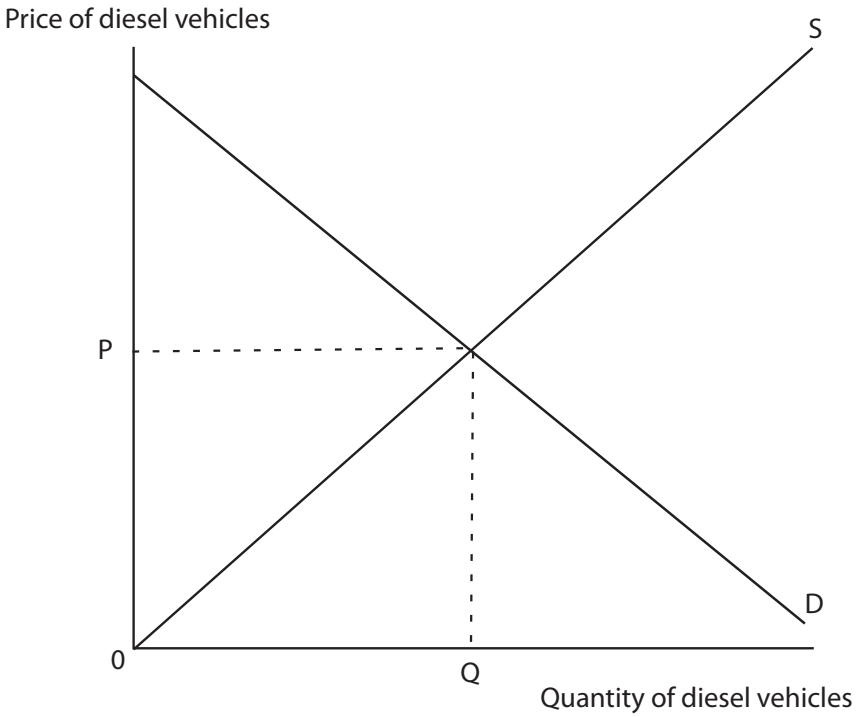
(Total for Question 4(c) = 1 mark)

2 The consensus that diesel emissions are bad for health has led to many cities planning to ban diesel vehicles from their centres. The mayors of Paris, Mexico City, Madrid and Athens have said they intend to ban these vehicles by 2025.

(Source: adapted from http://www.autoexpress.co.uk/car-news/consumer-news/98747/diesel-ban-clean-air-zone-expansion-could-see-diesel-cars-charged-to)

(a) Annotate the diagram to show the change in consumer surplus in the market for diesel vehicles, following the change in demand caused by the proposed 2025 ban in some city centres.

(2)



4 An annual season ticket for a train journey between London and Reading is planned to increase from £5 044 to £5 664 in 2023.

(Source adapted from: https://commonslibrary.parliament.uk/how-much-could-rail-fares-increase-by-in-2023-and-why)

(a) With reference to the information provided, calculate the percentage change in the price of an annual season ticket.

(2)

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(Total for Question 4(a) = 2 marks)

4 An annual season ticket for a train journey between London and Reading is planned to increase from £5 044 to £5 664 in 2023.

(Source adapted from: https://commonslibrary.parliament.uk/how-much-could-rail-fares-increase-by-in-2023-and-why)

(b) Explain the likely impact of the increase in price of a season ticket on consumer surplus.

(2)

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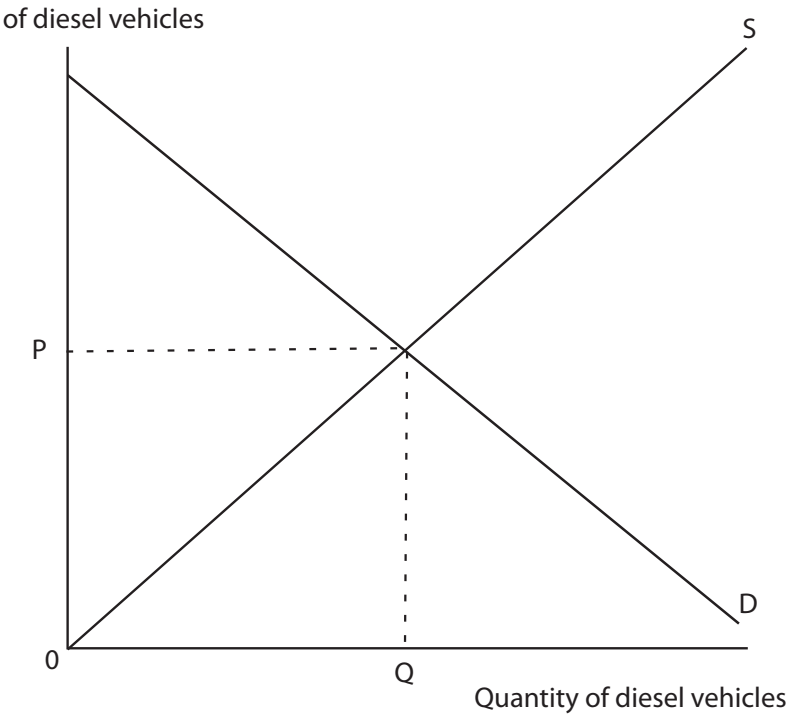
(Total for Question 4(b) = 2 marks)

2 The consensus that diesel emissions are bad for health has led to many cities planning to ban diesel vehicles from their centres. The mayors of Paris, Mexico City, Madrid and Athens have said they intend to ban these vehicles by 2025.

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(a) Annotate the diagram to show the change in consumer surplus in the market for diesel vehicles, following the change in demand caused by the proposed 2025 ban in some city centres.

(2)



(b) A ban on diesel vehicles in city centres will reduce the demand for diesel fuel. This is because:

(1)

- ☒ **A** consumers are irrational
- ☒ **B** consumers expect the price of diesel to rise
- ☒ **C** the goods are complements
- ☒ **D** the goods are substitutes

(c) Define the term 'demand'.

(1)

(Total for Question 2 = 4 marks)

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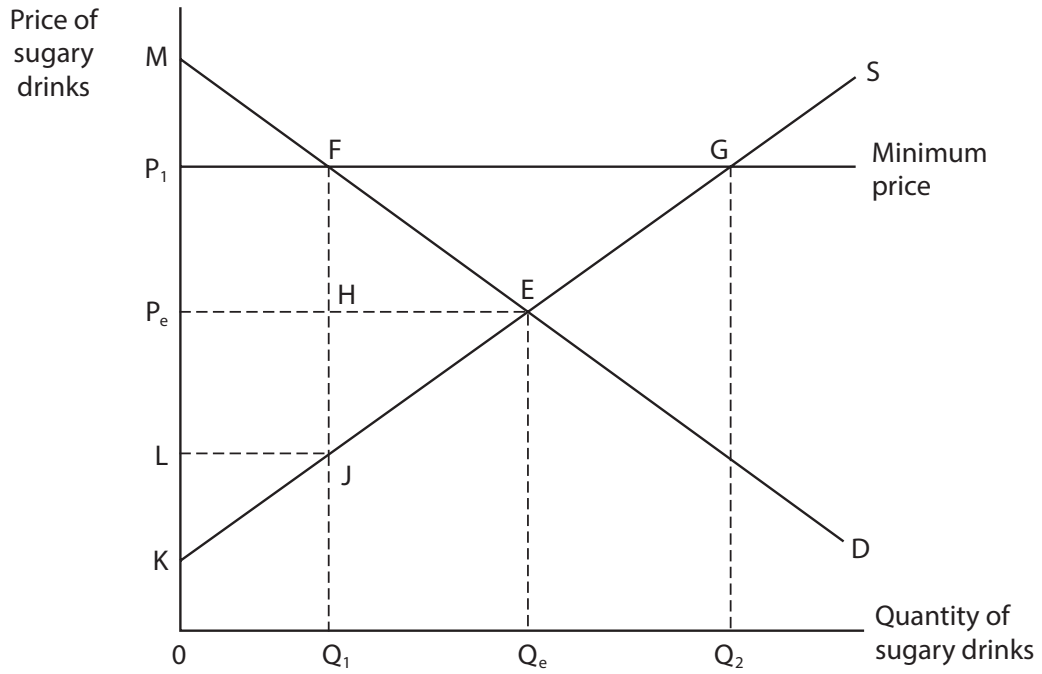
(a) With reference to the information provided, calculate the percentage change in the price of an annual season ticket.

(2)

(b) Explain the likely impact of the increase in price of a season ticket on consumer surplus.

(2)

The diagram below shows the demand and supply for sugary drinks.



(c) Which **one** of the following areas represents the *change* in producer surplus when a minimum price is imposed?

(1)

- ☒ **A** FEP_eP_1
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- ☒ **C** GEP_eP_1
- ☒ **D** GKP_1

(Total for Question 4 = 5 marks)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

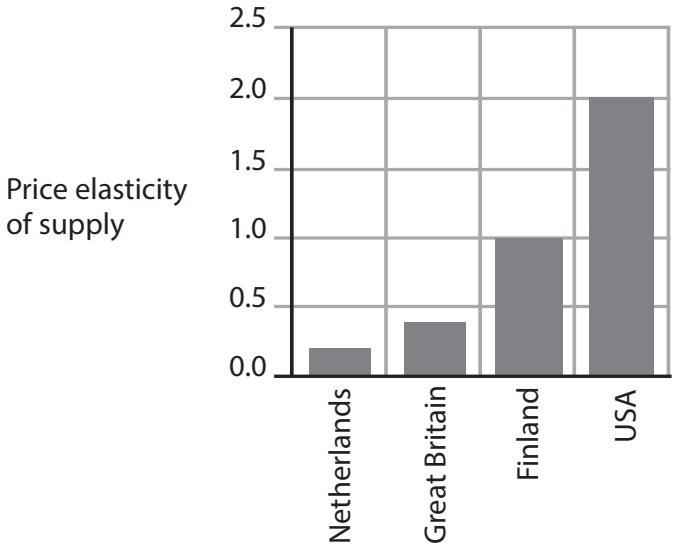
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

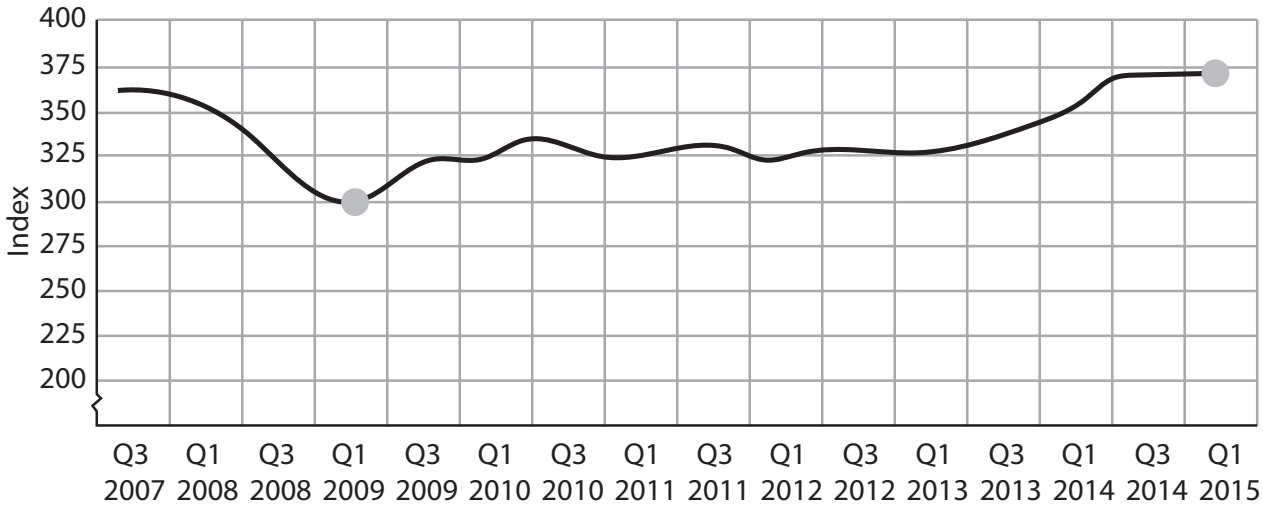
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

(c) Explain the likely impact on producer surplus of an increase in the demand for housing. Use a diagram to illustrate your answer.

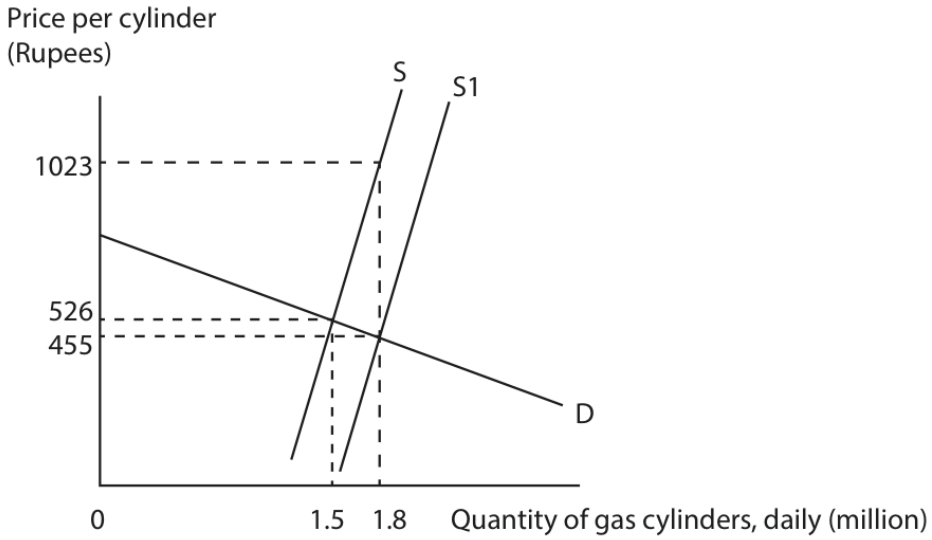
(6)

SUB-TOPIC 1.2.9

INDIRECT TAXES AND SUBSIDIES

Sub-topic 1.2.9 · 10 questions · 30 marks · lowest tariff first

3 The Indian government has introduced a subsidy on domestic cooking gas cylinders in the city of Mumbai. The diagram below shows the effect following the introduction of the subsidy.



(Source: https://www.iocl.com/products/indanegas.aspx and http://indianexpress.com/article/business/business-others/lpg-subsidy-fixed-at-rs-568-price-to-change-after-march/)

(b) Calculate the percentage share of the total subsidy received by:

(i) consumers

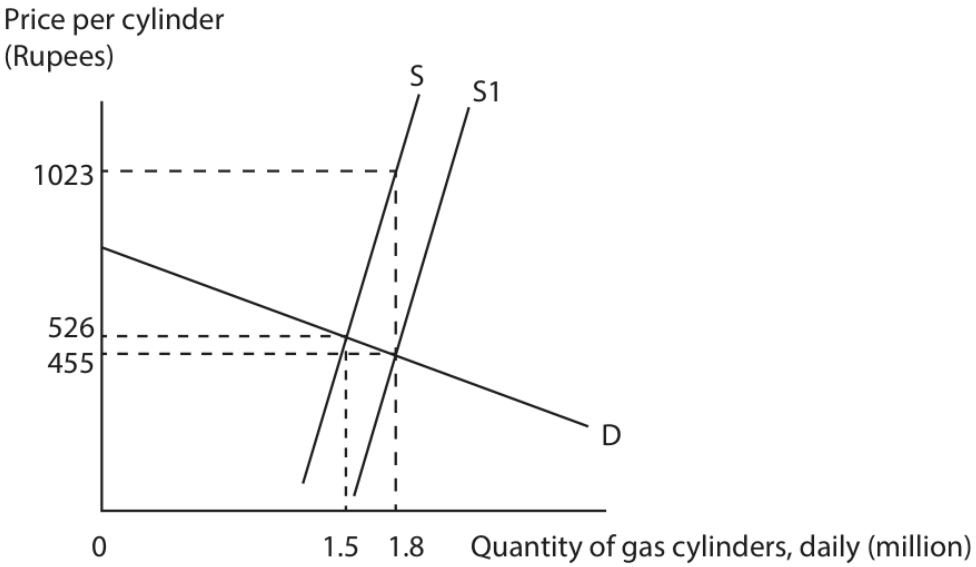
(1)

(ii) producers

(1)

(Total for Question 3(b) = 1 mark)

3 The Indian government has introduced a subsidy on domestic cooking gas cylinders in the city of Mumbai. The diagram below shows the effect following the introduction of the subsidy.



(Source: https://www.iocl.com/products/indanegas.aspx and http://indianexpress.com/article/business/business-others/lpg-subsidy-fixed-at-rs-568-price-to-change-after-march/)

(c) One effect of the subsidy is to increase:

(1)

- ☒ **A** consumer surplus
- ☒ **B** market failure
- ☒ **C** public good provision
- ☒ **D** tax revenue

(Total for Question 3(c) = 1 mark)

2 Between 2010 and 2015 the average price of tea in the UK increased from £7.20 per kilo to £8.48 per kilo. Over the same period the quantity of tea purchased fell from 97 million kilos to 76 million kilos.

(Source: http://www.theguardian.com/lifeandstyle/shortcuts/2015/aug/05/brew-do-you-think-you-are-why-tea-needs-to-copy-coffee-in-order-to-survive)

(a) Assume that the change in the quantity of tea purchased was only caused by the change in the price of tea. Calculate the price elasticity of demand for tea in response to the rise in its price. You are advised to show your working.

(2)

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(Total for Question 2(a) = 2 marks)

2 Between 2010 and 2015 the average price of tea in the UK increased from £7.20 per kilo to £8.48 per kilo. Over the same period the quantity of tea purchased fell from 97 million kilos to 76 million kilos.

(Source: http://www.theguardian.com/lifeandstyle/shortcuts/2015/aug/05/brew-do-you-think-you-are-why-tea-needs-to-copy-coffee-in-order-to-survive)

(b) Calculate the change in total sales revenue for UK tea retailers between 2010 and 2015. You are advised to show your working.

(2)

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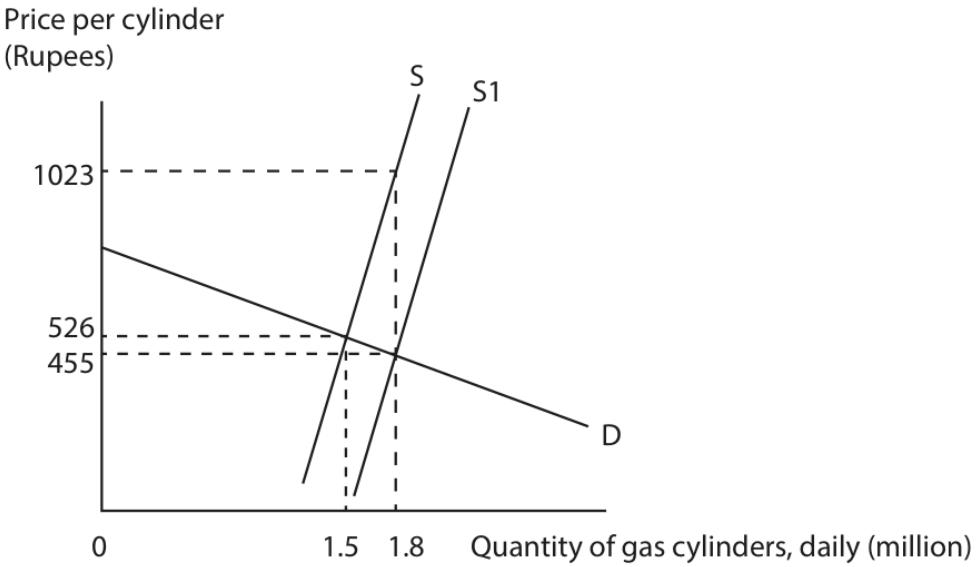
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(Total for Question 2(b) = 2 marks)

3 The Indian government has introduced a subsidy on domestic cooking gas cylinders in the city of Mumbai. The diagram below shows the effect following the introduction of the subsidy.



(Source: https://www.iocl.com/products/indanegas.aspx and http://indianexpress.com/article/business/business-others/lpg-subsidy-fixed-at-rs-568-price-to-change-after-march/)

(a) Calculate the total domestic cooking gas subsidy paid daily by the Indian government. You are advised to show your working.

(2)

(Total for Question 3(a) = 2 marks)

2 The number of individual weekly ticket sales from UK National Lottery games operated by Camelot was 73 million in the financial year 2015–2016.

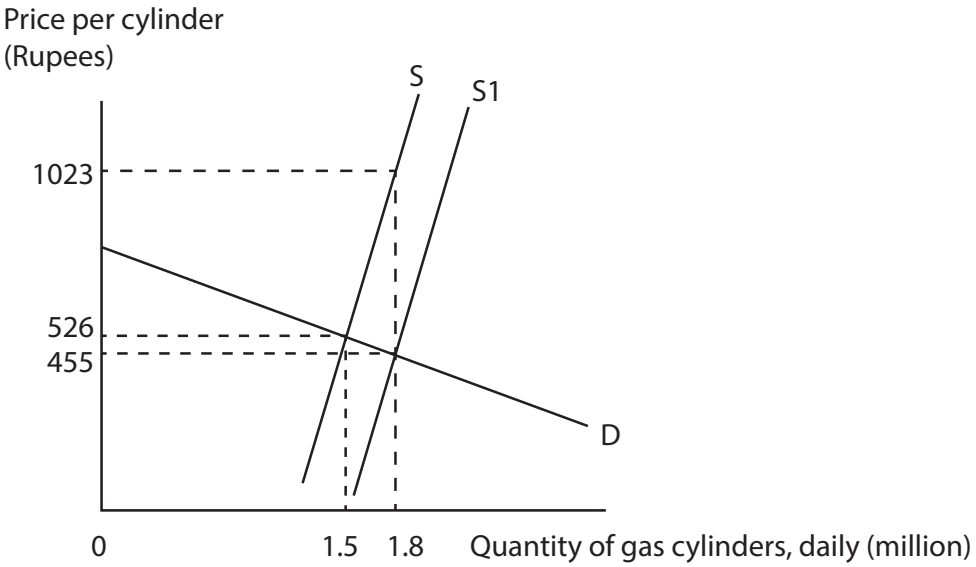
The sale price of each lottery ticket was £2. This figure included 24 pence of tax revenue on each ticket sold.

(a) Calculate the weekly revenue received by Camelot after paying the tax to the government. You are advised to show your working.

(2)

(Total for Question 2(a) = 2 marks)

3 The Indian government has introduced a subsidy on domestic cooking gas cylinders in the city of Mumbai. The diagram below shows the effect following the introduction of the subsidy.



(Source: https://www.iocl.com/products/indanegas.aspx and http://indianexpress.com/article/business/business-others/lpg-subsidy-fixed-at-rs-568-price-to-change-after-march/)

(a) Calculate the total domestic cooking gas subsidy paid daily by the Indian government. You are advised to show your working.

(2)

(b) Calculate the percentage share of the total subsidy received by:

(i) consumers

(1)

(ii) producers

(1)

(c) One effect of the subsidy is to increase:

(1)

- ☒ **A** consumer surplus
- ☒ **B** market failure
- ☒ **C** public good provision
- ☒ **D** tax revenue

(Total for Question 3 = 5 marks)

2 The number of individual weekly ticket sales from UK National Lottery games operated by Camelot was 73 million in the financial year 2015–2016.

The sale price of each lottery ticket was £2. This figure included 24 pence of tax revenue on each ticket sold.

(a) Calculate the weekly revenue received by Camelot after paying the tax to the government. You are advised to show your working.

(2)

Research conducted for HMRC estimated the cross elasticity of demand for using gaming machines to be 1.28 in response to changes in the price of national lottery tickets.

(Source: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322845/report313.pdf)

In October 2013 Camelot increased the price of a national lottery ticket from £1 to £2.

(b) Explain the likely impact of the price increase of national lottery tickets on the demand for using gaming machines.

(2)

In 2016 a coastal flood defence scheme was completed at Broomhill Sands in Kent, protecting people, homes and businesses. A £30 million grant from the National Lottery paid for the scheme.

(Source: https://www.gov.uk/government/news/30-million-project-set-to-reduce-flood-risk-in-kent)

(c) The most likely reason for this grant is to ensure the:

(1)

- ☒ **A** exclusivity of Broomhill Sands
- ☒ **B** provision of a private good
- ☒ **C** provision of a public good
- ☒ **D** rivalry of Broomhill Sands

(Total for Question 2 = 5 marks)

SECTION B

Read Figures 1, 2 and 3 and the following extracts (A and B) before answering Question 6.

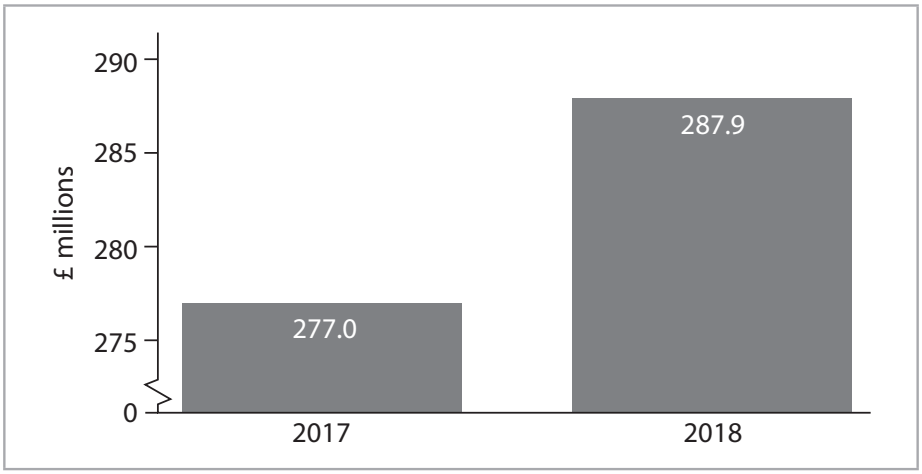
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

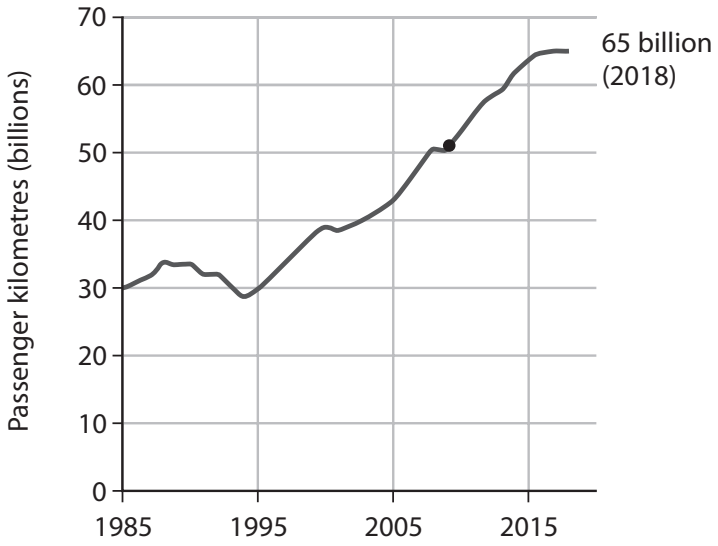
The UK Rail Industry

Figure 1: UK government subsidy to Northern, a train operating company in Northern England



(Source adapted from: https://www.theyworkforyou.com/wrans/?id=2018-10-18.181280.h)

Figure 2: Rail passenger kilometres travelled per year in the UK, billions



(Source adapted from: fullfact.org)

Figure 3: Price of a single off-peak train journey, Edinburgh to Leeds Saturday 22nd December 2018 19:00 hours

Adult	Young Persons (16–25) Railcard
£105.30	£69.50

(Source: https://www.lner.co.uk/buy-tickets/booking-engine)

Extract A

The case for nationalisation

Privatisation has not made the rail industry cheaper to operate, despite the promise from one government source that it would see private companies bringing: "more competition, greater efficiency and a wider choice of services".

One reason, suggest the critics, is fragmentation. Instead of pushing British Rail into the private sector as a single supplier the government chose to break it into three components of track, train operators and rolling stock i.e. the trains and carriages. This has encouraged each part of the rail industry to prioritise its own profits rather than collaborating to improve the system.

Privatisation, meanwhile, never really worked. The rail network of 2 500 stations and 32 000 km of tracks was renationalised in 2001. This has encouraged the government's transport secretary, a supporter of private sector involvement, to argue that the state Network Rail monopoly should be removed so that companies can bid to build new rail lines to upgrade the railway.

The privately-owned train operators are now the subject of fierce criticism, due to overcrowding and cancelled services. Private companies are supposed to compete to win a bid to be the train operator for a region for a short number of years. However in recent years the number of private companies bidding or renewing their contract as rail operators has fallen. In May 2018 the government rescued the East Coast line by renationalising it. The line had been run by the private rail operator Virgin Rail, which was suffering lower passenger numbers and revenue than forecast.

Some argue that there is a simple solution: reunite track and train in the only feasible manner, nationalisation.

(Source adapted from: https://www.ft.com/content/d82848ca-f7ba-11e7-88f7-5465a6ce1a00)

Extract B

Southern Rail boss paid £495 000

The Chief Executive of Southern Rail, the private-sector train operator that has become associated with delays, losses, cancellations and strikes, was paid £495 000 last year. This increased calls for nationalisation and a maximum wage for executives at companies with government contracts. In contrast the average base pay for a train driver in the UK is £47 705, although they can earn up to £63 000.

Nearly a third of Southern Rail trains were late in 2016 as it tried to deal with a labour dispute that involved extensive strike action. The rail trade unions are opposed to planned changes to the role of train guards, which they claim will put passenger safety at risk.

(Source adapted from: Rob Davies, The Guardian 10 April 2017
https://www.theguardian.com/business/2017/apr/10/southern-rail-boss-double-pay-rise)

6 (a) Refer to Figure 1. Explain the likely effect of the change in subsidy levels between 2017 and 2018 on rail fares.

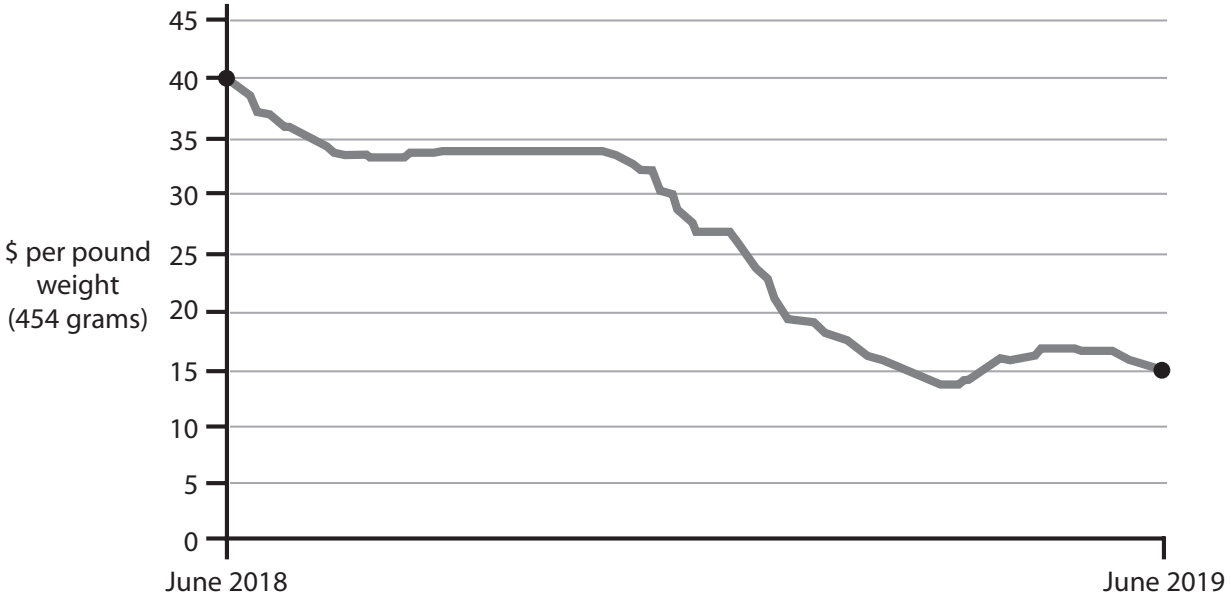
Include a supply and demand diagram in your answer.

(5)

2 Cobalt is a key metal used in the batteries of electric cars. China is the world's largest producer of electric cars but has recently cut subsidies to its manufacturers.

The Democratic Republic of the Congo (DRC) produces more than 60% of the world's supply of cobalt, from its small-scale mines. Many new small mines opened in 2018 as a result of improved expectations of profit.

The following graph shows the price of cobalt between June 2018 and June 2019.



(a) With reference to the information provided, draw a supply and demand diagram to show why the price of cobalt fell between June 2018 and June 2019.

(4)



(b) Between June 2018 and June 2019 the price of cobalt fell by:

(1)

- ☒ **A** 25%
- ☒ **B** 37.5%
- ☒ **C** 62.5%
- ☒ **D** 166.7%

(Total for Question 2 = 5 marks)

SUB-TOPIC 1.2.10

ALTERNATIVE VIEWS OF CONSUMER BEHAVIOUR

Sub-topic 1.2.10 · 5 questions · 20 marks · lowest tariff first

3 The average fee charged by high-street estate agents to homeowners for selling property is 1.3% of the final sale price.

(Source: http://www.which.co.uk/money/mortgages-and-property/home-movers/guides/selling-a-house/estate-agent-fees-and-contracts)

In August 2016 the Office for National Statistics reported that the average house price in London was £489 000, whereas in the North East of England it was £127 000.

(b) The ratio of the average house price in London to the average house price in the North East of England is:

(1)

- ☒ **A** 0.26
- ☒ **B** 3.62
- ☒ **C** 3.85
- ☒ **D** 7.40

(Total for Question 3(b) = 1 mark)

3 The average fee charged by high-street estate agents to homeowners for selling property is 1.3% of the final sale price.

(Source: http://www.which.co.uk/money/mortgages-and-property/home-movers/guides/selling-a-house/estate-agent-fees-and-contracts)

(a) Assume the selling fee is 1.3%. Calculate the payment received by an estate agent on a property sold for £489 000. You are advised to show your working.

(2)

(Total for Question 3(a) = 2 marks)

3 The average fee charged by high-street estate agents to homeowners for selling property is 1.3% of the final sale price.

(Source: http://www.which.co.uk/money/mortgages-and-property/home-movers/guides/selling-a-house/estate-agent-fees-and-contracts)

In August 2016 the Office for National Statistics reported that the average house price in London was £489 000, whereas in the North East of England it was £127 000.

(c) Explain **one** likely reason for the difference in average house prices between London and the North East of England.

(2)

(Total for Question 3(c) = 2 marks)

3 The average fee charged by high-street estate agents to homeowners for selling property is 1.3% of the final sale price.

(Source: http://www.which.co.uk/money/mortgages-and-property/home-movers/guides/selling-a-house/estate-agent-fees-and-contracts)

(a) Assume the selling fee is 1.3%. Calculate the payment received by an estate agent on a property sold for £489 000. You are advised to show your working.

(2)

In August 2016 the Office for National Statistics reported that the average house price in London was £489 000, whereas in the North East of England it was £127 000.

(b) The ratio of the average house price in London to the average house price in the North East of England is:

(1)

- ☒ **A** 0.26
- ☒ **B** 3.62
- ☒ **C** 3.85
- ☒ **D** 7.40

(c) Explain **one** likely reason for the difference in average house prices between London and the North East of England.

(2)

(Total for Question 3 = 5 marks)

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

(b) With reference to Extract A and your own knowledge, assess the view that it is irrational to buy plastic carrier bags when shopping.

(10)

SUB-TOPIC 1.3.2

EXTERNALITIES

Sub-topic 1.3.2 · 35 questions · 396 marks · lowest tariff first

2 (a) Define the term 'external benefits'.

(1)

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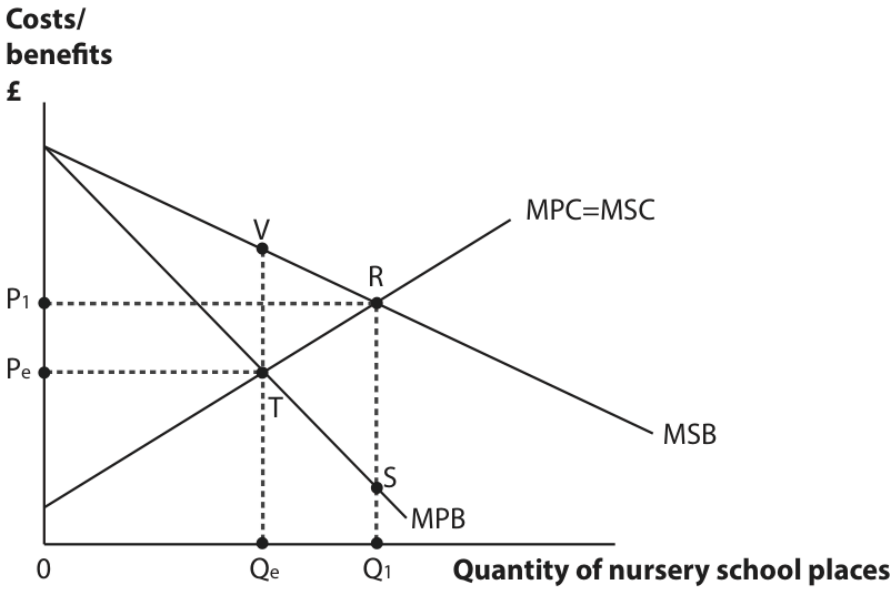
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(Total for Question 2(a) = 1 mark)

Diagram A shows the market for nursery school places.

Diagram A



(b) Which **one** of the following measures could a government introduce to achieve the social optimum consumption of nursery school places?

It could introduce a:

(1)

- ☒ **A** maximum price of 0P1 per unit
- ☒ **B** subsidy of RS per unit
- ☒ **C** tax of VT per unit
- ☒ **D** minimum price of 0P1 per unit

(Total for Question 2(b) = 1 mark)

3 The area around Lake Naivasha in Kenya supplies 70% of the UK cut-rose flower market. Much of the water which the flower farms are dependent on is extracted from the lake. This has resulted in damage to fish stocks and increasing competition for water.

(Source: adapted from 'Flower Struggles', Matthew Wilson, House and Home, Financial Times, 28 February/1 March 2015)

(a) The impact of the flower industry on workers in the fishing industry is an example of:

(1)

- ☒ **A** private benefits
- ☒ **B** private costs
- ☒ **C** external costs
- ☒ **D** external benefits

(Total for Question 3(a) = 1 mark)

2 The external benefits of higher education include increased tax revenue, faster economic growth, greater innovation and labour market flexibility.

(Source adapted from: https://www.timeshighereducation.com/news/higher-education-its-good-for-you-and-society/2008681.article#survey-answer)

(b) On average, in the UK, a working-age graduate earns approximately £10 000 more per year than a non-graduate.

(Source adapted from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701720/GLMS_2017.pdf)

This suggests a university degree provides a substantial

(1)

- ☒ **A** external benefit
- ☒ **B** external cost
- ☒ **C** private benefit
- ☒ **D** social cost

(Total for Question 2(b) = 1 mark)

3 A company that provides drinking water and treats waste water has been fined £180 000 after an incident that killed about 2 500 fish. The charges relate to an illegal discharge of sewage from the waste water treatment plant that polluted nine kilometres of the River Severn, a popular tourist destination.

(Source: adapted from https://www.leaderlive.co.uk/news/wrexham/19393552.water-company-fined-today-sewage-leaked-wrexham-river-killing-2-500-fish/)

(b) Which **one** of the following is the most likely effect of the £180 000 fine?

(1)

To:

- ☒ **A** increase market failure
- ☒ **B** increase profits for the water company
- ☒ **C** reduce external costs
- ☒ **D** reduce government failure

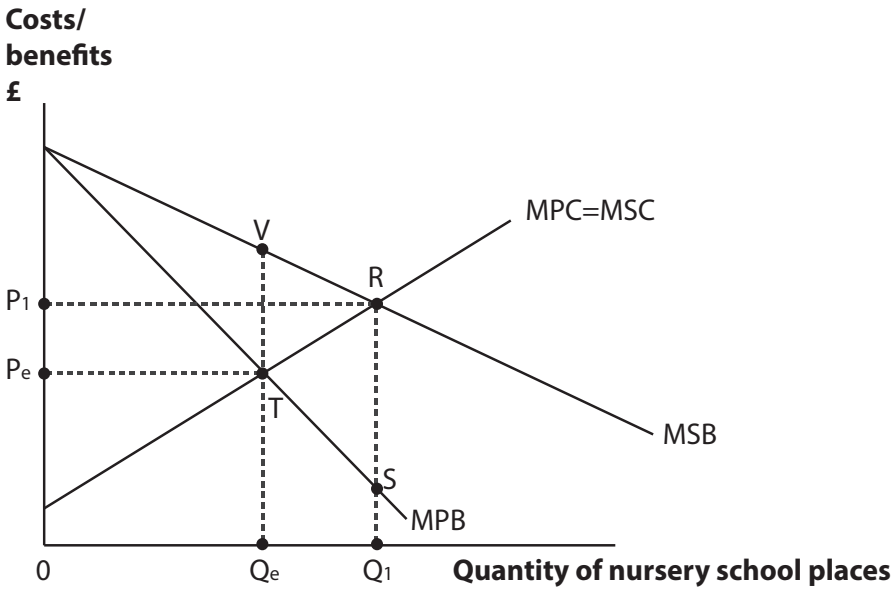
(Total for Question 3(b) = 1 mark)

2 (a) Define the term 'external benefits'.

(1)

Diagram A shows the market for nursery school places.

Diagram A



(b) Which **one** of the following measures could a government introduce to achieve the social optimum consumption of nursery school places?

It could introduce a:

(1)

- ☒ **A** maximum price of 0P1 per unit
- ☒ **B** subsidy of RS per unit
- ☒ **C** tax of VT per unit
- ☒ **D** minimum price of 0P1 per unit

(c) Annotate on Diagram A the welfare gain area and the new social optimum output resulting from successful government intervention in the market for nursery places.

(2)

(Total for Question 2 = 4 marks)

3 The area around Lake Naivasha in Kenya supplies 70% of the UK cut-rose flower market. Much of the water which the flower farms are dependent on is extracted from the lake. This has resulted in damage to fish stocks and increasing competition for water.

(Source: adapted from 'Flower Struggles', Matthew Wilson, House and Home, Financial Times, 28 February/1 March 2015)

(b) Explain **one** measure the Kenyan government could use to reduce the impact of water extraction from Lake Naivasha.

(3)

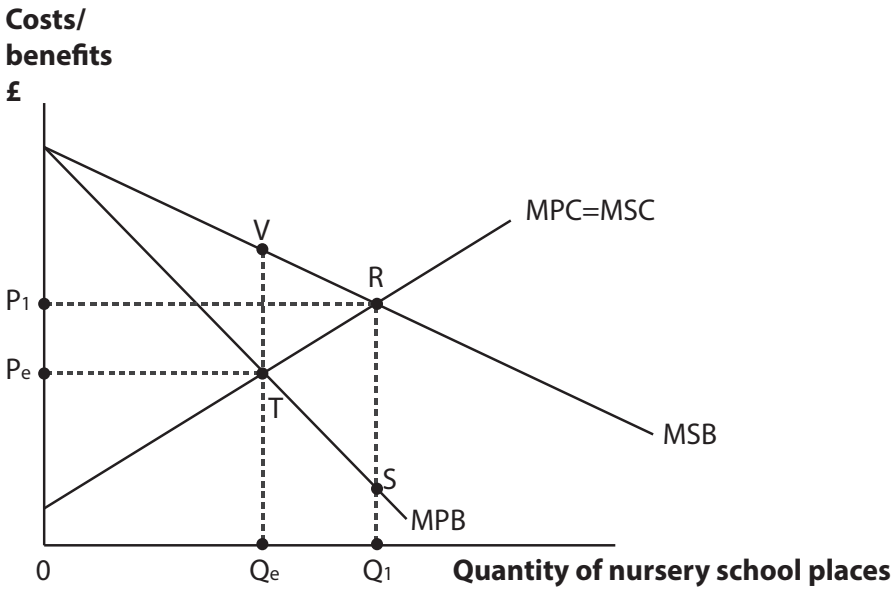
(Total for Question 3(b) = 3 marks)

2 (a) Define the term 'external benefits'.

(1)

Diagram A shows the market for nursery school places.

Diagram A



(b) Which **one** of the following measures could a government introduce to achieve the social optimum consumption of nursery school places?

It could introduce a:

(1)

- ☒ **A** maximum price of 0P1 per unit
- ☒ **B** subsidy of RS per unit
- ☒ **C** tax of VT per unit
- ☒ **D** minimum price of 0P1 per unit

(c) Annotate on Diagram A the welfare gain area and the new social optimum output resulting from successful government intervention in the market for nursery places.

(2)

(Total for Question 2 = 4 marks)

3 The area around Lake Naivasha in Kenya supplies 70% of the UK cut-rose flower market. Much of the water which the flower farms are dependent on is extracted from the lake. This has resulted in damage to fish stocks and increasing competition for water.

(Source: adapted from 'Flower Struggles', Matthew Wilson, House and Home, Financial Times, 28 February/1 March 2015)

(a) The impact of the flower industry on workers in the fishing industry is an example of:

(1)

- ☒ **A** private benefits
- ☒ **B** private costs
- ☒ **C** external costs
- ☒ **D** external benefits

(b) Explain **one** measure the Kenyan government could use to reduce the impact of water extraction from Lake Naivasha.

(3)

(Total for Question 3 = 4 marks)

2 The external benefits of higher education include increased tax revenue, faster economic growth, greater innovation and labour market flexibility.

(Source adapted from: https://www.timeshighereducation.com/news/higher-education-its-good-for-you-and-society/2008681.article#survey-answer)

(a) Draw an externalities diagram to show the likely impact of the consumption of higher education.

(4)



(b) On average, in the UK, a working-age graduate earns approximately £10 000 more per year than a non-graduate.

(Source adapted from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701720/GLMS_2017.pdf)

This suggests a university degree provides a substantial

(1)

- ☒ **A** external benefit
- ☒ **B** external cost
- ☒ **C** private benefit
- ☒ **D** social cost

(Total for Question 2 = 5 marks)

3 A company that provides drinking water and treats waste water has been fined £180 000 after an incident that killed about 2 500 fish. The charges relate to an illegal discharge of sewage from the waste water treatment plant that polluted nine kilometres of the River Severn, a popular tourist destination.

(Source: adapted from https://www.leaderlive.co.uk/news/wrexham/19393552.water-company-fined-today-sewage-leaked-wrexham-river-killing-2-500-fish/)

(a) Draw an externalities diagram to show the likely impact of the sewage discharge on the local tourist industry.

(4)



(b) Which **one** of the following is the most likely effect of the £180 000 fine?

(1)

To:

- ☒ **A** increase market failure
- ☒ **B** increase profits for the water company
- ☒ **C** reduce external costs
- ☒ **D** reduce government failure

(Total for Question 3 = 5 marks)

SECTION A

Read Figure 1 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

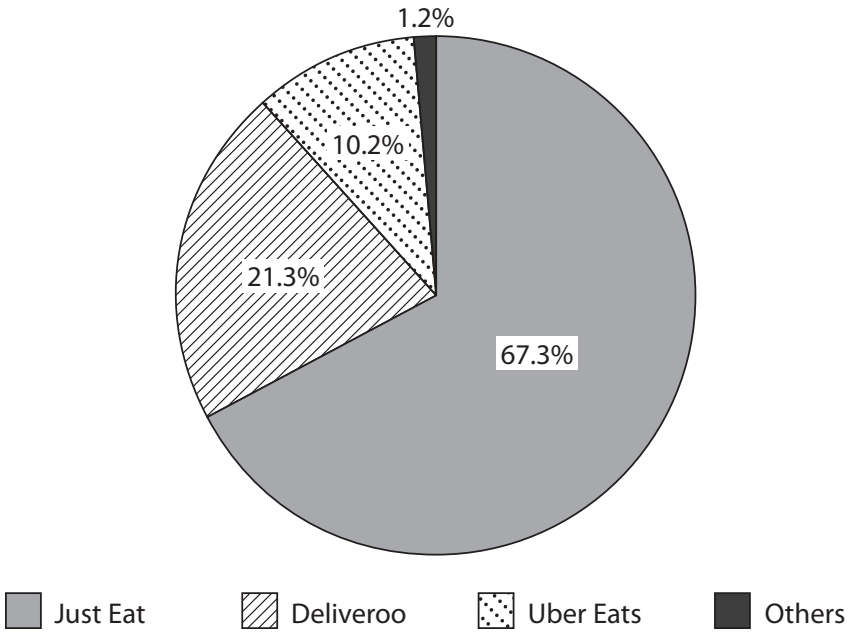
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

The food delivery industry

Figure 1: Market share for third-party food delivery services in the UK, 2019



(Source: adapted from https://onefourzerogroup.com/the-takeaway-takeover/)

Extract A

National Minimum Wage rises are more significant for 23 to 25-year-olds

In 2021, the National Minimum Wage main rate, also known as the National Living Wage, rose by 2.2% to £8.91, following a 6.2% rise in 2020. By reducing the age at which people are eligible for the National Living Wage to 23 in 2021, it is estimated that an additional 7.5% of 23 to 25-year-olds could get a 71p an hour pay rise. This amounts to an 8.7% increase, which may cause further financial worries for employers.

(Source: adapted from https://www.ndna.org.uk/NDNA/News/Latest_news/2020/Minimum_wages_to_rise_by_inflation_in_April.aspx)

Extract B

What is the true cost of the food delivery service?

The food delivery industry has boomed in recent years. Just Eat, Uber Eats and Deliveroo all offer very similar services – third-party food delivery firms that take up to 30% of the price of restaurant meals and deliver them to customers within a certain radius. The average spend per customer is around £15 with a £5 delivery fee, about five times more expensive than cooking at home and the same price as eating in the restaurant. Cash rich, time poor professionals increasingly turn to food delivery.

Food delivery comes with many layers of packaging. In the UK, there are 200 million meals annually with around 1.4 billion individual pieces of plastic for heat retention and protection when travelling, but does it really have to be plastic? People tend to order more food, often high in fat, sugar and salt, and don't even have to get up from their sofa.

But there are concerns that the delivery firms are exploiting employees who have no alternative. There is an issue of low pay and informal contracts. Delivery drivers are classed as 'independent contractors', and therefore not subject to some employment rights including a guaranteed minimum wage, sick pay, pensions or holiday pay. Drivers are paid either a flat hourly rate, or a fee per delivery. Factors such as delivery distance, speed, how busy it is and whether there are multiple drop-offs are all factored into how much a driver is paid. Deliveroo says its wages amount to around £10 per hour, but drivers say that during 2020 their pay has been as low as £1 per hour. Drivers are not paid extra for petrol or to maintain their vehicles. Many drivers are recent immigrants or students, who do not have property or savings to fall back on.

The government could address this with widening minimum pay legislation to contracted workers, by setting codes of practice, or by setting recommended wage targets. Furthermore, there are health and safety issues for workers. Vehicle safety checks, length of shifts and safety equipment are of concern. However, there are still people who take benefit from working flexibility.

(Source: adapted from https://www.theguardian.com/australia-news/2020/oct/25/home-food-delivery-what-is-the-most-ethical-way-to-order-in and https://digitalcommons.molloy.edu/cgi/viewcontent.cgi?article=1043&context=bus_fac)

Extract C

Integration in the third-party food delivery industry

The Competition and Markets Authority (CMA) is watching carefully to prevent any one firm having complete control of the food delivery industry. Just Eat, the market leader, agreed to merge with successful Dutch firm Takeaway.com in 2020, creating a new European leader by revenues. It also bought Grubhub in the US, with 20 million active users. Just Eat uses an aggressive pricing strategy, undercutting delivery fees below the average cost of other firms in the market, that will force them to merge in order to gain some economies of scale.

Amazon, having failed with its own delivery company Amazon Restaurants in 2018, has bought 16% of Deliveroo. The CMA took over a year to agree to the partial integration, on the argument that Deliveroo would close down without external investment. Amazon has unique expertise in marketing, increasing customer share and, most importantly, efficiency in delivering things. Food delivery is often uneconomical because a single household puts in a single order from a single restaurant at any one time. Tech companies such as Amazon can improve the business: once a meal has been ordered, an app often moves that restaurant to the top of the rankings for that neighbourhood, in the hope of getting a second and third delivery.

So why do restaurants turn to these delivery firms? The sheer volume of customers these delivery firms can hold makes it a difficult deal to turn down. But resentment from small business restaurant owners, angry at being wholly dependent on tech companies, is growing. Most restaurants would prefer that customers come in and pick up their orders themselves because they do not have to pay the 30% commission. Restaurant profit margins are small, and the effects of a 20% fall in the external value of the pound since 2016 on food costs are significant, given that over half of their food and drink is sourced outside the UK.

(Source: adapted from https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 https://www.ft.com/content/edf8a144-a101-4ef8-80e3-7d2f1565d35c and https://www.thisismoney.co.uk/money/markets/article-8138703/Uber-set-sell-takeaway-division-rival-Deliveroo-two-years.html and https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 and https://www.ft.com/content/bed7c4d8-28c1-11ea-9a4f-963f0ec7e134 and https://www.economist.com/1843/2021/01/26/gulp-the-secret-economics-of-food-delivery)

(a) Using the information provided, explain **one** externality that arises in the food delivery market.

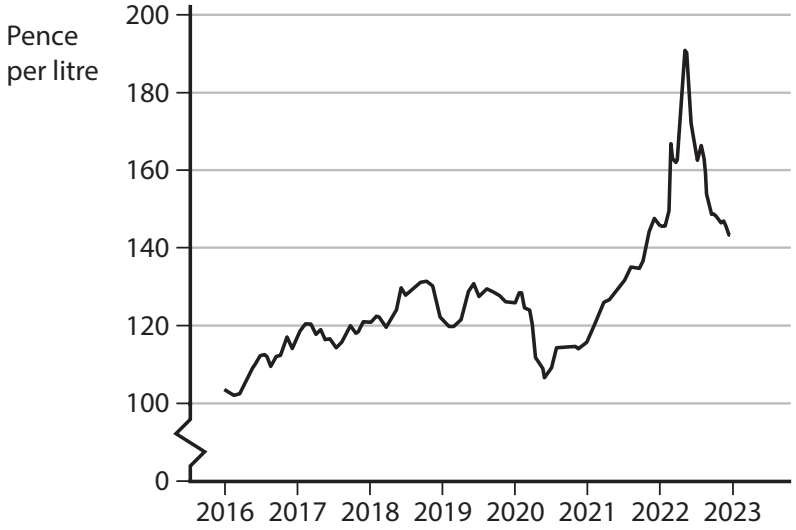
(5)

Sources for use with SECTION A

Read Figures 1 and 2 and the following Extracts A, B, C and D before answering Question 1.

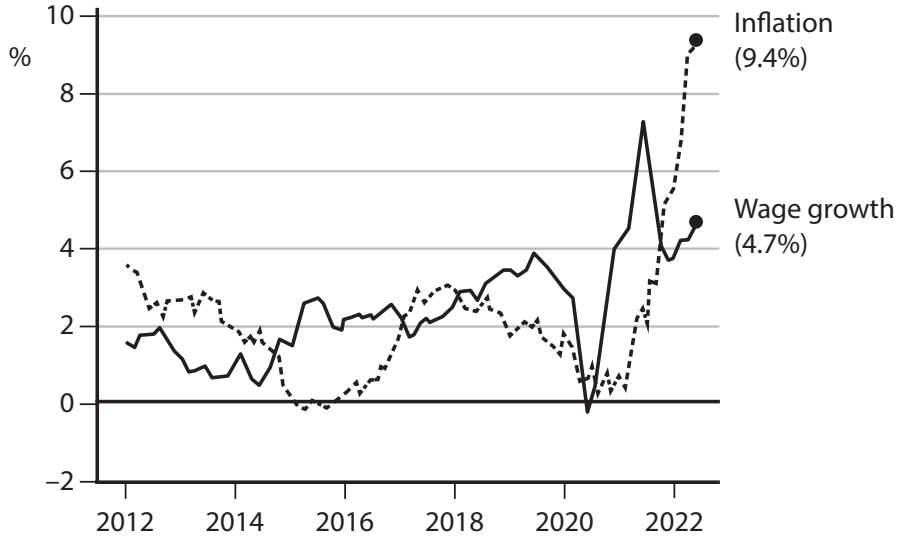
The cost of living in the UK

Figure 1: The price per litre of unleaded petrol in the UK, in pence, 2016–2023



(Source adapted from: RAC)

Figure 2: UK inflation, as measured by CPI, and wage growth (excluding bonuses), 3-month averages, 2012–2022



(Source adapted from: ONS)

Extract A

Supermarket restrictions on multibuy deals and advertising

Government rules limiting the location of unhealthy foods in shops began in 2022. Less healthy products are no longer promoted in key locations, such as checkouts, store entrances, aisle ends and their online equivalents. Rules banning multibuy deals on foods and drinks high in fat, salt or sugar (HFSS) – including buy one get one free (BOGOF), '3 for 2', and restrictions on free refills for soft drinks – were due in October 2023. The restrictions banning HFSS adverts on TV before 9pm and paid-for adverts online were set for January 2024.

(Source adapted from: https://www.gov.uk/government/news/government-delays-restrictions-on-multibuy-deals-and-advertising-on-tv-and-online)

Extract B

Supermarket pay in 2023

Supermarkets have been increasing their hourly pay rates and most now pay significantly more than the National Minimum Wage, which was set at £10.42 in April 2023.

Tesco made its biggest ever investment in employee pay in 2023, spending £230 million to finance an increase in its basic hourly rate of pay, to £11.02 per hour, rising to £11.95 in London.

The pay increase is the latest boost in employment benefits as supermarkets continue to compete for in-store workers, with Sainsbury's and Asda both increasing pay to above £11 per hour in July 2023, while Aldi pays £11.40 an hour.

Supermarkets have found themselves facing criticism over pay that did not rise in line with inflation. Some workers are taking industrial action, such as strikes, working closely with trade unions.

(Source adapted from: https://www.grocerygazette.co.uk/2023/02/22/supermarket-pay-rate-2023/)

Extract C

Supermarket petrol pricing

In 2023 David Potts, the boss of Morrisons, admitted that supermarkets increased profits at the petrol pumps as he was questioned in a parliamentary committee alongside executives from Tesco, Sainsbury's and Asda who denied they were making more profit from keeping petrol prices high.

A Competition and Markets Authority (CMA) report indicates that supermarkets' profits have doubled to 8% on fuel since 2017. It is expected to recommend that supermarkets must share local fuel prices on a comparison website in order to increase transparency and help bring down prices – a strategy tried successfully in Northern Ireland. All the supermarkets said they would welcome such a move.

In 2023, the RAC motoring group said that a price checker would be welcome but blamed high prices on the domination of petrol retailing in the UK by a few large supermarkets. "When the wholesale price of diesel fell this spring, we saw average retailer margin reach 22p a litre which was more than three times the long-term margin of 7p. This cannot be allowed to continue when households are having to contend with a cost of living crisis," an RAC spokesperson said.

At the committee, one politician, Jane Hunt, said: "In 1978 there were many more supermarkets. Now there are very few…are you in fact a cartel?"

(Source adapted from: https://www.theguardian.com/business/2023/jun/27/morrisons-boss-admits-supermarket-chains-have-hiked-profits-on-petrol)

Extract D

EU trade relations with the UK

The Trade and Cooperation Agreement 2021 between the EU and the UK means that there are no tariffs or quotas on goods moving between the EU and UK, provided those goods meet the 'rules of origin' of a good, based on where the products or materials used in their production come from. They prevent goods manufactured in outside countries being transported through the UK (or the EU) to avoid paying tariffs.

To benefit from the zero tariff, businesses must show the origin of their goods. A product qualifies as 'originating' if it is 'wholly obtained' in the UK and EU or has been substantially transformed in one or both markets. That is why UK businesses that re-export goods from outside countries with little or no further processing, may still face tariffs when trading with EU member states.

'Rules of origin' can be time consuming and complex. Some businesses cannot or do not wish to claim zero tariff because of the excessive administrative costs to firms.

(Source adapted from: https://commonslibrary.parliament.uk/new-customs-rules-for-trade-with-the-eu/)

1 (a) Explain **one** reason why consumers buy less than the social optimum quantity of healthy food.

(5)

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

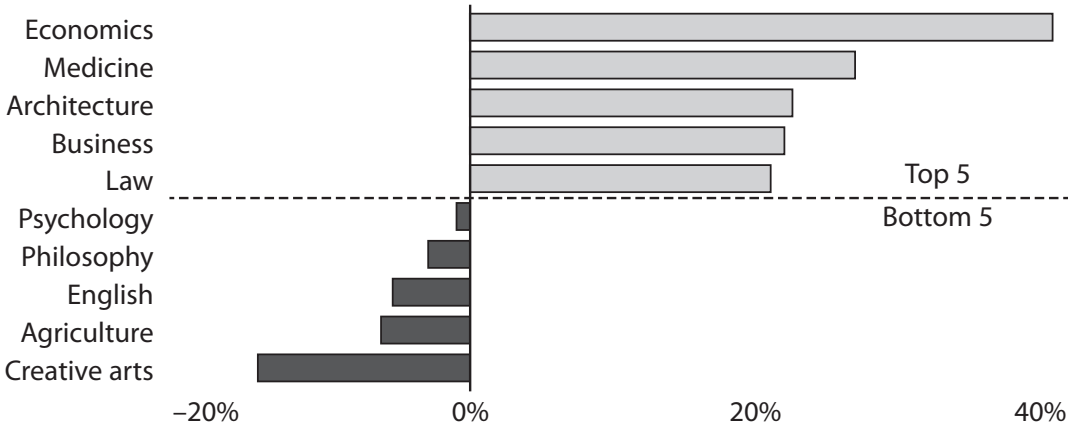
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

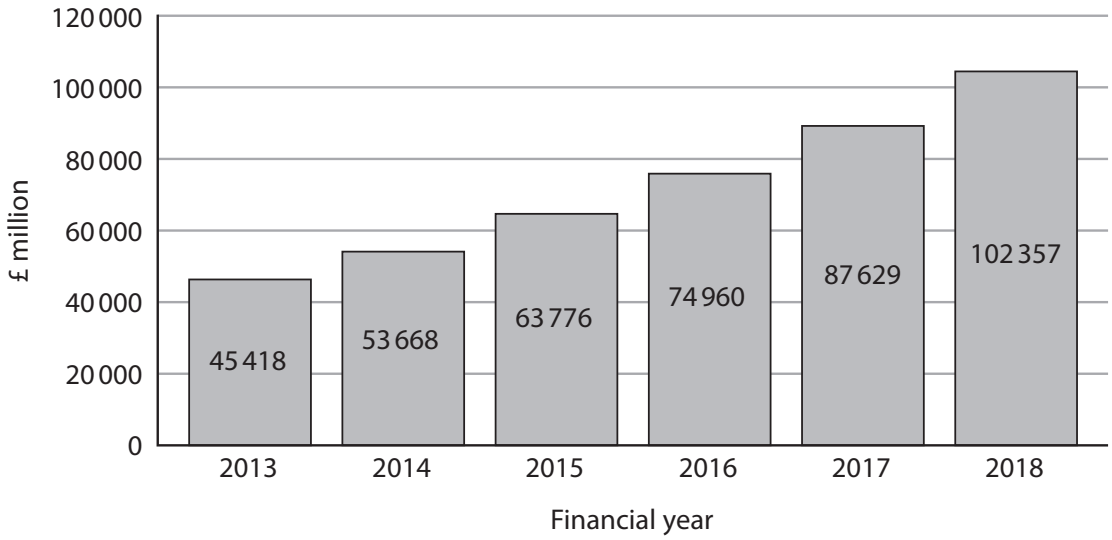
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



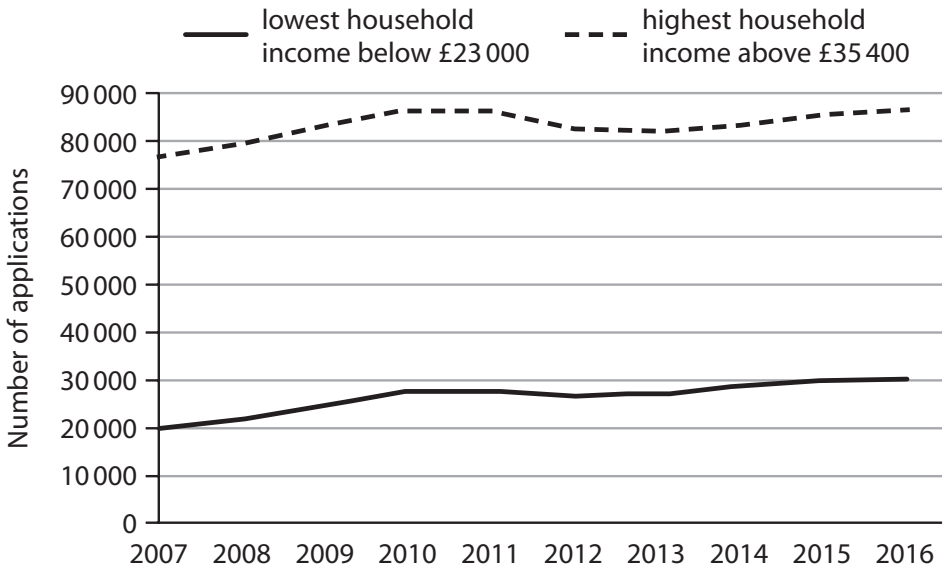
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

(c) With reference to Extract A, explain **one** likely private benefit to students and **one** likely external benefit of higher education.

(6)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

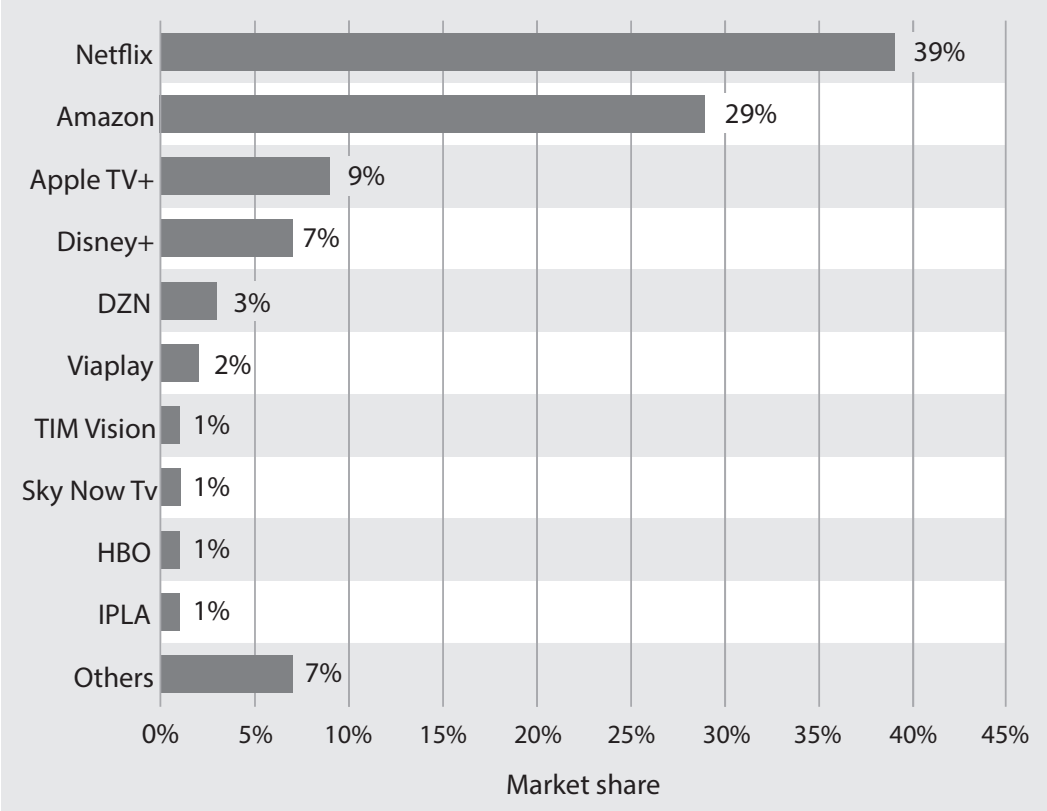
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

(b) With reference to Extract B, explain **two** external benefits associated with the consumption of 'public service broadcasting' (line 2).

(6)

SECTION A

Read Figures 1 to 3 and the following extracts (A and B) before answering Question 1.

Answer ALL questions 1(a) to 1(c), and EITHER Question 1(d) or 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Chile

Figure 1: Copper prices, US dollars per tonne, 2007–2015



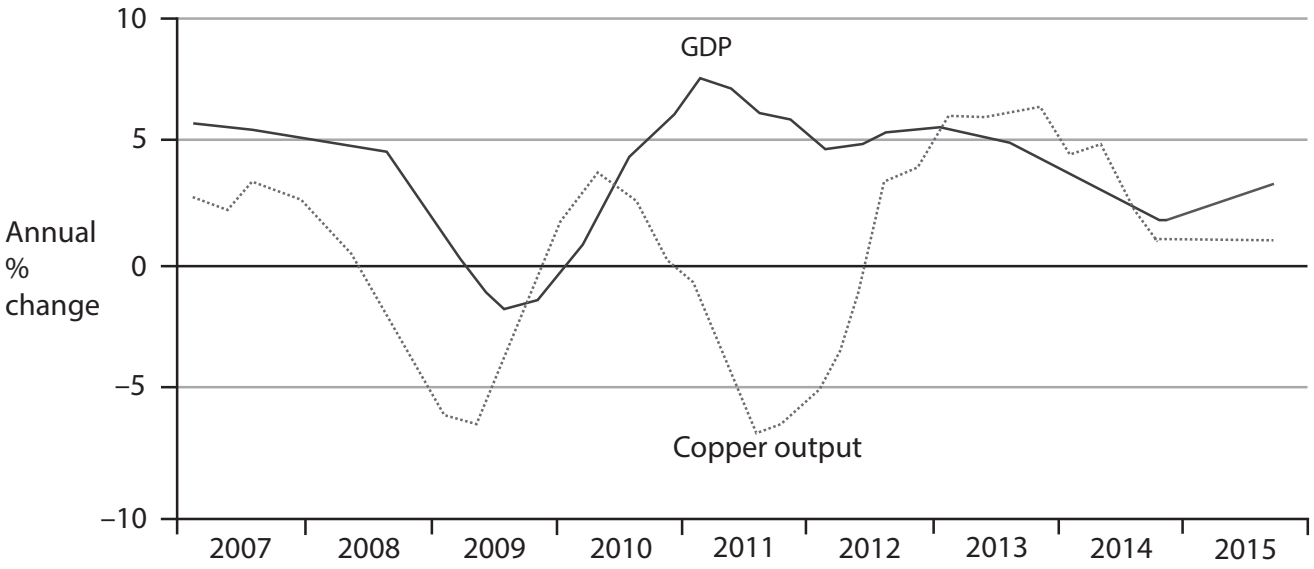
(Source: adapted from http://www.indexmundi.com/commodities/?commodity=copper&months=120)

Figure 2: US dollar per 100 Chile pesos exchange rate, 2007–2015



(Source: https://www.google.co.uk/finance?q=CLPUSD&ei=OGEvVun-AoulU6awjugF)

Figure 3: Chile: copper output and real GDP growth, 2007–2015



(Source: adapted from FT.com sources below)

Extract A

Chile's economic outlook brightens

Chile has been hit hard by a worldwide fall in commodity prices since 2011. Copper accounts for 20% of Chile's GDP and 60% of its exports; one third of the world's copper is produced by Chile. China purchased 40% of the world's copper, so a slowdown in China combined with increased global over-supply has meant copper prices have collapsed (see Figure 1). Chilean government income from copper exports had reached $11.5 billion a year before copper prices fell, but now tax revenues from this source have fallen drastically. Growing numbers of copper mines struggle to break even at current prices.

Chile's GDP is now growing, helped by a weak currency that has boosted export industries outside the mining sector, such as its successful wine and salmon industries. There are strengths in tourism and high-tech products. Public services are good in Chile, and poverty rates have been falling fast. On top of this, a large and diversified financial sector with high domestic savings provides a useful safety net, given high levels of corporate debt and the government's need to finance a fiscal deficit of 3% of GDP.

Chile's economy is often regarded as the best run in the region. This is attributed to the credibility of its financial institutions, relatively low levels of national debt (about 15% of GDP) and its free-trade model, which is unrestricted by government interventionism that has distorted the economies of countries such as Argentina and Venezuela. "Chile is an example of how credible institutions can smooth the economic cycle and make adjustments less traumatic," said Mr Valdés, the minister of finance in Chile, pointing to its widely respected and independent central bank and a well-established fiscal rule that give officials the freedom to implement counter-cyclical policies.

However, there are worries that without enough spare capacity in the economy, expansionary fiscal and monetary policies could end up increasing inflation rather than economic growth. Meanwhile monetary policy is restricted by inflation that has reached 5%, well outside the central bank's 2–4% target range, fuelled by a weaker exchange rate. Crucially, investment remains low because of uncertainty over the outcome of the Prime Minister's reforms, which are aimed at reducing inequality. A recent rise in corporation tax from 20% to 25% and labour market reforms that strengthen the power of trade unions may have a negative effect on business confidence.

Despite a "mildly contractionary" budget, Valdés insisted that the government would continue with costly reforms. Increased taxes on those on higher incomes are considered by the government to be necessary to sustain economic development in Chile. "We do want to change society, while recognising all the good things that have been done in the past 25 years," said Mr Valdés, referring to an average growth rate of 5.3% over the past three decades, but under 2% in 2015. There is broad consensus that investment in education is the key to unlocking Chile's growth potential.

(Sources: adapted from http://www.ft.com/cms/s/0/89926ce8-df96-11e4-a6c400144feab7de html#axzz3pCnzT3PC FT 20 April 2015 and http://www.ft.com/cms/s/0/d60ac2b2-7453-11e5-a129-3fcc4f641d98.html?siteedition=uk#axzz3pCnzT3PC FT 19 October 2015 and http://www.ft.com/cms/s/0/d60ac2b2-7453-11e5-a129-3fcc4f641d98.html?siteedition=uk#axzz3pCnzT3PC FT 19 October 2015 all by Benedict Mander)

Extract B

Chile's copper mining on a downward track

There was a time when investing in Chilean mining meant guaranteed success. After 1990, when military rule was replaced by an elected government, market reforms and restored relations with the US and UK meant foreign companies were keen to exploit vast copper reserves. The existence of large copper reserves in a stable country with a business-friendly government is rare, making Chile much more attractive to investors than countries such as Zambia.

By mid-2015, however, the copper price hit a six-year low. Chilean mines are becoming less productive. After 20 years of heavy digging, the ore is lower grade, and much further down. The deeper pits take longer to mine, and use more fuel. Wages are high, and trade unions are powerful. A mining truck driver earns $70 000 a year, $10 000 more than the US equivalent. Many mining projects that were planned are being postponed, and investors are looking to Peru; even the US copper mining industry is becoming more competitive.

Energy supply is also a worry as Chile produces virtually no fossil fuels and relies on imported coal and liquid natural gas to power its mines. Energy costs account for 18% of the cost of copper production.

Water supply is also becoming a major problem. Farmers and communities accuse mining companies of causing water shortages to keep their operations running. A prolonged drought has not helped. Mining firms are turning to desalination plants or using untreated seawater. However pumping water 200 kilometres from the Pacific Ocean to the copper mines is costly.

Chile's environmentalist movement has forced the government to tighten regulations. In 2001, it took 236 days to get an environmental impact assessment of a new mine approved. By 2013, this had increased to 506 days.

(Source: adapted from http://www.ft.com/cms/s/0/ea060ef4-6ae2-11e5-8171-ba1968cf791a.html#axzz3p20if45k Gideon Long September 27, 2015)

(b) Examine the likely impact of externalities of copper mining on firms and communities within Chile.

(8)

SECTION A

Read Figures 1 to 3 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

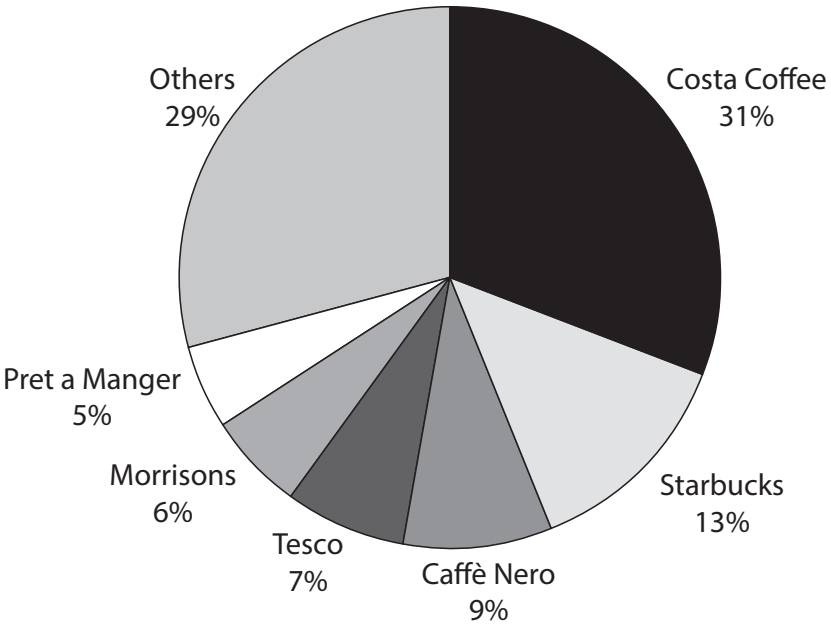
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

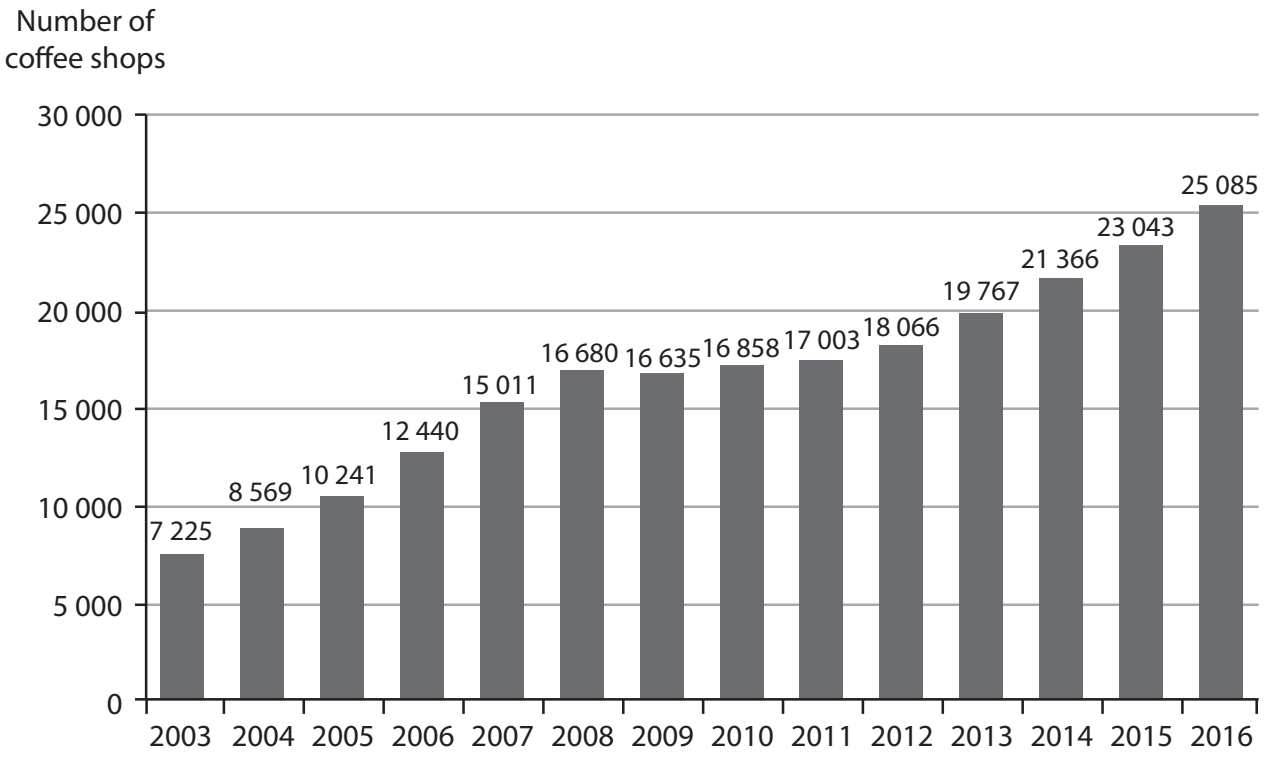
Branded coffee shops

Figure 1: Market share of UK branded coffee shops, 2015, percentages



(Source: http://metro.co.uk/2015/12/14/the-uks-most-popular-coffee-shop-has-been-revealed-5564569/)

Figure 2: Number of Starbucks coffee shops worldwide, 2003–2016



(Source: https://www.statista.com/statistics/266465/number-of-starbucks-stores-worldwide/)

Figure 3: Price comparison in selected London coffee retailers, February 2017

Coffee style	Starbucks	Costa Coffee	Caffè Nero	Greggs	McDonald's
Espresso Double	£2.00	£2.00	£1.70	£1.65	£0.99
Latte Medium	£2.60	£2.50	£2.50	£1.80	£1.79
Latte Large	£2.80	£2.70	£2.80	£2.10	£2.09

(Source: data collected from coffee shops in Holborn, London on 25 February 2017)

Extract A

Starbucks in Britain – a loss-making business?

Coffee shops are among the most profitable parts of the food and drink industry, and few are doing quite as well as Starbucks, a US-based transnational company. Starbucks may be complaining of adverse global market conditions but that did not stop the world's biggest coffee chain from reporting record annual profits in 2016. It made a profit of almost US$4.2 billion for the year, up 16% on 2015. That was mainly the result of a strong performance in its biggest market, America, where revenue rose 11%. The fastest growth was in the China and Asia Pacific region, with revenue up 23%. Howard Schultz, the CEO of Starbucks, said its Chinese coffee shops were the most efficient and profitable. While Starbucks still makes most of its profit in the US, Mr Schultz has said expansion in China will secure its future for "decades to come" and announced plans to more than double the number of shops in China to 5 000 by 2021.

However its British subsidiary, at first glance, appears to be doing less well. It has announced its first ever profit in Britain in 2015 – of just £1 million – despite opening its first coffee shop in the UK in 1998. It now has 849 UK outlets. The main reason why Starbucks has reported persistent losses in the UK is not due to a lack of demand for its coffee, but to minimise its tax bill. It is claimed that some of Starbucks' revenue earned in the UK is transferred to its Dutch subsidiary, which is charged lower rates of tax.

Starbucks is not finding life as easy in Britain as in the USA. It faces competition from home-grown chains such as Costa and Caffè Nero. Accusations of tax avoidance have also damaged Starbucks' sales to the benefit of its competitors. A survey found that a third less people rated Starbucks as their preferred coffee shop than they did before the tax-avoidance allegations were first published.

These issues have forced Starbucks to change its strategy. It has slowed down its expansion plans in the UK and has closed 67 underperforming coffee shops over the past year. It has also tried to repair its reputation by transferring its European headquarters from Amsterdam to London.

(Sources: adapted from *The Economist* 14 February 2015 http://www.economist.com/news/business-and-finance/21643271-tax and Starbucks company report 2016 and http://s21.q4cdn.com/369030626/files/doc_financials/2015/Starbucks-Fiscal-2015_Financial-Highlights.pdf)

Extract B

Tax on disposable coffee cups?

Two and a half billion disposable cups are thrown away every year in the UK, that is, seven million every day. Only one in 400 is recycled. The UK Environment Minister has suggested that a coffee cup tax could work in a similar manner to the plastic bag charge. The 5 pence a bag charge has led to an 85% reduction in the number of bags being given out since October 2015. It is estimated that introducing a tax on disposable coffee cups would cut usage by two billion every year. One environment spokesperson, Kate Parminter, said: "We've seen how dramatically a small charge has affected public behaviour when it comes to the plastic bags and it is clearly time to extend it to coffee cups. Most people purchase a tea or coffee and throw away the cup without even thinking about it, but a charge would increase our awareness of the environmental impact."

In response, another MP welcomed her comments but said he did not believe a tax was the solution. He said: "My initial reaction is charging 5p or 10p for the cup will not work. It will not encourage people to take their own cups in if a coffee goes up from £2.60 to £2.65. I suspect a more technological answer is what we need – either the composition of the disposable cups being changed so they're more easily recyclable, or changing the technology in the recycling."

Disposable coffee cups contain a plastic coating inside the cups which prevent them from becoming soggy, making them difficult to recycle. There are just two specialist facilities in the UK that have the required equipment to separate plastic from paper for recycling. Almost no recycled paper is used in the production of disposable cups, meaning that some 43 000 trees must be cut down annually to keep up with the demand. CO_2 emissions of around 83 000 tonnes are generated every year for their production.

(Sources: adapted from http://www.independent.co.uk/news/uk/politics/disposable-coffee-cups-could-be-taxed-like-plastic-bags-environment-minister-says-a6938126.html 05/09/16 and https://www.cchdaily.co.uk/lib-dems-call-5p-plastic-bag-tax-coffee-cups)

Extract C

German city of Freiburg takes action on cutting the use of disposable coffee cups

The 'Freiburg cup', made from dishwasher-proof plastic, can be reused hundreds of times. Cups are issued with a one-euro deposit, and can be returned to any of the participating coffee shops in the German city. The cups, which are provided to coffee shops by local councils, are washed in the cafés and bakeries that have signed up to the scheme before being reused. 56 coffee retailers have signed up, and 10 000 cups are being used.

One of the main obstacles facing a wider-reaching scheme, however, is the number of café chains in Germany that are unwilling to use unbranded multi-use cups, particularly Starbucks and McDonald's. Starbucks already offers a discounted coffee for customers with a multi-use cup, but only if it is bearing the unmistakable Starbucks logo.

(Source: adapted from http://www.dw.com/en/germanys-love-for-coffee-to-go-leaves-environmental-groups-demanding-action/a-36689719)

(c) Examine the advantages of using an indirect tax as a means of reducing the use of disposable coffee cups.

(8)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

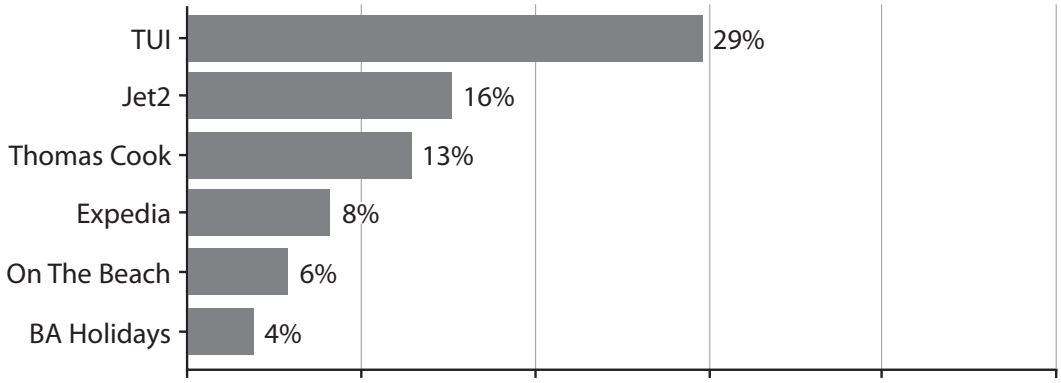
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The travel and tourism industry

Figure 1: Package holiday market share of the six largest providers, booked by UK residents, 2019



(Source adapted from: https://knowledge.sharescope.co.uk/2019/10/16/finding-companies-that-control-their-own-destinies/The Times/ATOL)

Figure 2: Jet2 package holiday prices to Sorrento

Price before Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,576** Per person price **£788**

Price 12 hours after Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,648** Per person price **£824**

Data accessed: 22nd and 23rd September 2019

Extract A

Marginal productivity of cabin crew

Cabin crew are responsible for loading passengers and providing in-flight meals. United Airlines is planning to reduce the number of its cabin crew members onboard international flights. The airline currently operates its planes with one more cabin crew member than its competitors. The marginal productivity of this additional crew member may be low. By reducing the number of its cabin crew members United Airlines will be able to operate more efficiently and compete more effectively. 5

(Source adapted from: https://simpleflying.com/united-airlines-to-reduce-number-of-crew-on-international-flights/)

Extract B

Thomas Cook's environmental impact

Thomas Cook Group plc's operations included its airline and 560 high street travel agents providing flights, hotels and package holidays.

The environmental impact of the travel industry is significant. It accounts for 8% of all global carbon emissions. Thomas Cook recognised the risks presented by climate change and actively engaged in reducing their airline emissions. Its plans included using more efficient aircraft and using lower-carbon fuel. In 2018, Thomas Cook was included in the top 10 of the world's most fuel-efficient airlines. 5

(Source adapted from: https://www.thomascookgroup.com/investors/insight_external_assest/Thomas+Cook+Sustainability+Report+2018.pdf)

Extract C

Why did Thomas Cook shut down?

Thomas Cook Group plc ceased trading on 23 September 2019. The collapse of Thomas Cook left 600 000 travellers stranded overseas and approximately 21 000 worldwide employees were left without a job.

Thomas Cook's management said that the failure of rescue talks between banks, shareholders and the UK Government meant it had no choice but to shut down the business.

But in truth the tour operator's problems go back much further. A disastrous merger in 2007, increased debts, the internet revolution in holiday booking and Brexit uncertainty all contributed to the failure of the business.

In 2007 it merged with MyTravel. Thomas Cook directors had an objective of rapid company growth over short-term profitability. The merger was supposed to create a European giant, promising £75 million-a-year cost savings and a springboard to challenge emerging internet rivals. In reality, Thomas Cook was merging with a company that had only made a profit once in the previous six years, and the deal left the Group with huge debts. In May 2019, the firm reported a £1.5 billion loss.

The role of the management in Thomas Cook's collapse is being investigated by the UK Government. Thomas Cook executives' salaries and bonuses have been questioned. Directors received salaries totalling £20 million in the five years before its collapse. The Chief Executive Officer (CEO) earned a £500 000 cash bonus in 2017 and about £8.5 million in his five years with the company. It seems that around £4 million of this was in the form of shares. The share price reached £1.46 in 2018, but each share is now worthless.

The CEO said that the directors had worked "exhaustively" to rescue Thomas Cook and create a long-term turnaround strategy. "It is a matter of profound regret to me and the rest of the board that we were not successful."

The UK prime minister admitted that the government refused to grant £150 million as a subsidy to help rescue Thomas Cook in the short run. The UK prime minister stated: "Clearly, that is a lot of taxpayers' money and sets up, as people will appreciate, a moral hazard in the case of future such commercial difficulties that companies face. I have questions about whether it's right that the directors, or whoever, the board, should pay themselves large sums when businesses can go down the tubes like that. One is driven to reflect on whether the directors of these companies are properly incentivised to sort such matters out".

(Source adapted from: https://www.theguardian.com/business/2019/sep/23/thomas-cook-as-the-world-turned-the-sun-ceased-to-shine-on-venerable-tour-operator

and https://www.ft.com/content/a7dd2554-de23-11e9-b112-9624ec9edc59)

(b) Examine the likely impact of Thomas Cook's plan 'to reduce their airline emissions' (Extract B, line 6) on the social optimum position. Use an appropriate externalities diagram in your answer.

(8)

SECTION A

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

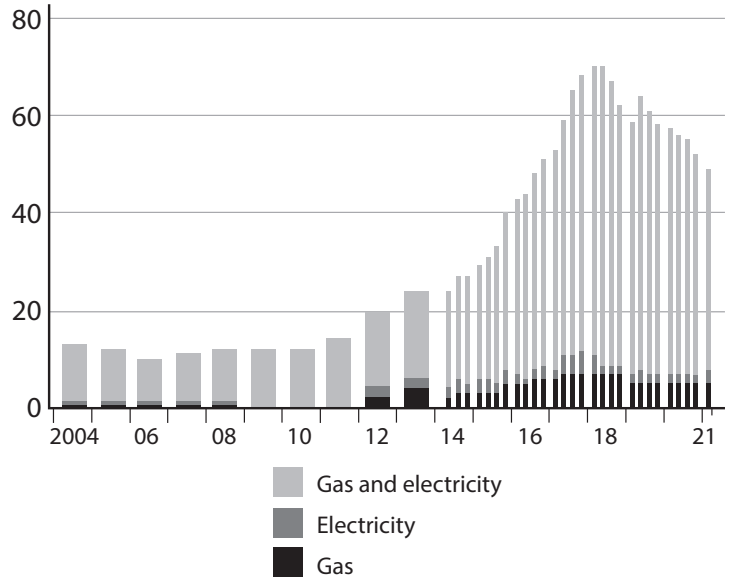
Question 1

The energy market

Figure 1: UK wholesale gas prices per therm, 2021, in pence



Figure 2: Number of firms supplying gas and electricity in the UK, 2004–2021



Extract A

Rising gas prices

UK consumers are some of the biggest users of gas. 85% of homes use gas central heating, and gas generates a third of the country's electricity. North Sea gas is running out – and as Britain has replaced coal-fired energy production with wind power in order to reduce carbon emissions, it has become dependent on gas imports.

Almost all UK businesses face significant rises in fuel costs over the next few months, and there is no substitute for energy, at least in the short run – an almost perfect example of price inelastic demand.

(Source: adapted from https://www.theecoexperts.co.uk/blog/reasons-for-uk-gas-price-increase)

Extract B

The UK gas market is broken

During the past decade the government has allowed new entrants into the retail energy market with business models that left them ill-prepared to achieve long term business growth. Now the UK must choose between letting its energy market collapse and offering large subsidies for energy retailers.

The problem began in the 1980s and 1990s, when privatisation created an oligopolistic energy market dominated by the "Big Six", which paid their shareholders high dividends and their bosses excessive salaries. The government responded to anger over high energy bills with further liberalisation. Some of the new entrants were innovative, such as Bulb, which offered consumption-tracking apps, and Octopus, which discouraged consumption when demand was high with dynamic pricing. But most were under-capitalised and produced no energy, merely buying it on global wholesale markets and selling it on. Some paid little attention to ensuring continuity of supply or forward buying of gas.

The constraints on energy retailers worsened in 2017 with the closure of a big gas-storage facility, which left the UK able to store just 2% of its annual demand. Other big gas importing countries, by contrast, can store 20%–30%. The risks rose further in 2019, when the government capped consumer prices in response to continued complaints about high energy bills.

The perfect storm came in the summer of 2021. As economies opened up, global demand for energy rose. Gas supply in Russia, a big producer, was disrupted, and unusually calm weather reduced UK wind turbine energy production to 11% of capacity. In August Ofgem, the industry regulator, said that from October the firms would be able to raise prices for households by 54%. But since then the wholesale price of gas paid by UK energy firms has risen by more than 70%. The result is that UK energy firms are tied into contracts to supply gas to households at far less than they must pay to get it.

(Source: adapted from https://www.economist.com/britain/britains-gas-market-is-broken/)

Extract C

The gender pay gap in the oil and gas industry

Despite best efforts to try to attract more women into the oil and gas industry, females are still hugely under-represented in science, technology, engineering and maths careers, whether school leavers, graduates or experienced workers. Women hold under 25% of careers in these areas, and typically hold more non-technical roles, which can attract lower salaries than technical disciplines.

There is an even smaller female representation in the offshore workforce (3.6%) e.g. working on rigs in the North Sea, an area that pays higher salaries than onshore work. Despite continued efforts there is still a lack of female applications. Only 5% of the applications to the technical apprentice programme were female, of which half withdrew their applications at the first stage of the recruitment process.

There is also a low representation of females in senior leadership roles within the oil and gas industry, especially in technical positions. Women also generally take up part-time positions which are typically lower paid. This has resulted in the oil and gas industry having an average gap in hourly pay of 25%.

In the majority of developed countries, women have made substantial progress in the labour market since the 1970s, with both wages and labour force participation increasing relative to that for men. Notwithstanding these large improvements, women still earn less than 'comparable' men in all developed countries and, since the 2000s, progress for women in the labour market seems to have slowed.

(Source: adapted from https://www.harbourenergy.com/media/2a2nmavb/chr-18311-01-gender-pay-gap-2020-v6-final.pdf and https://ftp.iza.org/dp10975.pdf)

(b) Examine **one** likely externality that arises when a producer generates electricity by burning gas. Use a diagram to show the external costs of production.

(8)

SECTION A

Read Figures 1 and 2 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Turkey – an emerging economy

Figure 1: Turkey's central bank lending rate, percent, 2013–2018

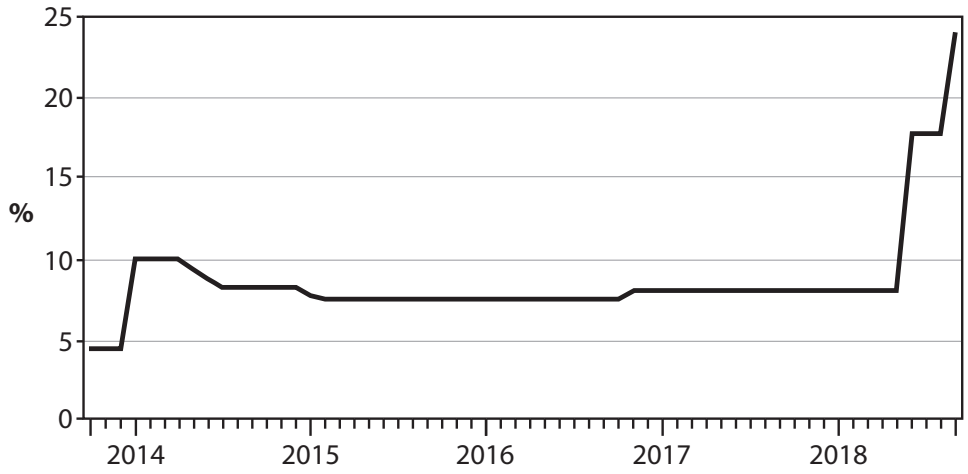
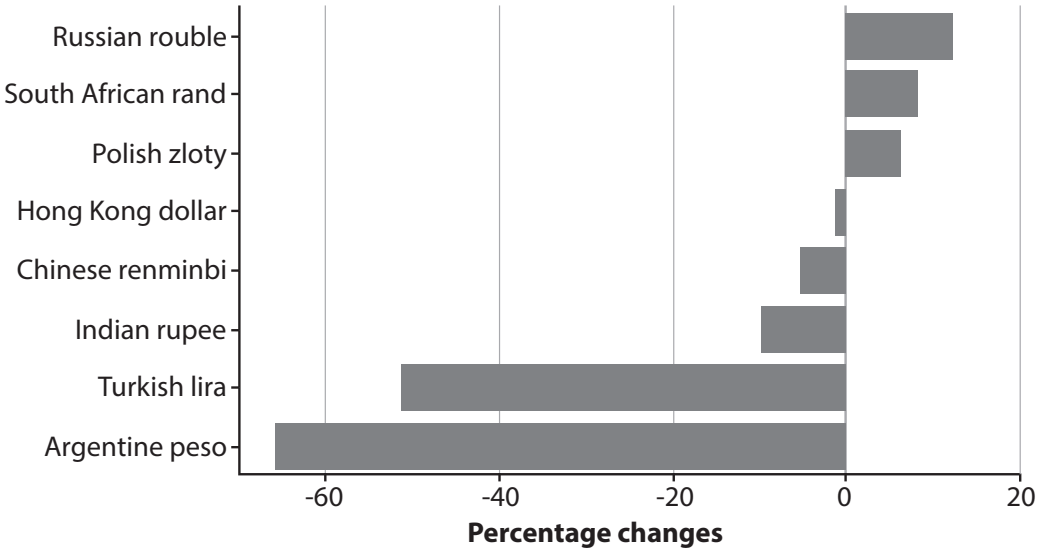


Figure 2: Selected emerging economy exchange rates, percentage change against the US dollar: January 2018 compared to January 2016.



(Source adapted from: FT.com)

Extract A

Can Turkey's central bank avoid another rate rise?

At an annual rate of 25%, Turkey's inflation is alarming. However, it may have peaked. This may be a turning point for the economically struggling country, whose currency (the Turkish lira) has lost nearly a third of its value against the US dollar in 2018. The central bank may be able to avoid tightening monetary policy further, as a severe economic adjustment is already well under way. Turkey is highly indebted in foreign currency. The Turkish government takes measures against excessive appreciation or depreciation of the Turkish lira to reduce financial stability risks. The financial market faces difficulties in trying to restore foreign investors' confidence.

Consumer prices increased by 2.7% in October 2018, a much lower rate than the 6.3% recorded in September 2018. The lira has stabilised, having risen 16% since the central bank raised interest rates by 6.25 percentage points. However, the government wants lower borrowing costs to fuel credit growth and economic expansion. Timothy Ash at a London investment bank says at this point it's "illogical" to raise interest rates again in Turkey. That's because Turkey's economy is already experiencing a severe slowdown.

In the long term Turkey's economic growth is expected to be above that of other emerging markets such as Brazil, Russia and China. Turkey's private sector is resilient. Between 2018–50 we expect Turkey to grow by an annual average of 3.1%. Brazil is expected to grow by an annual average of 2.1%, Russia by 1.6% and China by 2.8%. GDP growth will nevertheless be well below that recorded in 2004–07 and 2010–15. Average growth in GDP per head will be substantially lower, mainly reflecting the expected rise in the total population.

(Source adapted from: https://ftalphaville.ft.com/2018/11/06/1541508141000/Can-Turkey-s-central-bank-avoid-another-rate-hike-/. 6 Nov 2018 Colby Smith
and one sentence The president wants lower borrowing costs to fuel credit growth and economic expansion from https://www.theguardian.com/world/2018/aug/07/turkey-urged-to-announce-emergency-interest-rate-hike Larry Elliott 7/8/18 and
http://country.eiu.com/article.aspx?articleid=157174199&Country=Turkey&topic=Economy&subtopic=Long-term+outlook&subsubtopic=Summary)

Extract B

Turkey aims to bin the plastic bag

You get a free plastic bag whenever you go to a shop, even if it is just to buy a loaf of bread or a chocolate bar. In Turkey, plastic bags are everywhere, with millions being thrown away, and their use is causing a growing environmental problem.

In Istanbul, the country's biggest city with about 12 million people, around 10 000 tonnes of waste are being collected every day. Plastic bags and other plastic waste make up 950 tonnes, or almost 10%, of the total waste.

The Turkish government said it was looking at ways to discourage the consumption of single-use plastic bags. One possible step currently under review is a ban of the black bags that are said to contain carcinogens. Another is that the state may raise taxes on plastic products, which could lead to supermarkets charging consumers for the bags. In Corlu, a town north-west of Istanbul, a local environmental group distributed 20 000 canvas bags to shoppers in one month. In some parts of Turkey, plastic bags are completely banned, with heavy fines for both firms and consumers who use them.

(Source adapted from: tseibert@thenational.ae https://www.thenational.ae/world/europe/turkey-aims-to-bin-the-plastic-bag-1.530059 accessed 11/11/18)

Extract C

Istanbul's third airport set to be the busiest in the world

Istanbul's third airport is being constructed over an area of 76.5 million square metres, to the north of Istanbul. When complete, the new airport will have six runways and have an annual passenger capacity of up to 200 million people, making it potentially the world's busiest airport. "This airport is going to be the most important hub between Asia and Europe," said one business leader.

The airport design includes high vaulted ceilings and spacious, modern and efficient design – and its tulip-shaped air traffic control tower won the 2016 International Architecture Award. It uses mobile applications and artificial intelligence for customers, is energy efficient and has a high-tech security system. The site employs 36 000 people and is estimated to cost the equivalent of £10 billion. However, the rush to meet the deadline set by the Turkish government is a major cause of accidents on the construction site, according to the construction workers' union.

(Source adapted from: https://www.lonelyplanet.com/news/2018/08/08/istanbuls-huge-new-airport/ and https://www.voanews.com/a/istanbul-to-unveil-new-airport-seeks-to-be-world-s-biggest/4632308.html)

(c) Discuss the likely success of policies to reduce the consumption of single-use plastic bags in cities such as Istanbul.

(12)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK online streaming services market

Figure 1: Market share of UK online streaming services

	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Amazon Prime Video	37.9%	41.1%	45.0%	27.1%	25.9%
Disney+	16.0%	17.7%	19.3%	14.1%	21.5%
Netflix	15.0%	10.5%	5.0%	9.4%	4.5%
NOW	11.3%	11.2%	5.6%	11.0%	11.1%
AppleTV+	4.0%	5.5%	7.3%	9.2%	9.9%
BritBox	4.0%	3.0%	5.7%	6.0%	5.9%
Others	11.8	11.0%	12.1%	23.2%	21.2%

(Source adapted from: Kantar, Worldpanel Division Geotech 2022)

Figure 2: UK online streaming services – monthly fees

Streaming service provider	**September 2022**
Netflix premium (4 users/ultra HD*)	£15.99
Netflix standard (2 users/HD)	£10.99
Netflix basic (single user/non HD**)	£6.99
Amazon Prime Video	£8.99
Amazon Prime Video – Student price	£4.49
Disney+	£7.99
AppleTV+	£4.99

*This is the highest quality picture currently available

** This is the basic quality picture

(Source adapted from: https://www.radiotimes.com/tv/what-to-watch-tv/best-streaming-service-uk/)

Extract A

How Netflix makes use of behavioural science

In the last few years, companies have been trying to find ways to attract the attention of customers. Various streaming platforms such as Netflix, Amazon, and YouTube use 'nudges' to influence consumer behaviour. The 'next-up' feature on Netflix or 'auto-play' on YouTube has been subject to research that relates it to binge-watching. Binge-watching is the practice of viewing for a prolonged period, multiple episodes of a TV show or several films in rapid succession.

Similarly, the policy of offering a one-month free subscription under the label of 'free trial' requires credit card information to turn the forgetful subscriber into a potential paying one. Following this strategy, Netflix has expanded to 190 countries in just seven years and according to the Wall Street Journal, the company generated total revenue of over $5.2 billion in 2019, which was an increase from 2018 of around $4 billion.

However, 2022 data shows that consumers, increasingly worried about the rising cost of living, are turning their back on Netflix. With a reported cancellation of over 200 000 subscriptions in the first quarter and another two million forecast to leave by the end of the year. Subscribers are rethinking their commitment to the streaming services that grew their numbers sharply during the home-based months of the global health crisis. Netflix subscribers have also quoted a decline in value for money and satisfaction with the quality of the shows as key motives for cancellation.

Disney now see higher satisfaction rankings than Netflix across the quality of shows, amount of original content, number of new-release films, variety of classic films and amount of kids' content. Forecast cancellation rates for Disney+ fell to an all-time low of 3.2%.

(Source adapted from: https://www.novanudge.com/post/sludge-on-demand-how-netflix-makes-use-of-behavioural-science
https://www.theguardian.com/media/2022/apr/20/netflix-shares-fall-losing-subscribers)

Extract B

The economics of price discrimination

Throughout 2022, Netflix, a 100-billion-dollar company, increased prices in the US, Canada, the UK and Ireland (most of which saw similar price increases in 2021, too). In sharp contrast, Netflix recently announced it was reducing its prices in India (standard/2-user 499 rupees a month, equivalent to £5.42) in a bid to compete with Disney+ and Prime.

UK students currently enrolled in a college or university who have a valid student email address can join Prime Student through the Amazon website. This gives them nearly 50% off a standard Prime membership and many other exclusive benefits.

(Source adapted from: https://help.netflix.com/en/node/24926/in)

Extract C

Educational Website and TV Programmes

BBC Bitesize is a learning platform created by the BBC in 1998. The online study resource allows parents to teach their children from home, using ready-made lesson plans and study guides with questions for all ages. The revision sessions are free to watch and they are available for children aged five up to their late teens. The guides are written by teachers and subject experts, so they are reliable and follow the National Curriculum. Last year Bitesize attracted around two million weekly unique browsers with a peak week of 3.3 million in the GCSE exam period.

Oak National Academy is a freely available learning resource website created for pupils aged four to sixteen. Launched in 2020, as a response to the global health crisis, the website includes lesson slides, video lessons, worksheets, and quizzes conforming to the national curriculum in England. Ministers have set aside £43 million to fund the Oak National Academy over the next three years.

(Source adapted from: https://www.bbc.co.uk/bitesize/articles/zmjdhbk
https://www.structural-learning.com/post/oak-academy-a-teachers-guide#:~:text=Oak%20National%20Academy%20is%20a,the%20national%20curriculum%20of%20England)

(d) With reference to Extract C, discuss the likely private and external benefits of viewing educational websites and TV programmes.

(12)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

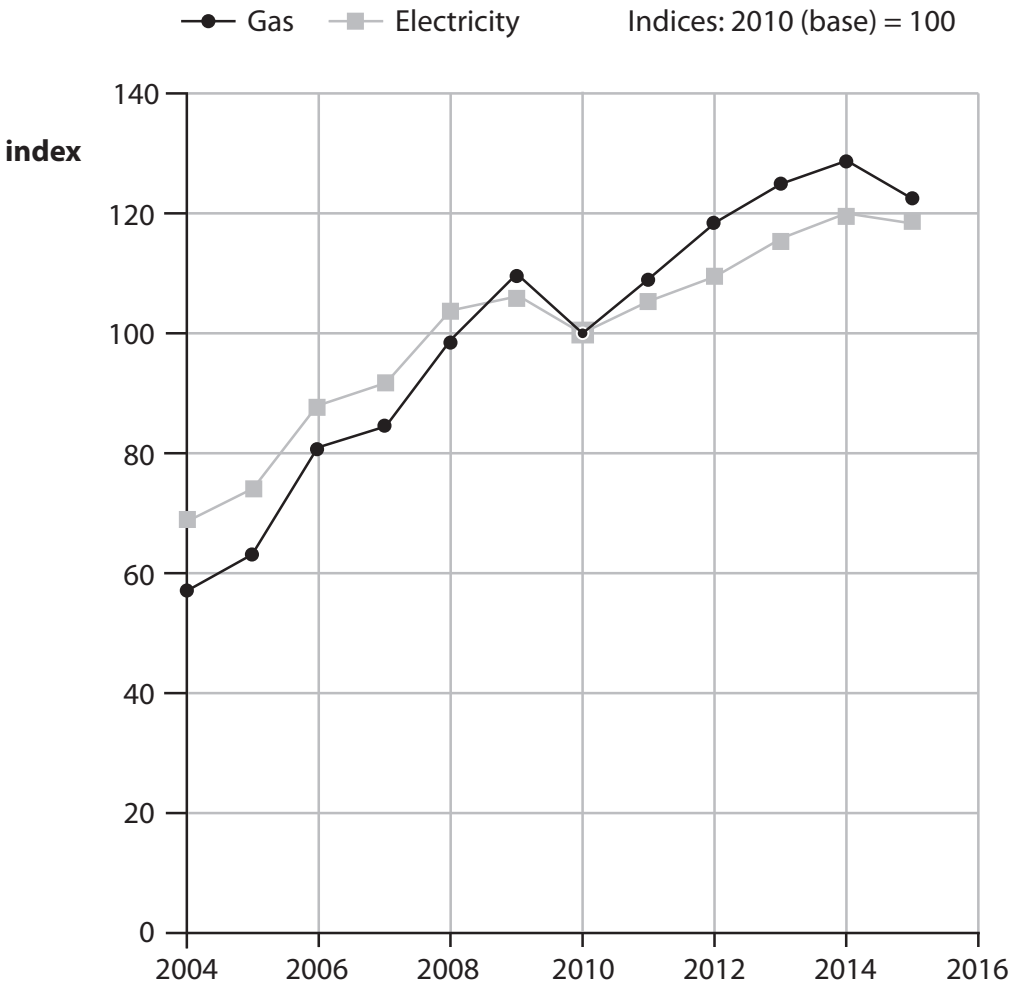
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK energy market

Figure 1: UK retail electricity and gas real price indices, 2004–2015



(Source: https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf)

Figure 2: UK retail electricity and gas supply: market share by company, 2016

Company	Electricity %	Gas %
British Gas	23	36
EON	16	13
SSE	16	13
EDF	12	8
Scottish Power	11	9
RWE (nPower)	10	9
Other companies	12	12
Total	**100**	**100**

(Sources: https://www.ofgem.gov.uk/chart/electricity-supply-market-shares-company-domestic-gb and https://www.ofgem.gov.uk/data-portal/retail-market-indicators)

Extract A

Competition and Markets Authority (CMA) report into the UK energy market

An investigation into the UK energy market by the CMA concluded that customers have been paying £1.4 billion a year more than they would in a fully competitive market. It found that 70% of domestic customers of the six largest energy firms were on an expensive standard rate. These customers could each save over £300 a year by switching to a cheaper deal but appear reluctant to do so.

However, the CMA investigation found no evidence of anti-competitive practices by firms. There has even been an increase in new entrant energy suppliers over recent years and their combined market share has reached 12% in both gas and electricity supply.

To protect consumers, the CMA has introduced various measures to open up and increase competition in the UK energy market. These include:

- the creation of a database designed to help consumers switch energy suppliers – rival suppliers can directly contact these customers
- the conversion of all homes to smart energy meters making it easier for customers to measure energy consumption and switch supplier
- new rules to protect the four million vulnerable customers using prepaid meters – this includes a temporary price cap until smart meters have been installed.

(Source: adapted from 'Competition and Markets Authority Final report into Energy Market Investigation' https://www.gov.uk/government/news/cma-publishes-final-energy-report-in-full)

Extract B

Proposals to regulate profits in the UK energy market

Currently energy retail companies make an average profit of 7% of total revenue. The Chairman of the Competition and Markets Authority (CMA) suggested that these profits are as much as five times higher than they should be, given the companies' limited role in marketing, metering and billing customers. He recommended a profit cap of 1.25% of total revenue.

However, Scottish Power criticised proposals for regulating profits saying that it would reduce investment in the energy industry and undermine long-term energy provision. The firm claimed that such a low rate of return is below the profit margin made by supermarkets.

All six large energy firms are vertically integrated – producing as well as distributing gas and electricity. This can provide efficiency benefits but also harm competition.

(Source: adapted from 'Profit cap doesn't fit with new investment, energy boss warns', by Robin Pagnamenta, *The Times*, 19th September 2016)

Extract C

Skills shortages in the UK energy sector

The energy sector is facing a skills shortage of engineers and technicians. Some 29% of employers in the gas and electricity industries report unfilled job vacancies compared with an average of 18% across all industries.

A lack of information and advice on career prospects for young people is partly to blame - many graduates have a negative image of the work involved. There is also a lack of students taking science, technology, engineering and maths-based subjects at school and university. Less than one-fifth of the energy sector's workforce are women.

The energy sector is characterised by an ageing workforce - data from the UK Labour Force Survey reveal that around two-thirds of workers are aged over 50. These cannot easily be replaced as a long time period is required for training and developing workers' skills in a highly regulated industry.

Urgent action is required by businesses and the government to reduce labour immobility to benefit the energy sector. This action could include policies to increase investment in training programmes, recruit skilled workers from overseas, change the industry image and deal with its ageing workforce.

(Source: adapted from 'Sector insights: skills and performance challenges in the energy sector', by the UK Commission for Employment and Skills, March 2015; https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/416998/15.03.25._Energy_SLMI_-_evidence_report.pdf)

(e) With reference to Extract C and your own knowledge, discuss policies businesses **and** government might implement to reduce labour immobility to benefit the energy sector.

(15)

(Total for Question 6 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS

SECTION B

Read the following extracts (A to D) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The electronics industry

Extract A

Rising prices of electronics devices

Computer chips act as the "brain" in all electronic devices. Makers of electronic devices face significant increases in the price of computer chips as they try to source enough components, including games consoles, computers and smartphones. The price of some computer chips has jumped from $0.20 each to more than $1. The prices of electronic devices have risen for a range of reasons, including higher material costs and the growing popularity of home entertainment.

(Source: adapted from https://www.ft.com/content/8c718a74-cd95-4b2d-ac0e-de0682e4e3cd)

Extract B

Labour shortages in the electronics industry

Every year, highly skilled and experienced employees in the electronics industry retire. The current tight labour market has made an already difficult problem of hiring suitable engineering and computing graduates worse, especially since the nature of the industry is becoming increasingly technical. As production becomes more automated, electronics jobs are more likely to require problem solving and analysis than just assembling skills. However, artificial intelligence and other new technologies can help fill some of the skills gap. In addition, by giving hazardous, repetitive, grimy work to robots, human beings can focus on more creative, analytic tasks.

(Source: adapted from https://www.ericsson.com/en/blog/2021/12/manufacturing-problems-that-keep-ceos-awake-at-night)

Extract C

Serious concerns over merger

The Competition and Markets Authority (CMA) has said the takeover of the Cambridge-based computer chip designer Arm by its US rival Nvidia raises serious competition concerns. It has launched an in-depth investigation into the £29.5 billion deal. The CMA said the merger could reduce choice for firms reliant on computer chips, pushing up prices of products including cars, games consoles and mobile phones. In addition, severe global shortages of computer chips has disrupted the manufacture of a range of electronic goods pushing up costs for firms.

Despite this, large electronics firms benefit from economies of scale and are able to finance high-risk innovation and global advertising.

(Source adapted from: https://www.theguardian.com/business/2021/aug/20/watchdog-expresses-concerns-over-nvidias-takeover-of-uk-chip-designer-arm)

Extract D

The growing problem of electronic waste

Electronic waste is the fastest growing element of the world's household waste problem. The problem in the UK is particularly bad. The country produces 24.9 kg a person a year – nearly 10 kg more than the EU average. In 2018, 1.2 million tonnes of electrical devices were sold in the UK, and 500 000 tonnes made it to recycling centres. Some appliances are more likely to be recycled than others. The recycling rate for big appliances, such as fridges and cookers, is about 80%. Of small appliances, barely one in five makes it to the recycling centre. As items such as toasters, hairdryers and headphones fit into household bins, they are not often taken to a recycling centre. This causes many problems, such as hazardous substances contaminating soil, water pollution and other external costs.

Policy makers have a long list of options to combat this problem including stricter regulation, environmental education, taxation and financial incentives. In some countries, for example, household rubbish is weighed and recycling initiatives are subsidised.

(Source adapted from: https://www.ft.com/content/26e1aa74-2261-11ea-92da-f0c92e957a96)

(e) With reference to Extract D, discuss possible methods of government intervention to reduce electronic waste.

(15)

(Total for Question 6 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

(e) Discuss the likely private costs and external costs of the production of plastic.

(15)

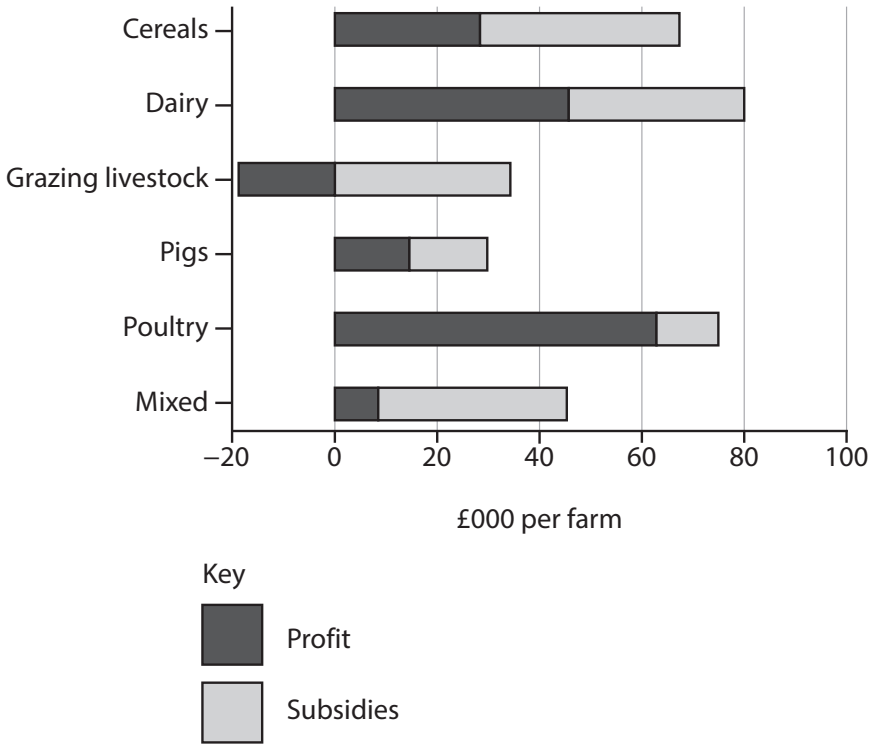
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

(e) With reference to Extract A, discuss the likely private costs and external costs caused by meat farming. Use an appropriate diagram in your answer.

(15)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

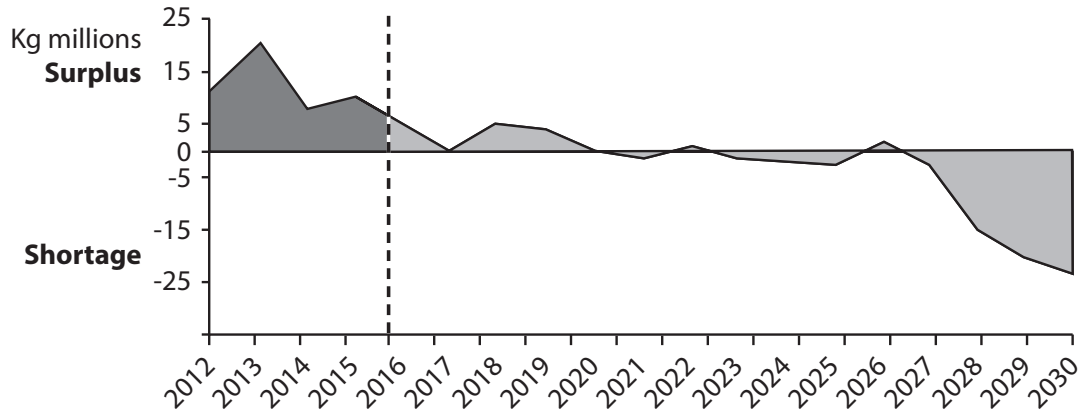
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

Q) 6 (f) Using the concept of external costs, evaluate whether nuclear power is under-provided or over-provided in the energy market. Use an appropriate diagram in your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figures 1, 2, 3 and the following extracts (A to B) before answering Question 6.

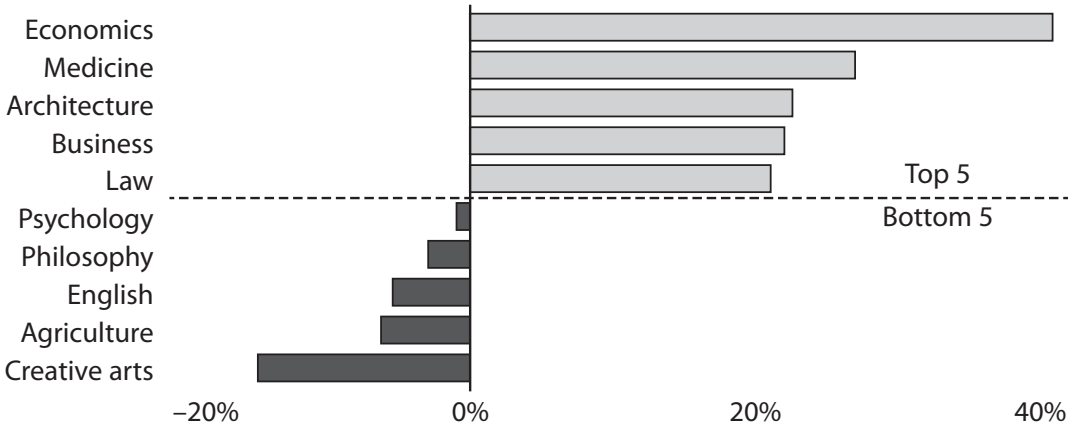
Answer ALL questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

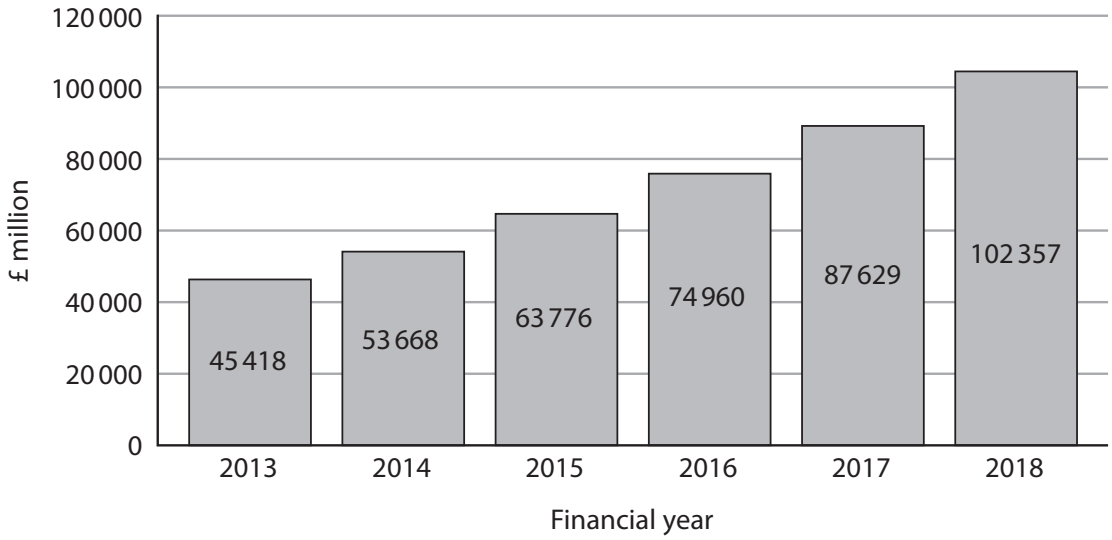
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



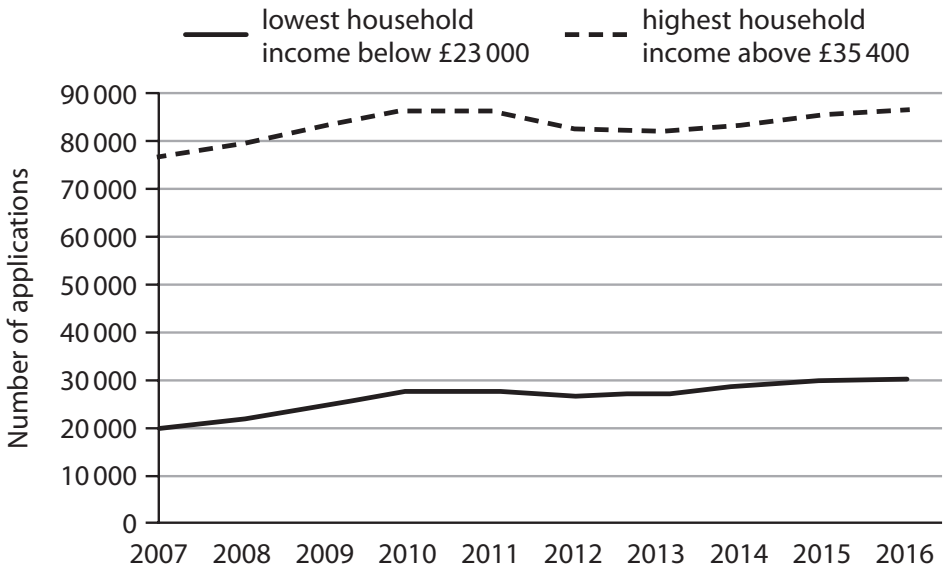
(Source: adapted from https://www.ifs.org.uk/publications/13731
The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/student-loans-debt-and-repayment/england.aspx)

Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10 000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50 000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1 000 per year. They are currently £9 250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scottish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)

Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-dropping-university-highest-level-five/)

Q) 6 (g) Evaluate whether government intervention is able to correct market failure in education.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

Q) 6 (f) Some economists suggest that the market price of cod does not result in the socially optimum level of output. Evaluate the likely external costs from the over-fishing of cod. Use an appropriate diagram in your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

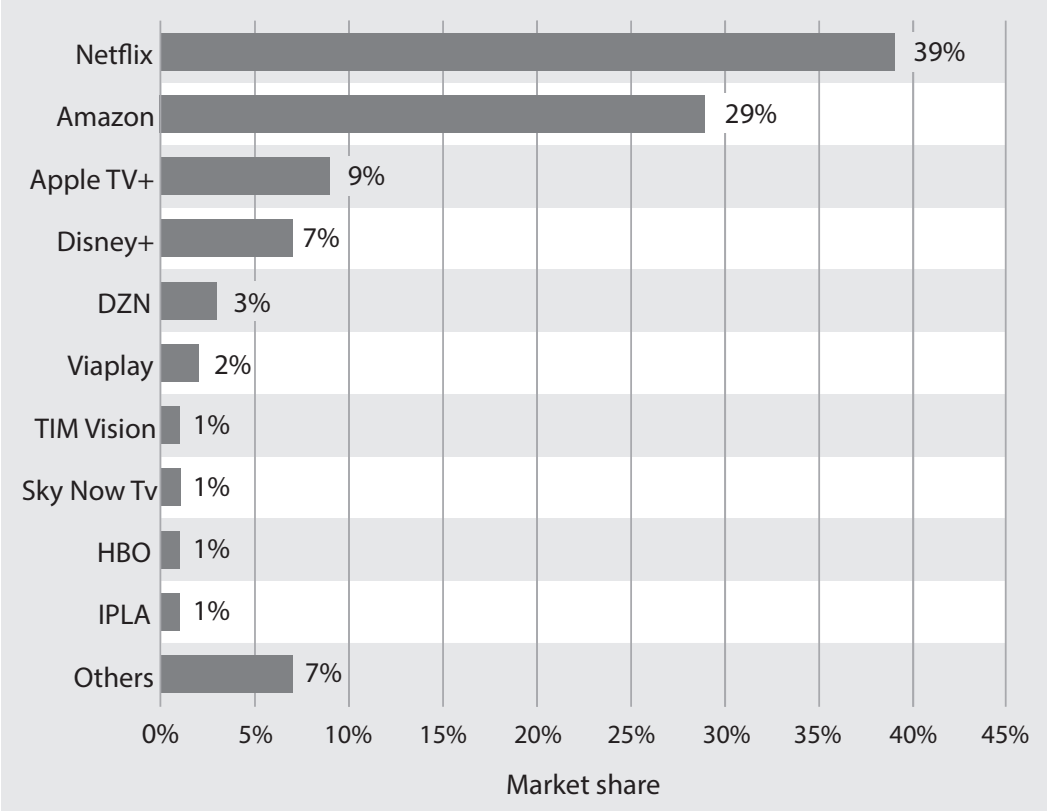
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

Q) 6 (g) Evaluate the possible disadvantages of a free market approach to the provision of television content.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

Q) 7 In 2015 a report by Public Health England recommended the imposition of a 20% tax on the sale of soft drinks that contain high levels of sugar. Evaluate the likely microeconomic effects of such a tax.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

Q) 7 In September 2016 the government approved the building of an £18 billion nuclear power station, Hinkley Point C, which will supply 7% of UK electricity for up to 60 years. The power station is funded by Chinese and French investment. Evaluate the likely private costs and external costs involved in such major power station construction projects. Use an appropriate externalities diagram in your answer.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SECTION A

Read Figures 1 and 2 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Turkey – an emerging economy

Figure 1: Turkey's central bank lending rate, percent, 2013–2018

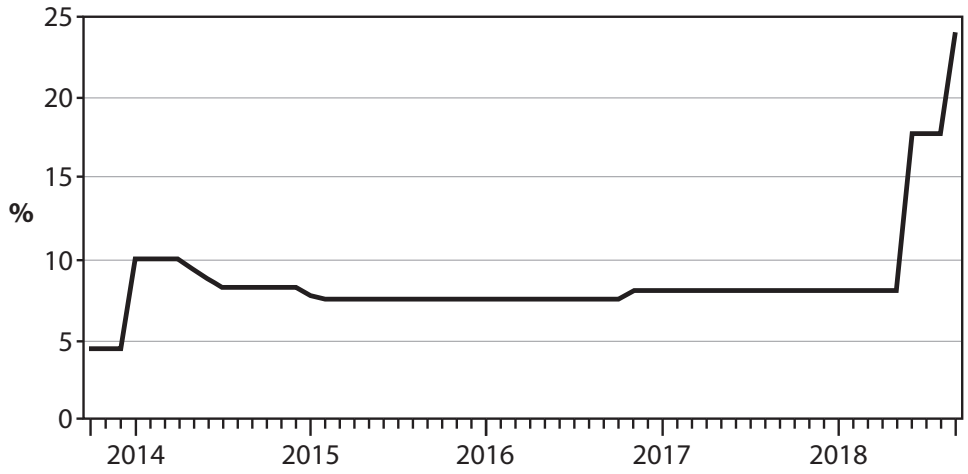
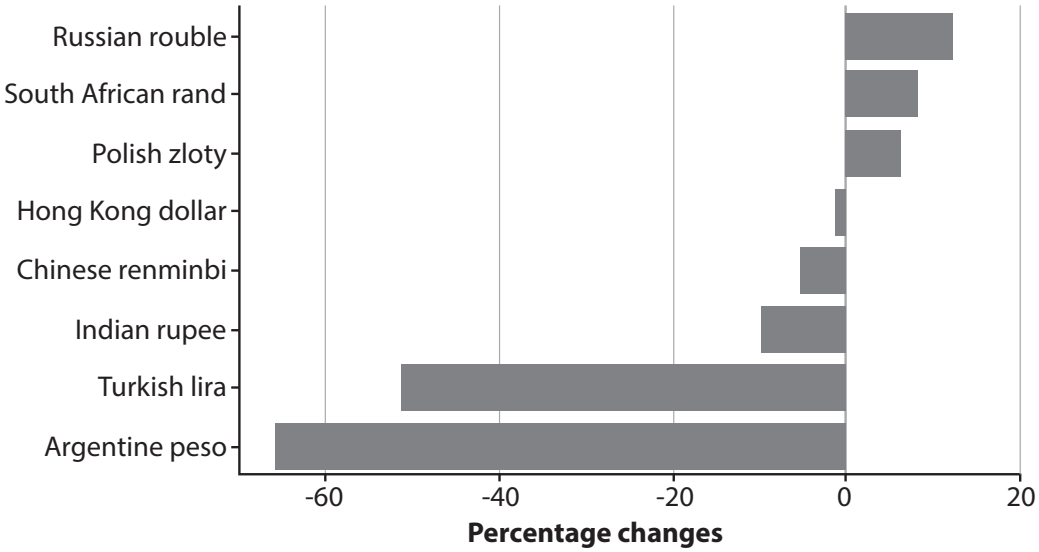


Figure 2: Selected emerging economy exchange rates, percentage change against the US dollar: January 2018 compared to January 2016.



(Source adapted from: FT.com)

Extract A

Can Turkey's central bank avoid another rate rise?

At an annual rate of 25%, Turkey's inflation is alarming. However, it may have peaked. This may be a turning point for the economically struggling country, whose currency (the Turkish lira) has lost nearly a third of its value against the US dollar in 2018. The central bank may be able to avoid tightening monetary policy further, as a severe economic adjustment is already well under way. Turkey is highly indebted in foreign currency. The Turkish government takes measures against excessive appreciation or depreciation of the Turkish lira to reduce financial stability risks. The financial market faces difficulties in trying to restore foreign investors' confidence.

Consumer prices increased by 2.7% in October 2018, a much lower rate than the 6.3% recorded in September 2018. The lira has stabilised, having risen 16% since the central bank raised interest rates by 6.25 percentage points. However, the government wants lower borrowing costs to fuel credit growth and economic expansion. Timothy Ash at a London investment bank says at this point it's "illogical" to raise interest rates again in Turkey. That's because Turkey's economy is already experiencing a severe slowdown.

In the long term Turkey's economic growth is expected to be above that of other emerging markets such as Brazil, Russia and China. Turkey's private sector is resilient. Between 2018–50 we expect Turkey to grow by an annual average of 3.1%. Brazil is expected to grow by an annual average of 2.1%, Russia by 1.6% and China by 2.8%. GDP growth will nevertheless be well below that recorded in 2004–07 and 2010–15. Average growth in GDP per head will be substantially lower, mainly reflecting the expected rise in the total population.

(Source adapted from: https://ftalphaville.ft.com/2018/11/06/1541508141000/Can-Turkey-s-central-bank-avoid-another-rate-hike-/. 6 Nov 2018 Colby Smith and one sentence The president wants lower borrowing costs to fuel credit growth and economic expansion from https://www.theguardian.com/world/2018/aug/07/turkey-urged-to-announce-emergency-interest-rate-hike Larry Elliott 7/8/18 and http://country.eiu.com/article.aspx?articleid=157174199&Country=Turkey&topic=Economy&subtopic=Long-term+outlook&subsubtopic=Summary)

Extract B

Turkey aims to bin the plastic bag

You get a free plastic bag whenever you go to a shop, even if it is just to buy a loaf of bread or a chocolate bar. In Turkey, plastic bags are everywhere, with millions being thrown away, and their use is causing a growing environmental problem.

In Istanbul, the country's biggest city with about 12 million people, around 10 000 tonnes of waste are being collected every day. Plastic bags and other plastic waste make up 950 tonnes, or almost 10%, of the total waste.

The Turkish government said it was looking at ways to discourage the consumption of single-use plastic bags. One possible step currently under review is a ban of the black bags that are said to contain carcinogens. Another is that the state may raise taxes on plastic products, which could lead to supermarkets charging consumers for the bags. In Corlu, a town north-west of Istanbul, a local environmental group distributed 20 000 canvas bags to shoppers in one month. In some parts of Turkey, plastic bags are completely banned, with heavy fines for both firms and consumers who use them.

(Source adapted from: tseibert@thenational.ae https://www.thenational.ae/world/europe/turkey-aims-to-bin-the-plastic-bag-1.530059 accessed 11/11/18)

Extract C

Istanbul's third airport set to be the busiest in the world

Istanbul's third airport is being constructed over an area of 76.5 million square metres, to the north of Istanbul. When complete, the new airport will have six runways and have an annual passenger capacity of up to 200 million people, making it potentially the world's busiest airport. "This airport is going to be the most important hub between Asia and Europe," said one business leader.

The airport design includes high vaulted ceilings and spacious, modern and efficient design – and its tulip-shaped air traffic control tower won the 2016 International Architecture Award. It uses mobile applications and artificial intelligence for customers, is energy efficient and has a high-tech security system. The site employs 36 000 people and is estimated to cost the equivalent of £10 billion. However, the rush to meet the deadline set by the Turkish government is a major cause of accidents on the construction site, according to the construction workers' union.

(Source adapted from: https://www.lonelyplanet.com/news/2018/08/08/istanbuls-huge-new-airport/ and https://www.voanews.com/a/istanbul-to-unveil-new-airport-seeks-to-be-world-s-biggest/4632308.html)

Q) 1 (e) Evaluate the microeconomic and macroeconomic impact of large infrastructure projects such as the building of a third airport in Istanbul.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

8 Using 2021 estimates of carbon emissions, it is estimated that a petrol car journey from London to Glasgow emits approximately 3.3 times more carbon dioxide per passenger than the equivalent journey by train.
(Source adapted from: https://www.gov.uk/government/statistics/transport-and-environment-statistics-autumn-2021/transport-and-environment-statistics-autumn-2021)

Q) Evaluate possible methods of government intervention to reduce carbon emissions caused by road transport in the UK.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

7 High Speed 2 (HS2) was a £100 billion UK government rail project designed to expand the existing network. The journey time between London and Manchester would take just 1 hour and 11 minutes, 54 minutes quicker than today's fastest time. Almost 900 homes, 1 000 businesses and around 60 ancient woodlands would be destroyed by its construction. (Source: adapted from https://www.independent.co.uk/climate-change/news/hs2-railway-route-houses-demolish-woodland-destroy-environment-impact-london-birmingham-manchester-a8582316.html)

Q) Evaluate the likely microeconomic effects of building major infrastructure projects.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

8 In 2023, the UK prime minister Rishi Sunak said that he wanted to see all students in England study some form of mathematics until they reach the age of 18 to 'ensure that they leave school better equipped for the jobs of the future'. This would require additional spending on education. Just half of all 16 to 19 year-olds study mathematics. Yet in a world where data is everywhere and statistics are vital in every job, the workforce will require more analytical skills than ever before.
(Source: adapted from https://educationhub.blog.gov.uk/2023/01/04/studying-maths-to-18-what-you-need-to-know/)

Q) Evaluate the likely microeconomic effects of increased spending on education.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SUB-TOPIC 1.3.3

PUBLIC GOODS

Sub-topic 1.3.3 · 10 questions · 56 marks · lowest tariff first

5 The British Broadcasting Corporation (BBC) is a TV broadcaster. It is financed through an annual TV licence fee of £145.50. At this fee level many TV owners benefit from consumer surplus.

(a) Define the term 'consumer surplus'.

(1)

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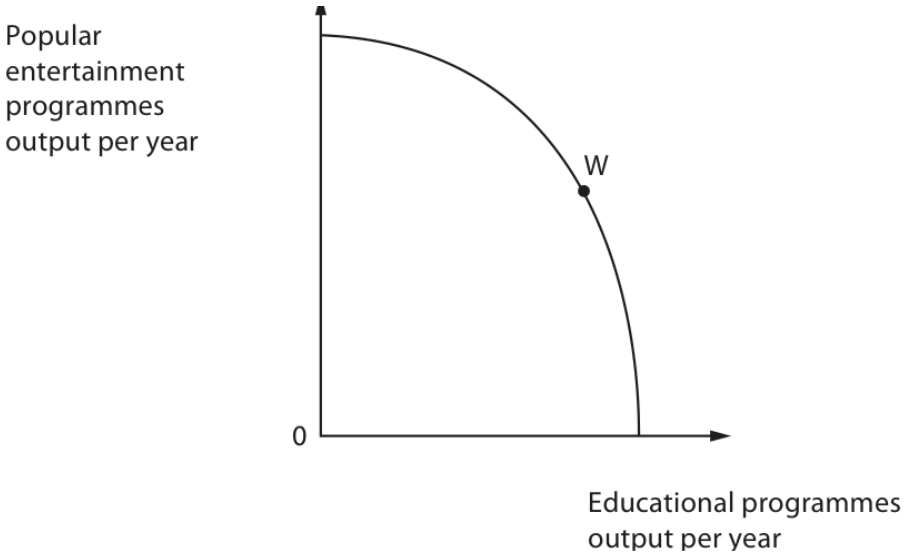
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(Total for Question 5(a) = 1 mark)

5 The British Broadcasting Corporation (BBC) is a TV broadcaster. It is financed through an annual TV licence fee of £145.50. At this fee level many TV owners benefit from consumer surplus.



(c) BBC programmes are often referred to as being public goods. This is because:

(1)

- ☒ **A** all BBC programmes are financed by the public sector
- ☒ **B** the BBC is the most popular broadcaster in the UK
- ☒ **C** the consumption of these programmes is non-rivalrous
- ☒ **D** there are external benefits from the consumption of many BBC programmes

(Total for Question 5(c) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Since 2015, the government has invested £74 million on a flood defence scheme in the Calder Valley. The scheme will protect homes, businesses and jobs.

(Source: https://www.theguardian.com/uk-news/2020/feb/10/yorkshire-residents-criticise-delays-to-flood-defence-scheme)

(a) What are the characteristics of a private good?

(1)

☒ **A** Non-rivalrous and excludable

☒ **B** Non-rivalrous and non-excludable

☒ **C** Rivalrous and excludable

☒ **D** Rivalrous and non-excludable

(Total for Question 1(a) = 1 mark)

5 The British Broadcasting Corporation (BBC) is a TV broadcaster. It is financed through an annual TV licence fee of £145.50. At this fee level many TV owners benefit from consumer surplus.

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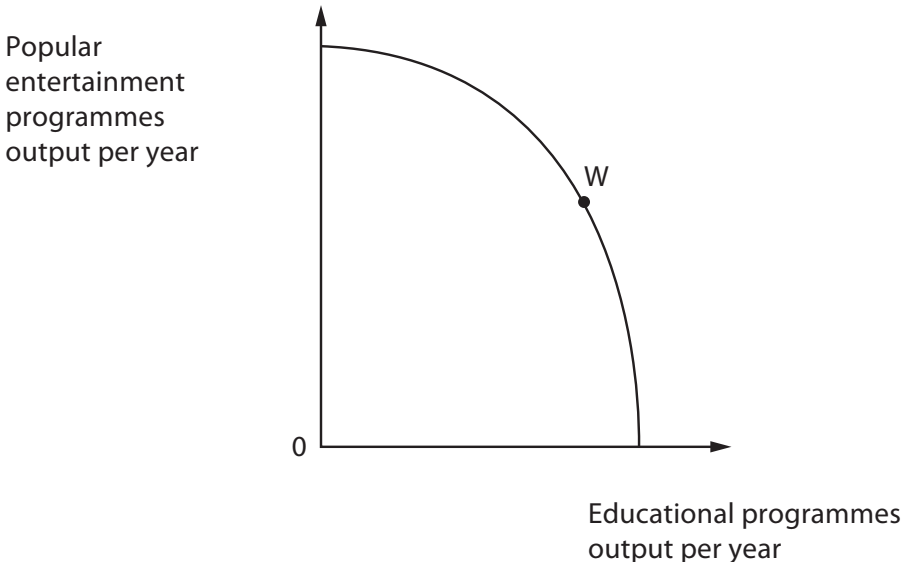
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(b) The diagram shows the production possibility frontier for the BBC. Assuming the BBC is at point W, annotate the diagram to show the opportunity cost of providing more educational programmes.

(2)



(c) BBC programmes are often referred to as being public goods. This is because:

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- ☒ **A** all BBC programmes are financed by the public sector
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- ☒ **D** there are external benefits from the consumption of many BBC programmes

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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(b) Explain why flood defences such as those in the Calder Valley are usually provided by the public sector.

(3)

(Total for Question 1(b) = 3 marks)

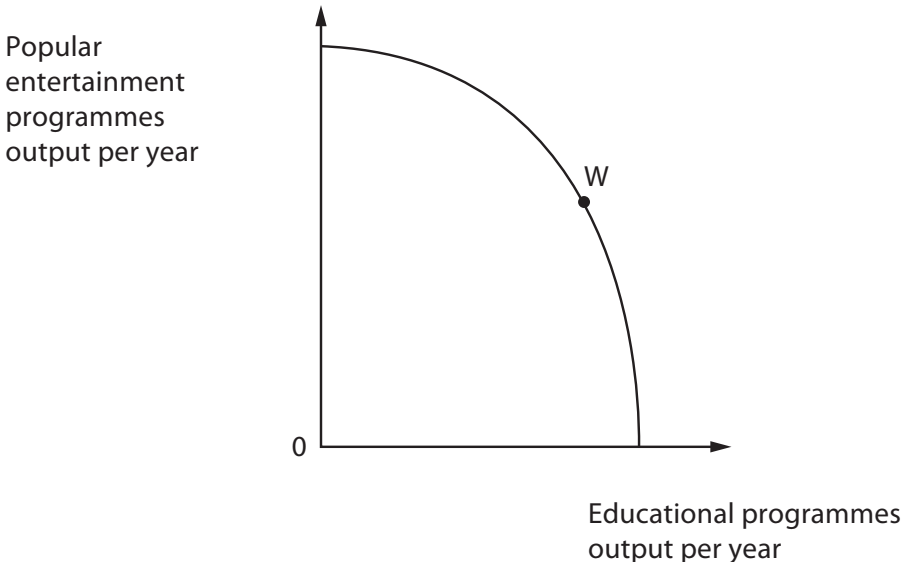
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(a) Define the term 'consumer surplus'.

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(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION A

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- ☒ **C** Rivalrous and excludable
- ☒ **D** Rivalrous and non-excludable

(b) Explain why flood defences such as those in the Calder Valley are usually provided by the public sector.

(3)

(Total for Question 1 = 4 marks)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

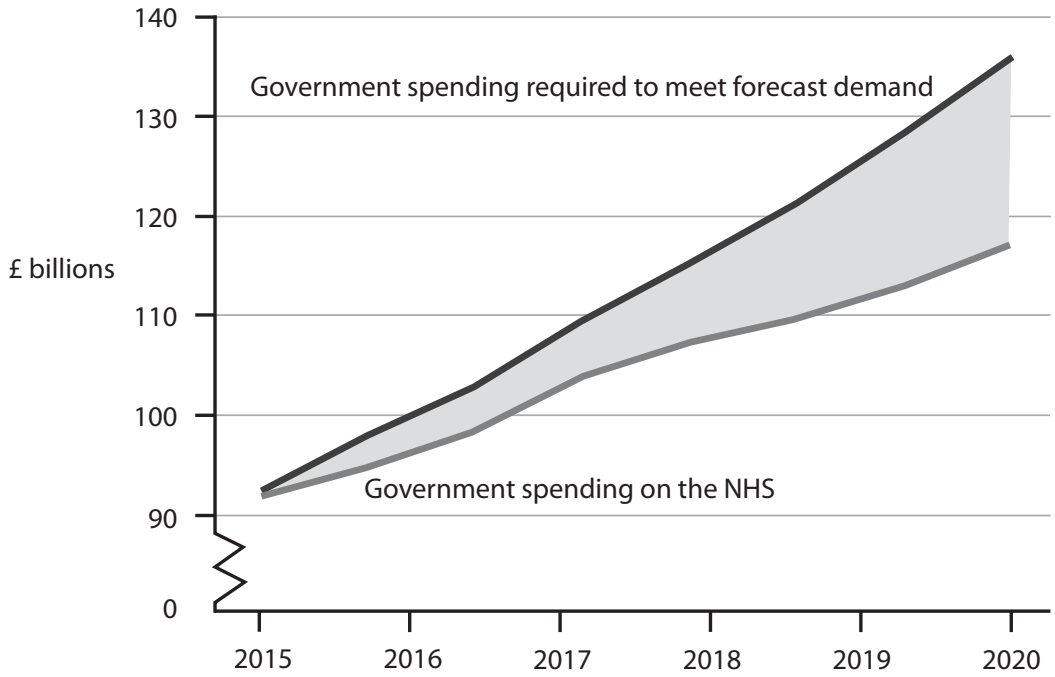
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You are advised to spend 1 hour 5 minutes on this section.

Question 6

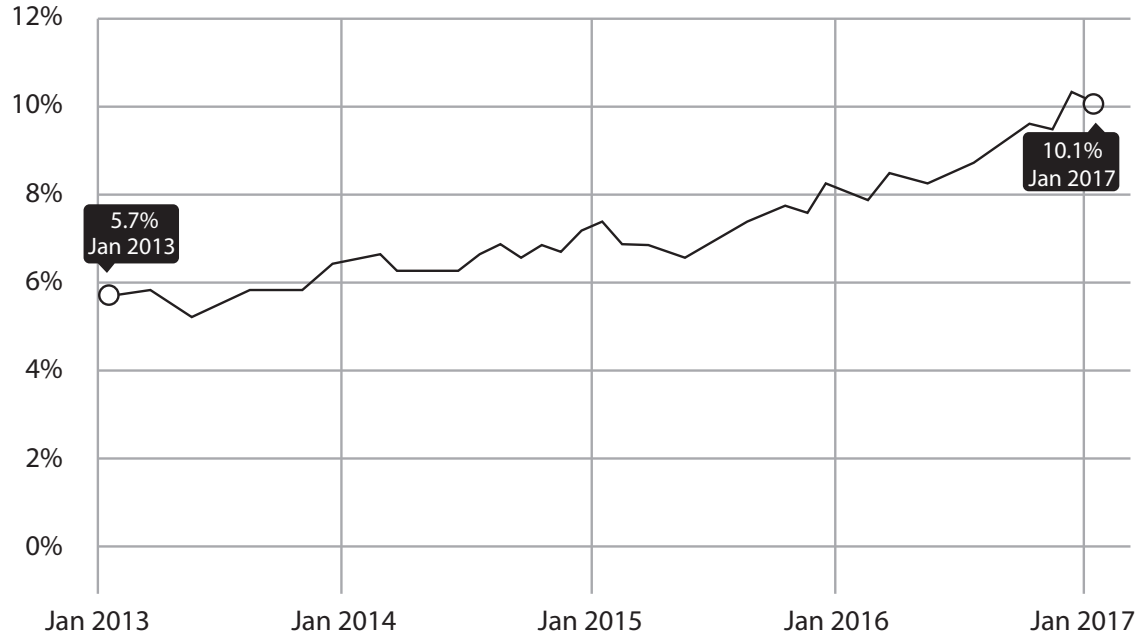
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

(c) 'Public parks are a public good' (Extract C, line 1). Assess this statement.

(10)

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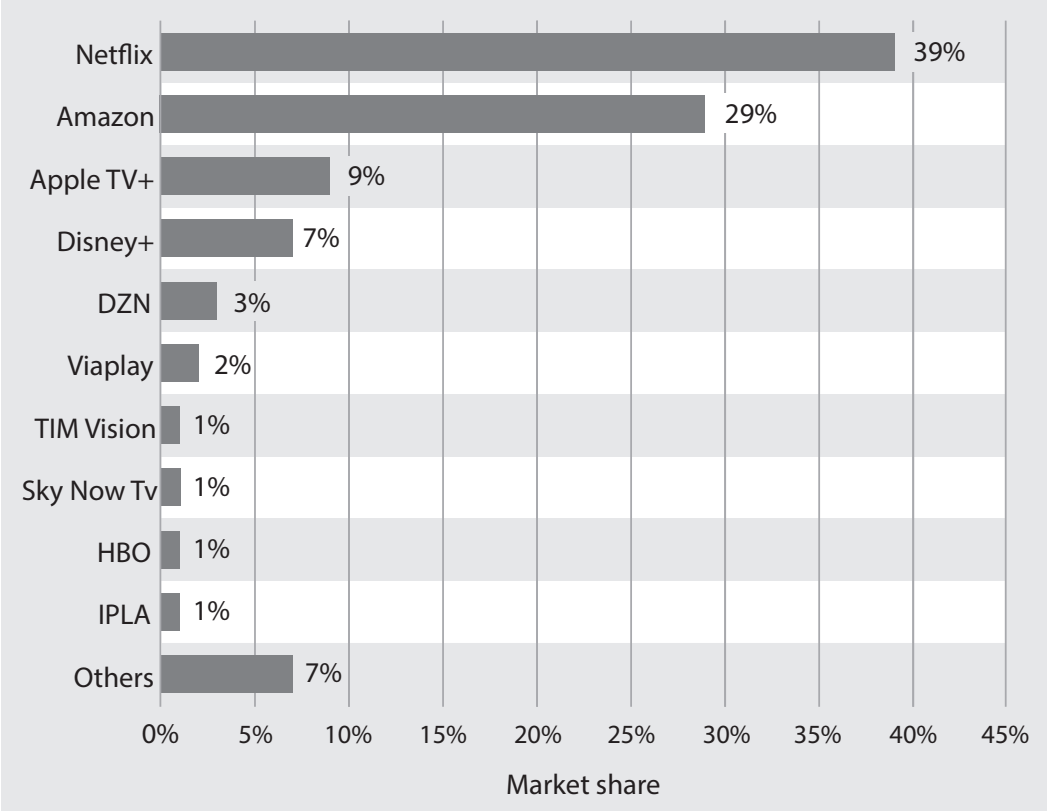
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Price elasticity of demand	–0.6
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Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

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The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
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- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

(c) 'Television content is a public good' (Extract B). Assess this statement.

(10)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

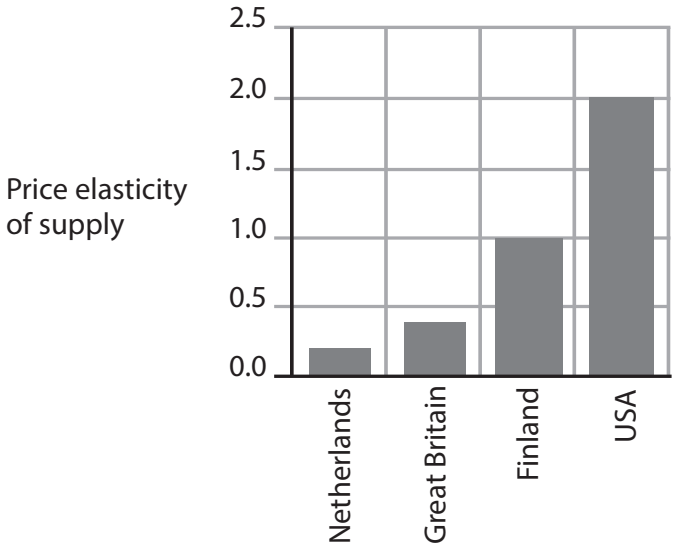
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

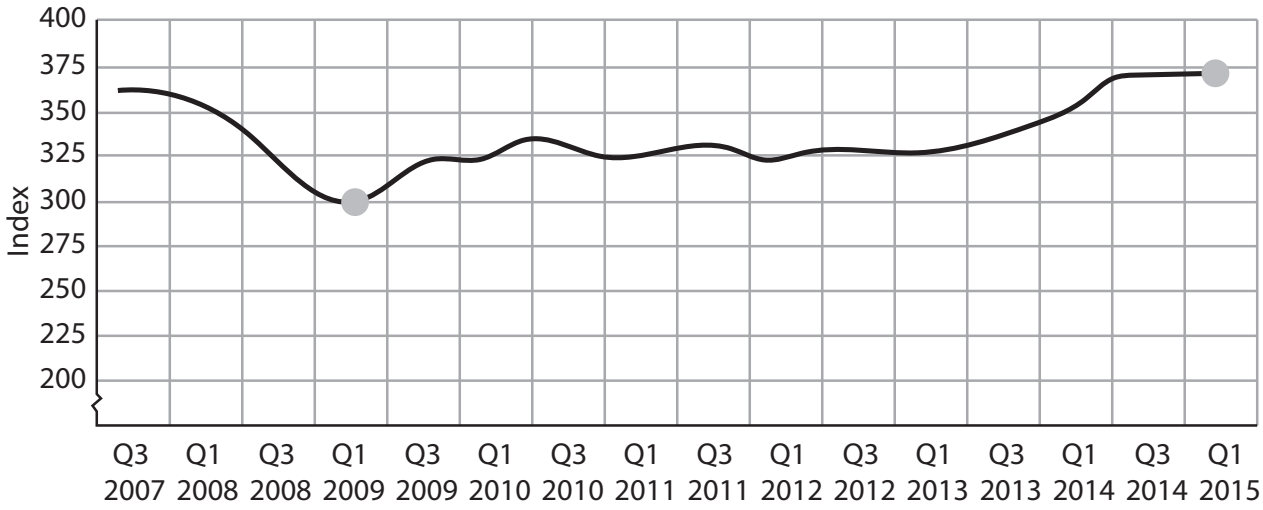
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

Q) 6 (g) Evaluate the case for government provision of goods and services such as flood defence schemes or housing.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SUB-TOPIC 1.3.4

INFORMATION GAPS

Sub-topic 1.3.4 · 7 questions · 58 marks · lowest tariff first

4 Nearly 750 000 consumers in Britain face unresolved problems with used car purchases every year. Older vehicles tend to have more faults and increase the risks facing a potential buyer.

(Source: adapted from https://www.gov.uk/government/news/new-approach-to-give-second-hand-car-buyers-a-better-deal)

(b) In September 2022, the online retailer, Amazon, increased the price of its Prime service from £7.99 a month to £8.99. As a result, almost 600 000 people cancelled their subscriptions.

(Source: adapted from https://www.telegraph.co.uk/business/2022/08/17/hundreds-thousands-uk-households-ditch-amazon-prime/)

Which **one** of the following is the most likely explanation of this behaviour?

These consumers:

(1)

- ☒ **A** aim to maximise profits
- ☒ **B** aim to maximise utility
- ☒ **C** demonstrate habitual behaviour
- ☒ **D** demonstrate weakness at computation

(Total for Question 4(b) = 1 mark)

4 Nearly 750 000 consumers in Britain face unresolved problems with used car purchases every year. Older vehicles tend to have more faults and increase the risks facing a potential buyer.

(Source: adapted from https://www.gov.uk/government/news/new-approach-to-give-second-hand-car-buyers-a-better-deal)

(a) With reference to the data above, explain how imperfect market information may lead to a misallocation of resources in the used-car market.

(4)

(b) In September 2022, the online retailer, Amazon, increased the price of its Prime service from £7.99 a month to £8.99. As a result, almost 600 000 people cancelled their subscriptions.

(Source: adapted from https://www.telegraph.co.uk/business/2022/08/17/hundreds-thousands-uk-households-ditch-amazon-prime/)

Which **one** of the following is the most likely explanation of this behaviour?

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- ☒ **A** aim to maximise profits
- ☒ **B** aim to maximise utility
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(Total for Question 4 = 5 marks)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

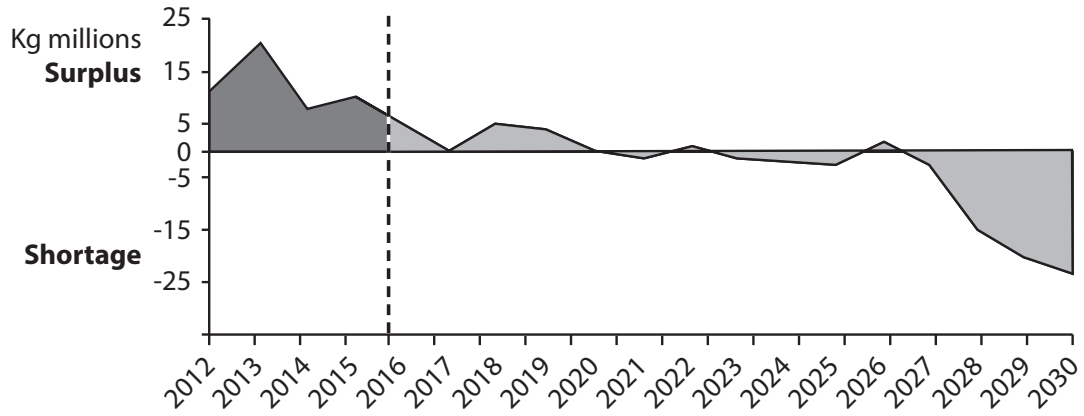
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

(c) With reference to Extract B, explain **two** likely reasons why many consumers of energy have not switched to suppliers offering lower prices.

(6)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

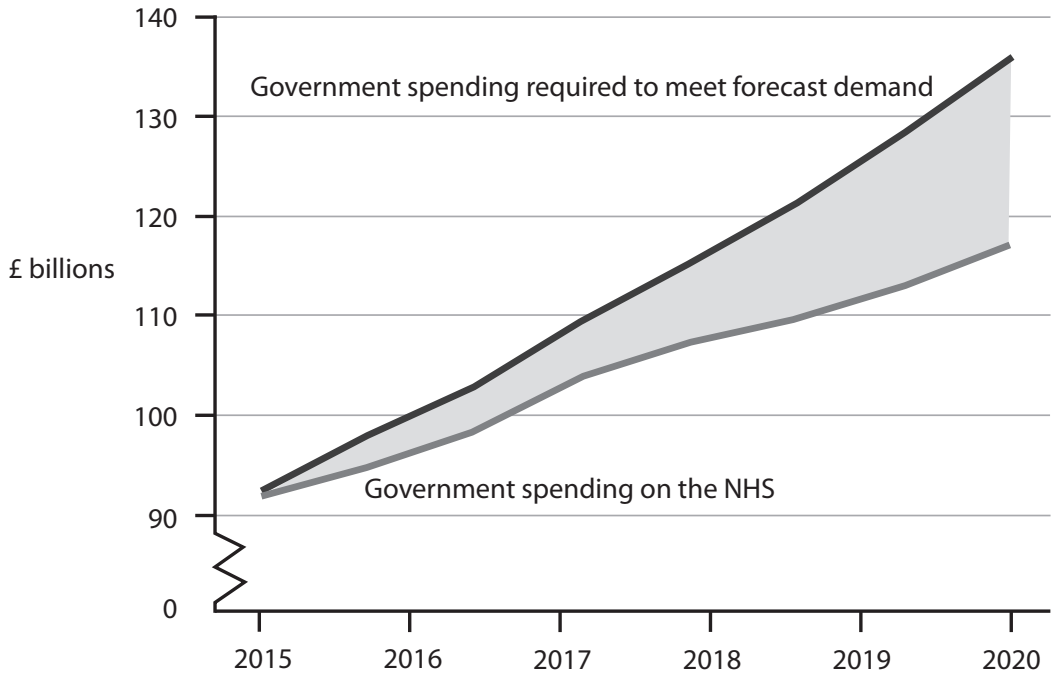
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

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Question 6

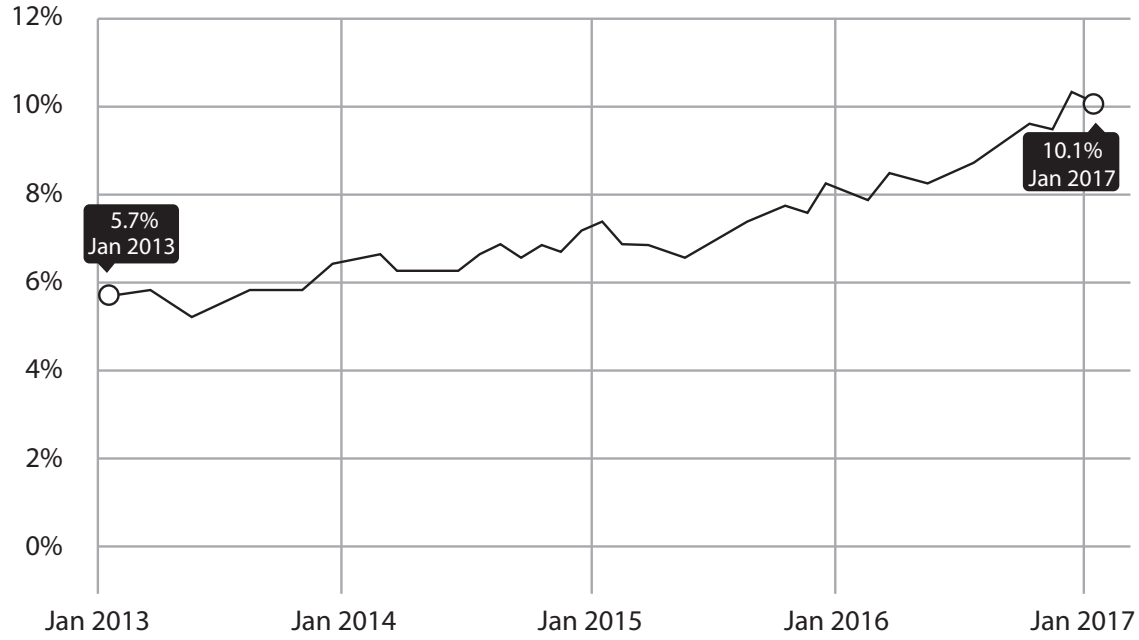
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

(b) Explain how 'asymmetric information' (Extract B, line 30) can lead to market failure in health provision.

(6)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

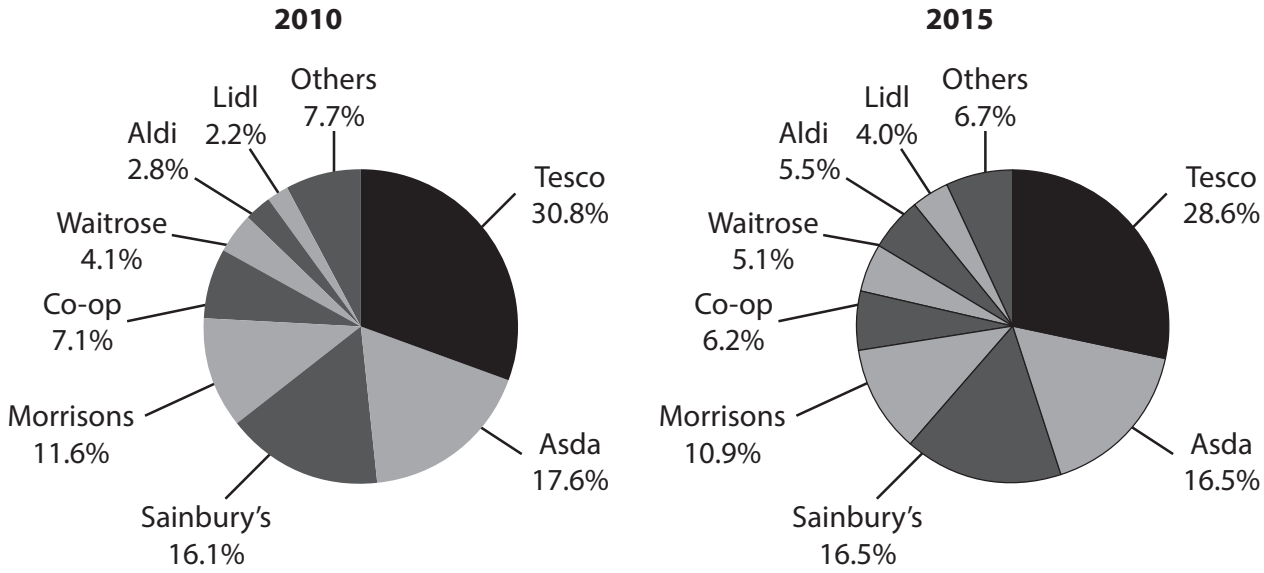
Write your answers in the spaces provided.

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Question 6

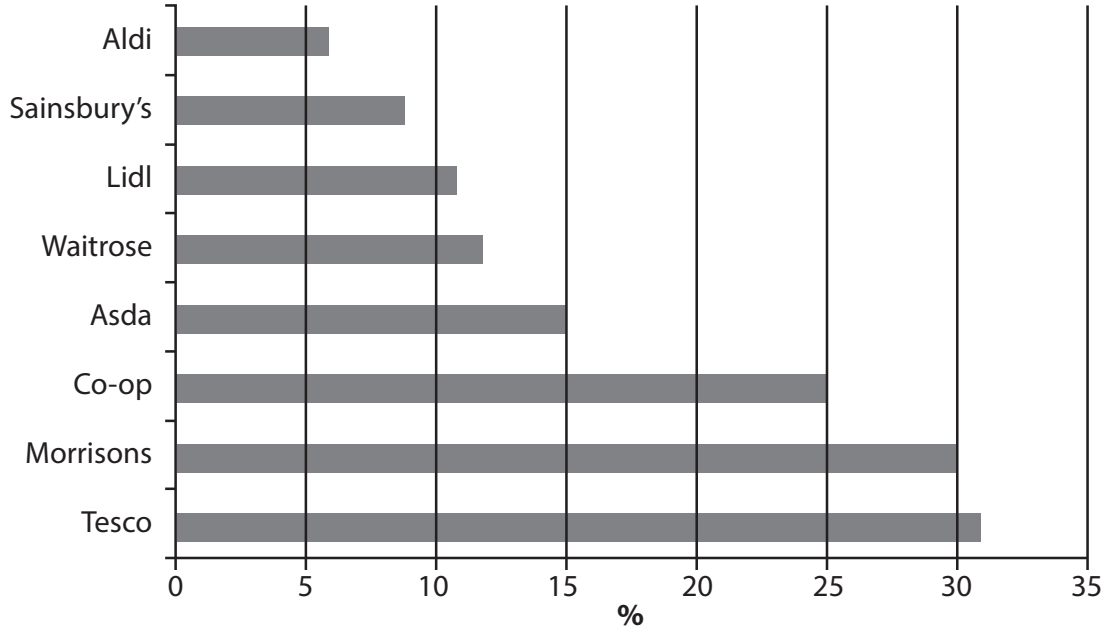
Supermarket price war, food waste and possible mergers

Figure 1: Market shares by total revenue in the UK supermarket sector, 2010 and 2015



(Source: Kantar worldpanel, http://www.kantarworldpanel.com/en/grocery-market-share/great-britain/snapshot/11.10.15/)

Figure 2: Proportion of food suppliers reporting that the following supermarkets fail to meet the Groceries Code of Conduct, 2015.



(Source: YouGov poll of more than 1100 food suppliers to supermarkets. Reported in The Times, 23 June 2015)

Extract A

Supermarket price war puts pressure on their food suppliers

The number of food suppliers (to supermarkets) struggling to remain in business has increased by more than 50% over the past year as supermarkets engage in an intense price war. It has never been tougher for the UK's food suppliers according to a study by accountants Begbies Traynor. It blames aggressive price-cutting by the supermarkets and delays in payments to food suppliers as the main causes of the difficulties. Further problems include food suppliers being forced to pay excessive amounts for packaging specified by supermarkets and funding in-store promotions. Almost 90% of struggling food suppliers are small and medium-sized businesses.

The price war has contributed to food prices paid by consumers falling by 1.7% over the past two years.

The market shares of the big four supermarkets – Tesco, Asda, Sainsbury's and Morrisons – are under pressure as shopping habits change. Many consumers are switching from one main weekly shop to shopping more frequently at local discount stores such as Aldi and Lidl or purchasing goods online from other grocery retailers.

The big four supermarkets have responded by putting more pressure on their suppliers despite an investigation by the Groceries Code Adjudicator (GCA). The GCA has the power to fine supermarkets up to 1% of their annual sales revenue if they break the Groceries Code of Conduct. A YouGov study found considerable differences between the supermarkets in meeting the Code with Aldi performing well but Tesco badly. Despite the Groceries Code, many food suppliers are reluctant to complain for fear of losing contracts with the supermarkets.

(Source: adapted from 'Supermarket price war takes toll on UK food suppliers'. Rupert Jones, The Guardian, 20th July 2015)

Extract B

Food waste in the supply chain

A report from the British Retail Consortium reveals that supermarkets are directly responsible for around 0.2 million tonnes of food waste every year. This is due to the expiry of use-by-dates and poor handling of stock.

However, 4.1 million tonnes of food waste occurs annually in the food supply chain before it even reaches the supermarkets, indicating the existence of information gaps. The supermarkets are cooperating with food suppliers and farmers to try to reduce this waste. This involves improving forecasts for supply and demand of food and increasing the reliability of transportation and storage.

Consumers, the final stage of the supply chain, waste a further 7 million tonnes of food each year. This suggests irrational behaviour. Supermarkets are also working with consumers to reduce the waste by providing advice on how to store and use leftover food. The development of packaging designs to keep food fresher for longer is one of the innovations under way to reduce waste.

(Source: adapted from 'Supermarkets tally up food waste bill'. Will Nicholls, in Businessgreen, 19th January 2015. http://www.businessgreen.com/bg/news/2390792/supermarkets-tally-up-food-waste-bill)

Extract C

Proposed merger activity in the supermarket sector

Analysts at Société Générale, an investment bank, have recommended a merger between Sainsbury's and Morrisons. They claim it would lead to increased economies of scale and market power for the combined business. Such a merger between the third and fourth largest supermarkets in Britain would have been unrealistic a few years ago due to concerns of its impact in reducing competition. However, the chances of getting permission from the Competition and Markets Authority have increased following the growth of Aldi and Lidl. Giant mergers have been approved in other sectors such as Lloyds-HBOS (banking) and British Telecom-EE (telecommunications).

The suggested merger would have its challenges. There is considerable overlap between the locations of the stores and the enlarged company would require the rationalisation and co-ordination of hundreds of thousands of employees. A new expensive IT system is likely to be required and the underlying difficult market trends would remain in the food retailing industry.

(Source: adapted from 'Tesco-bury and AS-Morrisons. Could Britain's supermarkets be about to merge?' Graham Ruddick, in The Telegraph, 16th December, 2015. http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/11699724/Tesco-burys-and-AS-Morrisons.-Could-Britains-supermarkets-be-about-to-merge.html)

(d) Assess the extent to which 'information gaps' (Extract B, lines 5 and 6) and 'irrational behaviour' (Extract B, line 11) are the main causes of food waste in the UK.

(10)

SECTION B

Read Figures 1 and 2 and extracts (A to C) before answering Question 6.

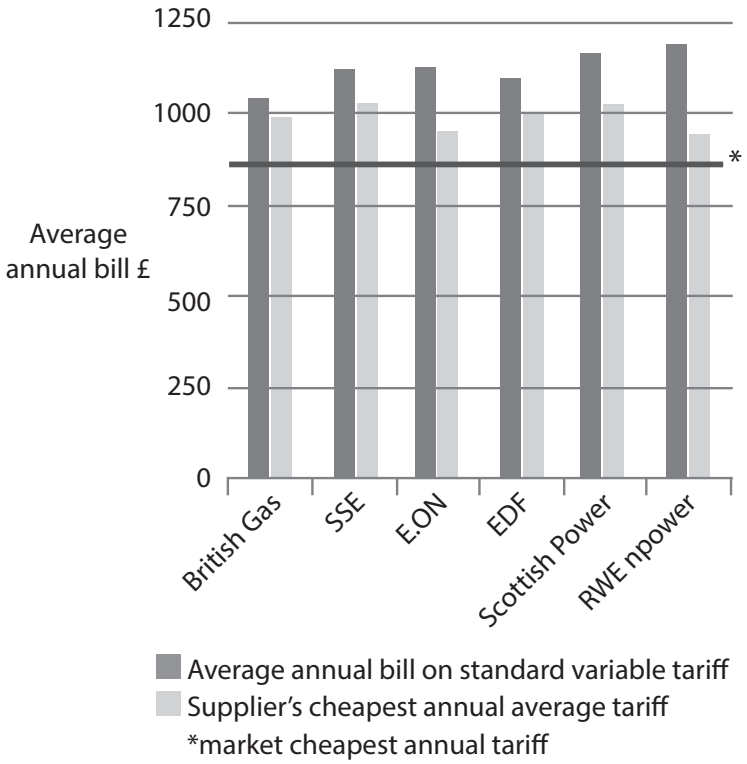
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

Energy and telecommunication markets in the UK

Figure 1: Average annual household bill from the Big Six UK energy suppliers, 2017



(Source: https://www.lovemoney.com/news/67298/standard-variable-tariff-compared-cheapest-deal-provider-savings)

Extract A

Energy price cap to fix 'broken' market in UK

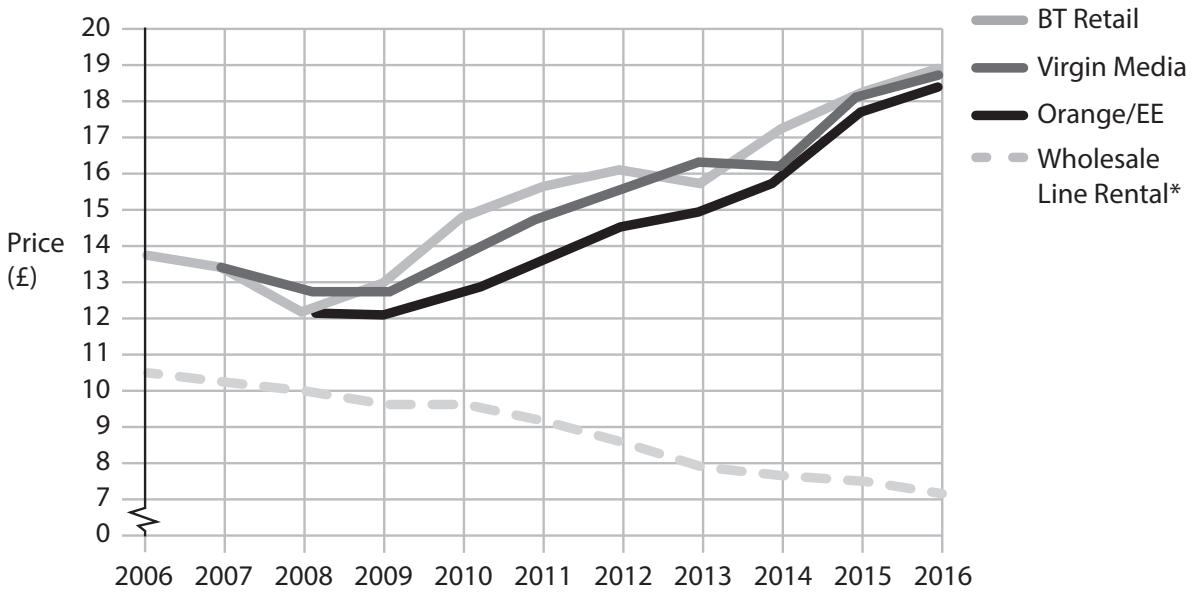
The Prime Minister recently said that the regulator Ofgem (Office of Gas and Electricity Markets) should limit electricity and gas suppliers' most expensive tariffs.

Under the planned new legislation, the energy bills of 11 million households will be capped for as long as five years. The government claimed this cap could save households up to £100 a year. This legislation would force Ofgem to change the licence conditions for energy suppliers so that they are required to cap electricity and gas prices. The measure will apply to anyone on a standard variable tariff, the expensive plans that customers are moved to when cheaper, fixed-price deals end. Ofgem will need to consult energy companies on how the cap is calculated, the government said. The Prime Minister repeated her claim that she had to act because the 'market is broken', a charge the big energy companies reject. "I have been clear that our broken energy market has to change – it has to offer fairer prices for millions of loyal customers who have been paying hundreds of pounds too much," she said.

However, Michael Lewis, chief executive of E.ON said "the government must guard against any unintended consequences that undermine customer service and push up prices as a whole. A price cap will not be good for customers. It will reduce competition and innovation". Smaller suppliers such as First Utility said the Big Six had only themselves to blame for the cap, because they had kept millions of people on standard variable tariffs.

(Source: adapted from 'UK puts energy efficiency at heart of climate change strategy', Adam Vaughan, Copyright Guardian News & Media Ltd 2017 https://www.theguardian.com/money/2017/oct/12/may-energy-price-cap-ofgem-electricity-gas-tariffs)

Figure 2: The monthly rental cost of a telephone landline



*Wholesale line rental – the rental price BT Openreach charges telephone service providers

(Source: https://www.ofcom.org.uk/about-ofcom/latest/features-and-news/landline-prices-review)

Extract B

BT profit rises

BT Group, which includes BT Openreach and BT Retail, reported a rise in profit as revenue increased following the integration of the consumer mobile business, EE. BT finalised the takeover of EE in August 2016, and the integration has resulted in BT controlling 35% of the mobile consumer market. The profit of the UK-based telecommunication group in its second quarter 2017 rose to £566 million.

BT Group chief executive Gavin Patterson said: "We will operate a multi-brand strategy with UK customers being able to choose a mix of BT, EE or Plusnet services, depending on which suits them best. The acquisition enables us to offer great value bundles of services and customers are set to be the winners as we compete for their business".

(Source: adapted from www.marketwatch.com (Oct 27 – 2016) and http://home.bt.com/news/bt-life/bt-to-retain-ee-brand-as-acquisition-confirmed-11364037422234)

Extract C

BT to slash landline charges for 1 million customers

Rental charges for landline-only customers – households with a telephone-only contract but no BT broadband – will fall from £18.99 to £11.99 per month after the regulator attacked existing deals as 'poor value for money'. This rental reduction will save a million landline-only customers £84 a year.

The regulator Ofcom (Office of Communications) said it stepped in because these bills for landline-only customers – nearly two-thirds of whom are over 65 – have "soared" in recent years. This is despite BT and other landline providers benefiting from significant cuts in the wholesale line rental cost of providing the service by BT Openreach. Many landline-only customers are elderly, and have been with BT for decades. Ofcom has focused on BT because it accounts for two-thirds of the UK's 1.5m landline-only customers.

A spokesperson for Ofcom said "This position [of dominance] has allowed BT to increase prices without much risk of losing customers, and other providers have followed BT's pricing lead. We expect BT's price cut to mean other providers will follow suit". Ofcom said that over three-quarters of BT's landline-only customers have never switched provider, which has left them a prime target for price rises. The regulator said that all major landline providers have increased their line rental charges by between 23% and 47% in recent years, while their own costs for providing the service have fallen about 27%. Ofcom said it is also looking at measures to help people shop around for better deals with more confidence.

(Source: adapted from 'BT to slash landline charges for 1m customers', Mark Sweney, Copyright Guardian News & Media Ltd 2017 https://www.theguardian.com/business/2017/oct/26/bt-to-slash-landline-charges-for-1m-customers)

(c) With reference to Extract C, assess possible reasons why many 'landline-only' customers do not switch to a cheaper telephone provider.

(10)

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

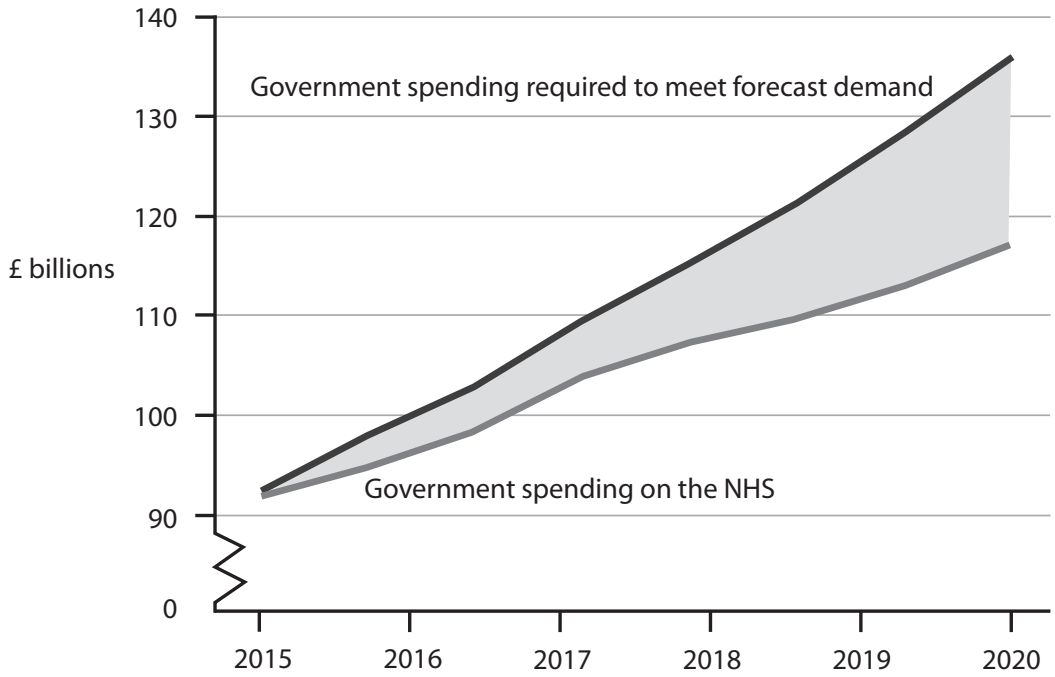
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

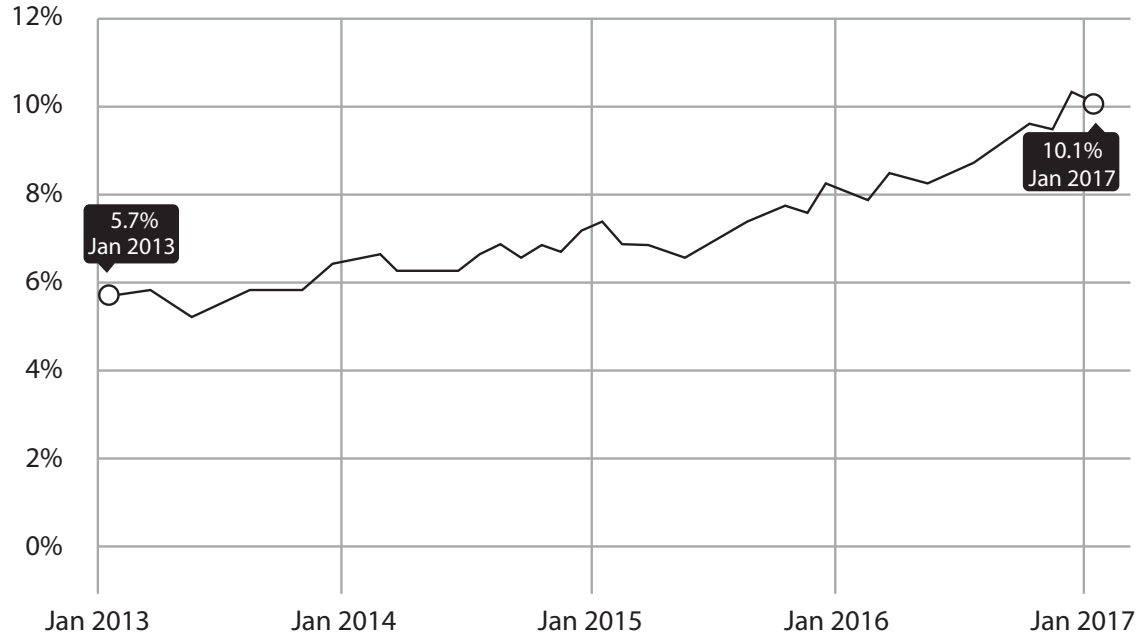
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

Q) 6 (g) Evaluate the possible disadvantages of a free market approach to providing health care.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SUB-TOPIC 1.4.1

GOVERNMENT INTERVENTION IN MARKETS

Sub-topic 1.4.1 · 48 questions · 413 marks · lowest tariff first

3 In 2015 the UK government cut subsidies for the installation of solar energy panels.

(a) Define the term 'subsidies'.

(1)

.....

.....

(Total for Question 3(a) = 1 mark)

3 In 2015 the UK government cut subsidies for the installation of solar energy panels.

(b) The most likely effect of cutting subsidies for the installation of solar panels is to:

(1)

- ☒ **A** increase producer surplus
- ☒ **B** decrease the provision of public goods
- ☒ **C** decrease consumer surplus
- ☒ **D** increase government expenditure

(Total for Question 3(b) = 1 mark)

4 In 2016 the average energy bill per household was £1 070 per year, excluding VAT, an indirect tax charged at 5%.

(Source: adapted from ©Crown Copyright https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits)

(a) The amount of VAT paid per year from energy bills by an average household in 2016 was:

(1)

- ☒ **A** £53.50
- ☒ **B** £214.00
- ☒ **C** £1 019.00
- ☒ **D** £1 123.50

(Total for Question 4(a) = 1 mark)

4 In 2016 the average energy bill per household was £1 070 per year, excluding VAT, an indirect tax charged at 5%.

(Source: adapted from ©Crown Copyright https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits)

(c) Define the term 'indirect tax'.

(1)

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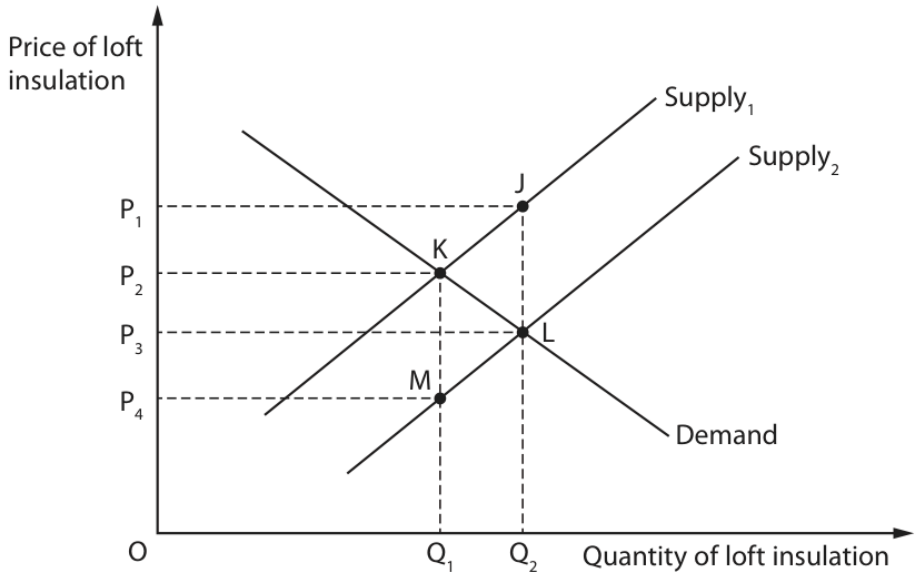
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(Total for Question 4(c) = 1 mark)

3 The 'Energy Company Obligation' is the government's term for its programme to make houses in the UK more energy efficient.

(a) In the diagram below, the government grants a subsidy to energy suppliers to install loft insulation. This shifts the market supply curve for loft insulation from $Supply_1$ to $Supply_2$.



The total amount spent by the government on subsidies is represented by the area:

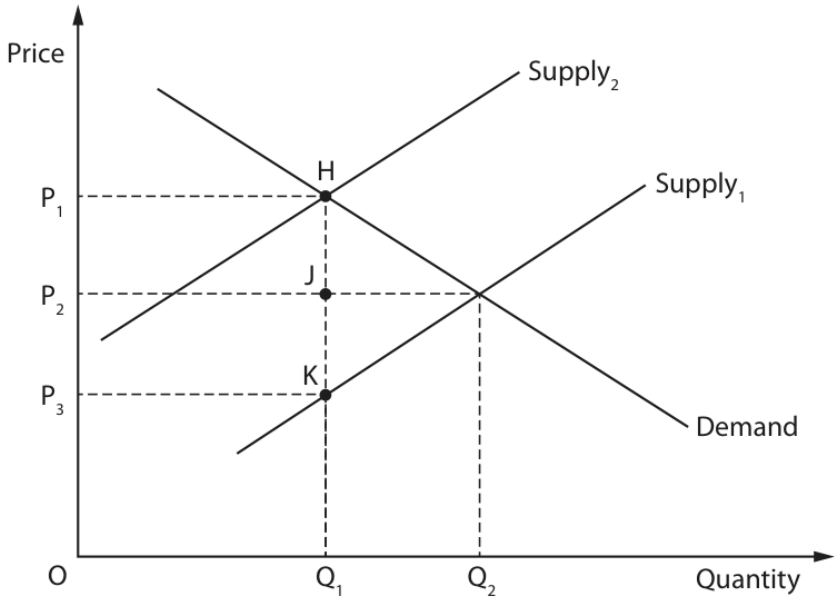
(1)

- ☒ **A** OP_1JQ_2
- ☒ **B** OP_3LQ_2
- ☒ **C** P_3P_1JL
- ☒ **D** P_4P_2KM

(Total for Question 3(a) = 1 mark)

4 The UK Government uses a range of indirect taxes to affect the market prices and quantities of many goods and services.

(a) In the diagram below, the government imposes a specific tax on a product. This shifts the supply curve from $Supply_1$ to $Supply_2$.



The government's tax revenue is shown by the area:

(1)

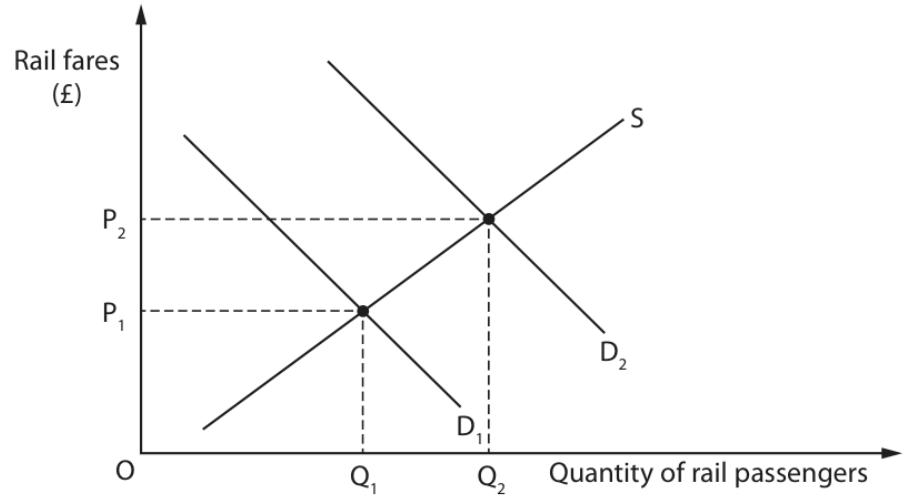
- ☒ **A** OP_1HQ_1
- ☒ **B** P_2P_1HJ
- ☒ **C** P_3P_1HK
- ☒ **D** P_3P_2JK

(Total for Question 4(a) = 1 mark)

5 HS2 is a high-speed rail network linking the north and south of England. HS2 will be four years late and cost double the Department for Transport's original estimate.

(Source: https://www.transportxtra.com/publications/local-transport-today/news/58459/hs2-will-be-four-years-late-and-cost-double-the-dft-s-estimate-mps-told)

(c) The diagram below shows the demand for and supply of passenger rail services.



The shift of the demand curve from D_1 to D_2 is most likely to result from a:

(1)

- ☒ **A** government decision to impose a tax on workplace parking
- ☒ **B** government decision to increase subsidies for rail travel
- ☒ **C** planned expansion of the government's railway track building programme
- ☒ **D** reduction in the tax imposed on a litre of petrol

(Total for Question 5(c) = 1 mark)

2 The Common Agricultural Policy (CAP) is a system of minimum prices and other programmes covering farming, environmental measures and rural development. The CAP applied to British farmers before the UK left the EU in January 2020.

(Source adapted from: https://www.gov.uk/government/collections/common-agricultural-policy-reform)

(a) Define the term 'minimum price'.

(1)

.....

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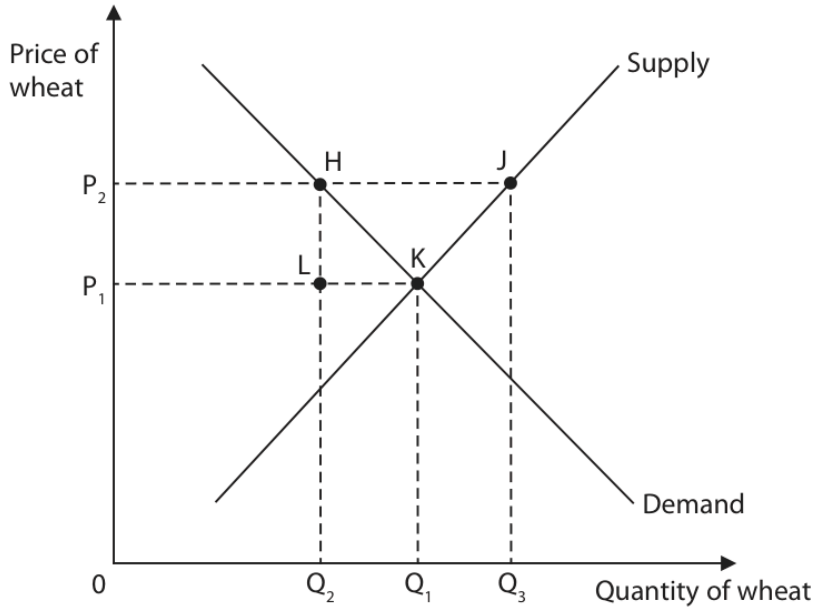
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(Total for Question 2(a) = 1 mark)

2 The Common Agricultural Policy (CAP) is a system of minimum prices and other programmes covering farming, environmental measures and rural development. The CAP applied to British farmers before the UK left the EU in January 2020.

(Source adapted from: https://www.gov.uk/government/collections/common-agricultural-policy-reform)

The diagram below shows the demand and supply curves for wheat in the European Union (EU).



The free market price of wheat is P_1. It had been agreed as part of the CAP to maintain a price of P_2 within the EU and to do so through intervention buying.

(b) In achieving a price of P_2, the amount spent on intervention buying by the EU would be

(1)

- ☒ **A** HKL
- ☒ **B** JHQ_2Q_3
- ☒ **C** LKJH
- ☒ **D** Q_1Q_2LK

(Total for Question 2(b) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 In 2021, energy regulator Ofgem announced that the maximum price of energy will rise from £1 277 to £1 971 a year, for the average household bill.

(Source: adapted from https://www.moneysavingexpert.com/utilities/what-is-the-energy-price-cap/)

(a) Which **one** of the following is the percentage increase in the maximum price to the average household bill?

(1)

- ☒ **A** 35%
- ☒ **B** 45%
- ☒ **C** 54%
- ☒ **D** 694%

(Total for Question 1(a) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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(Source: adapted from https://www.moneysavingexpert.com/utilities/what-is-the-energy-price-cap/)

(c) Define the term 'equilibrium price'.

(1)

.....

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.....

.....

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(Total for Question 1(c) = 1 mark)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Fuel duty is an excise tax imposed on the sale of petrol, included in the price paid by consumers, set at 58 pence per litre.

(Source: https://www.gov.uk/tax-on-shopping/fuel-duty)

(b) The indirect tax on fuel is increased in a market in which the price elasticity of demand is –0.1. Which **one** of the following is the most likely effect on consumer and producer surplus?

(1)

- ☒ **A** Consumer surplus and producer surplus both decrease
- ☒ **B** Consumer surplus and producer surplus both increase
- ☒ **C** Consumer surplus decreases and producer surplus increases
- ☒ **D** Consumer surplus increases and producer surplus decreases

(Total for Question 1(b) = 1 mark)

3 The EU tradable pollution permits scheme is expected to become more effective by 2020, due to recent reductions in the number of tradable pollution permits.

(Source adapted from: https://ec.europa.eu/clima/policies/ets_en)

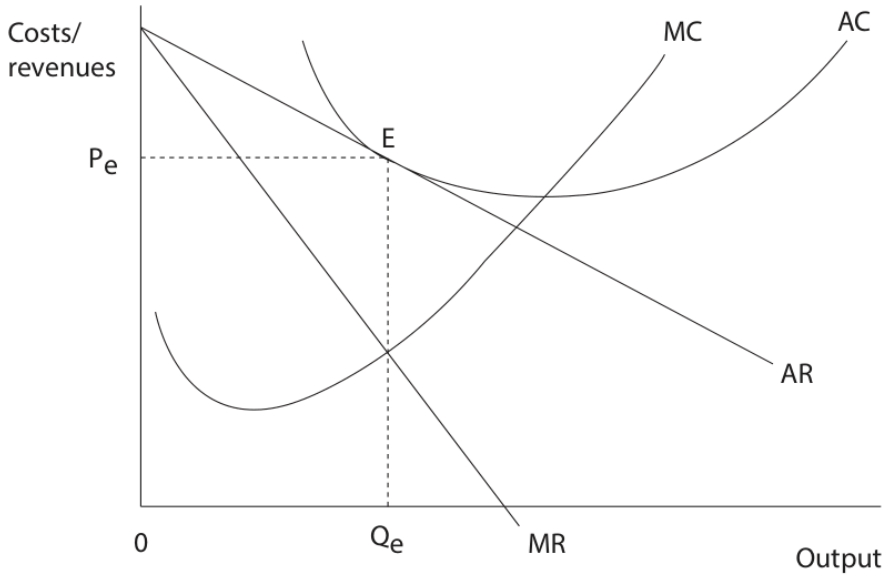
(b) Regulation of firms that pollute is likely to be a problem because it

(1)

- ☒ **A** allows firms to use price signals
- ☒ **B** creates unintended consequences
- ☒ **C** fills information gaps for businesses
- ☒ **D** means lower administrative costs

(Total for Question 3(b) = 1 mark)

3 The diagram below shows the equilibrium position of a dental practice operating in a monopolistically competitive industry.



(a) Which **one** of the following applies to the dental practice's equilibrium at point E?

The dental practice is:

(1)

- ☒ **A** in long-run equilibrium
- ☒ **B** making normal profit because average revenue is greater than average cost
- ☒ **C** making supernormal profit because marginal cost equals marginal revenue
- ☒ **D** productively efficient

(Total for Question 3(a) = 1 mark)

3 In 2015 the UK government cut subsidies for the installation of solar energy panels.

(a) Define the term 'subsidies'.

(1)

.....

.....

(b) The most likely effect of cutting subsidies for the installation of solar panels is to:

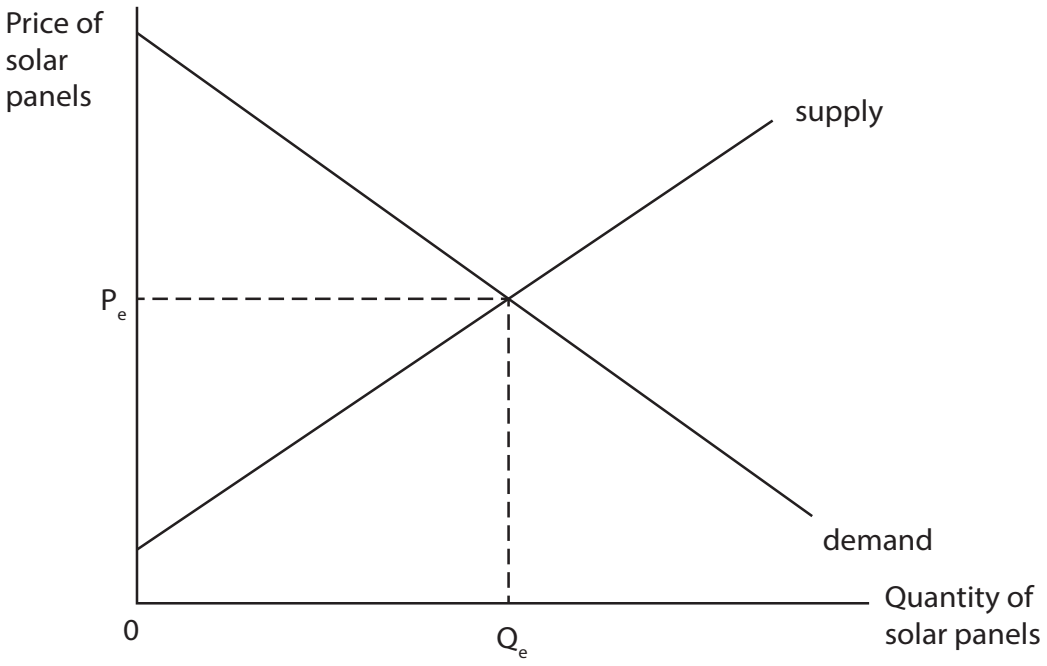
(1)

- ☒ **A** increase producer surplus
- ☒ **B** decrease the provision of public goods
- ☒ **C** decrease consumer surplus
- ☒ **D** increase government expenditure

(c) Annotate the diagram below to show the effect of removing the solar panel installation subsidy on the equilibrium price and quantity.

(2)

Solar panel installation market diagram



(Total for Question 3 = 4 marks)

4 In 2016 the average energy bill per household was £1 070 per year, excluding VAT, an indirect tax charged at 5%.

(Source: adapted from ©Crown Copyright https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits)

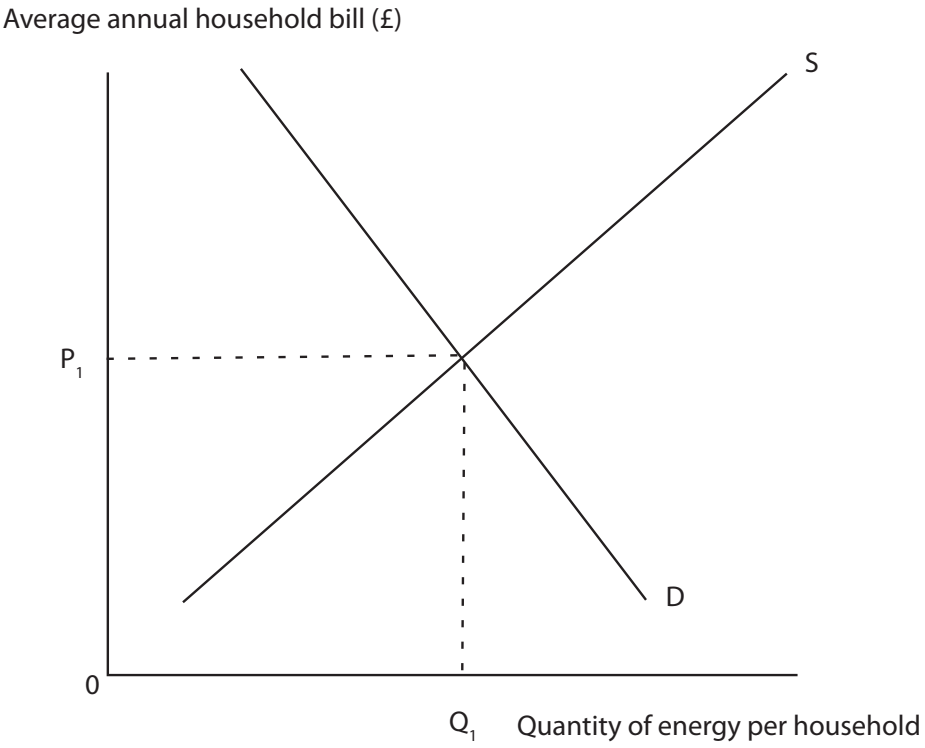
(a) The amount of VAT paid per year from energy bills by an average household in 2016 was:

(1)

- ☒ **A** £53.50
- ☒ **B** £214.00
- ☒ **C** £1 019.00
- ☒ **D** £1 123.50

(b) On the diagram below annotate the effect of a rise in VAT on the market for household energy use.

(2)



5 HS2 is a high-speed rail network linking the north and south of England. HS2 will be four years late and cost double the Department for Transport's original estimate.

(Source: https://www.transportxtra.com/publications/local-transport-today/news/58459/hs2-will-be-four-years-late-and-cost-double-the-dft-s-estimate-mps-told)

(b) Explain **one** likely microeconomic reason why the government is using taxpayers' money to fund HS2.

(2)

(Total for Question 5(b) = 2 marks)

2 The Common Agricultural Policy (CAP) is a system of minimum prices and other programmes covering farming, environmental measures and rural development. The CAP applied to British farmers before the UK left the EU in January 2020.

(Source adapted from: https://www.gov.uk/government/collections/common-agricultural-policy-reform)

(c) Explain **one** likely problem for the EU of maintaining prices at P_2.

(2)

(Total for Question 2(c) = 2 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 In 2021, energy regulator Ofgem announced that the maximum price of energy will rise from £1 277 to £1 971 a year, for the average household bill.

(Source: adapted from https://www.moneysavingexpert.com/utilities/what-is-the-energy-price-cap/)

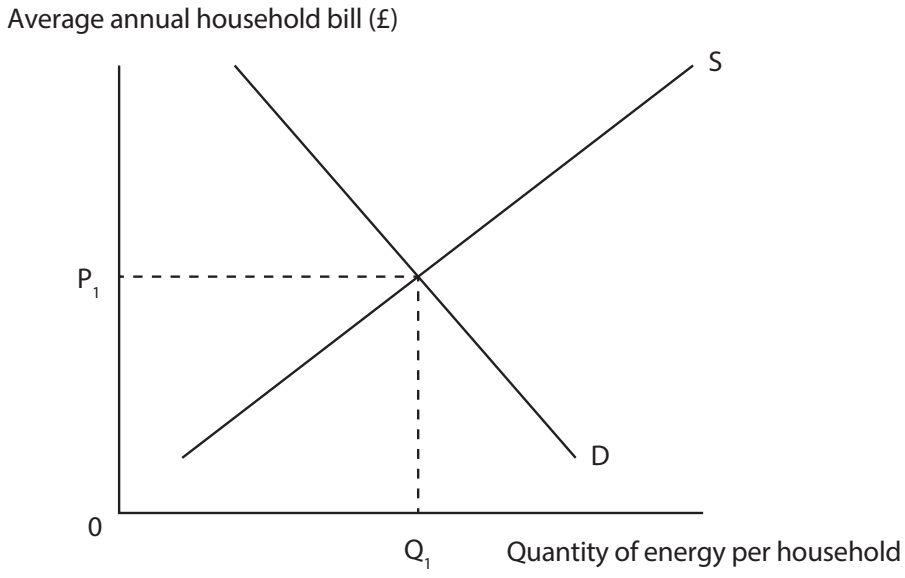
(a) Which **one** of the following is the percentage increase in the maximum price to the average household bill?

(1)

- ☐ **A** 35%
- ☐ **B** 45%
- ☐ **C** 54%
- ☐ **D** 694%

(b) Annotate the diagram below to show the original **and** new maximum price in this market.

(2)



3 The 'Energy Company Obligation' is the government's term for its programme to make houses in the UK more energy efficient.

(b) Explain an opportunity cost to the government of granting subsidies to energy suppliers to install loft insulation.

(3)

(Total for Question 3(b) = 3 marks)

4 The UK Government uses a range of indirect taxes to affect the market prices and quantities of many goods and services.

(b) Using an example, explain why the government imposes **specific** taxes on many goods and services.

(3)

(Total for Question 4(b) = 3 marks)

3 In 2015 the UK government cut subsidies for the installation of solar energy panels.

(a) Define the term 'subsidies'.

(1)

.....

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(b) The most likely effect of cutting subsidies for the installation of solar panels is to:

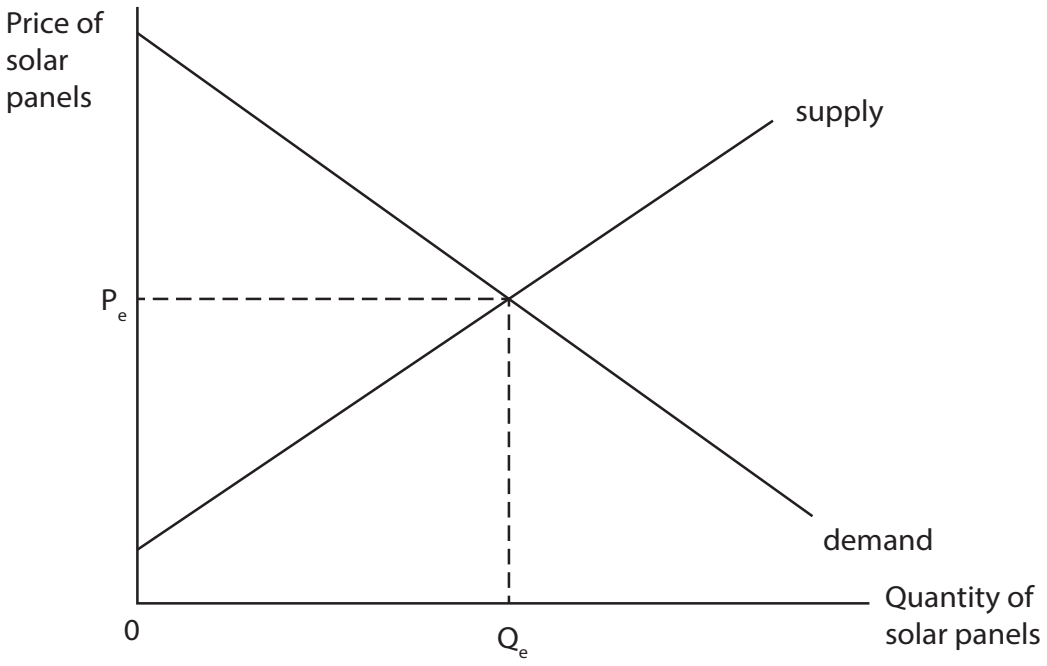
(1)

- ☒ **A** increase producer surplus
- ☒ **B** decrease the provision of public goods
- ☒ **C** decrease consumer surplus
- ☒ **D** increase government expenditure

(c) Annotate the diagram below to show the effect of removing the solar panel installation subsidy on the equilibrium price and quantity.

(2)

Solar panel installation market diagram



(Total for Question 3 = 4 marks)

4 In 2016 the average energy bill per household was £1 070 per year, excluding VAT, an indirect tax charged at 5%.

(Source: adapted from ©Crown Copyright https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits)

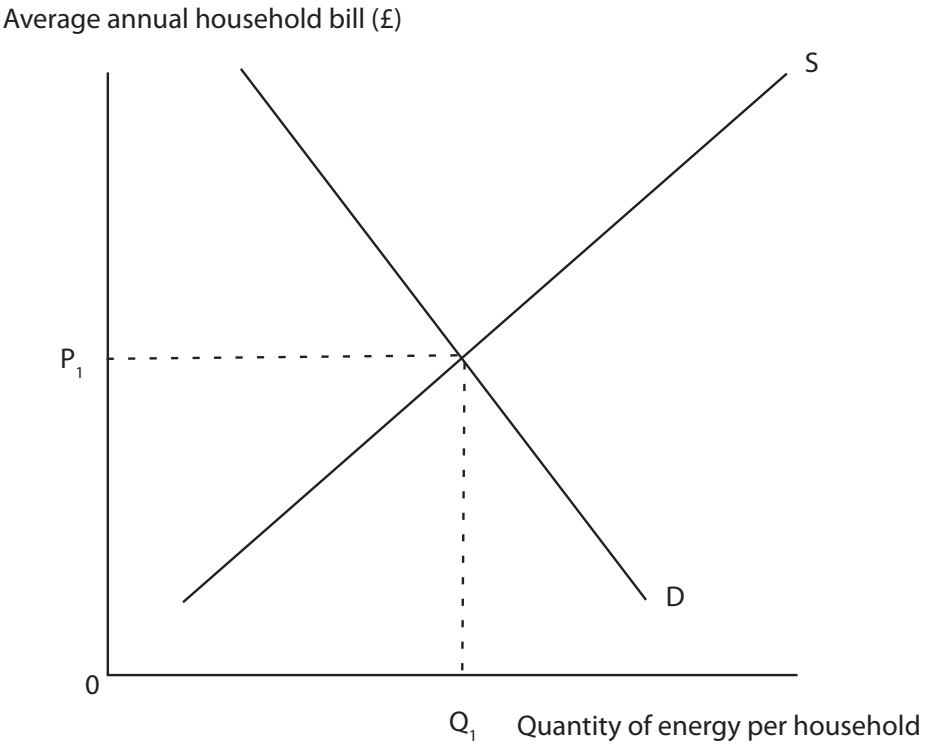
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(1)

- ☒ **A** £53.50
- ☒ **B** £214.00
- ☒ **C** £1 019.00
- ☒ **D** £1 123.50

(b) On the diagram below annotate the effect of a rise in VAT on the market for household energy use.

(2)



(c) Define the term 'indirect tax'.

(1)

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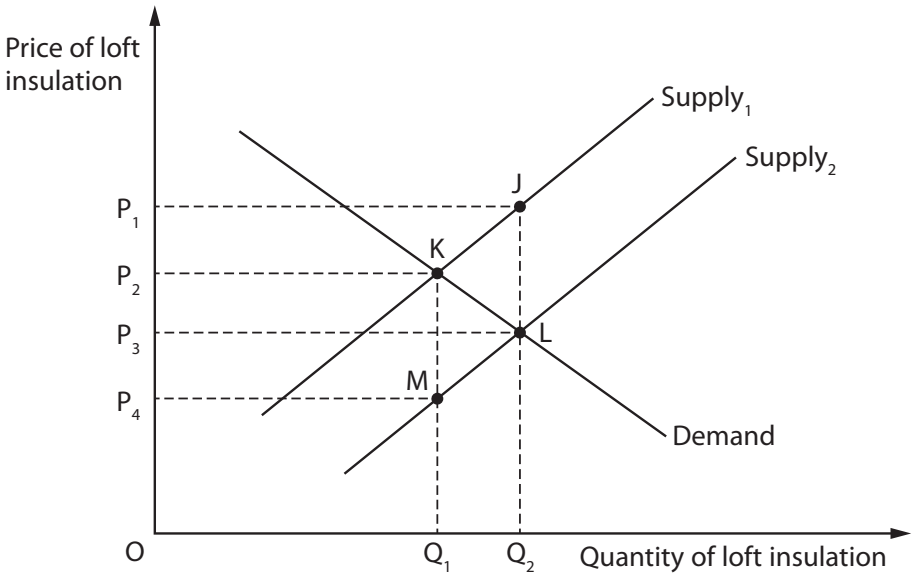
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(Total for Question 4 = 4 marks)

3 The 'Energy Company Obligation' is the government's term for its programme to make houses in the UK more energy efficient.

(a) In the diagram below, the government grants a subsidy to energy suppliers to install loft insulation. This shifts the market supply curve for loft insulation from $Supply_1$ to $Supply_2$.



The total amount spent by the government on subsidies is represented by the area:

(1)

- ☒ **A** OP_1JQ_2
- ☒ **B** OP_3LQ_2
- ☒ **C** P_3P_1JL
- ☒ **D** P_4P_2KM

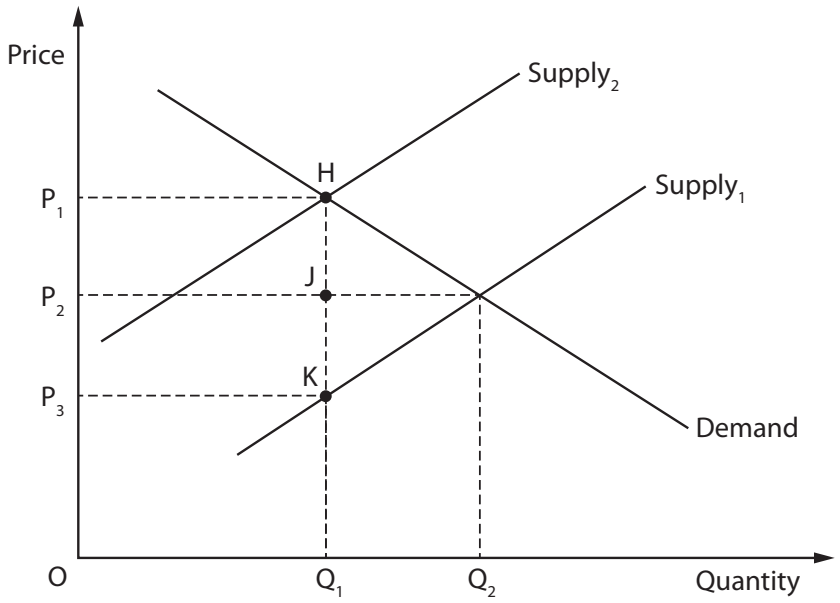
(b) Explain an opportunity cost to the government of granting subsidies to energy suppliers to install loft insulation.

(3)

(Total for Question 3 = 4 marks)

4 The UK Government uses a range of indirect taxes to affect the market prices and quantities of many goods and services.

(a) In the diagram below, the government imposes a specific tax on a product. This shifts the supply curve from $Supply_1$ to $Supply_2$.



The government's tax revenue is shown by the area:

(1)

- ☒ **A** OP_1HQ_1
- ☒ **B** P_2P_1HJ
- ☒ **C** P_3P_1HK
- ☒ **D** P_3P_2JK

(b) Using an example, explain why the government imposes **specific** taxes on many goods and services.

(3)

(Total for Question 4 = 4 marks)

2 The Common Agricultural Policy (CAP) is a system of minimum prices and other programmes covering farming, environmental measures and rural development. The CAP applied to British farmers before the UK left the EU in January 2020.

(Source adapted from: https://www.gov.uk/government/collections/common-agricultural-policy-reform)

(a) Define the term 'minimum price'.

(1)

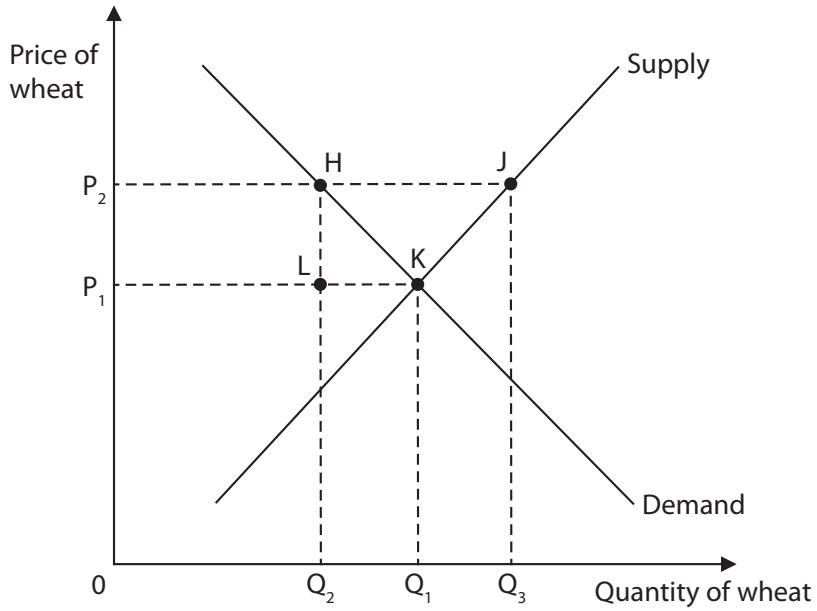
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The diagram below shows the demand and supply curves for wheat in the European Union (EU).



The free market price of wheat is P_1. It had been agreed as part of the CAP to maintain a price of P_2 within the EU and to do so through intervention buying.

(b) In achieving a price of P_2, the amount spent on intervention buying by the EU would be

(1)

☒ **A** HKL

☒ **B** JHQ_2Q_3

☒ **C** LKJH

☒ **D** Q_1Q_2LK

(c) Explain **one** likely problem for the EU of maintaining prices at P_2.

(2)

(Total for Question 2 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 25 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 In 2021, energy regulator Ofgem announced that the maximum price of energy will rise from £1 277 to £1 971 a year, for the average household bill.

(Source: adapted from https://www.moneysavingexpert.com/utilities/what-is-the-energy-price-cap/)

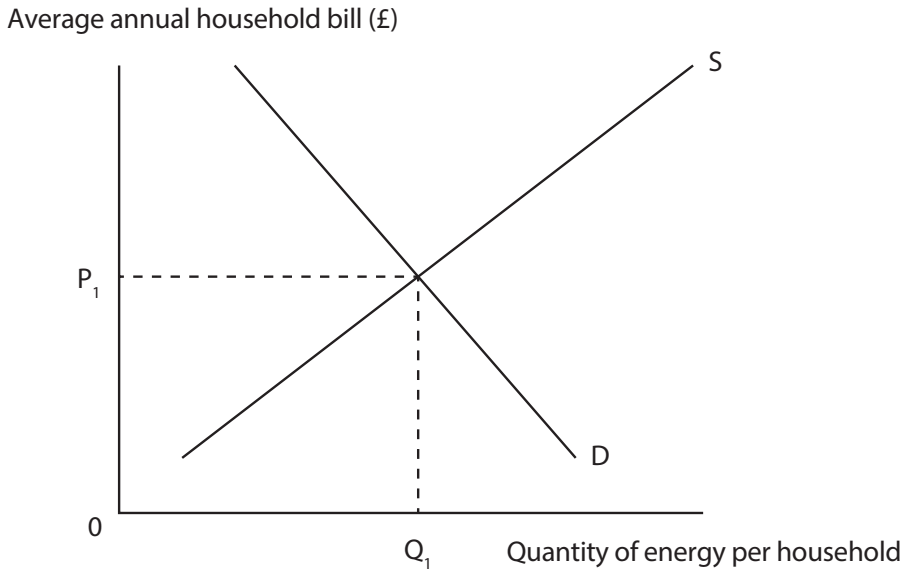
(a) Which **one** of the following is the percentage increase in the maximum price to the average household bill?

(1)

- ☐ **A** 35%
- ☐ **B** 45%
- ☐ **C** 54%
- ☐ **D** 694%

(b) Annotate the diagram below to show the original **and** new maximum price in this market.

(2)



(c) Define the term 'equilibrium price'.

(1)

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(Total for Question 1 = 4 marks)

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

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You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Fuel duty is an excise tax imposed on the sale of petrol, included in the price paid by consumers, set at 58 pence per litre.

(Source: https://www.gov.uk/tax-on-shopping/fuel-duty)

(a) Draw a supply and demand diagram to show the incidence of a specific petrol tax on consumers and producers.

(4)



(b) The indirect tax on fuel is increased in a market in which the price elasticity of demand is –0.1. Which **one** of the following is the most likely effect on consumer and producer surplus?

(1)

- ☐ **A** Consumer surplus and producer surplus both decrease
- ☐ **B** Consumer surplus and producer surplus both increase
- ☐ **C** Consumer surplus decreases and producer surplus increases
- ☐ **D** Consumer surplus increases and producer surplus decreases

(Total for Question 1 = 5 marks)

3 The EU tradable pollution permits scheme is expected to become more effective by 2020, due to recent reductions in the number of tradable pollution permits.

(Source adapted from: https://ec.europa.eu/clima/policies/ets_en)

(a) Explain **one** likely effect of reducing the number of tradable pollution permits.

(4)

(b) Regulation of firms that pollute is likely to be a problem because it

(1)

- ☒ **A** allows firms to use price signals
- ☒ **B** creates unintended consequences
- ☒ **C** fills information gaps for businesses
- ☒ **D** means lower administrative costs

(Total for Question 3 = 5 marks)

4 In 2022 the government announced that the maximum undergraduate tuition fee for universities in England will remain at £9 250 per year for the next two years.

(Source adapted from: https://questions-statements.parliament.uk/written-statements/detail/2021-10-21/HCWS339)

(a) Explain **one** likely reason for the maximum price for an undergraduate university programme.

(4)

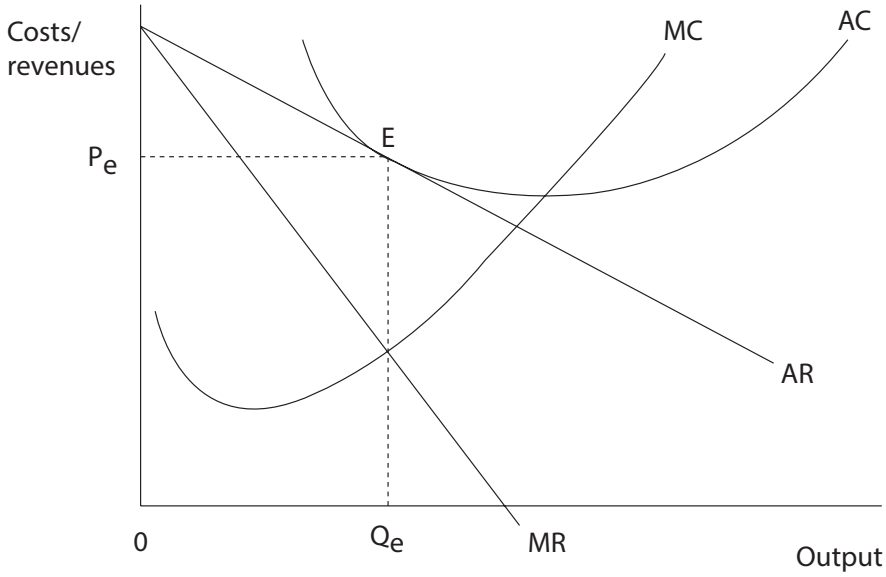
(b) Which **one** of the following is an example of government failure associated with the maximum price?

(1)

- ☒ **A** Contraction in demand
- ☒ **B** Distortion of price signals
- ☒ **C** Excess supply
- ☒ **D** Extension in supply

(Total for Question 4 = 5 marks)

3 The diagram below shows the equilibrium position of a dental practice operating in a monopolistically competitive industry.



(a) Which **one** of the following applies to the dental practice's equilibrium at point E?

The dental practice is:

(1)

- ☒ **A** in long-run equilibrium
- ☒ **B** making normal profit because average revenue is greater than average cost
- ☒ **C** making supernormal profit because marginal cost equals marginal revenue
- ☒ **D** productively efficient

(b) The government subsidises dental care in the UK through the National Health Service (NHS). There has been a large decrease in the work carried out by NHS dentists. Up to 90% of practices are not accepting new NHS patients.

(Source: adapted from https://www.theguardian.com/society/2023/jul/14/mps-demand-urgent-reform-nhs-dental-services-report)

Draw an externalities diagram to identify the welfare gain area from the consumption of dental care in the UK.

(4)

(Total for Question 3 = 5 marks)

Sources for use with SECTION B

Read Figure 3 and the following Extracts (E to G) before answering Question 2.

The economy of India

Figure 3: Selected economic data for India, 2006–2021

Year	GDP per capita (US$)	Human Development Index (HDI) value	% people living in absolute poverty
2006	820.0	0.611	55.1
2016	1 714.3	0.624	27.7
2021	2 238.1	0.633	16.4

(Source adapted from: https://www.statista.com/statistics/1272613/india-multidimensional-poverty-index/; https://data.worldbank.org/indicator/; UN Human Development Reports)

Extract E

135 million Indians escape absolute poverty in recent years

Absolute poverty in India, measured by the number of people living on under US$2.15 a day, has fallen dramatically over the last 15 years. The government's dedicated focus on improving access to sanitation, nutrition, cooking oil, banking services, drinking water and electricity has led to significant advances in these areas. The $2.3 million provision of subsidised cooking oil has positively transformed lives, with a 14.6 percentage points improvement in the access to cooking oil. 5

(Source adapted from: https://pib.gov.in/)

Extract F

Buffer stocks in India

The Indian government is required to maintain a buffer stock of 11 million tonnes of wheat and 10 million tonnes of rice. The grains are purchased from farmers at the minimum support price and stored in secure warehouses across the country. India, once troubled by famine, has more recently managed to remain self-sufficient in most food categories except edible oils, and is the world's largest rice exporter. Even during the global health crisis 2020-2022, when the government distributed free food to nearly 800 million people, buffer stocks ran down but not out. Farmers are encouraged to produce more without any consideration of sustainability.

(Source adapted from: https://ig.ft.com/india-population/)

Extract G

Population growth in India

"The greatest obstacle in the path of overall economic development is the alarming rate of population growth," was one Indian government minister's view in 1967. In the 1970s, the Indian government took radical measures to try to prevent population growth, with little success.

Then, in the 1980s and 1990s, India began opening up its economy to the private sector. Policymakers began viewing a growing young population in the form of the so-called demographic dividend – when a majority of a country's population is of working age (15-64 years) – as an engine for further economic development. In May 2023 India took over from China as the country with the highest population reaching 1.4 billion. However, it needs enough well-paying jobs designed to serve the modern, urban economy.

(Source adapted from: https://www.aljazeera.com/features/2023/4/18/overtaking-chinas-population-will-india-gain-or-lose)

2 (a) Using a demand and supply diagram, explain the cost of a subsidy on the market for cooking oil to the Indian government (Extract E, line 6).

(5)

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

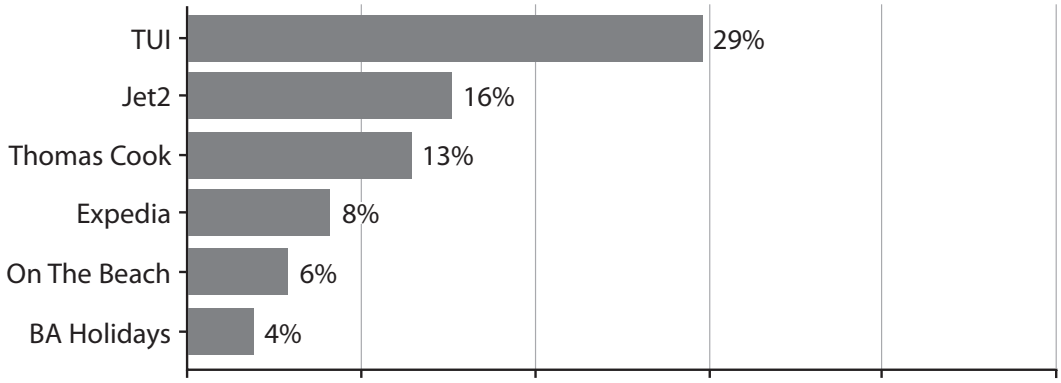
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The travel and tourism industry

Figure 1: Package holiday market share of the six largest providers, booked by UK residents, 2019



(Source adapted from: https://knowledge.sharescope.co.uk/2019/10/16/finding-companies-that-control-their-own-destinies/The Times/ATOL)

Figure 2: Jet2 package holiday prices to Sorrento

Price before Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,576** Per person price **£788**

Price 12 hours after Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,648** Per person price **£824**

Data accessed: 22nd and 23rd September 2019

Extract A

Marginal productivity of cabin crew

Cabin crew are responsible for loading passengers and providing in-flight meals. United Airlines is planning to reduce the number of its cabin crew members onboard international flights. The airline currently operates its planes with one more cabin crew member than its competitors. The marginal productivity of this additional crew member may be low. By reducing the number of its cabin crew members United Airlines will be able to operate more efficiently and compete more effectively.

(Source adapted from: https://simpleflying.com/united-airlines-to-reduce-number-of-crew-on-international-flights/)

Extract B

Thomas Cook's environmental impact

Thomas Cook Group plc's operations included its airline and 560 high street travel agents providing flights, hotels and package holidays.

The environmental impact of the travel industry is significant. It accounts for 8% of all global carbon emissions. Thomas Cook recognised the risks presented by climate change and actively engaged in reducing their airline emissions. Its plans included using more efficient aircraft and using lower-carbon fuel. In 2018, Thomas Cook was included in the top 10 of the world's most fuel-efficient airlines.

(Source adapted from: https://www.thomascookgroup.com/investors/insight_external_assest/Thomas+Cook+Sustainability+Report+2018.pdf)

Extract C

Why did Thomas Cook shut down?

Thomas Cook Group plc ceased trading on 23 September 2019. The collapse of Thomas Cook left 600 000 travellers stranded overseas and approximately 21 000 worldwide employees were left without a job.

Thomas Cook's management said that the failure of rescue talks between banks, shareholders and the UK Government meant it had no choice but to shut down the business.

But in truth the tour operator's problems go back much further. A disastrous merger in 2007, increased debts, the internet revolution in holiday booking and Brexit uncertainty all contributed to the failure of the business.

In 2007 it merged with MyTravel. Thomas Cook directors had an objective of rapid company growth over short-term profitability. The merger was supposed to create a European giant, promising £75 million-a-year cost savings and a springboard to challenge emerging internet rivals. In reality, Thomas Cook was merging with a company that had only made a profit once in the previous six years, and the deal left the Group with huge debts. In May 2019, the firm reported a £1.5 billion loss.

The role of the management in Thomas Cook's collapse is being investigated by the UK Government. Thomas Cook executives' salaries and bonuses have been questioned. Directors received salaries totalling £20 million in the five years before its collapse. The Chief Executive Officer (CEO) earned a £500 000 cash bonus in 2017 and about £8.5 million in his five years with the company. It seems that around £4 million of this was in the form of shares. The share price reached £1.46 in 2018, but each share is now worthless.

The CEO said that the directors had worked "exhaustively" to rescue Thomas Cook and create a long-term turnaround strategy. "It is a matter of profound regret to me and the rest of the board that we were not successful."

The UK prime minister admitted that the government refused to grant £150 million as a subsidy to help rescue Thomas Cook in the short run. The UK prime minister stated: "Clearly, that is a lot of taxpayers' money and sets up, as people will appreciate, a moral hazard in the case of future such commercial difficulties that companies face. I have questions about whether it's right that the directors, or whoever, the board, should pay themselves large sums when businesses can go down the tubes like that. One is driven to reflect on whether the directors of these companies are properly incentivised to sort such matters out".

(Source adapted from: https://www.theguardian.com/business/2019/sep/23/thomas-cook-as-the-world-turned-the-sun-ceased-to-shine-on-venerable-tour-operator

and https://www.ft.com/content/a7dd2554-de23-11e9-b112-9624ec9edc59)

(d) With reference to Extract C, discuss the proposed government subsidy to prevent Thomas Cook from reaching its shut-down point.

(12)

Sources for use with SECTION B

Read Figure 3 and the following Extracts (E to G) before answering Question 2.

The economy of India

Figure 3: Selected economic data for India, 2006–2021

Year	GDP per capita (US$)	Human Development Index (HDI) value	% people living in absolute poverty
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Extract E

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(Source adapted from: https://pib.gov.in/)

Extract F

Buffer stocks in India

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(Source adapted from: https://ig.ft.com/india-population/)

Extract G

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Then, in the 1980s and 1990s, India began opening up its economy to the private sector. Policymakers began viewing a growing young population in the form of the so-called demographic dividend – when a majority of a country's population is of working age (15-64 years) – as an engine for further economic development. In May 2023 India took over from China as the country with the highest population reaching 1.4 billion. However, it needs enough well-paying jobs designed to serve the modern, urban economy.

(Source adapted from: https://www.aljazeera.com/features/2023/4/18/overtaking-chinas-population-will-india-gain-or-lose)

(c) With reference to Extract F, discuss the problems that might be involved with the buffer stock system in India.

(12)

SECTION B

Read Figure 1 and the following extracts (A to C) before answering Question 6.

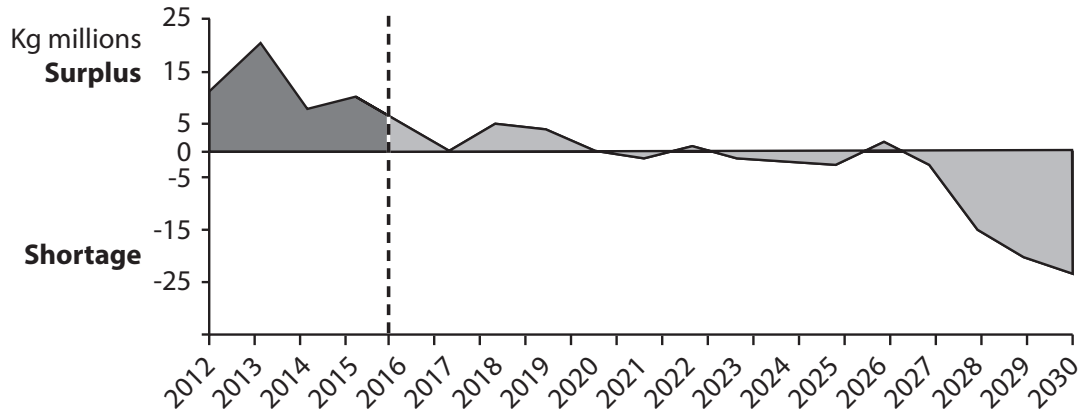
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

(Source: adapted from www.sternreview.org.uk/)

Q) 6 (g) Evaluate ways in which government intervention could be used to reduce carbon emissions. Use at least one appropriate diagram in your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figure 1 and 2 and the following extracts (A to C) before answering Question 6.

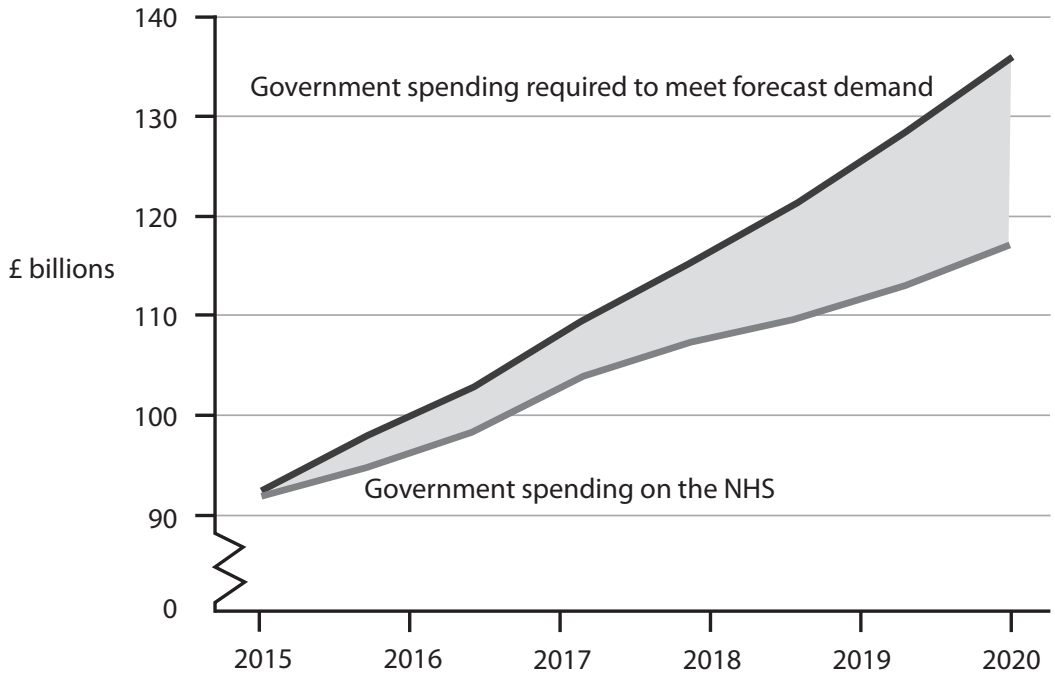
Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

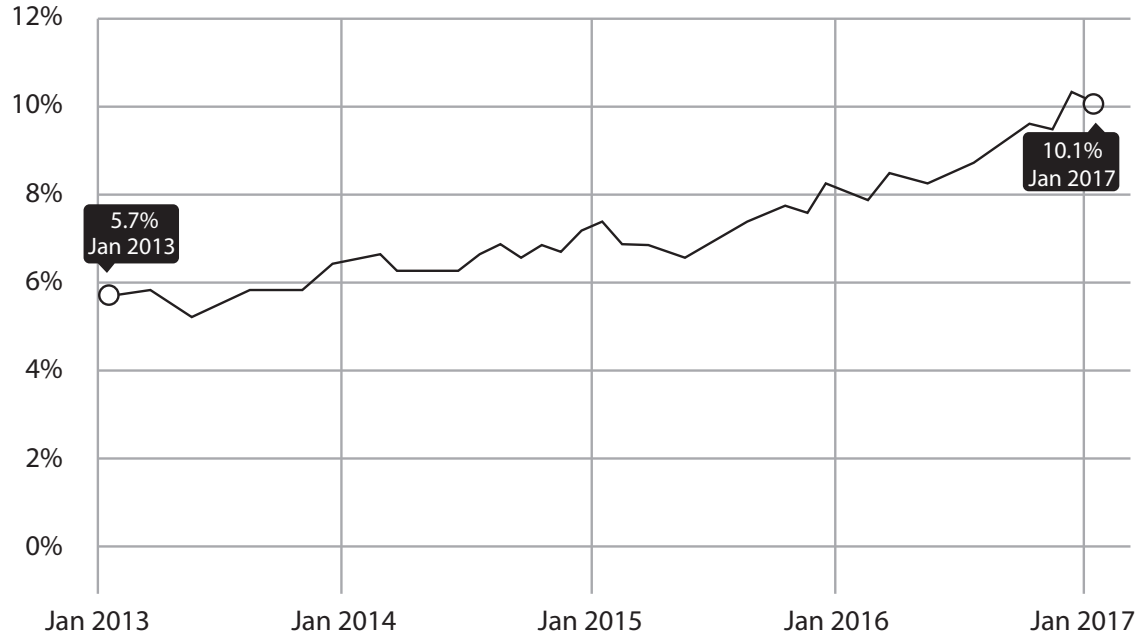
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2 300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)

Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

Q) 6 (f) Evaluate possible ways the government could intervene to reduce the excess demand for state-funded health care.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Extracts A and B and Figure 1 before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for fish

Extract A

Total allowable catches of North Sea cod halved in response to falling stocks

In 2020, new lower limits on the quantity of cod that can be caught by the UK fishing fleet came into force. These limits on the fish catch, called total allowable catches (TACs), were agreed at the annual EU fisheries negotiations.

It was the last December EU meeting attended by the UK before it left the EU. It was agreed that cod catch limits will be cut by 50% in the North Sea, while reduced limits were agreed for cod in the Celtic Sea, Irish Sea and west of Scotland.

However, there were increases for other types of fish, with TACs for haddock in the North Sea rising by 23% and for sole rising by 19%.

UK Fisheries Minister George Eustice said: "This year there has been mounting scientific evidence suggesting that cod is being overfished in many parts of the northeast Atlantic and we have responded to conserve stocks".

These new regulations applied to the UK while it remained part of the Common Fisheries Policy. In the future it will become an independent coastal state and negotiate on fisheries with the EU and other coastal states such as Norway.

(Source adapted from: https://www.independent.co.uk/news/business/news/north-sea-cod-stocks-quota-climate-change-brexit-a9252196.html)

Figure 1

Atlantic over-fishing: share of total allowable catch (TAC) in excess of scientific advice (2019)

Country	**Excess TAC** (%)	**Excess TAC** (tonnes)
Sweden	52.4	17 369
United Kingdom	24.3	106 925
Ireland	21.7	34 052
Denmark	19.7	49 914
Germany	18.0	20 620
The Netherlands	13.5	31 910
Belgium	10.4	3 009
France	9.4	27 230
Spain	6.6	16 689
Portugal	3.8	3 662

(Source adapted from: Statista 2018)

Extract B

The tragedy of the commons

The 'tragedy of the commons' may occur when there are common access resources (CARs). These are natural resources over which no private ownership has been established. Therefore, there are difficulties in excluding people from using or exploiting them. CARs include fisheries and common grazing lands. Oceans are so vast that it is impractical for one fishing company to establish ownership and control. This means that others cannot be prevented from exploiting the ocean. Economists have suggested that with the lack of ownership of these resources, private producers will act in their own self-interest and exploit CARs to maximise profit. This exploitation is unsustainable. In other words, CARs provide an opportunity for individuals to create profit, while creating negative externalities which impact on everybody else. This process is referred to as the 'tragedy of the commons'.

The 'tragedy of the commons' is at the core of a range of problems that are relevant and threatening to natural resources, environments and human health. In the case of overfishing, fishing companies are not made accountable for the state of the ocean. They continue to fish as much as possible to maximise profit. Today, 90% of fish stocks are depleted.

The reason for such a wide range of problems is because there is an environmental cost for everything. The 'tragedy of the commons' is the outcome of the fact that every resource is limited on this planet, coupled with the rising level of demand for these resources. These issues are large-scale and require laws, regulation and international cooperation.

(Source adapted from: http://felixonline.co.uk/articles/2019-12-09-tragedy-commons-drama-planet-not-enjoying/)

Q) 6 (g) Other than using a TAC, evaluate the policy options which could be used to reduce market failure resulting from over-fishing. Use at least one appropriate diagram in your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

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Question 6

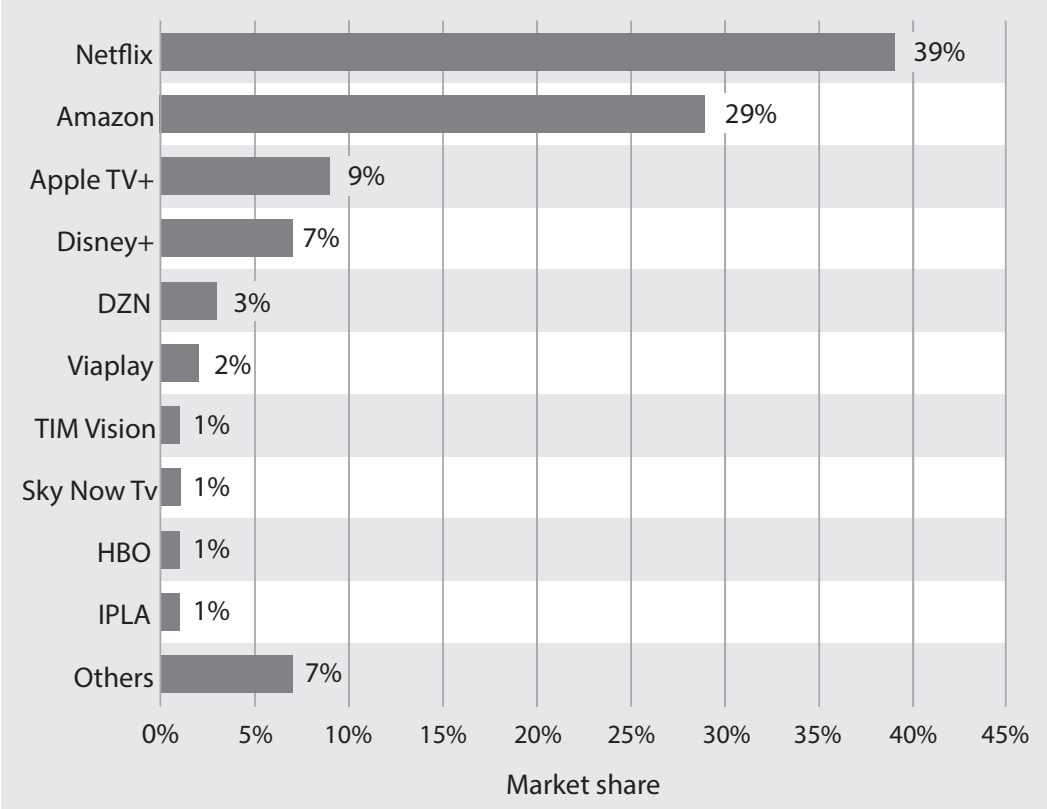
The market for television content

Figure 1: Elasticities of demand for streamed television services, UK, 2021

Price elasticity of demand	–0.6
Income elasticity of demand	1.6

(Source: adapted from https://www.consultancy.uk/news/24986/covid-19-presents-netflix-with-chance-to-hike-prices)

Figure 2: Market shares of streamed content providers, Europe, 2021



(Source: adapted from Statista 2021)

Extract A

The growth of streamed television content

Netflix currently has 13 million UK subscribers, who typically pay £9.99 a month to the US based private sector firm. At this price, up to two users can view the television content at the same time. The demand for individual firms' streamed television content boomed when people were forced to stay at home and has only begun to slow recently as more firms enter the market e.g. Amazon Prime Video.

The launch of Disney+ at the end of 2019, including original content such as the £74 million *Star Wars* TV spin-off *The Mandalorian*, resulted in the service adding more UK subscribers in a year in 2020 than any other streaming platform has ever managed.

However, the costs of providing streaming television content have risen. Consumers now expect original content, for example *Stranger Things* which costs around £10 million an episode to make. Furthermore, advertising in a saturated market is expensive.

In 2021, Netflix put up the price of its most-popular package by £1 a month to £9.99. Fortunately for Netflix, its subscriber demand has proven price inelastic. Just 3% of customers in a survey said they would definitely cancel their subscription after Netflix's latest price rise.

(Source: adapted from 'As UK hits peak, Netflix the streaming giant will have to work harder', The Guardian, Monday 3 January 2022)

Extract B

Is television content a public good?

Public service broadcasting in the UK is made up of a number of parts. First, there are the main UK-wide public service broadcasters (PSBs). There is the publicly funded BBC, and the publicly owned Channel 4 which is funded through advertisements.

The BBC was established in 1922 by a Royal Charter. It is mainly funded through the TV licence fee, which costs £159 a year and is a compulsory charge for those who watch live TV on any device. Live TV and catch-up services are free to view and do not restrict household usage. Without the licence fee very few people would pay due to the free rider problem.

The BBC's Charter sets out its five public purposes:

- To provide impartial news and information
- To support learning for people of all ages
- To show the most creative, highest quality and distinctive televised content
- To provide content for minority groups which would not be profitable for a private firm
- To reflect the UK, its culture and values to the world.

(Source: adapted from https://publications.parliament.uk/pa/cm5801/cmselect/cmcumeds/156/15604, and 'BBC licence fee to be abolished in 2027 and funding frozen', The Guardian, Sunday 16 January 2022)

Extract C

The environmental impact of streaming television content

The carbon footprint produced by watching a month of Netflix programmes is equivalent to driving a car to Saturn. Every activity in the chain required to stream video, from the use of huge datacentres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting CO^2. Modern flatscreen televisions use significant amounts of energy.

There's very little a government can do about this in a free market dominated by US firms. The focus of any government intervention could be to encourage alternative forms of entertainment and recreation, support the development of more energy efficient devices, to improve information on the environmental effects or to use regulation to limit viewing hours.

(Source: adapted from 'Streaming's dirty secret: how viewing Netflix top 10 creates vast quantity of CO2', The Guardian, Friday 29 October 2021)

Q) 6 (f) Evaluate possible methods of government intervention to reduce the environmental damage caused by the consumption of television content.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

Q) 6 (f) Evaluate the likely impact of a tax on plastic food-packaging. Use a diagram to support your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

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(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

Q) 6 (g) Evaluate methods of government intervention which could be used to reduce the market failure associated with plastic waste. Use a diagram to support your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

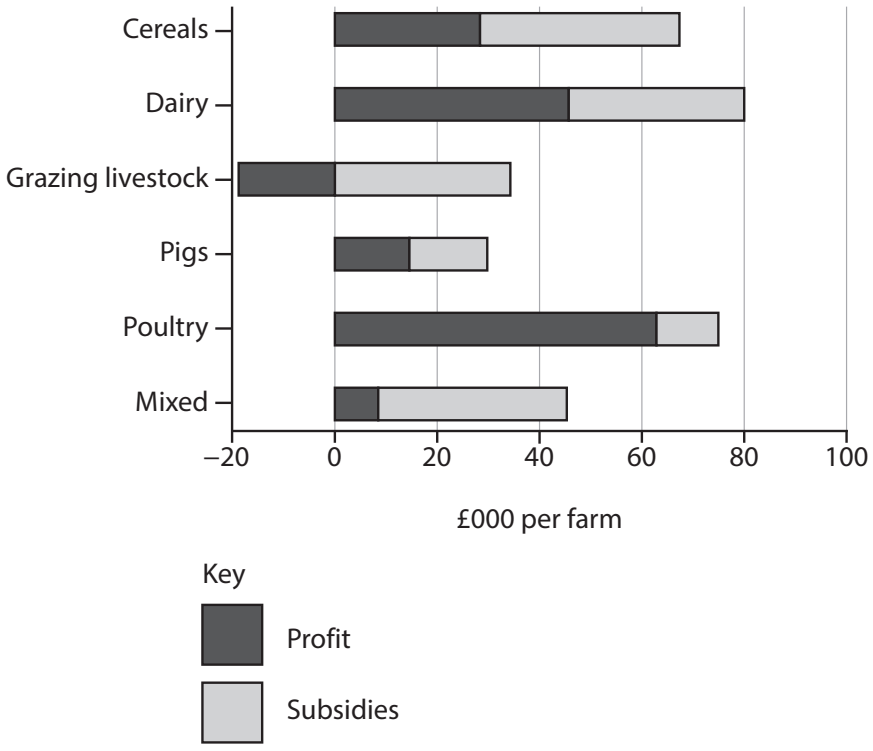
Sources for use with SECTION B

Read the following figures (1 and 2) and extracts (A and B) before answering Question 6.

The market for meat and the growth of vegetarianism

Figure 1

The impact of subsidies on farmer income, in England, 2018–2019 (£000 per farm)



(Source: adapted from www.FT.com)

Figure 2

Potential impact of indirect tax rises on meat prices per kg, 2023–2030

Type of Meat	Before indirect tax increases	After indirect tax increases
Beef/Veal	£24.24	£29.50
Chicken	£7.60	£8.63

(Source: adapted from Tax beef, pork and chicken to help climate and health, EU urged – CGTN)

Extract A

The case for cutting out meat

Around a third of Britons are reducing the amount of meat they eat or are cutting it out altogether. Are these consumers right to be cutting out meat? For a start, there are the greenhouse gases released as a result of producing food. The evidence is clear that switching to a plant-based diet would lower emissions. A UK study found that eating a diet high in meat costs 7.2 kg carbon dioxide emissions per day, compared with 3.8 kg for vegetarians. It would also free up land for other uses. Nearly 80% of the world's farmland is dedicated to rearing animals; a plant-based diet would cut the use of land for agriculture by 76%. The land currently used by grazing livestock could be used for "rewilding", allowing the environment and animal species destroyed by meat farming to recover.

Our health and wealth would be better too. A study published in 2016 modelled what would happen to our health and the global economy if we all switched to vegetarian diets. The economic benefits of switching to plant-based diets could be as much as £700 billion to £1 trillion per year in terms of savings on healthcare costs and lost working days due to ill health.

Some economists recommend an increased indirect tax on animal products so that their prices reflect the cost of externalities.

This could impact on European farmers, if adopted by the European Union. The tax could bring £35 billion to the EU, with around £15 billion of that going directly to farmers. The rest would be used to bring down VAT on fruit and vegetables, and fund other policies to encourage healthy-eating diets both in and outside the EU.

(Source: adapted from https://moneyweek.com/499842/the-economic-consequences-of-veganism December-28-2018)

Extract B

Businesses benefitting from meat-substitute products

There is one group for whom the trend towards meat-substitute products is definitely a good thing: processed food manufacturers and retailers.

Finest British beef burgers are priced at £6.61 per kg. The 'fake burger' (which is made mostly of pea protein) is priced at £21.81 per kg even though the ingredients used to make them, such as mushrooms, peas and palm oil, are cheaper ingredients than meat. Despite high prices, demand continues to rise for these products. This might benefit shareholders, but is it doing any real good for the rest of us?

A large food producer bought meat-substitute product maker Vegetarian Butcher in December 2018 and is moving towards a range with more meat-substitute products. In 2017, Nestlé bought Sweet Earth, a California-based maker of vegetarian foods, and it is launching its own meat-substitute 'Incredible Burger'. It expects its meat-substitute revenues to reach $1 billion by 2029.

As subsidies are being cut in every area of farming, consumers ought to be willing to pay higher prices for all food products. If farmers are to stay in business, they need to find additional sources of revenue such as oyster mushrooms, goji berries and basil.

(Source: adapted from http://www.financialtimes.com/the-veganism-boom-does-more-for-food-company-profits-than-the-planet February-22-2019)

Q) 6 (f) Evaluate the likely microeconomic effects of a reduction in subsidies to farmers of animal products (Figure 1 and Extract B, line 14). Use a relevant diagram to support your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

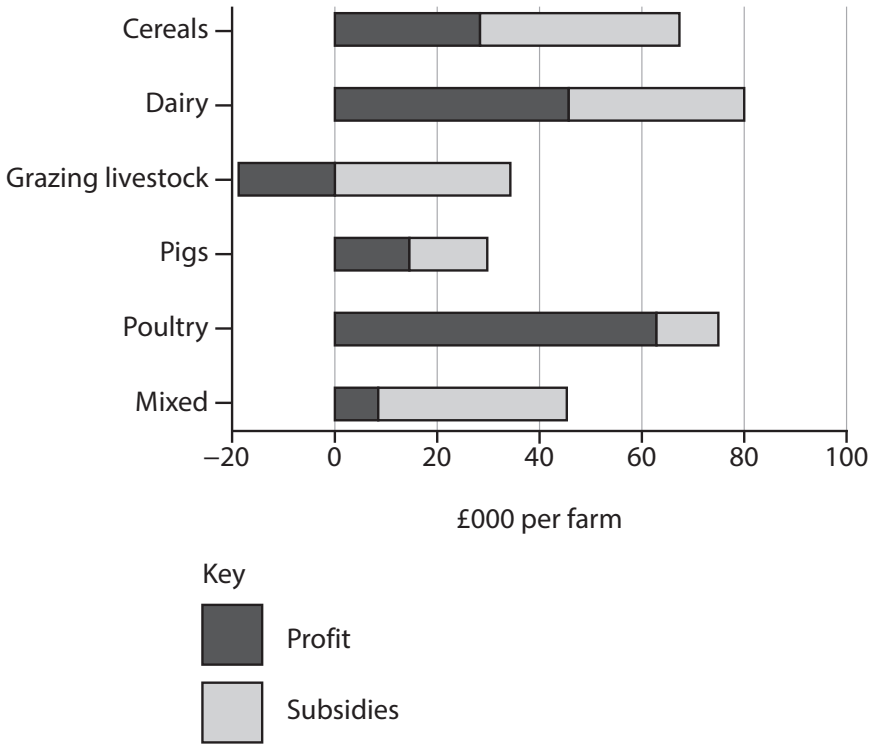
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Q) 6 (g) Evaluate the likely microeconomic effects of an increase in indirect tax on animal products (Figure 2 and Extract A, line 17). Use a relevant diagram to support your answer.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION A

Read Figure 1 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Markets for food and drinks high in fat, salt or sugar (HFSS)

Figure 1: UK market share of potato crisps, 2017

Firm	Brand	Size	Market share of firm	Market share of product	Price (£)
Walkers	All Walkers		*55.3%*		
	of which: *Regular Standard*	35 g		28.1%	0.45
	Regular Max	50 g		7.4%	0.63
	Sensations	40 g		2.0%	0.59
	Doritos	40 g		4.7%	0.45
	Other			13.1%	
KP	KP	50 g	*22.7%*		0.52
Tayto	Golden Wonder		*4.2%*		
		<40g		3.1%	0.38
		40g+		1.1%	0.72
Other	Other		*17.8%*		

(Source: adapted from https://academic.oup.com/restud/article/3108825/The-Effects-of-Banning-Advertising-in-Junk-Food 6 April 2017)

Extract A

The effects of a total ban on advertising of HFSS foods

Food and drinks which are high in fat, salt or sugar (HFSS) tend to be sold in highly concentrated markets. Tough new rules banning advertisements for HFSS products, such as those for confectionery, fizzy drinks and potato crisps, come into effect in July 2017 as a means to reduce consumption. The rules apply to media targeted at under-16s and will mean a major reduction in the number of advertisements children see for HFSS products in posters near schools, in films targeted at children, on catch-up television and in social media if it is directed at children.

There are three main factors that will determine the effectiveness of the intervention: first, whether advertising acts to expand the market share or steal rivals' market share. Secondly, how firms in the market adapt their behaviour in response to the ban. Thirdly, what substitute products do consumers turn to if they opted out of the targeted market.

Results from a recent survey in the UK suggest that the total quantity of crisps sold would fall by around 15% in the presence of an advertising ban, or by 10% if firms respond with price cuts, since the ban acts to make the market more competitive and firms respond to the ban by, on average, lowering their prices.

The survey showed that following a ban, consumers are more likely to switch to another junk food than to a healthy food, which (in addition to the pricing response of firms) acts to partially offset any health gains from the policy.

(Source: adapted from The Effects of Banning Advertising in Junk Food Markets, Dubois, Pierre; Griffith, Rachel, Review of Economic Studies Copyright © 2017, Oxford University Press https://academic.oup.com/restud/article/3108825/The-Effects-of-Banning-Advertising-in-Junk-Food 6 April 2017 and https://www.asa.org.uk/news/tougher-new-food-and-drink-rules-come-into-effect-in-children-s-media.html 30 June 2017)

Extract B

Taxing HFSS foods and subsidising healthy eating widens inequality

Since low-income groups spend a higher proportion of their income on food and tend to eat less healthily, they are the main targets of taxes on products that are high in fat, salt or sugar (HFSS). Subsidies on healthy food are seen as an alternative policy approach to encourage healthy eating. While data on the impact of such policies are scarce, a recent study on the distributional impacts of HFSS taxes and healthy food subsidies found that these actually widened health and fiscal inequalities. The policies tend to be regressive and favour higher-income consumers. Taxes on unhealthy food increase prices which have a greater impact on low income groups rather than higher income groups. Lower income groups prefer to buy HFSS food.

Subsidies encouraged all income groups to buy more fruit and vegetables. However, those on higher incomes proved more responsive and the average share of budget spent on healthy food actually increased for the higher income groups who were more likely to buy the subsidised healthy food and then spend the savings they had enjoyed on yet more healthy food. The diets of the higher income groups before the subsidy tended to be healthier. The choices of the higher income groups are more responsive to price changes. By contrast, lower income groups, if they responded to lower prices, often used the money saved to buy unhealthy items or something else entirely. The long-term benefits of a healthier diet are harder to grasp for consumers when information gaps exist. Often the immediate boost of a tasty treat is more appealing. Taxes and subsidies do not change that. Other strategies are needed to promote healthy eating, especially education.

(Source: adapted from Economist 5 October 2017 https://www.economist.com/news/finance-and-economics/21730033-study-suggests-lower-income-families-end-up-paying-more-their-food-taxing-fat and https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3031005 The Economic Journal September 2017 Vol 127 Issue 604)

Extract C

Tax on fatty foods in Denmark is an economic disaster

Denmark introduced a specific tax on saturated fat in October 2011. Recognised as a world-leading public health policy, it was abandoned just 15 months later having been both an economic and political disaster.

Indirect taxes of this sort are invariably regressive, disproportionately affecting the elderly and the poor. The specific tax led to prices rising on average 15% for highest-fat products, yielding a total decrease of 5% in the intake of saturated fat from products such as minced beef and cream. 80% of Danish consumers did not change their shopping habits at all. The behavioural change was economically damaging as consumers switched to cheaper brands and crossed the border to Sweden and Germany to do their shopping. Danish tax revenue fell as a result.

(Source: adapted from https://iea.org.uk/in-the-media/press-release/evidence-shows-a-fat-tax-would-hit-poorest-the-hardest 25 May 2013 and https://www.cambridge.org/core/journals/public-health-nutrition/article/effects-of-the-danish-saturated-fat-tax-on-the-demand-for-meat-and-dairy-products/984CF03634C819D50E66C7B5DC5209DA/core-reader)

Q) 1 (d) Evaluate the microeconomic and macroeconomic effects of increased government spending on education to promote healthy eating in the UK.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SECTION A

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Q) 1 (e) Evaluate the likely microeconomic and macroeconomic effects of imposing a tax on HFSS foods.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

7 The national living wage, the minimum wage for 25-year-olds and over, is expected to rise to more than £10.50 an hour in 2024 compared with £8.72 in 2020. The wage does not apply to the UK's self-employed and 'gig economy' workers. Some economists said the increase was ambitious. Business groups warned that employers in sectors such as social care could be hit hard. In large parts of the north of England the living wage has already reached two-thirds of local median earnings, said Professor Shackleton.
(Source adapted from: https://www.theguardian.com/uk-news/2020/mar/11/budget-2020-national-living-wage-national-insurance)

Q) Evaluate the disadvantages of a significant increase in the national living wage on a specific labour market, such as that for social care workers.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SECTION A

Read extracts A and B before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Hand car wash (HCW) firms in the UK

Extract A

What is the true human cost of your £5 hand car wash (HCW)?

The UK's hand car washes (HCWs) are extremely price competitive, but they have also been linked to modern slavery. Are they ever fair for workers?

There is little agreement about how many HCWs there are in the UK. Estimates range from 10 000 to 20 000. This lack of accurate information about the industry makes government regulation very difficult. Automated car washes, with their fierce rotating bristles, used to be the first option for drivers in a hurry. Now there is more choice. While the economy slows and incomes fail to keep up with inflation, demand for HCWs has grown. Many people see paying £5 for a car washed by someone else, rather than cleaning it at home, as a small expense which yields a high utility. But what is the true cost of a £5 car wash – and what should we be paying?

The growth of HCWs is partly the result of changes in the structure of industry in the UK. Many petrol stations have closed as drivers fill up at supermarkets. Garages and their forecourts have closed as cars become more reliable and locked into service agreements. The available sites for HCWs have therefore increased significantly and rents have fallen.

HCW entrepreneurs have identified available land and have benefitted from changes in the labour market, partly as a result of EU migration. UK drivers are now able to obtain cheap and effective hand car washing. For many migrants, car washes are a first job. "They accept car washing for a short period while they improve their language skills and move into other industries," says Ian Clark, a professor of work and employment at Nottingham Business School. "But there are also car-wash workers without networks who are in a dead end, working there for long periods."

Many drivers are only interested in getting the cheapest wash. If the price is very low, it probably means that workers are receiving less than the minimum wage and working in poor conditions. Crude calculations illustrate the problem. A £5 HCW employing five workers for 10 hours a day would need to wash 79 cars a day to just cover the wage costs. This assumes the workers are paid the minimum wage. This is one car every seven and a half minutes. Even if the profit can be higher on valet services, the price of which can be as little as £12 for a full inside-and-out clean, it's hard to see how a car wash price as low as £5 pays a living wage. This ignores all other costs which HCWs incur such as business rates and rent.

Evidence from car-wash workers is limited but Clark and others have been able to build a picture of some of the tougher conditions on drenched forecourts. "Like nail bars and small garment manufacturers, car washes are what we call 'hard-to-reach places,'" Clark explains. As part of the research, Clark and his team spoke to workers from 45 HCWs in the Midlands.

Clark and his team met and observed workers who lacked waterproof boots or trousers, or hi-vis jackets and gloves. "They're spraying around hydrochloric acid solution for alloy wheels, breathing in the vapour and fumes," Clark says. Some workers were paid a little over half the minimum wage.

(Source adapted from: https://www.theguardian.com/world/2018/jul/16/true-human-cost-5-pound-hand-car-wash-modern-slavery)

Extract B

Government intervention in the HCW industry

There are three main areas of government intervention that might impact on labour intensive firms such as HCWs:

First, there is the planning issue which focuses on the impact on the environment, for example, the disposal and recycling of waste water and chemicals. There could be planning regulations to prevent the use of tarmac rather than concrete on forecourts. Tarmac allows waste water and chemicals to seep into the sub soil. It could also be a requirement to have a sludge trap to stop the waste entering waterways.

Second, there is the health and safety issue for workers. Prolonged exposure to chemicals and lack of protective clothing puts the health of workers at risk. Performance targets could involve minimum levels of protective clothing and rest breaks for the workers.

Third, there is the issue of tax. The informal nature of the business type makes tax evasion easier.

Not all UK HCWs violate regulations. There are legitimate, regulated HCW firms as well as examples of good practice by independent outlets. One national supermarket, Tesco, has banned all independent hand car washes from its car parks. It is now in a partnership agreement with national car wash operator Waves. It uses a WashMark certificate of quality and compliance which was introduced by the industry to improve working conditions. Other major supermarkets are considering similar changes. One adviser believes £9 is a reasonable minimum price for a basic wash. Some pressure groups have developed a mobile phone app where evidence of unreasonable conditions can be reported by drivers.

Involving drivers in the issue, and making them demand fairer car washes, creates an incentive for good businesses to improve practices and come forward to get a WashMark certificate.

(Source adapted from: https://www.parliament.uk/documents/commons-committees/environmental-audit/Hand-Car-Wash-evidence.pdf research into HCWs by Professor Ian Clark, Nottingham Business School May 2018)

Q) 1 (e) Evaluate the microeconomic and macroeconomic effects of increased government intervention in an industry. Refer to HCWs or another industry of your choice.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SECTION A

Read Figure 1 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

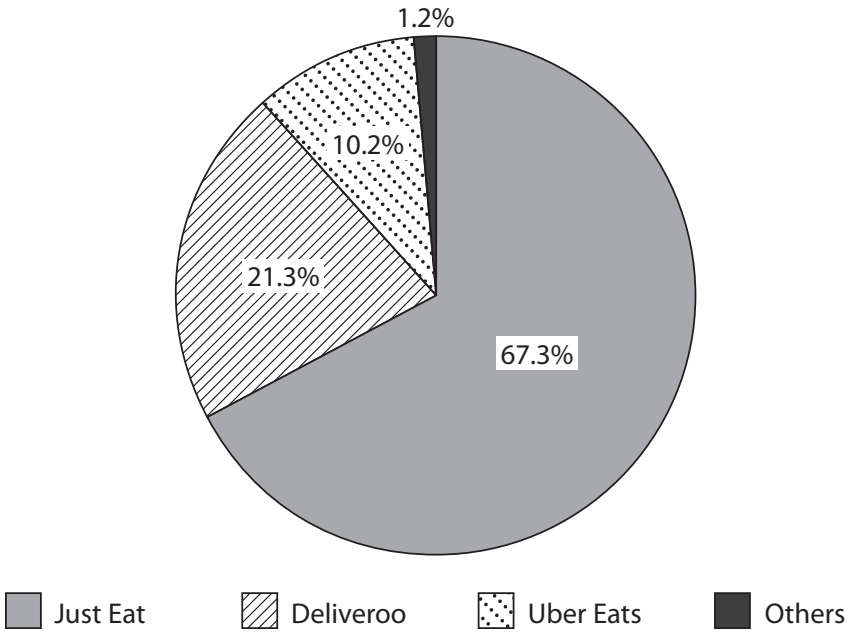
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

The food delivery industry

Figure 1: Market share for third-party food delivery services in the UK, 2019



(Source: adapted from https://onefourzerogroup.com/the-takeaway-takeover/)

Extract A

National Minimum Wage rises are more significant for 23 to 25-year-olds

In 2021, the National Minimum Wage main rate, also known as the National Living Wage, rose by 2.2% to £8.91, following a 6.2% rise in 2020. By reducing the age at which people are eligible for the National Living Wage to 23 in 2021, it is estimated that an additional 7.5% of 23 to 25-year-olds could get a 71p an hour pay rise. This amounts to an 8.7% increase, which may cause further financial worries for employers.

(Source: adapted from https://www.ndna.org.uk/NDNA/News/Latest_news/2020/Minimum_wages_to_rise_by_inflation_in_April.aspx)

Extract B

What is the true cost of the food delivery service?

The food delivery industry has boomed in recent years. Just Eat, Uber Eats and Deliveroo all offer very similar services – third-party food delivery firms that take up to 30% of the price of restaurant meals and deliver them to customers within a certain radius. The average spend per customer is around £15 with a £5 delivery fee, about five times more expensive than cooking at home and the same price as eating in the restaurant. Cash rich, time poor professionals increasingly turn to food delivery.

Food delivery comes with many layers of packaging. In the UK, there are 200 million meals annually with around 1.4 billion individual pieces of plastic for heat retention and protection when travelling, but does it really have to be plastic? People tend to order more food, often high in fat, sugar and salt, and don't even have to get up from their sofa.

But there are concerns that the delivery firms are exploiting employees who have no alternative. There is an issue of low pay and informal contracts. Delivery drivers are classed as 'independent contractors', and therefore not subject to some employment rights including a guaranteed minimum wage, sick pay, pensions or holiday pay. Drivers are paid either a flat hourly rate, or a fee per delivery. Factors such as delivery distance, speed, how busy it is and whether there are multiple drop-offs are all factored into how much a driver is paid. Deliveroo says its wages amount to around £10 per hour, but drivers say that during 2020 their pay has been as low as £1 per hour. Drivers are not paid extra for petrol or to maintain their vehicles. Many drivers are recent immigrants or students, who do not have property or savings to fall back on.

The government could address this with widening minimum pay legislation to contracted workers, by setting codes of practice, or by setting recommended wage targets. Furthermore, there are health and safety issues for workers. Vehicle safety checks, length of shifts and safety equipment are of concern. However, there are still people who take benefit from working flexibility.

(Source: adapted from https://www.theguardian.com/australia-news/2020/oct/25/home-food-delivery-what-is-the-most-ethical-way-to-order-in and https://digitalcommons.molloy.edu/cgi/viewcontent.cgi?article=1043&context=bus_fac)

Extract C

Integration in the third-party food delivery industry

The Competition and Markets Authority (CMA) is watching carefully to prevent any one firm having complete control of the food delivery industry. Just Eat, the market leader, agreed to merge with successful Dutch firm Takeaway.com in 2020, creating a new European leader by revenues. It also bought Grubhub in the US, with 20 million active users. Just Eat uses an aggressive pricing strategy, undercutting delivery fees below the average cost of other firms in the market, that will force them to merge in order to gain some economies of scale.

Amazon, having failed with its own delivery company Amazon Restaurants in 2018, has bought 16% of Deliveroo. The CMA took over a year to agree to the partial integration, on the argument that Deliveroo would close down without external investment. Amazon has unique expertise in marketing, increasing customer share and, most importantly, efficiency in delivering things. Food delivery is often uneconomical because a single household puts in a single order from a single restaurant at any one time. Tech companies such as Amazon can improve the business: once a meal has been ordered, an app often moves that restaurant to the top of the rankings for that neighbourhood, in the hope of getting a second and third delivery.

So why do restaurants turn to these delivery firms? The sheer volume of customers these delivery firms can hold makes it a difficult deal to turn down. But resentment from small business restaurant owners, angry at being wholly dependent on tech companies, is growing. Most restaurants would prefer that customers come in and pick up their orders themselves because they do not have to pay the 30% commission. Restaurant profit margins are small, and the effects of a 20% fall in the external value of the pound since 2016 on food costs are significant, given that over half of their food and drink is sourced outside the UK.

(Source: adapted from https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 https://www.ft.com/content/edf8a144-a101-4ef8-80e3-7d2f1565d35c and https://www.thisismoney.co.uk/money/markets/article-8138703/Uber-set-sell-takeaway-division-rival-Deliveroo-two-years.html and https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 and https://www.ft.com/content/bed7c4d8-28c1-11ea-9a4f-963f0ec7e134 and https://www.economist.com/1843/2021/01/26/gulp-the-secret-economics-of-food-delivery)

Q) 1 (e) Evaluate the microeconomic and macroeconomic effects of significant increases in the minimum wage. Refer to restaurants or other food delivery services in your answer.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

7 The average UK household energy bill (gas and electric combined) rose 80% from £1 971 in 2021 to £3 549 in 2022.
(Source adapted from: https://www.telegraph.co.uk/money/consumer-affairs/energy-price-cap-rise-october-2022-what-happen-household-bills/)

Q) Evaluate possible methods of government intervention to control household energy bills in the UK.

(25)

(Total for this part = 25 marks)

Continue on separate paper if required.

SUB-TOPIC 1.4.2

GOVERNMENT FAILURE

Sub-topic 1.4.2 · 6 questions · 51 marks · lowest tariff first

5 HS2 is a high-speed rail network linking the north and south of England. HS2 will be four years late and cost double the Department for Transport's original estimate.

(Source: https://www.transportxtra.com/publications/local-transport-today/news/58459/hs2-will-be-four-years-late-and-cost-double-the-dft-s-estimate-mps-told)

(a) Define the term 'government failure'.

(1)

.....

.....

.....

.....

(Total for Question 5(a) = 1 mark)

4 In 2022 the government announced that the maximum undergraduate tuition fee for universities in England will remain at £9 250 per year for the next two years.

(Source adapted from: https://questions-statements.parliament.uk/written-statements/detail/2021-10-21/HCWS339)

(b) Which **one** of the following is an example of government failure associated with the maximum price?

(1)

- ☒ **A** Contraction in demand
- ☒ **B** Distortion of price signals
- ☒ **C** Excess supply
- ☒ **D** Extension in supply

(Total for Question 4(b) = 1 mark)

5 HS2 is a high-speed rail network linking the north and south of England. HS2 will be four years late and cost double the Department for Transport's original estimate.

(Source: https://www.transportxtra.com/publications/local-transport-today/news/58459/hs2-will-be-four-years-late-and-cost-double-the-dft-s-estimate-mps-told)

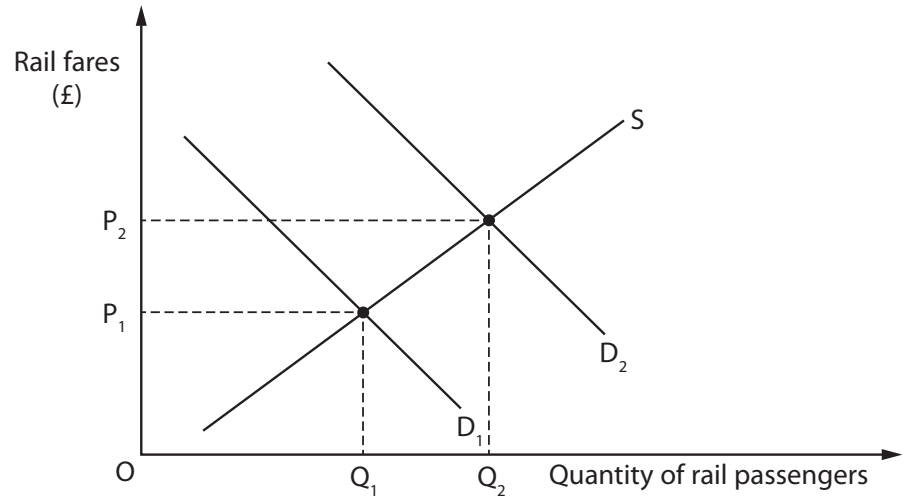
(a) Define the term 'government failure'.

(1)

(b) Explain **one** likely microeconomic reason why the government is using taxpayers' money to fund HS2.

(2)

(c) The diagram below shows the demand for and supply of passenger rail services.



The shift of the demand curve from D_1 to D_2 is most likely to result from a:

(1)

- ☒ **A** government decision to impose a tax on workplace parking
- ☒ **B** government decision to increase subsidies for rail travel
- ☒ **C** planned expansion of the government's railway track building programme
- ☒ **D** reduction in the tax imposed on a litre of petrol

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

SECTION B

Read Figure 1 and the following extracts (A, B and C) before answering Question 6.

Answer ALL Questions 6(a) to 6(e) and EITHER Question 6(f) OR Question 6(g).

You are advised to spend 1 hour 5 minutes on this section.

Question 6

The market for plastic in the UK

Figure 1: Trend in the purchase of single-use plastic bags in millions, UK, 2014 to 2021

2014	2015	2016	2017	2018	2019	2020	2021
7 500	2 120	1 750	1 130	1 040	627	496	197

Extract A

10p charge continues to reduce use of plastic carrier bags

The 5p charge on single-use carrier bags was introduced in supermarkets in 2015. The charge was increased to 10p in 2021 and extended to all businesses.

The UK Environment Minister said that the plastic bag charge has ended the irrational purchase of billions of single-use carrier bags, thereby protecting our landscapes and ensuring millions of pounds are redistributed to worthy causes. This was needed as without this legislation, the market is not able to effectively manage the situation. Consumers are now in the habit of bringing reusable carrier bags when shopping.

In addition to single-use carrier bag charges, major retailers have offered bottle deposit return schemes and refillable food and cleaning product options. These provide incentives to consumers to reuse their plastic containers.

However, retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging. With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year.

(Source adapted from: https://www.circularonline.co.uk/news/)

Extract B

Plastic packaging tax

Food manufacturers have criticised the implementation of a new UK environmental tax, warning it will force them to increase prices for consumers.

The 2018 tax was designed to provide incentives to businesses to use recycled plastic in packaging. Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% recycled plastic are taxed at £200 a tonne. Plastic packaging containing more than this will be exempt from the tax.

Helene Roberts, Chief Executive of Robinson Packaging, said increased prices for the consumer would be an unintended consequence of the tax. "It will just create inflationary pressures within the supply chain and firms may need to pass this on." A wide range of businesses are affected by the new tax, including retailers importing items such as bin liners, drink bottles and carrier bags. Food manufacturers are particularly impacted as the industry uses 40% of packaging in the UK.

(Source adapted from: https://www.ft.com)

Extract C

Single-use cups

An estimated 2.5 billion single-use cups are used in the UK every year by consumers buying coffee from chains and cafes, creating approximately 25 000 tonnes of waste. Research has found that while a 25p charge on single-use cups increases the use of reusable coffee cups in coffee shops, a discount on reusable coffee cups has no impact at all on their use.

A 25p charge on single-use cups increases the use of reusable coffee cups by 3.4%. Environmental messaging in cafes, for example posters about litter, increases the use of reusable coffee cups by 2.3%. The availability of reusable cups leads to an increase of 2.5% whereas the distribution of free reusable cups leads to a further increase of 4.3%.

"While the increases for individual measures were modest, the greatest behavioural change was when the measures were combined," said Wouter Poortinga of Cardiff University.

(Source adapted from: https://www.theguardian.com/environment/2017/mar/30/)

6 (a) Explain what is meant by the 'unintended consequence' (Extract B, line 9) of the plastic tax.

(5)

SECTION B

Read the following Figures (1 to 2) and Extracts (A to B) before answering Question 6.

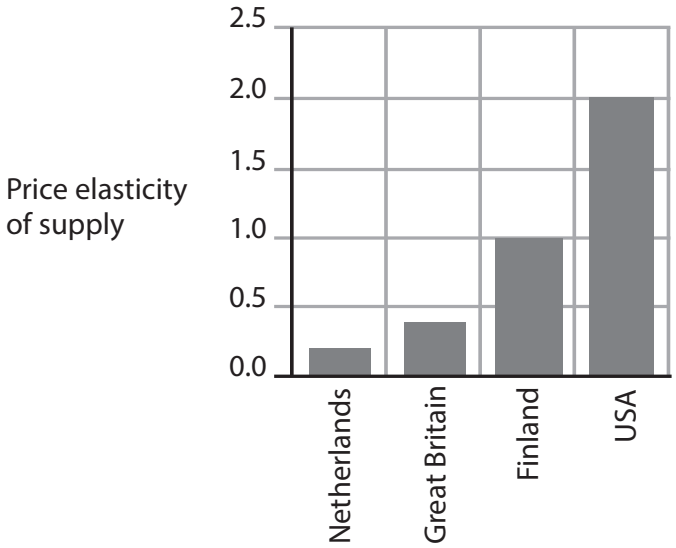
Answer ALL Question 6 (a) to 6 (e) and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

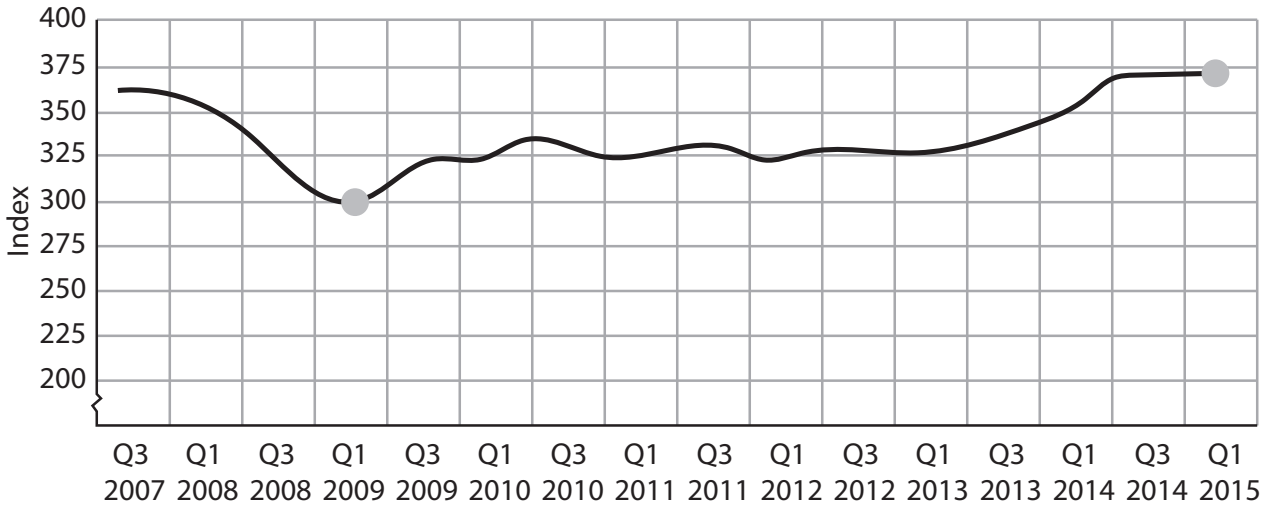
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9qhrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)

Q) 6 (f) Evaluate the likely microeconomic effects of government intervention in the UK housing market.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

Q) 6 (g) Evaluate the impact of government intervention in the cigarette market.

(20)

(Total for this part = 20 marks)

Continue on separate paper if required.

MARK SCHEMES

official mark schemes

Question Number	Answer	Mark
1(a)	**The only correct answer is C** ***A*** *is not correct because Statement 1 is Positive, using testable data* ***B*** *is not correct because Statement 1 is Positive, using testable data* ***D*** *is not correct because 'ought' in Statement 2 is Normative*	**(1)**

Question Number	Answer	Mark
1(b)	**Application 2** **Application** 11 000 000 / 155 (1) = 70 968 or 11 000 000 / 156 (1) = 70 512 Award 2 marks for an answer within the range 70 500 and 71 000.	**(2)**

Question Number	Answer	Mark
1(c)	**Knowledge 1** **Knowledge/Understanding** 1 mark for definition, e.g. • centrally planned • government run • no or limited private sector • government allocates most/all resources.	**(1)**

Question Number	Answer	Mark
3(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition Allow reference to a firm, individual or country • Concentrates on one good/ service (1) • produces a narrow range of goods or services (1) • over time develops a cost advantage in producing these goods and services (1)	**(1)**

Question Number	Answer	Mark
3(b)	**The only correct answer is A** ***B*** *is not correct because 'supply chain disruption is the most important issue facing governments' is a normative statement* ***C*** *is not correct because 'the free market leads to the best allocation of resources' is a normative statement* ***D*** *is not correct because 'the government should increase healthcare spending' is a normative statement.*	**(1)**

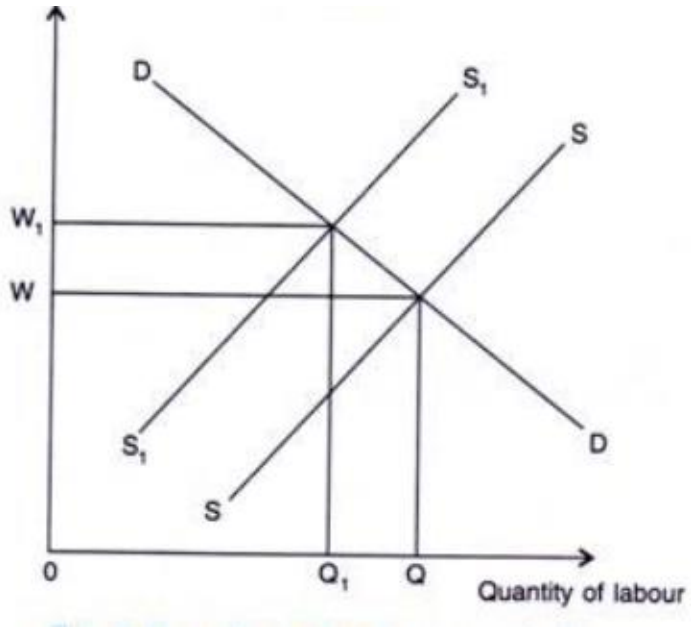
Question Number	Answer	Mark
3(c)	**Knowledge 1 Analysis 1** **1 mark for advantage and 1 mark for linked development** • Specialisation increases the size of the market (1) • Gives opportunities to reduce unit costs (1) • Increased or decreased quality due to specialisation (1) • Allows for increased productivity within a particular product/ market(1) and ultimately increased profits (1)	**(2)**

Question Number	Answer	Mark
4(a)	**Knowledge 1** **The only correct answer is C** A not correct as statement 1 can be tested/ is objective B is not correct as statement 2 is subjective and is based on a value judgement D is not correct as statement 2 is subjective and is based on a value judgement	**(1)**

Question Number	Answer	Mark
4(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge** Opportunity cost is the value of the next best alternative forgone in an economic decision (1) **Application** 5% of government spending in Finland is spent on education / Reduced funding for military (1) **Analysis** As a result of spending high levels of funding on particular areas, it means other areas of government spending need to be reduced due to scarcity/ limited resources (1) Can award 1AN mark for relevant diagram - PPF	**(3)**

Question Number	Answer	Mark
1(a)	**Knowledge 1** **The only correct answer is D** ***A*** *is not correct because Statement 1 and 2 are positive statements, they are not value judgements* ***B*** *is not correct Statement 1 is positive as it is an objective statement which can be tested* ***C*** *is not correct because Statement 2 is positive*	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 2, Application 1, Analysis 1** **Knowledge / understanding:** 2 marks for understanding e.g. • Supply of labour decreases (1) • Wage rises (1) **Application:** 1 mark for e.g. • Takes time to train engineers (1) • Migration of 1 million workers (1) • Annotating diagram in context of engineers (1) • Shortage of engineers (1) • 'Many engineers have left Poland for higher paid jobs in other countries' (1) **Analysis**: 1 mark for a linked development e.g. • Excess demand (1) • Firms offer higher wages (1) • Firms contract demand for labour (1) • New labour market equilibrium achieved (1) **NB Full marks only to be awarded for specific reference to labour market.**	**(4)**

	Wage rate  	

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 1, Analysis 1** Positive statements are value free/ based on facts/ can be verified and/or Normative statements contain value judgements/ not based on facts/ cannot be supported with evidence (1) The reference to 'should' in the statement suggests it is normative as this is a person's value judgement or vaccination can be good for an entire population (1) The idea that those who are not vaccinated will benefit is a positive statement as evidence will exist that shows others will benefit from others being vaccinated or if enough of its members are vaccinated, even those who are not will receive a measure of protection (1)	**(3)**

Question Number	Answer	Mark
4(b)	**The only correct answer is C** ***A*** *is not correct because this is government failure* ***B*** *is not correct because this is the incentive function of the price mechanism* ***D*** *is not correct because this is the rationing function of the price mechanism*	**(1)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** **Knowledge/understanding** 2 marks defining both positive (1) and normative statements Positive – based on fact/ evidence and can be tested/ hypothesised Normative – involve value judgements and personal opinions **Application** 2 marks for giving examples of both types of statements Eating a diet high in meat will cost 7.2kg CO2 emissions a day This might benefit shareholders (high prices) but is it doing any good for the rest of us?	**(4)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge and Analysis:** (up to 3 marks) • Understanding of a positive statement e.g. statement of fact that can be tested (1) • Understanding of a normative statement e.g. statement containing a value judgement (1) Further analysis of the difference (1) e.g. • a positive statement is not linked to political viewpoint • these normative statement represents the value judgement of the Prime Minister/current political party • objective v subjective • Scientific method **Application:** up to 2 marks 1 for positive and 1 for normative for each example from the extract Normative example (up to 1 mark) • the regulator 'should' limit the standard variable tariff (1) • offer fairer prices for customers who are paying too much (1) • 'a price cap will not be good for consumers' (1) • The market is broken (1) Positive example (up to 1 mark) • Energy bills of 11 million households will be capped (1) • Save households up to £100 (1)	**(5)**

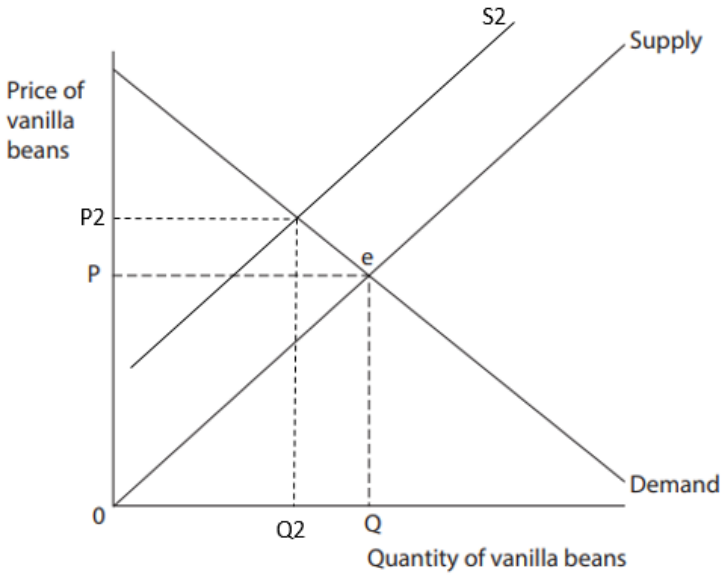
Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge** **Up to 2marks, points might include:** • positive statement e.g. statement of fact (1) • normative statement e.g. value judgement, moral, ethical (1) **Application:** 2 marks for data (1+1): • **Positive example (1) e.g.** ○ 'removal of the 45% tax band' ○ '1.25 % rise in national insurance was implemented' ○ 'already raised them from 0.1% in 2021 to 2.25% by September 2022' ○ 'Britain's poorest households would have lost £7.56 a year' • **Normative example (1) e.g.** ○ 'wrong time to do this' ○ 'an unfair decision at the time' **Analysis (1 mark)** for linked development e.g. • can / cannot be tested (1) • subjective / objective (1)	**(5)**

Question Number	Answer	Mark
1(a)	**Knowledge 1, Application 1, Analysis 1** Explain the distinction between renewable and non-renewable resources **Knowledge/Analysis** • Renewable resources e.g. can naturally replenish themselves / will not run out(1) • Non-renewables e.g. are limited in supply / cannot be used sustainably (1) **Application 1** Oil and/or wind power – must be linked to either renewable or renewable source (1)	**(3)**

Question Number	Answer	Mark
1(b)	**Knowledge 1** **The only correct answer is C** A Is not correct as scarcity not moving along a demand curve B Is not correct as supply does not exceed demand when an item is scarce D Is not correct, there are too few resources to be allocated	**(1)**

Question Number	Answer	Mark
2(a)	**Knowledge 1** **Knowledge/ Understanding** 1 mark for e.g. • willingness and ability of producers to create goods and services to take them to market • the amount of a good that can be produced by a business • the quantity of a good or service that a firm is willing to sell at a given price – over a given time period	**(1)**

Question Number	Answer	Mark
2(b)	**Knowledge 1** **The only correct answer is D** A – is not correct, as it is an unobtainable level of resources B – is not correct as shows a movement along the PPF curve, increasing the level of consumer goods C – is not correct as displays a shift out of the PPF curve illustrating increased productive potential/ resources	**(1)**

Question Number	Answer	Mark
2(c)	**Knowledge 1 Application 1** Application 2 marks for e.g. • New supply curve drawn and labelled, showing an inwards/leftwards shift (1) • New equilibria labelled, showing a rise in price (1)  	**(2)**

Question Number	Answer	Mark
1(a)	**The only correct answer is A** ***B*** *is not correct because savings are money, which is not a capital good* ***C*** *is not correct because shares in a company are another form of saving* ***D*** *is not correct because oil reserves are an example of natural resources or 'land'.*	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 1 Application 1 Analysis 1** **Knowledge** 1 mark for defining either renewable or non-renewable resources **Application** 1 mark for a relevant example e.g. coal, oil, natural gas are non-renewable **Analysis** 1 mark for linked development of the distinction e.g. non-renewable are scarce/ finite	**(3)**

Question Number	Answer	Mark
2(a)	Knowledge 1, Application 2 **Knowledge/Understanding** 1 mark for identifying formula for PED (this understanding may be implicit) **Application** 1 mark for calculating percentage change in quantity demanded (-4%). -0.2 = x/+20 1 mark for 4% of 2.5m is 100000 sausage rolls Award 3 marks for correct answer of 2.4m	**(3)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** **Knowledge/understanding** 2 marks for e.g. Renewable energy is a resource made from something which can be renewed itself/infinite supply (1) Non-renewable energy is a resource which once exploited cannot be replaced/finite supply (1). **Application** 2 marks for, e.g. Energy generated by nuclear or coal is non-renewable (1) Solar or wind energy is renewable (1).	**(4)**

Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge and analysis (3):** • Definition of opportunity cost as the next best alternative foregone (1) • Governments have to pay interest (1) at the expense of other expenditure (1) • Servicing means paying back interest and minimum capital requirements (1) e.g. to prevent a default, loss of confidence, other repercussions (1) • The debt is external (1), and in this case owed by governments as they have been borrowing from abroad (1) • Use of PPF to show opportunity cost may be awarded as analysis (1) **Application (2 marks for 1 point, or 1 + 1)**: e.g. • Debt service payments above 20% of G (1) are unsustainable (Extract D) (1) • £20billion raised 2010-2015 (Extract D) (1) • Commodity prices soaring and foreign loans available' (Extract D) (1) • 'Heavy repayment schedules at a time of low commodity prices' (Extract D) (1) • Governments have taken to 'private debt too eagerly' (Extract D) (1) • 'Median level of debt risen from 34% to 48% in 2017' (Extract D) (1) is heavy because of 'low tax base' (Extract D) (1) • High levels of poverty – half of the 26 million people (1), so many feel the effects of reduced government expenditure (Extract E) (1) • 'non-existent tuna fleet' or other hidden debt (Extract D) or corruption (1) at the expense of other government spending (1) • Opportunity costs applied to any developing country, e.g. spending on poverty alleviation, education and health spending or recent cyclone April 2019 (1). **Award a maximum of 1 application mark if there is no reference to Extract D**	**(5)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge/understanding** 1 mark for infinite wants and finite resources (1) **Application** 1 mark each for any one of the following for infinite wants: • Consumers of health care have a growing list of medical concerns for essential/non essential treatment/waiting list 4 million (1) • Ageing population (1) • New medical technologies(1) 1 mark each for any one of the following for finite resources: • Number of doctors/nurses (1) • Number of hospital beds available/bed occupancy rates 99% (1) use of Figure 2 e.g. • Waiting time has increased from 5.7% (1) to 10.7% (1) **Analysis** Up to 2 marks for any one of the following in linked development OR two limited examples of analysis (1+1): • Health resources are scarce (1) so Hospitals have to make choices about who to treat (1) • Decisions need to be made on what, how, why and for whom to treat (1+1) • Opportunity cost of making a medical choice/decision (1) • Government health priorities (1)	**(5)**

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(a)</td><td>
Knowledge 1, Application 1, Analysis 1

Knowledge/understanding
1 mark for definition of opportunity cost (e.g. value of the next best alternative foregone)
1 mark for definition of production possibility frontier (e.g. the maximum potential output combinations of two goods an economy can achieve when all its resources are fully and efficiently employed)

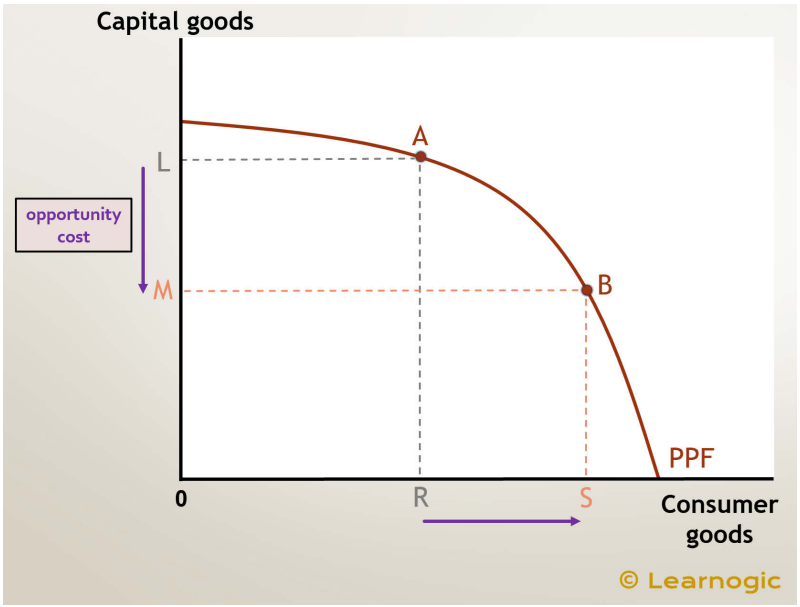
Application
1 mark for application – Application to the table information to demonstrate that opportunity cost increases or is small for manufacturing goods as more is produced (at least two calculations need to be shown for opportunity cost increasing and this may be in the table or in the written explanation or one data reference to opportunity cost being small)

<table>
<tr><th>Capital goods output (million units)</th><th>Consumer goods output (million units)</th><th>Opportunity cost</th></tr>
<tr><td>0</td><td>42</td><td>-</td></tr>
<tr><td>10</td><td>40</td><td>2</td></tr>
<tr><td>20</td><td>36</td><td>4</td></tr>
<tr><td>30</td><td>30</td><td>6</td></tr>
<tr><td>40</td><td>22</td><td>8</td></tr>
<tr><td>50</td><td>12</td><td>10</td></tr>
<tr><td>60</td><td>0</td><td>12</td></tr>
</table>

Analysis
1 mark for linked development e.g. the opportunity cost for the economy of moving from consumer goods to capital goods is small compared to the gains in production made (1 Analysis) or diagram of production possibility frontier, illustrating concept of increasing opportunity cost – it must be correctly labelled with consumer goods and capital goods (concave to origin) (1)
</td><td>(3)</td></tr>
</table>

Question Number	Answer	Mark
1(b)	B	**(1)**

Question Number	Answer	Mark
5(a)	**Knowledge 1 Application 1** **Knowledge/understanding** 1 mark for definition, e.g. A mixed economy means that part of the economy is left to the free market and part of it is managed by the government (1) Public and private sectors existing within the economy (1) **Application** 1 mark • 11.7 million jobs were furloughed during the global health crisis (1) • Costing the UK Government £70 billion (1) • '80% wages paid by the government 80% of their wages/. Some private sector employers continued to pay the remaining 20%' (1)	**(2)**

Question Number	Answer	Mark
5(b)	**Application 1** Opportunity cost relating to higher production of consumer goods must result in a fall in capital goods – this must be clearly highlighted on the curve The diagram below earns 1 mark  	**(1)**

Question Number	Answer	Mark
5(c)	**The only correct answer is A** ***B*** *is not correct because 'price acts as a signal to allocate resources' is an advantage of a free market economy* ***C*** *is not correct because 'price controls cause shortages of goods' is a disadvantage of a command economy* ***D*** *is not correct because 'the profit motive gives firms the incentive to be more efficient' is an advantage of a free market economy*	**(1)**

Question Number	Answer	Mark
1(a)	**Application 2** **Application:** Calculation of original opportunity cost of producing 50 capital goods is 120 -100=**20** consumer goods. (1 mark) Calculation of new opportunity cost of 50 capital goods is 170 -140=**30** consumer goods. (1 mark)	**(2)**

Question Number	Answer	Mark
1(b)	**The only correct answer is D** ***A*** *is not correct because this would be describing a change in actual output such as W to V from inside the PPF XY* ***B*** *is not correct because PPF shows potential output and not the cost of output* ***C*** *is not correct because PPF shows potential output and not the demand for a good or service*	**(1)**

Question Number	Answer	Mark
1(c)	**Knowledge 1, Analysis 1** **Knowledge/understanding:** 1 mark for e.g. Position **W** represents an • inefficient allocation of resources (1) • unemployment of resources (1) **Analysis:** 1 mark for e.g. • It is possible to increase output of both consumer goods and capital goods by using unemployed resources (1) • The economy could produce at either 100 or 140 consumer goods but is currently producing 80 (1) • The country is operating inside the PPF (1)	**(2)**

Question Number	Answer	Mark
2(a)	**Application 2** **Application** 2 marks for e.g. • The opportunity cost is 1 unit of oats (2) • 2 more units of wheat to be produced (1)	**(2)**

Question Number	Answer	Mark
2(b)	**Knowledge 1, Analysis 1** **Knowledge** 1 mark for understanding, e.g. • Efficiency will decrease • Inefficient allocation of resources • Not productively efficient **Analysis** 1 mark for e.g. • Not producing at maximum potential output • Potentially produce more wheat and oats • Spare capacity • Unemployed resources • Lower output the next year • No opportunity cost from moving from W towards PPF	**(2)**

Question Number	Answer	Mark
2(c)	**Knowledge 1** **The only correct answer is B** ***A*** *is not correct because the PPF shows the production of oats and wheat, not milk* ***C*** *is not correct because a PPF does not show demand for a product* ***D*** *is not correct because a PPF does not consider the price of the product once sold*	**(1)**

Question Number	Answer	Mark
1(a)	C	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for definition of specialisation or definition of money acting as a medium of exchange or a measure of value or a store of value or a method of deferred payment. Specialisation requires exchange. **Application** 1 mark for application to a process, business or worker, e.g. Worker lives by exchanging earnings from making smartphones or receives training or is incentivised by money or smartphone company earns profit by trading in smartphones. **Analysis** 1 mark for linked development from money to improved specialisation, e.g. new technology enables further specialisation thus improving productivity or building up capital or increasing skills of workers.	**(3)**

Question Number	Answer	Mark
1(a)	**Knowledge 1** **The only correct answer is A** ***B*** *is not correct because whilst Hayek is associated with free market economy thinking, reference to Adam Smith is made in the context of specialisation and the division of labour.* ***C*** *is not correct because Keynes is mostly associated with 'animal spirits' and the multiplier effect.* ***D*** *is not correct because Marx is associated with the disadvantages of the free market and the case for a command economy.*	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for definition of division of labour or workers specialised e.g. Where a task is broken down into its component parts or Where an individual concentrates on one particular task to the exclusion of others **Application** 1 mark for application – Application to the car industry e.g. A worker who adds tyres to a car **Analysis** 1 mark for linked development e.g. increased productivity or reduces unit costs or higher output	**(3)**

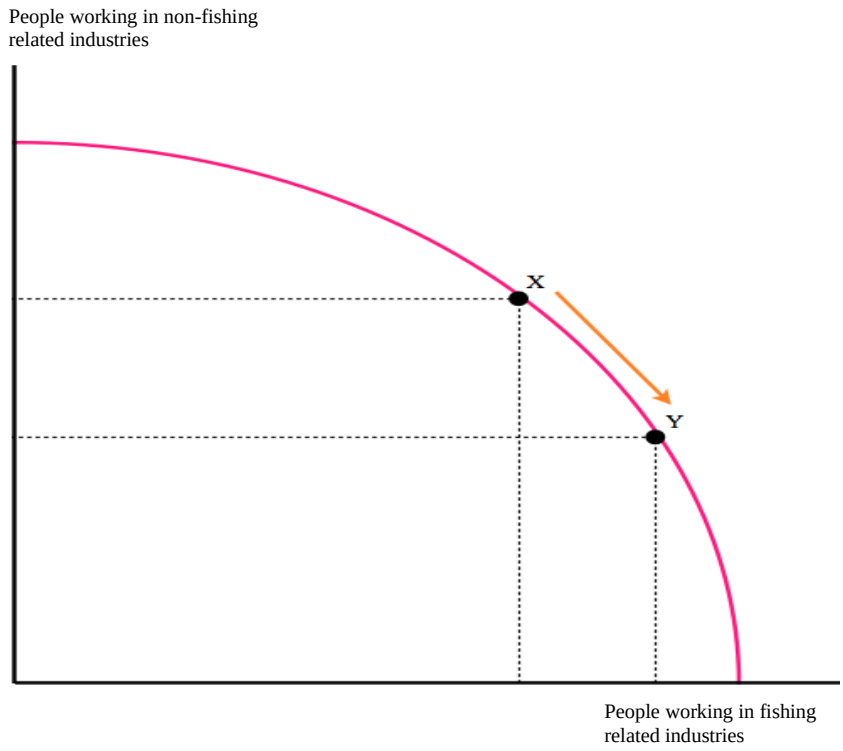
Question Number	Answer	Mark
3(a)	**The only correct answer is B** ***A*** *is not correct because difficulty in counterfeiting is an attribute of money* ***C*** *is not correct because divisibility is an attribute of money* ***D*** *is not correct because durability is an attribute of money*	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1 Application 2** Award one function e.g. A measure of value (1) e.g. prices can be measured in satoshis (1) people can compare prices of goods and services (1) OR A store of value (1) when an individual saves bitcoin (1) they are confident they will receive the equivalent value back (1) OR A standard of deferred payment (1) when an individual loans another person bitcoin (1) they are confident they will receive the equivalent value back (1)	**(3)**

Question Number	Answer	Mark
5(a)	**Knowledge 1, Analysis 1** • Resources are allocated via the price/market mechanism/market forces of supply and demand/ the invisible hand of the market (1) • If there is an increase in demand prices rise to ration the good (1) • Price changes act as a signal (1) • If there is a fall in supply prices rise to ration the good (1) • Consumer sovereignty (1) • By privately owned firms (1) • Limited intervention by government/laissez-faire (1)	**(2)**

Question Number	Answer	Mark
5(b)	**Knowledge 1** **The only correct answer is D** **A** is not correct because Hayek promoted the idea of private investment rather than government spending **B** is not correct because Hayek was a critic of command economies allocating resources, advocating instead the many price signals in a free market economy **C** is not correct because Marx was a critic of the free market economy allocating resources	**(1)**

Question Number	Answer	Mark
5(c)	**Knowledge 1, Analysis 1** **Knowledge** Identification of a benefit of division of labour (1) • Less training needed • Faster production process • Greater output from given workforce • Less time wasted moving between jobs • Increased skill within specific role • Increased efficiency **Analysis** Linked development (1) e.g. A benefit is that the firm only needs to train workers in one specific role (1k) this means that they can lower costs (1an)	**(2)**

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** Impacts can be positive or negative. • Understanding of specialisation. The number of workers in the fishing industry relative to other workers will be more in Scotland relative to the rest of the UK:  **NB If there is no valid diagram - maximum level 2 KAA** Advantages might include: • Fishing fleets develop expertise based on years of experience • This will be the case for both labour and capital • Fishing ports have the infrastructure to process the catch and to distribute it to markets in the UK and overseas • Employment opportunities will be available and will grow as the industry develops • Specialisation enables training providers to specialise in developing skills for workers in the region - more resources can go in to	**(9)**

	preparing for fishing industry without having to invest in training in other areas. • Spillover effects - skilled labour more freely available so if a new worker is needed they can benefit from training with a different company • Efficient use of resources – a region that specialises in fishing due to availability of resources e.g. good fishing grounds. • Creates jobs – people of Scotland will be able to find employment in the fishing industry • Scotland specialising in the production of fish can catch more and then trade with other countries who specialise in the production of other goods. • By catching more fish the economy can sell these, increasing income in the Scottish economy • By specialising and division of labour increasing output/ reducing costs of production the economy can improve income, living standards. **NB KAA can be treated as Evaluation and vice versa**	

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** There are many disadvantages of specialising in the production of goods and services to trade: • Over-exploitation of resources leaves economic agents over-exposed, leading to possible business failures and job losses • The reduction of the cod TAC could lead to major issues for Scottish fishing • External costs related to congestion and pollution • Demand for fish falls with the increased trend towards vegetarianism and veganism, the economy would be at risk • Workers could find it difficult to transfer to other industries if they are over-specialised • Current consumption may be unsustainable leading to reduced incomes for future generations	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
1(a)	**Knowledge 1** **Knowledge/Understanding** 1 mark for definition, e.g. A free market economy refers to an economic system where the prices of goods and services are set freely by the forces of supply and demand (1) or without intervention by the government (1)	**(1)**

Question Number	Answer	Mark
1(b)	**The only correct answer is D** ***A*** *is not correct because this is the incentive function* ***B*** *is not correct because this is the signalling function* ***C*** *is not correct because a rise in price will reduce the shortage*	**(1)**

Question Number	Answer	Mark
1(c)	**Knowledge 2** **Knowledge/understanding** 1 mark for one reason. Possible answers include: • Competitive markets responsive to consumers (1) no competition in command economies to ensure firms are efficient (1) • Market prices transmit information between buyers and sellers (1) no need for costly bureaucracy (1) • Reduces risk of government failure (1) as governments do not know what is demanded (1)	**(2)**

Question Number	Answer	Mark
3(a)	**Knowledge 1** **The only correct answer is B** A Is not correct as Karl Marx thinks free market economies result in exploitation of workers. C Is not correct as there are externalities in all economic systems D Is not correct as in a free market the private sector owns all resources and there is no/ very little government	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge 1** Education is paid for/ funded by government and tax revenue / positive consumption externalities (1) Education is seen as a merit good that benefits wider society (1) **Application** International education rankings / with its teenagers coming top in tests in maths, reading and science (1) **Analysis** • Education is underprovided in a free market as the external benefits are not considered (1) • Any explanation of the externality and its positive impact upon 3rd party (1) • Due to asymmetric information, is unclear to individuals what the full benefits are to education (1) • Diagram highlighting positive consumption externalities (1 AN)	**(3)**

	0.05/ 1.2 = 4% change in price 20% price change PED -0.2 -0.2 = x /+20 0.2 = -4/+20 NB Maximum of 2 marks if correct answer is not given	

Question Number	Answer	Mark
2 (b)	**The only correct answer is C** ***A*** *is incorrect as is perfectly inelastic and would mean the coefficient would be 0* ***B*** *is not correct as the coefficient would be greater than 1* ***D*** *is not correct because the coefficient would be 1 with the same proportionate change in quantity demanded as price*	**(1)**

Question Number	Answer	Mark
3(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • A **free market** is a system of buying and selling goods and services without government intervention.	**(1)**

Question Number	Answer	Mark
3(b)	**The only correct answer is C** ***A*** *is not correct because public good provision free of charge would help achieve a social optimum* ***B*** *is not correct as an overproduction of good with external benefits would be in the public's interest and optimum* ***D*** *is not correct because an underproduction of these goods would be beneficial to society*	**(1)**

Question Number	Answer	Mark
3(c)	**Knowledge 2** **Knowledge/Understanding** 1 mark for reason and 1 mark for linked development. Possible answers include: • The private sector is profit driven (1) therefore only producing those goods that will be able to sold for a profit (1) • Public goods with external benefits are under-produced (1) therefore requiring government intervention (1) • Characteristics of public goods such as non-rivalry and non-excludability (1) mean that there is no incentive to pay for these goods (1)	**(2)**

Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 1, Analysis1** **K + An up to 3 marks e.g.:** • More choice (1) because of consumer sovereignty (1) and profit motive / greater incentive (1) • More efficient allocation of resources (1) because of allocative efficiency / productive efficiency / dynamic efficiency / lack of X-inefficiency (1) because of profit motive / greater incentive (1) • Lower prices (1) because of more competition (1) and greater incentive (1) • Better quality products (1) because of competition (1) and profit motive (1) • More innovation (1) because of competition (1) and profit motive (1) **Application 1 mark for e.g.** ○ Cuban government allow small private businesses ○ 'Jump-start the economy' ○ Create jobs ○ Role of small business ○ Reform of command economy	**(4)**

Question Number	Answer	Mark
1(b)	**Knowledge 1** **The only correct answer is D** ***A*** *is not correct because Adam Smith supported the free market* ***B*** *is not correct because Friedrich Hayek supported the free market* ***C*** *is not correct because John Maynard Keynes did not advocate a command economy, rather higher borrowing to provide an injection of demand into the economy*	**(1)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2 Analysis 2** **Knowledge and Analysis (1+1)x2** • Excludability (1) e.g. private ownership enables individuals to charge for the use of an asset (1) • Private ownership of resources (1) e.g. land, labour, capital and enterprise may be exploited by private individuals or firms (1) • Rivalry (1) e.g. private owners of resources can choose to buy and sell resources in order to generate profit (1) • Private ownership in a free market economy may lead to wage disparities or other inequalities (1+1) **Application (1+1)** 1 mark for use of Extract B e.g. 'private producers will act in their own self-interest' individuals 'maximise profit' 1 mark for use of own knowledge e.g. private ownership of a resource means someone is accountable for it (1) If someone owns something then they legally stop other people from using it (1)	**(6)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** 1 mark for e.g. Identifies the correct formula (1) e.g. the formula for XED is %ΔQD Good A/%ΔP Good B -8 = x/2% (1) -8 x 2% = -16% (1) (decrease in quantity demanded of bags of chips) 950 000 x 16% = 152 000 (1) 950 000 – 152 000 (1) = **798 000** **If correct answer is given award all 4 marks. Award up to 3 marks for correct working but overall correct answer missing.**	**(4)**

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Functions of the price mechanism to allocate resources: • rationing • incentive • signalling Market diagrams for tobacco and e-cigarettes, making use of supply and demand analysis. * Consumers with knowledge of the potential harm of cigarette smoking may quit smoking. * Smokers will maximise their private utility * Consumers will decide what is in their best interests * Reduction in smoking will happen automatically, without government intervention, as e-cigarettes become popular. Candidates may refer to Adam Smith Consumers free to pursue own self interest Profit incentive will mean firms will want their consumers to live long – so move out of tobacco and into e-cigarette market. Without government regulations e-cigarettes market will be easier for new firms to enter thus improving competition. Competition between e-cigarette manufacturers to maximise profits will drive health improvements and lower costs making them more price competitive. Candidates may refer to Friedrich Hayek Resource allocation from tobacco to e-cigarettes will be brought about by market forces, which will be far superior to any state planning system. Individuals do not have perfect information on cigarettes but have the best knowledge of their own situation. The price mechanism acts as a communication network, markets are self-correcting. Government lacks sufficient information about everything happening in the cigarettes market to be able to make informed decisions.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6 (f) continued	**Evaluation 6** Failings of the price mechanism • Information gaps • Asymmetric information • Externalities • Peer pressure ignores utility • Habit forming distorts utility Possible different disadvantages or approaches : * While consumers may maximise their private utility MSC > MSB, with explanation. e.g. passive smoking/health care costs * Without government intervention the oligopolistic/monopolistic power of cigarette firms, in the form of advertising and propaganda, will go unchecked Candidates may refer to Karl Marx Consumers exploited in past by misinformation on tobacco and due to being addictive they become dependent. Competition and the need to profit maximise will mean firms cut costs risking consumers health and increase prices thus reducing consumer surplus. Nature of free market is for powerful monopolies to emerge that can further exploit consumers.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Answer	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** The extracts contain plenty of examples from an international context. • Re-designing the structure of fees in England according to the 'value of the degree' • This could be done by subject, institution etc. • Cutting fees for poorer groups and introducing maintenance grants • The US model where top institutions charge high fees and state universities much lower ones • The European model of lower fees • A graduate tax as in Germany • Discussion of efficient/inefficient allocation of resources • Education as a merit good • External benefits application (with appropriate diagram) • Impact on income inequality/fairness/impact on poorer communities • Free market system will discourage 'fringe degrees' and focus on degrees that offer more vocational benefits that pay higher salaries (Good or bad?) Candidates may use supply and demand analysis to develop the idea of different subjects charging different fees.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	**1–3**	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	**4–6**	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	**7–10**	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	**11–14**	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Answer	Mark
6(f) continued	**Evaluation 6** England is similar to the U.S. and quite different from Europe • Good evaluation will consider the strengths and weaknesses of each method • European approaches recognise the increase in graduate earning potential and the much higher taxes that graduates will pay in the future. They are much cheaper at the point of use and encourage applicants from poorer families. The taxpayer pays the majority of the cost at the point of use • U.S. and English approaches recognise that the consumer of education must pay at the point of use and be prepared to make a personal investment in future earning power. Students are encouraged to consider whether their degree is worth the cost. If creative arts confer no benefits, then why study them?	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	**1–2**	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	**3–4**	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	**5–6**	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 2** **Knowledge/understanding** 1 mark for definition of diminishing marginal utility e.g. as decline in the additional satisfaction a person derives from consuming an additional unit of that product. **Application** 2 marks for linked application (1+1), e.g. • this is the premise on which 'All you can eat buffet' operates as they know each additional plate of food (1) provides less utility than the one before (1) • most people will eat only until their marginal utility matches the price they paid (1) OR people eat until they are satiated (1) otherwise if you kept eating you would reach the point of being sick or dissatisfied (dis-utility). (1)	**(3)**

Question Number	Answer	Mark
4(b)	A	**(1)**

Question Number	Answer	Mark
5(a)	D	**(1)**

Question Number	Answer	Mark
2 (a)	**Knowledge 1** **Knowledge/understanding** 1 mark for e.g. • The year with which all other values in a series are compared • Benchmark year	**(1)**

Question Number	Answer	Mark
2(b)	**Application 2** **Knowledge/Understanding** 2011 = (15 257/14 878) x 100 = 102.5 (1) 2012 = (13 261/14 878) x 100 = 89.1 (1) Accept 102-103; 89-89.2	**(2)**

Question Number	Answer	Mark
2(c)	**Application 1** B	**(1)**

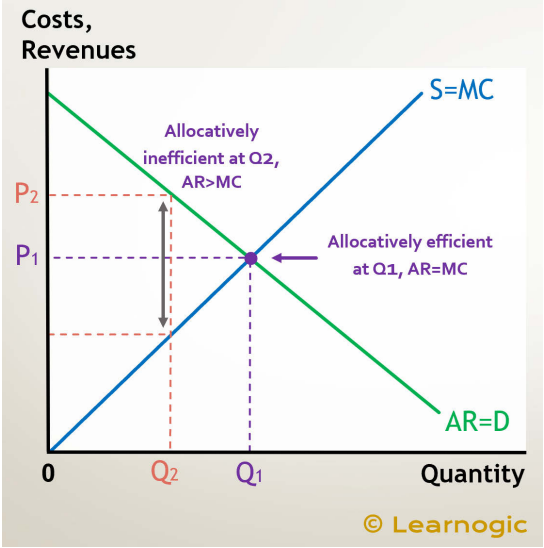
Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** • 1 mark for identifying the formula e.g. (new-original)/original*100 (1 mark) • 1 mark for locating the data 373 (Q1 2015) minus 300 (Q1 2009) • 1 mark for performing calculation • 1 mark for substituting figures correctly e.g. (373 – 300)/300 * 100= 24%. Accept 23 – 25% NB If the answer given is 24% or 24 award 4 marks. Do not award inaccurate answers such as minus 24% as 4 marks but credit any accurate working.	**(4)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** £12 * 450 million (1) = £5.4 billion (1) £5.4 billion * 90% = £4.86 billion (1) £5.4 billion - £4.86 billion (1) = £0.54 billion £5.4 billion * 10% (1) = £540 million (1) **NB Award 4 marks for a correct answer of £540 million/£0.54 billion. Award up to 3 marks for correct working but overall correct answer missing.**	**(4)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding** • Identification of one external and one private benefit: tax revenue (external); higher earnings (private) (1+1) **Application** 2 marks for, e.g. • 'the government will benefit greatly from additional tax revenues' (1) • 'the rest will be in the form of their extra spending power' (1) **Analysis** Linked development of why the education specifically benefits producers e.g. higher productivity enable firms to achieve lower costs and, therefore, lower prices (1+1) **Award up to 3 marks for each benefit**	**(6)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** Formula for percentage calculation (new-old)/old x 100. (1) (102357 – 45418)/45418 x 100 (1+1) = Accept any figure between 125 and 126 **NB Award 4 marks for a correct answer of 125%. Award up to 3 marks for correct working.**	**(4)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 1, Analysis 3** **Knowledge/Understanding:** (up to 1 mark) • Real price of gas and electricity refers to their price adjusted to remove the effects of inflation (1) • Increase in demand (1) • Decrease in supply. (1) • The lack of competition (1) **Application:** (up to 1 mark) e.g. • Figure 1 indicates the real price of gas and electricity has increased since 2004: electricity from 70 to 119 or rises 70% (accept approximations) (1) • Gas from 58 to 121 or rises by 108% (accept approximations) (1) **Analysis:** up to 3 marks for linked development of one reason e.g. • Rise in price (1) due to non price determinant of demand e.g. income, economic growth, population growth (1) explained using contraction in demand or extension in supply or other extended analysis of market forces (1) • Rise in price (1) due to non price determinant of supply e.g. increase in cost of production, finite resources (1) explained using contraction in demand or extension in supply or other extended analysis of market forces (1) • Energy firms have sought to increase profits (1) tacit collusion (1) provide more dividends and higher share prices for shareholders (1) directors salaries linked to profits (1) • Energy firms able to exploit consumers not behaving rationally due to: influence of other consumers (1) habitual behaviour (1) computation difficulties (1)	**(5)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge and Analysis:** (up to 3 marks) • Allocative efficiency is when the goods and services produced are those that consumers most desire • Occurs when the marginal utility to consumers of consuming a good or service equals the marginal cost of producing it • It is likely to improve • Achieved where price/AR equals MC • More optimal distribution of resources is achieved • Maximisation of consumer welfare • Increased competition in market • Increased concentration in some digital markets may worsen allocative efficiency • Reward a relevant diagram e.g.  **Application:** up to 2 marks for e.g. • Consumers now have greater choice • Access to higher quality products • Lower prices • E.g. fashion clothing, language tuition, digital banking, online retailing, computer games, mobile apps • Time saved by online banking compared to going to a branch	**(5)**

Question Number	Answer	Mark
1(b)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Knowledge/ implicit understanding:** (1+1) marks for **two** reasons and explanation e.g. • HCWs are inferior goods if demand rises when incomes fall • HCWs at £5 are a very small percentage of consumer income so they might be seen as essential or basic goods • Other factors affect demand apart from income, for e.g. availability and price of substitutes (automatic car washes [might be normal/luxury good] or car washing equipment), working patterns **Application:** (2 marks for any relevant point, or two points 1 +1). Points might include: • Incomes are not keeping up with inflation so real incomes are falling • HCWs at £5 are a very small percentage of consumer income so they might be seen as essential or basic goods. • Increased demand when people have lower incomes – high level of utility at small expense, Extract A paragraph 2 • Extract B: there is a decrease in the availability of automatic car washes as independent petrol retailers go out of business. • Increased number of sites and rents have fallen (Extract A paragraph 3) **Analysis** (1 + 1)**:** • Linked development of the two points made • Maybe shown by diagrammatic analysis **Evaluation:** (2 marks for any relevant point, two points 1 +1). Points might include: • Subjective happiness is yielded from an HCW, implying that it is rational to use an HCW/it is not rational as washing the car at home is cheaper when incomes fall • Incomes have not been falling over the whole period, so it is more likely that as incomes rise people are buying a HCW as a YED is low (small percentage of income) • Regional or demographic changes in incomes	**(8)**

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Application – price of e-cigarettes per nicotine cheaper • Data on PED suggests some rational response to price change e.g. 10% rise causes 4% fall in demand (Extract A) Reasons rational • Smokers computationally aware of financial gains of switching • Smokers informed of private health gains (Extract B Paragraph 2) • Reducing health external costs e.g. passive smoking(Extract A L15) • Smokers aware that regulations will increasingly make it difficult for them to gain utility of nicotine consumption through tobacco smoking **NB Reasons for/against being rational may be presented as either KAA or EV**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** Reasons against being rational • Smokers lack information and computational skills to accurately assess full costs and benefits of switching. May underestimate long-term gains of switching (bounded rationality) • Information overload • Both products contain nicotine which is addictive and habit forming. • If e-cigarettes were not available they may quit smoking altogether • Switch may be only short-term (impulse buying) • E-cigarettes complements tobacco smoking resulting in an overall increase in nicotine consumption • PED for tobacco remains lower than e-cigarettes so a price rise in the latter may result in a switch back • Peer pressure (herd mentality) pushing smokers to make the switch	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • The statement is concerning because people from poorer backgrounds are less likely to apply to university in the first place (Extract A, Figure 3), so when they do go and drop out we are failing to maximise the use of scarce resources • Universities are trying to increase accessibility but failing to keep poorer students. This means that graduates are increasingly likely to be from wealthier families and poorer student are leaving because of concern over high levels of debt • Would this happen if England had low or no tuition fees like Germany? • Candidates may draw a PPF showing the country operating within the frontier because as a nation we are not making the most of our labour force • Opportunity cost. Government and universities spending money/resources that could have been spent elsewhere	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	**1–2**	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	**3–4**	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	**5–6**	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Answer	Mark
6(b) continued	**Evaluation 4** • Extract A refers to the fact that 'Students from all backgrounds are more likely to go to university than ever before' • Poorer students are continuing to attend university and various schemes exist to support them • Questioning the extent of the effect over time. How significant is this? Are tuition fees a significant contributor to drop-out rates? • Judgement should focus on how important this effect is NB KAA can be treated as Evaluation and vice versa	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	**1–2**	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	**3–4**	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** Reasons why fishing as much as possible is rational • This is completely rational from the perspective of a fishing company, which has revenues clearly linked to size of catch. • Shows an understanding of profit maximising behaviour. 'Private producers will act in their own self-interest and exploit common access resources to maximise profit.' • Figure 1 shows Sweden fishing at an excess of 52.4% in excess of TAC. • Using techniques to increase the size of the catch will help to minimise costs • 'Common access resources provide an opportunity for individuals to create profit, while spreading negative externalities to everyone else.' **NB KAA can be treated as Evaluation and vice versa**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
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Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** Reasons why fishing as much as possible is irrational: • 'Exploitation is unsustainable and will lead to the depletion of resources; this is known as the tragedy of the commons.' • Short run profits means that stocks are rapidly depleted so in the long run there are no resources for them to fish e.g. individual firms find that dwindling fish stocks mean their own revenue base is contracting. '90% of fish stocks are depleted.' • It may be rational for firms to behave this way but also it is harmful to society of which those firms are a part e.g. negative externalities impact society as a whole	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Understanding of rational behaviour e.g. utility maximisation • Consumers prioritising low prices (e.g. 'free trials') and better service • Consumers cancelling subscriptions due to decline in • 'value for money and satisfaction with the quality of shows' • Consumers cancelling subscriptions due to cost of living concerns • Reported 200,000 cancelled subscriptions in the first quarter and another 2 million forecast to leave • Subscribers switching to Disney who has higher customer satisfaction rankings e.g. more original content and new release films. • Subscribers joining new streaming services during the global health crisis when less alternative forms of entertainment were available e.g. closed cinemas and restaurants **NB: For Level 3 candidates must refer to Netflix subscribers** **NB: Netflix subscribers acting irrationally may be seen as KAA and then rational behaviour as EV**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated.

		Economic ideas are applied appropriately to the broad elements of the question.

	Indicative content	Mark
6(b) continued	**Evaluation 4** e.g. • Irrational behaviour by Netflix subscribers • Purchasing additional packages with similar services/little differentiation • Computational weakness - consumers failing to understand correct price plans and not understanding price changes • Habitual behaviour - regular direct debit that is paid regardless of usage, multiple subscriptions that aren't used, unaware of need to cancel after short term trial period • 'Forgetful subscribers' • Influencing by nudges e.g. 'next-up' and 'auto-play' • features • Binge watching • Lack of information - may be on the wrong price plan	**(4)**

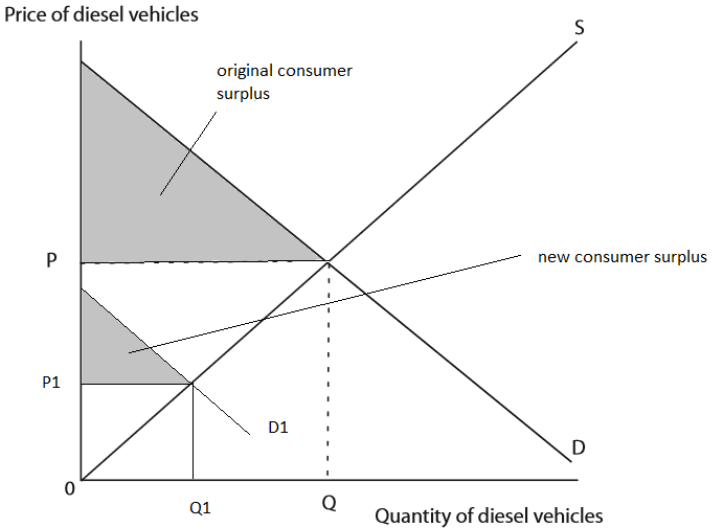
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Shows or demonstrates understanding of rational behaviour as economic agents maximising utility and or profits. • Reasons why meat-substitute consumption may be rational. • Reference to a plant-based diet lowering emissions (Extract A). • Reference to health. 8.1 million deaths could be avoided if we went plant based. • Reference to $700bn-$1trn per year in terms of savings on healthcare costs and lost working days'. **NB KAA can be treated as Evaluation and vice versa**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** Reasons why switching to meat-free diets is not rational: • Meat-substitutes a trend/ fad against poor dietary habits. Herd behaviour and the 'marketing greenwash to beat all others'. • Large companies exploiting the shift towards non-meat products e.g. Nestle, Unilever, Kelloggs. • Recognition that processed meat substitute products will 'do more for food company profits than for the planet or your health.'.	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

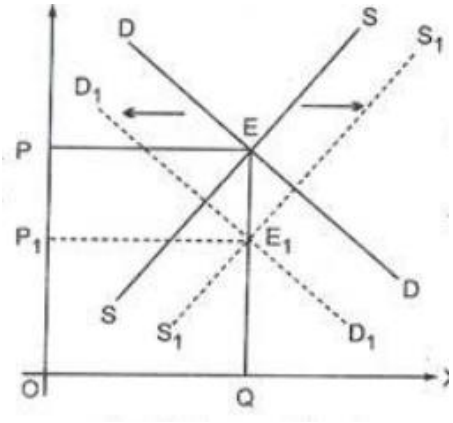
Question Number	Answer	Mark
2 (a)	**Application 2** Identify demand shifts left (1) Annotate or identify reduced consumer surplus (1)  **NB If the candidate shows an incorrect shift, but the new consumer surplus is correct, award 1 mark**	**(2)**

Question Number	Answer	Mark
2(b)	**Knowledge 1** **The only correct answer is C** ***A*** *is not correct because irrational behaviour would suggest an increase in demand.* ***B*** *is not correct because if consumers expected price of diesel to rise they would increase demand for diesel.* ***D*** *is not correct because they are not rival products.*	**(1)**

Question Number	Answer	Mark
2(c)	**Knowledge 1** **Knowledge** 1 mark for definition, e.g. Amount consumers are willing and able to buy (1) Amount consumers buy at a particular price/period of time (1)	**(1)**

Question Number	Answer	Mark
5(a)	**The only correct answer is A** **B** *is not correct because a rise in costs would lead to a left shift of the supply curve* ***C*** *is not correct because an introduction of indirect taxes would shift the supply curve to the left* ***D*** *is not correct because a subsidy on producers will cause a right shift of the supply curve*	**(1)**

Question Number	Answer	Mark
5(b)	**Knowledge 1 Application 2** **Knowledge/ Understanding** 1 mark for understanding of a base year, within the calculation of an index number (understanding my be implicit) **Application** 400000-28725/ 400000 X 100 = 28.04 **NB award 3 marks for the correct answer of 71.96** **NB award maximum of 2 marks if final step not completed and answer given as 28.04**	**(3)**

Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 2** **Knowledge** • Supply and demand diagram annotated to show: a right shift in the supply curve (1) and a left shift in the demand curve (1) **Application** • New lower price (1) • New equilibrium price at D1 and S1 as illustrated below, for example (1)  	**(4)**

Question Number	Answer	Mark
2(b)	**Knowledge 1** **The only correct answer is C** ***A*** *is not correct because they have mistakenly only calculated the change in price as a percentage change* ***B*** *is not correct because they have mistakenly calculated -the new price divided by the original price initially* ***D*** *is not correct because they have mistakenly calculated the change in price by the new price.*	**(1)**

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 2** **Knowledge/understanding** 1 mark for definition of diminishing marginal utility e.g. as decline in the additional satisfaction a person derives from consuming an additional unit of that product. **Application** 2 marks for linked application (1+1), e.g. • this is the premise on which 'All you can eat buffet' operates as they know each additional plate of food (1) provides less utility than the one before (1) • most people will eat only until their marginal utility matches the price they paid (1) OR people eat until they are satiated (1) otherwise if you kept eating you would reach the point of being sick or dissatisfied (dis-utility). (1)	**(3)**

Question Number	Answer	Mark
4(b)	A	**(1)**

Question Number	Answer	Mark
5(a)	D	**(1)**

Question Number	Answer	Mark
5(b)	**Knowledge 1, Application 2** **Knowledge** 1 mark for identifying that a price fall would result in a fall in total revenue OR definition of total revenue. **Application** 2 marks for linked application (1+1), e.g. • the percentage rise in quantity demanded is lower than the percentage fall in price (1) as demand is price inelastic OR less than 1/-1(1) • diagram showing inelastic demand (1) showing increased revenue is less than lost revenue (1) or numerical example of revenue changes (1+1).	**(3)**

Question Number	Answer	Mark
2 (a)	**Application 2** **Application** PED = %△Qd/%△P price rise = 5/60 x 100 = 8.3% (1) **or** -5.4%/+8.3% (1) PED = (-)0.65 Award 2 marks for (-)0.65 **NB if answer given is between (-)0.7 and (-)0.6 award 2 marks.**	**(2)**

Question Number	Answer	Mark
2(b)	**The only correct answer is A** ***B*** *is not correct because 'population' is a non price determinant of demand not PED determinant* ***C*** *is not correct because 'cost' is a non price determinant of supply not PED determinant* ***D*** *is not correct because 'expected rise in the price' is a non price determinant of demand not PED determinant*	**(1)**

Question Number	Answer	Mark
2(c)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition: 'all other things being equal' (1) OR All other factors remain unchanged (1)	**(1)**

Question Number	Answer	Mark
3(c)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • Where one party in a transaction has more or superior information compared to another (1) • Providers know more than consumers or vice versa (1)	**(1)**

Question Number	Answer	Mark
4(a)	**The only correct answer is B** ***A*** *is not correct because as a quantitative skill this describes the range rather than median so acts as a distractor* ***C*** *is not correct because as a quantitative skill this describes the mode rather than median so acts as a distractor* ***D*** *is not correct because as a quantitative skill this describes the mean rather than median so acts as a distractor*	**(1)**

Question Number	Answer	Mark
4(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for correct definition of inferior good e.g. as incomes rise demand falls or YED formula = %△Qd/%△Y Or as incomes falls more demand for inferior goods **Application** 1 mark for, e.g. 1 mark for calculating percentage change in income = 1.5/24.2 =+6.2% 1 mark for calculating YED = -3%/+6.2% = -0.48 (accept range -0.48 to -0.5) **Analysis** 1 mark for linked development e.g. bus travel is an inferior good as YED is negative (1). Or explanation of the inverse relationship (1).	**(3)**

Question Number	Answer	Mark
5(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • Measure of the welfare (utility) that people gain from consuming goods and services • Difference between the total amount that consumers are willing and able to pay and the total amount that they actually pay. • Diagram showing area under the demand curve and above the market equilibrium price.	**(1)**

Question Number	Answer	Mark
3(a)	**Application 1** **The only correct answer is D** ***A*** *is not correct because a negative figure would indicate they are complements* ***B*** *is not correct because a figure less than one indicates a distant relationship* ***C*** *is not correct because whilst positive is a substitute a figure less than one does not indicate a close relationship.*	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1, Application 2** **Knowledge/Understanding** 1 mark for identifying revenue as price x quantity (this understanding may be implicit) **Application** 1 mark for calculating percentage change in quantity (-)1.5% or actual change 18.8135 million tickets (allow 18.8 million) 1 mark for correct answer £143.547 million (allow 143.5 to 143.6) **NB Award 3 marks for correct answer £143.547 million (allow 143.5 to 143.6)** **NB Maximum of 2 marks if correct answer is not given**	**(3)**

Question Number	Answer	Mark
4(c)	**Knowledge 1** **Knowledge** 1 mark for definition, e.g. an indirect tax is imposed on producers (suppliers) by the government (1) tax on good or service which is added to their price (1) tax on consumer expenditure (1)	**(1)**

Question Number	Answer	Mark
5(a)	**Application 1** **The only correct answer is C** ***A*** *is not correct because they may multiplied 8.75 by -0.1* ***B*** *is not correct because they have mistakenly taken 2017 as the original year in the percentage change calculation* ***D*** *is not correct because the percentage change in quantity demanded has not been multiplied by -0.1.*	**(1)**

Question Number	Answer	Mark
5(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for recognition of the effect of a change in income on the demand **Application** 1 mark for application to Freddo, e.g. • YED is negative (1) • Freddos is an inferior good (1) • YED is inelastic **Analysis** 1 mark for linked development, e.g. • Sales revenues fall as incomes rise or • Sales revenue rise when incomes fall • Company should plan to produce less when the economy does well or • Company should plan to produce more when economy/incomes are not growing	**(3)**

Question Number	Answer	Mark
2(a)	**The only correct answer is D** ***A*** *is not correct because the concept explored is PED not YED* ***B*** *is not correct because as unemployment falls fewer people will use buses* ***C*** *is not correct because XED is concerned with the relationship between complements or substitutes*	**(1)**

Question Number	Answer	Mark
2(b)	**Knowledge 1, Application 1 and Analysis 1** **Knowledge/understanding** 1 mark for reason Possible answers include: • Recognition that the lower the PED the less price sensitive the product is (1) quantity demanded does not change significantly with price (1) **Application** • If, for example, a product with a PED of -0.1 had a 10% price rise, sales volume would fall by 1% (ceteris paribus) (1); so the 10% higher price per unit would far outweigh the 1% reduction in units sold (1) **Analysis** • The lower a product's price elasticity, the easier it is to boost revenue by increasing the price (1) if the firm raises its price it will increase the value of its sales (1)	**(3)**

Question Number	Answer	Mark
2(a)	**Knowledge 1, Application 1 and Analysis 1** **Knowledge/understanding** 1 mark for factor e.g. • Supply of gas is price inelastic (1) • Lack of storage/stockpile (1) • Lack of spare capacity (1) • Inflexible resources (1) • Time period (1) • Alternative substitute source of gas available (1) **Application** • Gas prices have risen (1) • Supply of gas has fallen in 2021 (1) **Analysis** 1 mark for linked development e.g. less availability means gas suppliers are unable to respond to changes in the market price (1) in the long-run firms can respond (1)	**(3)**

Question Number	Answer	Mark
2(b)	**The only correct answer is C** ***A*** *is not correct because a 10% increase in the price of gas would cause a much smaller increase in supply* ***B*** *is not correct because there is not enough information to say* ***D*** *is not correct because the supply of gas is more responsive to changes in price than the demand*	**(1)**

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 1 and Analysis 1** **Knowledge/understanding** 1 mark for reason Possible answers include: • Firms will aim to maximise profits (1) • Helps to ration demand (1) **Application** • For reference to the stem e.g. 'shortages of crisps, petrol and other items' (1) • 'businesses increase prices' (1) • **Analysis** Consumers bid-up prices (1) **NB Diagram showcasing excess demand can earn either 1 application and/ or 1 analysis mark**	**(3)**

Question Number	Answer	Mark
4(b)	**The only correct answer is D** ***A*** *is not correct because a negative figure would indicate they are complements* ***B*** *is not correct because a figure less than one indicates a distant relationship* ***C*** *is not correct because whilst positive is a substitute a figure less than one does not indicate a close relationship*	**(1)**

Question Number	Answer	Mark
5(a)	**Knowledge 1, Application 1** In June 2023, Tesla further reduced the price of its Model 3 saloon by £4200 from £42990. In a fiercely competitive market it has been forecast this will lead to a 15% increase in demand by June 2024 Initial cost £42,990 Reduction in price £4,200 New price £38,790 **Knowledge** %change in QD/%change in price = PED (1) or %change in price = difference/original x100 Change in price = 9.77% (or 9.76) (1) **Application** 15/-9.77 = - 1.54 Allow 1.5 to 1.54 range Award full (2) marks (K+APP) if within this range, allow positive or negative PED for 2 marks	**(2)**

Question Number	Answer	Mark
5(b)	**Knowledge 1** **Knowledge/ Understanding** 1 mark for definition e.g. 'All other things being equal'	**(1)**

Question Number	Answer	Mark
5(c)	**Knowledge 1** **The only correct answer is A** B is incorrect as population size will increase the market size and, most likely, overall demand but would shift not affecting PED C is incorrect as this is a determinant of supply and not PED D is incorrect as unsold vehicles / spare stock/ capacity would affect PES and not PED	**(1)**

Question Number	Answer	Mark
1(a)	**The only correct answer is A** ***B*** *is not correct because savings are money, which is not a capital good* ***C*** *is not correct because shares in a company are another form of saving* ***D*** *is not correct because oil reserves are an example of natural resources or 'land'.*	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 1 Application 1 Analysis 1** **Knowledge** 1 mark for defining either renewable or non-renewable resources **Application** 1 mark for a relevant example e.g. coal, oil, natural gas are non-renewable **Analysis** 1 mark for linked development of the distinction e.g. non-renewable are scarce/ finite	**(3)**

Question Number	Answer	Mark
2(a)	Knowledge 1, Application 2 **Knowledge/Understanding** 1 mark for identifying formula for PED (this understanding may be implicit) **Application** 1 mark for calculating percentage change in quantity demanded (-4%). -0.2 = x/+20 1 mark for 4% of 2.5m is 100000 sausage rolls Award 3 marks for correct answer of 2.4m	**(3)**

	0.05/ 1.2 = 4% change in price 20% price change PED -0.2 -0.2 = x /+20 0.2 = -4/+20 NB Maximum of 2 marks if correct answer is not given	

Question Number	Answer	Mark
2 (b)	**The only correct answer is C** ***A*** *is incorrect as is perfectly inelastic and would mean the coefficient would be 0* ***B*** *is not correct as the coefficient would be greater than 1* ***D*** *is not correct because the coefficient would be 1 with the same proportionate change in quantity demanded as price*	**(1)**

Question Number	Answer	Mark
3(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • A **free market** is a system of buying and selling goods and services without government intervention.	**(1)**

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(a)</td><td>
Application 2, Knowledge 2

Application:
Accurate insertion of data in both columns in table (either fully or as far as the new equilibrium).
(1+1 marks)

<table>
<tr><th>Price £</th><th>Quantity demanded per month (000)</th><th>Quantity supplied per month (000)</th><th>New Quantity demanded per month (000)</th><th>New Quantity supplied per month (000)</th></tr>
<tr><td>25</td><td>5</td><td>9</td><td>8</td><td>10</td></tr>
<tr><td>24</td><td>6</td><td>8</td><td>9</td><td>9</td></tr>
<tr><td>23</td><td>7</td><td>7</td><td>10</td><td>8</td></tr>
<tr><td>22</td><td>8</td><td>6</td><td>11</td><td>7</td></tr>
<tr><td>21</td><td>9</td><td>5</td><td>12</td><td>6</td></tr>
</table>

Knowledge/understanding:
Calculation of new equilibrium price of £24 (1) and quantity of 9 000 (1)

NB do not award for quantity of 9

Award full marks for £24 and 9 000
</td><td>(4)</td></tr>
</table>

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(b)</td><td>C</td><td>(1)</td></tr>
</table>

Question Number	Answer	Mark
2(a)	**Application 2** **Application:** 1 mark for applying the formula and 1 mark for the correct answer -21.65% ÷ 17.78% (1) = -1.2 (1) Correct calculations of both percentages accept (-) 0.217 and (-) 0.178 = 1 mark **NB if the answer given is -1.2 or 1.2, award 2 marks**	**(2)**

Question Number	Answer	Mark
2(b)	**Knowledge 1, Analysis 1** **Knowledge/understanding:** 1 mark for original **and** new sales revenue Original sales revenue: £7.20 × 97 million = £698.4 million New sales revenue: £8.48 × 76 million = £644.5 million **Analysis:** 1 mark for the change in revenue: -£53.9 million (accept close approximation, for example a fall of £54 million) **NB if the answer given is -53.9m/53.9m award 2 marks (this may be stated as -7.7% or 7.7%)** **NB If million is missing from the answer award up to 1 mark**	**(2)**

Question Number	Answer	Mark
2(c)	B	**(1)**

Question Number	Answer	Mark
3(a)	**Application 2** **Application:** 568 × 1.8 million (1) Accept 1022 million or 1022.4 million for 2 marks. Accept 1,022,400,000 **NB If million is missing from the answer award up to 1 mark**	**(2)**

Question Number	Answer	Mark
3(b)	**Application 2** **Application:** 1 mark for the percentage of subsidy for consumers: **71 ÷ 568 X 100 = 12.5%** (1) 1 mark for the percentage of subsidy received by producers: **497 ÷ 568 X 100 = 87.5%** (1) Award 1 mark if the answers are transposed **NB** if no correct calculations, award up to 1 mark for: correct annotation of diagram depicting consumer and producer subsidy areas OR the actual consumer subsidy per unit (71 rupees) and producer subsidy per unit (497 rupees) OR consumer subsidy (127.8 million rupees) and Producer subsidy (894.6 million rupees)	**(2)**

Question Number	Answer	Mark
2(a)	**Application 2** **Application:** 1 mark for appropriate calculation e.g. £2 ×73 million = £146 million (1) **OR** £0.24 ×73 million = £17.52 million (1) **OR** £1.76 ×73 million (1) **OR** correct answer with no millions (1) Answer = **£128.48 million** (accept between £128 million and £129 million) **Award 2 marks for correct answer (128m)**	**(2)**

Question Number	Answer	Mark
2(b)	**Knowledge 1, Analysis 1** **Knowledge:** 1 mark for e.g. • The demand for use of gaming machines is likely to increase (1) • It is a substitute for national lottery tickets (1) • Substitutes have a positive cross elasticity of demand (1) **Analysis:** 1 mark for e.g. • Increase by 128% in response to a 100% increase in the price of national lottery tickets (1) • 1.28 cross elasticity of demand indicates they are **close** substitutes (1)	**(2)**

Question Number	Answer	Mark
2(c)	**The only correct answer is C** ***A*** *is not correct because the flood defence scheme is non-exclusive* ***B*** *is not a private good because flood defence scheme is non-exclusive so you are unable to charge private individuals that benefit from the scheme* ***D*** *is not correct because it is a distractor in lacking meaning but also indicating that the candidate is confusing rivalry with the non-rivalrous nature of public goods*	**(1)**

Question Number	Answer	Mark
3 (a)	**Application 2** **Application 2:** 1 mark for appropriate calculation /formula e.g. $\frac{1.3 \times £489\,000}{100}$ (1) **OR** 489 000 ×0.013 (1) Answer = **£6 357** **Award 2 marks for correct answer (6 360)**	**(2)**

Question Number	Answer	Mark
3(b)	**The only correct answer is C** ***A*** *is not correct because the candidate has mistakenly done the average house price in North East of England to the average house price in London* ***B*** *is not correct because the candidate has made a computational error* ***D*** *is not correct because the candidate has made a computational error*	**(1)**

Question Number	Answer	Mark
5(a)	**The only correct answer is A** ***B*** *is not correct because the candidate has divided by the new year rather than the original year* ***C*** *is not correct because the candidate has looked at the difference in quantity sold between 2014 and 2015 rather than answering the question between 2011 and 2015* ***D*** *is not correct because the candidate has looked at the decrease in the quantity of PC's not the percentage decrease*	**(1)**

Question Number	Answer	Mark
5(b)	**Knowledge 1, Analysis 1** **Knowledge:** 1 mark for likely reason in the decrease in sales of PCs e.g. • Development of substitutes such as Tablets or iPads or iPhones (1) • Fall in global real incomes (1) • Fall in price of substitutes (1) **Analysis:** 1 mark for linked development e.g. • Tablets are more convenient to carry round (1) • New technology in other personal devices so becoming more powerful in their functions (1) • Fall in global incomes means that consumers are less likely to buy normal goods such as PCs (1)	**(2)**

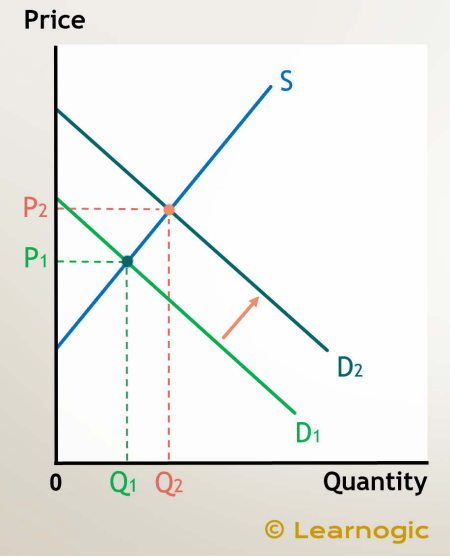
Question Number	Answer	Mark
5(c)	**Application 2** **Application 2** 1 mark for appropriate calculation /formula e.g. the sum of 5 largest figures = 190 239 (1) $\frac{190\ 239\ \text{(million)}}{276\ 700\ \text{(million)}} \times 100$ Answer = **68.8%** (Accept between 68% and 69%) **Award 2 marks for correct answer (68.8)**	**(2)**

Question Number	Answer	Mark
1(a)	**Application 2** Price elasticity of supply calculation % change in quantity supplied (28 268/134 612 x 100) = 21% (accept range 20.9 to 21) (1) PES = 21/5.4 (1) = 3.9 **Award 2 marks for 3.9** **(Accept a range between 3.8 and 4)**	**(2)**

Question Number	Answer	Mark
1(b)	**Application 1** **The only correct answer is C** **A** is not correct because the PES does not equal to infinity **B** is not correct because the PES does not equal zero **D** is not correct because the PES is not less than one	**(1)**

Question Number	Answer	Mark
1(c)	**Knowledge 1, Analysis 1** Identification of a factor determining PES (1) e.g • levels of spare capacity • stocks of finished goods and components available e.g. bricks • time period and production speed • level of factor mobility/flexibility • availability of bricklayers, electricians etc • availability of land • planning permission/regulations • availability of technology/machinery to build Explain as to the impact on price elasticity of supply (1) e.g. • limited availability of land/builders (1) so supply will be inelastic (1)	**(2)**

Question Number	Answer	Mark
1(a)	**Analysis 1** **The only correct answer is D** ***A*** *is not correct because fixed costs are not related directly with output in the short-term* ***B*** *is not correct there is no information available on income changes* ***C*** *is not correct because there is no information available on price changes*	**(1)**

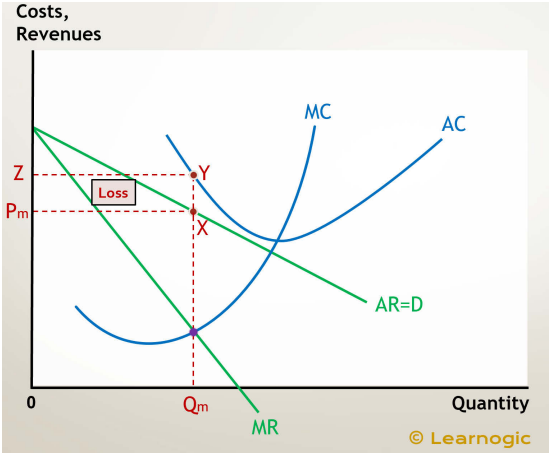
Question Number	Answer	Mark
1(b)	**Knowledge 2, Application 2** **Knowledge** - Correctly labelled original demand and supply (1) annotated to show the demand curve shifted to the right (1) **Application** **As a result of demand shifting right:** – Price increase (1) – Output increase (1) – Original and new equilibrium points identified (1+1) ALLOW horizontal supply Award a maximum of three marks if supply also shifts Diagram e.g.  	**(4)**

Question Number	Answer	Mark
2(a)	**Application 2** **Application:** 1 mark for likely understanding e.g. • 5% x -1.37 (1) **OR** • 5 % x 1.37 (1) Answer = - **6.85%** **Award 2 marks for correct answer (accept any in the range of 6.8 to 7 or -6.8 to -7)**	**(2)**

Question Number	Answer	Mark
2(b)	**Application 2** **Application:** 1 mark for likely understanding e.g. • 5% x 0.63 (1) **OR** • 5% x -0.63 (1) **OR** Answer = **3.15%** **Award 2 marks for correct answer (accept any in the range of 3 to 3.2)**	**(2)**

Question Number	Answer	Mark
2(c)	**Knowledge 1** **The only correct answer is D** ***A*** *is not correct because demand is price-elastic and XED is positive (substitute)* ***B*** *is not correct because demand is price-elastic and XED is less than +1* ***C*** *is not correct because XED is positive (substitute)*	**(1)**

Question Number	Answer	Mark
3(a)	**Application 1** **The only correct answer is D** ***A*** *is not correct because -3.4 suggests an inferior good* ***B*** *is not correct because -0.74 suggests and inferior good* ***C*** *is not correct because +0.74 suggests a normal good which is a necessity*	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 2, Application 2**  Identification of profit maximising equilibrium where: ○ Downward sloping AR and MR (1) ○ AC above AR (1) ○ MC=MR (1) ○ Area of loss (1)	**(4)**

Question Number	Answer	Mark
1(a)	**Knowledge 2 Application 1 Analysis 1** **Knowledge/Analysis: Up to 3 marks for one reason e.g.** • Price elasticity of demand measures the responsiveness of demand to a proportionate change in price/formula (1) • Closeness of substitutes (1) young people have greater availability of substitutes – bus, walk, cycle/closer substitutes/adults bus dependent (1) • Proportion of income spent (1) greater proportion for younger people spent on bus travel (1) • Degree of necessity (1) adults getting to work may be more important than students getting to classes on time (1) **Application: 1 mark for reference to data e.g.** • Adult PED is -0.4, student PED is -0.7 (1) • Calculation e.g. 10% increase in price leads to a 7% decrease in demand for student tickets (1) • PED for young people is relatively less price inelastic (1) • PED for adults is relatively more price inelastic (1)	**(4)**

	N.B. Could be illustrated using a demand curve and may be awarded as application or analysis	

Question Number	Answer	Mark
1(b)	**The only correct answer is B** ***A*** *is not correct because 0.4/4.8 is an incorrect use of the formula* ***C*** *is not correct because the wrong PED has been selected,* *4.8x0.7* ***D*** *is not correct because 4.8/0.4 is an incorrect use of the formula*	**(1)**

Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 1, Analysis 1** **Knowledge and Analysis (3)** • The PES of oil is likely to be between 0 and 1 (1) • PES is likely to be relatively inelastic (1) • Change in price has little/no impact (less than proportionate effect) on supply of oil (1) • Diagram to show an inelastic supply (1) • Time lags (1) • Less inelastic for existing producers. Plants can be mothballed etc. (1) **Application (1)** 1 mark for e.g. • As oil companies may take years to develop oil fields when prices are high (1) • Companies can take 20 years to begin to extract oil (1) • They often have to continue producing oil even when prices fall (1) • UK government provided to 130 new licences	**(4)**

Question Number	Answer	Mark
2(b)	**The only correct answer is C** ***A*** *is not correct as XED shows the change in the demand for petrol cars in response to the change in price of diesel cars* ***B*** *is not correct as XED shows the change in the demand for petrol cars in response to the change in price of diesel cars* ***D*** *is not correct as the this would only occur if the prices of diesel cars fell by 100%*	**(1)**

	• magnitude/time	

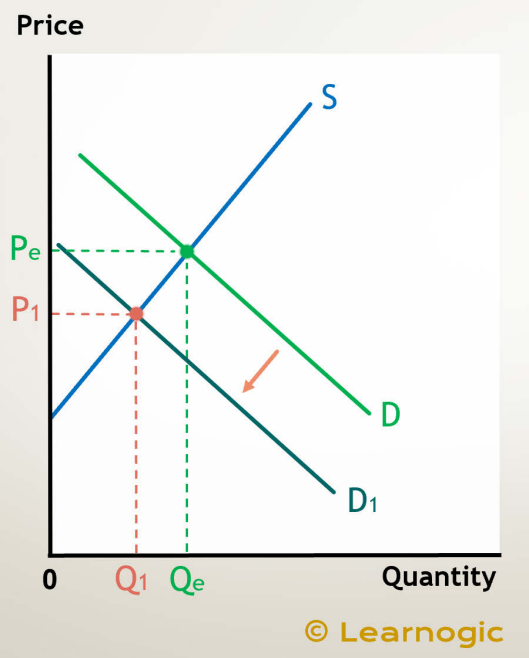
Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** 2 marks for each correct answer, e.g. • High-income countries = -4% / +10% (1) =- 0.4 (2) or 0.4 (2) • Low-middle-income countries = -5% / +10% (1) = -0.5 (2) or 0.5 (2) **NB Award 1 mark for a correct formula as an alternative for substituting correct figures on up to one occasion.**	**(4)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2 Analysis 2** **Knowledge and Analysis (1+1)x2** • Excludability (1) e.g. private ownership enables individuals to charge for the use of an asset (1) • Private ownership of resources (1) e.g. land, labour, capital and enterprise may be exploited by private individuals or firms (1) • Rivalry (1) e.g. private owners of resources can choose to buy and sell resources in order to generate profit (1) • Private ownership in a free market economy may lead to wage disparities or other inequalities (1+1) **Application (1+1)** 1 mark for use of Extract B e.g. 'private producers will act in their own self-interest' individuals 'maximise profit' 1 mark for use of own knowledge e.g. private ownership of a resource means someone is accountable for it (1) If someone owns something then they legally stop other people from using it (1)	**(6)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** 1 mark for e.g. Identifies the correct formula (1) e.g. the formula for XED is %ΔQD Good A/%ΔP Good B -8 = x/2% (1) -8 x 2% = -16% (1) (decrease in quantity demanded of bags of chips) 950 000 x 16% = 152 000 (1) 950 000 – 152 000 (1) = **798 000** **If correct answer is given award all 4 marks. Award up to 3 marks for correct working but overall correct answer missing.**	**(4)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** **Knowledge/understanding** 2 marks for e.g. A substitute good is one which has rivals in consumption / 'competitive demand' / A good that can be replaced by another to satisfy a want(1) A complementary good is one which is consumed with another good or service/ A good where the demand increase of one good causes an increase in demand of a related good/ service (1) **Application** 2 marks for, e.g. Netflix and Disney+ are substitute goods (1) Flatscreen televisions are consumed with streamed television services (1)	**(4)**

Question Number	Indicative content	Mark
6(c)	**Knowledge 2, Application 2** **Knowledge 2** Reference to value for reusable cleaning products to be + / coefficient higher than (0 or positive) (1) Reference to type of good (normal/ luxury) (1) **Application 2** • Reference to extract – consumers demand will be income elastic as incomes are falling (1) • Retailers have suggested that most customers do not wish to pay more for cleaning products in reusable packaging (1) With the average household income falling by 4.3% in 2023, sales of refillable cleaning products are expected to fall from 200 000 to 130 000 this year (1) • Could calculate YED using the information given • 70 000/ 200000 = 0.35 x 100 = 35% (1) • YED = -35/-4.3 = 8.14 (1 APP + 1APP) **If correct YED coefficient of between 8.1-8.14 given only with no explanation - award 2 APP, 2 marks maximum**	**(4)**

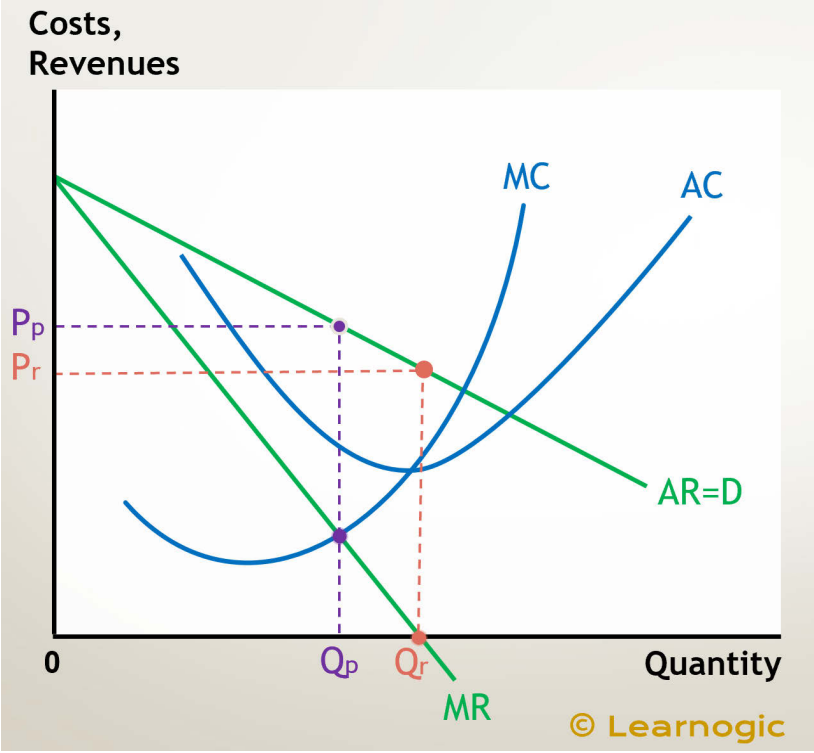
Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for definition of revenue or may identify clearly in diagram (1) **Application** 1 mark for using source data or linking ban to reduced consumption (1) and 1 mark for diagrammatic link to change in revenue (1), e.g. • "can reduce tobacco consumption" (1) leading to decreased revenue as shown in diagram (1) **Analysis** Diagram showing demand shifts left or becomes less price inelastic (1) and new equilibrium (1)  	**(5)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for understanding/formula of price elasticity of demand i.e. the responsiveness of quantity demanded to a change in price **Application** 2 marks for using data e.g. • reference to fees e.g. £9 250 (1) or PED e.g. -0.5 (1) • 825% increase in fees (2) **Analysis** PED is inelastic (1) so government and universities know that students are prepared to accept higher fees (1) Students are not price sensitive (1) so the level of fees is perhaps less important than other issues e.g. fairness of fees for different courses (1)	**(5)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for understanding the positive relationship between price increases and total revenue when PED is inelastic **Application** 2 marks for using data e.g. • price elasticity of demand for market is -0.6 (1) • Netflix's subscriber base 'has proven highly inelastic' (1) □ 3% of customers in a survey said they would cancel their subscription after Netflix's latest price rise (1) **Analysis** PED is highly inelastic (1) so firms are able to increase prices for streamed television services without a fall in total revenue (1) 10% rise in price causes a 6% fall in quantity demanded (1) this may be shown using a diagram (1+1)	**(5)**

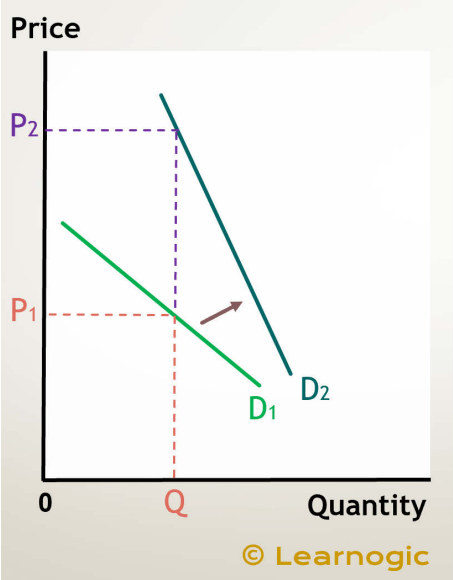
Question Number	Answer	Mark
2(a)	**Knowledge 2 Application 1 Analysis 1** **Knowledge and Analysis: Up to 3 marks for one reason e.g.** • Price elasticity of supply measures the responsiveness of supply to a proportionate change in price/formula (1) • Regulations (1) takes time to build/planning permission/immobile factors (1) • Lack of resources (1) shortage of land/materials/ labour/operating at full capacity (1) **Application: 1 mark for reference to data e.g.** • New York (PES 0.5), price inelastic supply (1) OR • Texas (PES 1.8), price elastic supply (1) • Calculation e.g. 10% increase in price in New York leads to a 5% increase in supply (1) • Supply of housing is relatively more price inelastic in New York than Texas/more price elastic in Texas than New York (1) **N.B. Could be illustrated using a supply curve and may be awarded as application or analysis (up to 2 marks)**	**(4)**

Question Number	Answer	Mark

2(b)	**The only correct answer is C** ***A*** *is not correct because 1.8/12 is an incorrect use of the formula* ***B*** *is not correct because 1.8/1.2 is an incorrect use of the formula* ***D*** *is not correct because 1.8x12 is an incorrect use of the formula*	**(1)**
Question Number	Answer	Mark
3 (a)	**Knowledge 2, Application 2** 1 mark profit maximisation output where MC=MR 1 mark profit maximisation price 1 mark revenue maximisation output where MR=0 1 mark revenue maximisation price Diagram required e.g.  	**(4)**

Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge/implicit understanding and analysis: up to 3 marks e.g.** • The percentage change in quantity demanded is less responsive to a change in price (1) • Is relatively low e.g. between 0 and -1 (or 0 and 1) / PED<1 (1) • Diagram showing price inelastic demand (1) • An increase in price will result in an increase in total revenue (1) • Reference to a characteristic e.g necessity, small proportion of income, few substitutes (1) **Application: up to 2 marks e.g.** • UK consumers use gas for 85% of central heating/'are some of the biggest user of gas' (1) • Gas generates a third of UK electricity (1) • There is no substitute for energy, at least in the short run (1) • Calculation of price change as percentage or percentage points (1) • Rise from around 50p per therm in Feb 2021 to 352p per therm in Dec 2021 (1) • 'An almost perfect example of price inelastic demand' (Extract A lines 7-8)	**(5)**

Question Number	Answer	Mark

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for discussing inelastic demand of the meat substitute products. This may be illustrated on a diagram as seen below **Application** 2 marks for using source data to explain increased revenue from meat-substitute products. • Despite high prices (1) demand continues to rise for these products (1) • Nestle buying Sweet Earth leading to its 'meat-free business hitting $1bn by 2029' (1) **Analysis** Accurate diagram – showing change in gradient/slope of the demand (1) and higher price marked on axes (1) e.g.  	**(5)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding** 1 mark each for any two of the following: • definition or formula of cross elasticity of demand (1) • tobacco cigarettes and e-cigarettes have a positive cross elasticity of demand (1) • understanding of substitute relationship e.g. similar products (1) **Application** 1 mark each for any two of the following: • e-cigarettes seen as less harmful so become more attractive compared to tobacco cigarettes (1) • tougher regulations and growing health awareness on tobacco (1) • they are substitutes because they offer nicotine (1) • applying cigarettes to diagram showing impact on e-cigarettes (1+1) • relative price differences e.g. Figure 1 or tax rises on tobacco (1) • use of numerical example e.g. a 10% rise in the price of tobacco cigarettes results in a less than 10% rise in demand for e-cigarettes **Analysis** Up to 2 marks for any one of the following in linked development OR two limited examples of analysis (1+1): • the increase in the price of traditional cigarettes is resulting in the change in quantity demanded of e-cigarettes increasing • consideration of whether distant or close substitutes • diagram showing relationship between price of one of the product and demand for the other	**(6)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding 2** Explanation of role/ relationship between the two products and how are substitutes (1) and that they have a positive XED (1) **Application 2** Reference to information from extract involving; environmental messaging/ litter posters/ 25p charge *i.e. Environmental messaging in cafes, for example posters about litter (1), increases the use of reusable coffee cups by 2.3% (1)* *The availability of reusable cups leads to an increase of 2.5% (1) whereas the distribution of free reusable cups leads to a further increase of 4.3% (1)* **Analysis 2** Reference to reusable cups being cheaper (1)– discussion of consumers switching due to price differentials (1) Diagram awardable showcasing demand falling (1) for single use cups with relevant explanation (1) Messaging helps to reduce asymmetrical information (1) in regards the increased external costs of single-use cups (1) Could showcase the XED and role of both reusable vs single use cups - award relevant diagram (1) with explanation (1)	**(6)**

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Accept answers based on switching between electricity suppliers as well as switching from electricity to other energy sources** **Knowledge/Understanding:** 2 marks for identification of two reasons (1+1) e.g. • It takes time for consumers to switch demand following price changes • Existing contracts make it difficult to switch in the short term • More substitutes available in the longer term **Analysis:** 1 mark for linked explanation of each reason (1+1) e.g. • Demand more price inelastic in short run as: takes time for consumers to adjust their consumption habits (habitual behaviour) / imperfect market information / no close substitutes. • Demand less price inelastic in long run as: some consumers are able to change their habits improved market information / substitutes may emerge such as greater use of gas appliances or installation of solar power panels. **Application:** 2 marks for reference to data (1+1), e.g. • Idea that demand is price inelastic (1) becoming less inelastic / more elastic in the long run (1) • Use of Extract A e.g. 70% of domestic consumers do not switch (1) • Development of new technology that reduces electricity consumption / electricity saving lightbulbs or energy efficient kettles (1) • Increased awareness of measures to become more price sensitive (1) to become more energy efficient (1) • Costs and time involved in switching to energy-saving appliances (1)	

- Improved consumer knowledge of consumption through smart meters (1)

- New firms might enter the market using gas / biofuel / solar / wind / households producing their own rather than buying electricity (1)

Evaluation: 2 marks for two evaluative comments, OR 2 marks for identification and linked development of one comment

- The figures are averages for all households – but great variation exists between households; for example, there may be no effect on households who have little concern for energy saving measures.

- High income households may not be affected by rising electricity prices as it comprises such a small part of total income - so demand remains very price inelastic.

- Some households may suffer from imperfect market knowledge in long run or cannot change their habits – so demand remains very price inelastic.

- Consideration of the magnitude of the change in elasticity (from -0.35 to -0.85); quite substantial in terms of doubling elasticity / or electricity demand still remains price inelastic in the long run as no suitable alternatives.

(8)

Question Number	Answer	Mark
6(b)	**Knowledge 2, Analysis 2, Application 2, Evaluation 2** **Knowledge/understanding:** 2 marks for identification of two non price determinants (1+1) e.g. • Change in taste and preference/quality of service • Changes in income • Price of substitute has risen/substitute less attractive • Price of complement has fallen/complement more attractive • Increased population/migration • Lower price in real terms • Lower prices – special offers/off-peak/forward booking. **Analysis:** 1 mark for linked explanation of each identified determinant to demand increasing/shifting right (this may be shown on a diagram) (1+1) Increase in population moved to commuter areas/improvement in rail stock e.g. wifi access. Income elasticity of demand Close substitute e.g. car travel, XED >+1 Close complement e.g. on-board meal, XED >-1 **Application:** 2 marks for reference to Figure 2 (1+1) or other data (1), e.g. • Approximately 50 billion rail passenger kilometres per year (1) to 65 billion (1) or increased by 15 billion rail passenger kilometres per year (2) or Increased by 30% (2)	

	• Economic recovery post 2008 crisis (1) • Cost of car travel/road congestion (1) • Quality of train meals/on board Wi-Fi access (1) **Evaluation:** 2 marks for two evaluative comments, OR 2 marks for identification and linked development of one evaluative comment, evaluating significance of factors or another reason as a counter-argument e.g. • Delays and cancellations (1) • Recession 2008- 2010 (1) • Car travel still cheaper/train delays and cancellations (1) • Rail meals expensive/congested trains so can't work on board (1) • Increased home working • Rail fares have risen (1)	**(8)**

Question Number	Answer	Mark
6(b)	**Knowledge 2, Analysis 2, Application 2, Evaluation 2** **Knowledge/understanding:** 2 marks (1+1) e.g. • Acknowledgement of price inelastic demand (1) • Acknowledgement of price inelastic supply (1) • Non-price determinants of demand (1) • Non-price determinants of supply (1) • Cross price elasticity of demand (1) **Analysis:** 2 marks for linked explanation (1+1) e.g. • Speculative demand, change income, taste and preference (1) • Supply chain failure/ harvest failure/weather/seasonality (1) • Price inelastic demand, lack of close substitutes, small proportion of income, necessity (1) • Price inelastic supply – time-lags with supply, storage problems (1) • Closure of cafés/farms/freight in 2020 (1) **Application:** 2 marks with at least 1 mark for reference to Figure 2 e.g. • May 2020 price falls 3.23% (1) • April 2020 price rises 4.28% (1) • Between April and May 2020 price moved by 7.51 percentage points (1) • Price falls from \$3.13 (Jan 2020) to \$2.99 (Feb 2020 (1+1) • Price rises \$2.99 (Feb 2020) to 3.27 (March 2020) (1+1) • Average price = \$3.32 (2) • Coffee crop harvest failure (1) • Coffee addictive (1) **NB allow up to 2 marks for diagram that enhances the written explanation elsewhere**	**(8)**

	Evaluation: 2 marks for two evaluative comments, OR 2 marks for identification and linked development of one evaluative comment e.g. • Depends upon the degree of price elasticity of demand when supply shifts (1) • Depends upon the degree of price elasticity of supply when demand shifts (1) • Use of buffer stocks (1) brings price stability (1) • Transitory changes (1) short-term shocks of disappear over-time (1) • Futures market (1) dampens price instability/removes volatility (1) • Easy to store (1) and therefore to release if there was a poor harvest (1) • Short-run/long-run (1) **NB award a maximum of 6/8 if no reference to Fig 2 and/or price elasticity**	

Question Number	Answer	Mark
1(b)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Knowledge/implicit understanding:** (1+1) marks e.g. • demand is price inelastic means that the percentage change in price causes a smaller percentage change in quantity demanded • demand is income elastic means that percentage change in income causes a greater percentage change in demand **Application:** (1+1 or 2) e.g. • food delivery firms' charge of £5 is a very small percentage of consumer income so they might be seen as essential or basic goods (Ext B line 5) • three dominant firms Just Eat, Uber Eats and Deliveroo (Ext B line2) • The food delivery industry has boomed in recent years (Ext B line 2) • cash rich, time poor (Ext B line 7) • income growth prior to 2020 meant delivery has boomed • HFSS addiction/habit forming • Convenient mobile app, so PED inelastic • 5 times more expensive than cooking at home **Analysis:** (1+1) development of each type of elasticity, e.g. • if demand is price inelastic then **revenue** will rise for the firm when it raises price • habit forming behaviour so PED inelastic • few close substitutes so PED inelastic • small part of overall consumer spending so PED inelastic • food delivery services are a very small percentage of consumer income so they might be seen as essential or basic goods • if food delivery is a luxury the demand likely to be income elastic, e.g. then the firms will benefit in times of economic growth, but lose demand in a recession • if food delivery is a treat in an economic downturn then it is an inferior good **NB up to 2 marks may be awarded for diagram(s) (1+1)** **Evaluation:** (2 marks for any relevant point, or two points 1 +1) • the 30% of prices paid by restaurants is not seen by the consumer • depends on geographical areas e.g. rural vs urban areas. • the worldwide health crisis might have caused distortions in the data • third-party food delivery firms are inferior goods if demand rises when incomes fall • other factors affect demand apart from income, e.g., availability of substitutes (eating in restaurants is impossible in global health crisis)	
	• discussion of normal vs inferior question e.g. compared to eating in a restaurant or cooking at home • income elastic vs. inelastic e.g. demand for third-party food delivery is price elastic for some income groups when incomes fall as it takes up a larger percentage of income	**(8)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Knowledge/implicit understanding:** (1+1) e.g. • Cross elasticity of demand shows the responsiveness of demand for one good to a change in the price of another / XED formula (1) • Value greater than 0 (1) **Application:** (1+1) e.g. • Declining market share of Netflix in figure 1 (1) • Rising market share of Disney+ in figure 1 (1) • Planned cancellations at Disney+ are lower than Netflix (1+1) • Subscribers rethinking their commitment to multiple subscriptions (1) • Example calculation of price changes e.g. Netflix price rise £1 leads to a greater percentage change at Disney+ (1+1) • Figure 1 shows the range of online streaming services providing similar service/growth of competition in the market/use of 'other' market share (1+1) • Netflix cutting its prices in India to compete with Disney+ and Prime (1) **Analysis:** 2 marks for linked explanation (1+1) • Explanation of substitutes, e.g. increase in the price of one streaming service will lead to an increase in the demand for other streaming services. (1+1) • Explanation of substitutes, e.g. declining satisfaction, cancellation and demand at one provider will lead to an increase in demand at an alternative (1+1) • Diagrammatic representation of positive correlation between substitutes (up to 2 marks) **Evaluation**: 2 marks for two evaluative comments, OR 2 marks for identification and linked development of one evaluative comment e.g. • Strength of substitutes • Each provider offers subscribers different shows that could be original and unique to them e.g. Stranger Things, so XED may be low causing them to be weak substitutes (positive XED less than 1) • XED can vary over time (1) - they were not viewed as substitutes during lockdown, they were viewed as complements, so many consumers had multiple subscriptions (1) • XED can vary over time with changes in real income (1) - they are viewed as stronger substitutes due to	

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Help to Buy is a subsidy making home ownership more attractive • Cross (price) elasticity of demand (XED) measures the responsiveness of quantity demanded for one good to a change in the price of another good. • Identify home ownership and rented properties as substitutes • Likely positive cross elasticity of demand – Help to Buy scheme may result in decrease demand in rental sector • Deposit size 5% rather than 20% - demand increases • Demand for rental properties decrease – diagram showing shift inwards • Price and quantity of rental properties to fall • Consumer and Producer surplus in rented sector declines • Alternative views valid e.g. Help to Buy may increase house prices and therefore increase demand for rented accommodation from those not eligible for Help to Buy. Help to Buy shifted demand for private houses to the right (increase) and that, ceteris paribus, this would shift demand for rented accommodation to the left (reduction).	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1-2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no links between causes and consequences
Level 2	3-4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relate them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5-6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** • Scale – "modest" uptake of the Help to Buy scheme • Time-scheme due to end in 2017 • Scope – more likely to affect "lower end" of property market. • Closeness of substitutes – home ownership is purchasing an asset renting is a cost of living. • Scheme only affects first time buyers • PES – planning restrictions • Regional variations • Other factors more significant e.g. income • Candidates may refer to long-term investment in private rented sector as buy-to-let increasing demand for home ownership.	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1-2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3-4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative Content	Mark
6(c)	**Knowledge 2, Application 2, Analysis 4,** PED is likely to be price inelastic as: - Change in price does not cause a significant change in quantity demanded/less responsive - Diagram to show price inelastic demand - 'high price does not seem to deter all new buyers, especially in sports and multi-player action games' - Examples of high prices of games - Addictive e.g. 10-16 hours per day - Irrational behaviour of buyers - In-game purchases bring in additional revenue - Price Discrimination - inelastic PED players have opportunities to spend more on in app purchases e.g. £9.99 Spiderman "skin" - Loyal customers willing to pay a high price - Market dominated by a few large firms/lack of choice arguments e.g. Microsoft/Activision merger - Use of data on games/prices to support argument - Habitual behaviour – monthly subscription payment - Likely to be a small proportion of adults' incomes - Possible discussion of how cheap per hour played the product is/comparison with other entertainment forms like cinema or Netflix - Influencers - top players get millions of views and may be sponsored by video companies. Makes consumers want to play the product themselves - Branding/brand strength making PED more price inelastic **NB: candidates could argue demand is price inelastic as KAA and demand is price elastic as evaluation (or vice versa)**	**(8)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative Content	Mark
6(c) continued	**Evaluation 4** PED may not be inelastic (or argument for elastic PED) - Cheaper games are available (there are plenty of alternatives) - Lower prices games can attract large sales e.g. Minecraft/Mario Kart 8 - Depends on which segment of the market the game is aimed - Large proportion of income (expensive product) - PED varies over time – only very inelastic at the point of release - Games have seen a drop off in demand after the pandemic, as consumers have less free time now - Many freemium games on offer. Free to play with just advertising and no need to purchase enhanced in app features - Subscription services offer a new alternative - Could change in the future with merger activity/ government intervention	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Identification of determinants of price elasticity of demand • Application – PED tobacco cigarettes -0.35; PED e-cigarettes -1.9. Reasons why tobacco cigarettes being relatively price-inelastic, e-cigarettes relatively price-elastic e.g.: • habitual consumption • tobacco broadly defined • proportion of income spent on tobacco cigarettes lower than switching cost of buying reusable e-cigarette kit • number of close substitutes • tobacco addictive necessity, e-cigarettes luxury (not yet addicted to). **NB to access Level 3 candidates need to consider tobacco and e cigarettes.**	**(9)**

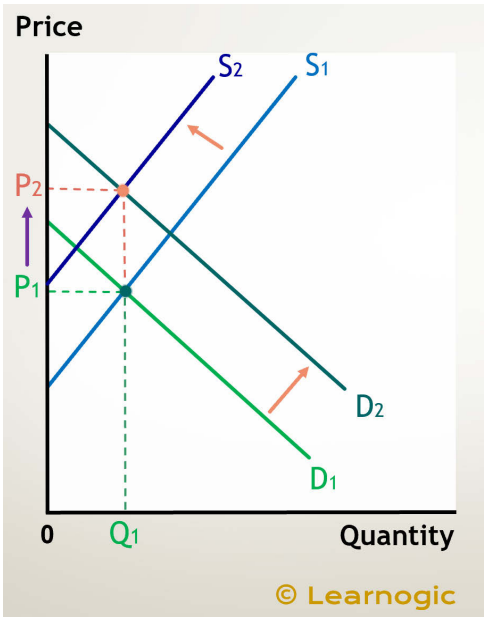
"Assess" was used as the command word for this question instead of "Discuss". In order to meet the expectations set out in the sample material the 10 mark level descriptors have been mapped on to the 15 mark levels as below on this one occasion. See Appendix 1 for full details.

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	4-6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	7-9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad

		elements of the question.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • significance of determinant • e-cigarettes habit forming • tobacco cigarettes narrowly defined • proportion of income spent on tobacco cigarettes is rising • becoming closer substitutes • tobacco addiction waning as lost glamour and health warnings, e-cigarettes nicotine addiction. • longer term response to rising tobacco prices	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** Demand shifting right and/or Supply shifting left e.g.  Reasons for demand shifting right: • Ageing population, migration • Medical technological advances • NHS as a substitute less attractive, inferior good, waiting times. • Peer pressure Reasons for supply shifting left: • high management and administrative costs • salaries/wages rising due to doctor/nurse shortages • removal of subsidy/higher tax on private health care treatment • rising rents of private hospitals • rising cost of machinery in health care. **NB For Level 3 KAA one relevant diagram.**	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	4-6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	7-9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • Magnitude depends on how proportionately large the shift in demand or supply is as a key determinant • Price elasticity of demand may be more price elastic in the long run, given improvements in the NHS, discouraging further price increases • Price elasticity of supply may be relatively price inelastic, given health infrastructure, so price rise may be very significant • Other factors may reduce price e.g. government subsidies, productivity gains, healthier lifestyles.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • The top five subjects generate earnings significantly above the average when compared to non-graduates whereas the bottom five reduce earning potential. Charging different fees would allow universities to maximise their own earning potential • Students would pay because they can clearly see that the benefits outweigh the costs • Some subjects cost more to staff, so they should cost more, allowing less expensive degrees to be reduced in price • Provide improved courses / give students better educational experience/attract more domestic students • Provide more funds to look after disadvantaged students • Improved courses will attract overseas students • Allow universities to cover the true cost of some courses. Examine variable fees in terms of allocation of resources • Discuss the consumer pays principle. Consumers i.e. students who benefit from university education (premium of £10 000) should pay/contribute to the cost? • Discuss the government / taxpayer role in financing higher education • Long term supply side benefits e.g. more skilled work force	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	**1–3**	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	**4–6**	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	**7–9**	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Answer	Mark
6(e) continued	**Evaluation 6** • Difficult to quantify exactly what should be charged for what subjects – figures can change over time • May be problematic for those from poorer families, who may see the higher cost of certain degrees as prohibitively expensive • Discussion of the concept of a 'broader education' – are degree choices simply about money. A creative arts subject may reduce earning potential when compared to the average but such subjects are essential for any liberal education	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	**1–2**	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	**3–4**	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	**5–6**	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

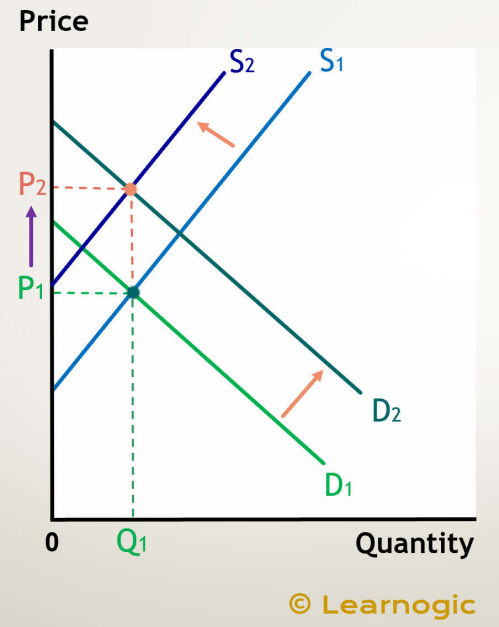
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** **Exploiting market power** • Jet2 increases 'price per person' by £36 after Thomas Cook closes (Fig 2) • Thomas Cook, with a 13% market share in 2019, exits the market causing Jet2 to gain market share, possibly close to 25% - gaining monopoly power/duopoly/oligopoly (Fig 1) • Jet2 may be using its monopoly dominance to set a price above the market clearing/allocatively market price • Consumer surplus reduced, producer surplus gained. • With less competition for package holidays, Jet2's PED becomes relatively more price-inelastic resulting in greater price setting powers for package holidays • Jet2 may now be able to set its price at a profit maximising level of £824 rather than possible sales maximisation/revenue pricing/limit pricing/predatory pricing at £788 • Demand for Jet2 holidays increasing as a close substitute to Thomas Cook • Remaining companies colluding, use of game theory. **N.B KAA may be used as EV and vice-versa.**	**(9)**

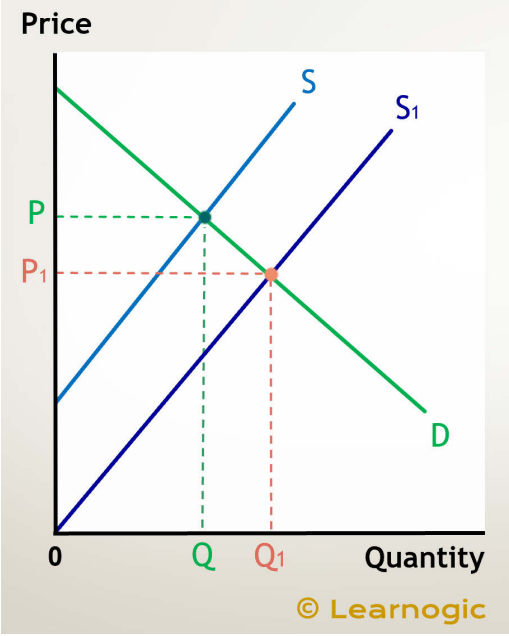
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** **Responding to market forces** • Demand for Jet2 holidays increasing as a close substitute to Thomas Cook. This may have been happening before Thomas Cook closure • Thomas Cook exiting the package holiday may have removed a surplus of package holidays • At the price of £788 there is now a shortage of holidays to Sorrento, as shown by excess demand due to cancelled Thomas Cook holidays • Market forces resulting in Jet2 extending their supply at higher prices • As they increase the price to £824 the market may clear • Consumers may decide not to buy at higher price - to stay home or become anxious about firms closing and cancelled holidays • Other factors may have caused demand to rise or supply to shift inwards • Market share may not be reallocated to Jet2 • Jet2 is a distant substitute and may not go to same destinations as Thomas Cook • Companies do not collude as fear a whistle-blower and fines 10% or revenue • Rising marginal costs for Jet2 to reduce CO_2 emissions/ buy more fuel to new destinations/ costly take overs. **NB KAA may be used as EV and vice-versa.**	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** Reasons why the market price within the streaming television content is rising; Reasons causing demand to shift; • The demand for streamed services has increased significantly because of quality content • Lockdowns have increased demand as people watched much more television whilst at home. • Since the end of the first quarter of 2014 to the end of 2021, Netflix has grown its U.S. subscriber base by 70%. Its subscription price for its most popular plan is now 62% higher than it was in the first quarter of 2014 • The supply of streamed services has increased with competition from Amazon prime and Disney+. The cost of gaining new subscribers has increased significantly Reasons causing supply to shift; • New content is expensive and has increased the costs of content producers. 'The costs of providing streaming television content have risen. • Consumers now expect original content, for example Stranger Things which costs around £10 million an episode to make'. • 'Furthermore, advertising in a saturated market is expensive' causing firms costs to increase **NB For Level 3 KAA one relevant demand and supply diagram is required showing D or S shift/or both**  	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • Discussion of the impact of demand and supply factors upon the price of streaming services • Discussion of 'saturation' may mean that prices will start to fall as number of substitute services, such as Apple TV, continues to increase • Discussion of the timescale under consideration. i.e. whether subscribers will continue to tolerate rising prices • Much depends on the PED and YED of streamed services and how high prices will affect demand • Diagram demonstrating understanding of increased competition could result in falling prices  	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
1(e)	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** **Microeconomic effects may include:** • Effects on consumers – e.g. higher prices (or lower prices if increased competition), more consumer spending on high street. Might include PED, YED (this might be developed as evaluation) • Effect on workers – higher incomes, more jobs • Effect on firms, e.g. increase in profits, revenue/decrease for independent non-branded coffee shops; cost of employing specific skilled workers e.g. baristas or other factors of production • Increase negative externalities e.g. more coffee cups • External economies of scale e.g. ancillary services such as cup manufacturers **Macroeconomic effects may include:** • Increased employment in service industry • Balance of payments e.g. outflow of profits to Starbucks • Effects on primary product producers • AD increase, negative/positive multiplier effects (local businesses might lose out to branded supermarket coffee outlets), inflation/growth • Tax implications e.g. transfer pricing • Income inequality • Environmental impacts **NB environmental impacts, labour markets, taxation or incomes can be seen as a micro or macro approach.** **Evaluation points may include:** • Extent of negative externalities depends on whether new processing plants for cups are set up/how alternatives are produced. • Depends on the extent of the increase in demand, PED, YED, XED – and if other areas are seeing declines. • Depends on the size of the multiplier • Depends on the level of spare capacity (LRAS for example) • Depends on growth levels, point at which AD and AS meet (if Keynesian approach) • Depends on the performance of other firms • Depends on the extent to which local shops are displaced	

	• Depends on the extent to which substitution can occur – e.g. people drink coffee instead of going to pubs • Depends on degree of profit repatriation, remittances, transfer pricing • Depends on whether coffee shops extends consumption spending or replaces demand for something else which might have different benefits/costs	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic factors. The answer demonstrates logical and coherent chains of reasoning.

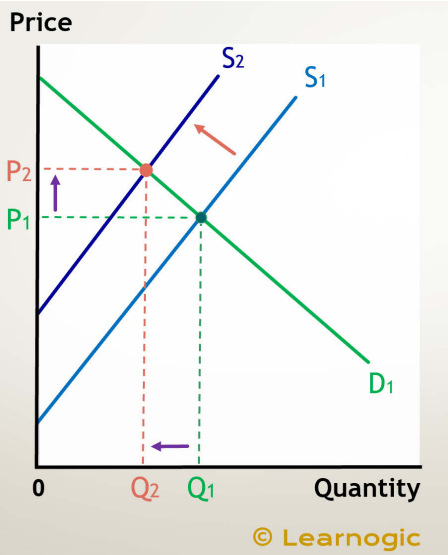
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced, leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** • Definition of microeconomic consequences • Identification of positive XED Positive consequences • Consequences for microeconomic agents of increased demand for electricity – consumers, electric vehicle manufacturers, electric vehicle dealers, battery manufacturers, freight companies, retailers, government, employees. • Use of cost and revenue diagram for to show the effect on profit of falling cost of electric powered vehicles/rising revenue. • Welfare effects on consumer and producer surplus of consumers switching to electric powered vehicles. • Efficiency – allocative, productive, dynamic • Positive external benefits • Reduced negative external costs (MSC>MPC) closer to social optimum Negative consequences • Use of cost and revenue diagram to show the effect on profit of rising cost of petrol or diesel/declining revenue (D=AR). • Welfare effects on consumer and producer surplus of consumers switching away from diesel or petrol. • Efficiency – x-inefficiency • Loss of government revenue as a large proportion of petrol or diesel price is tax • Negative external costs associated with e car manufacturing **NB: Negative consequences can be seen as KAA and positive consequences against as evaluation or vice versa.**	

	Evaluation • Predictions may be wrong – dynamic market forces between substitutes may result in cheaper sources of oil, electric power becoming more expensive. Lack of electric infrastructure. Distant substitutes, XED<+1. • Counterarguments made to the point raised e.g. Supernormal profits made may raise barriers to entry, firms may pursue sales maximisation rather than profit maximisation, congestion. • Information gaps • Different geographic markets – regulations and taxes on oil powered vehicles • Impact on the oil market will depend on how electricity is generated • Negative external costs partly offset by increased demand for electricity **NB: Negative consequences can be seen as KAA and positive consequences against as evaluation or vice versa.**	**(25)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	**1–4**	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	**5–8**	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	**9–12**	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	**13–16**	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	**1–3**	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	**4–6**	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	**7–9**	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for original supply and demand diagram with original equilibrium **Application** 2 marks for using source data explaining change in supply e.g. • Cod catch limits cut (1) by 50% (1) • Reduced limited TACs agreed for Celtic Sea/Irish Sea/west of Scotland (1) • Relevant use of data from Figure 1 (1+1) e.g. Identifying the country that is overfishing (1) Identifying the amount of overfishing (1) **Analysis** Accurate diagram – showing price rise or candidate states price rise (1) correct shift in supply (1) e.g.  	**(5)**

Question Number	Answer	Mark
5(a)	**Knowledge 1 Application 1 Analysis 1** **Knowledge** 1 mark for e.g. • Recognition that supply is price inelastic • It takes time for firms to respond **Application** 1 mark for, e.g. • Flour producers cannot process the wheat into flour quickly enough • It takes time for wheat to grow • It is difficult to store wheat because it is bulky and perishable **Analysis** 1 mark for linked development e.g. a diagram showing inelastic supply or an explanation of a small quantity response to a change in price using numerical or other explanation	**(3)**

Question Number	Answer	Mark
5(b)	**The only correct answer is D** ***A*** *is not correct because the decimal place is in the wrong place* ***B*** *is not correct because the decimal place is in the wrong place* ***C*** *is not correct as the price change would need to be 33.33%*	**(1)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge/understanding** 1 mark for e.g: • definition or formula or diagram of price elasticity of supply. Price elasticity of supply (PES) measures the responsiveness of quantity supplied to a change in price. PES can be calculated using the following formula: PES= percentage change in Quantity Supplied (%Δ in Qs) / percentage change in Price (%Δ in P) **Application** Linked application focussed on new housing stock (1+1) e.g. • Price elasticity of supply of 1 means unitary elasticity; PES>1 means elastic; PES <1 means inelastic (1) • 1 mark for identifying Supply elasticities in the USA or Finland are at or above unity (1) and 1 mark for identifying a country with particularly low elasticities of supply e.g. the Netherlands or the UK (1). • Candidates who compare the elasticities of one country where supply is elastic and one country where supply is inelastic: e.g. USA +2.0 (1) and UK +0.4 (1). • Supply is particularly unresponsive to prices in the Netherlands, more than ten times less responsive than in the USA (1+1). • A numerical illustration of the effects of price changes in different countries (1+1) **Analysis** Linked analysis (1+1) e.g. • Above unity PES implying that in response to a demand shock housing output will increase proportionally more than prices (1) and below unity where housing supply is relatively unresponsive (1). • Explaining how it is easier to build new houses in the US compared to the UK (1) where it is more difficult to build new houses e.g. due to planning restrictions in UK (1). • Allow other reasons/factors that affect PES e.g. land availability, technology or time(1+1).	**(5)**

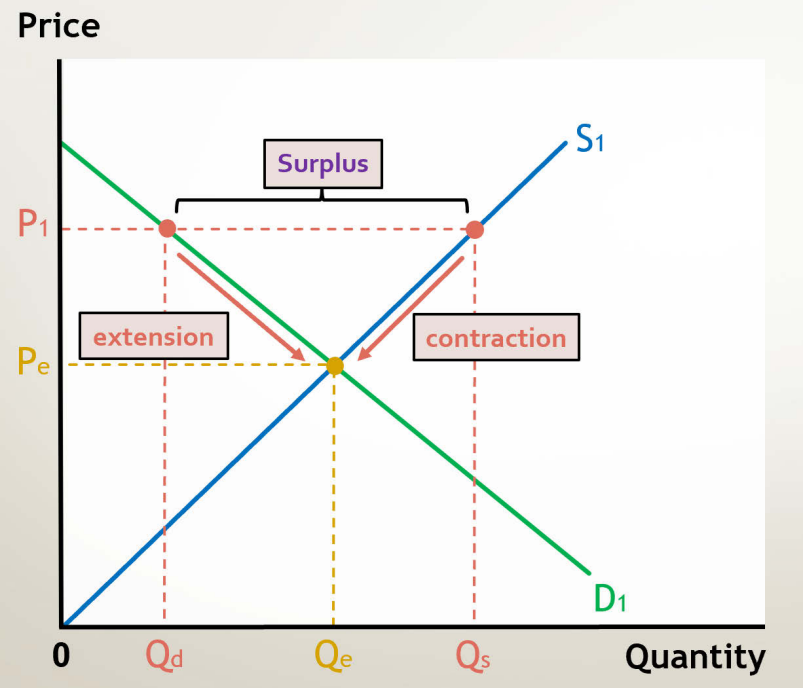
Question Number	Answer	Mark
6(c)	**Knowledge 1, Application 1 Analysis 1** **Award up to 3 marks for each factor**: **Knowledge/understanding** • Identification of two separate reasons: number of producers, spare capacity, how easily switch from other products, storage ease, length of time to produce (all 1 mark) **Application** 1 mark for, e.g. • Reference to goji berries. (1) • Reference to oyster mushrooms (1) **Analysis** Linked development of how these agricultural goods supply will be affected by a range of factors **e.g.** • The time it would take to grow these new products and to harvest them would affect their PES (1)	**(6)**

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Shows or demonstrates understanding of price elasticity of supply. • Reasons why uranium is price inelastic. • Diagram to show price inelastic supply. • Time. Two years to build a uranium mine in Spain, ten years in 'development', difficult to find in right concentrations. • Factor immobility e.g. uranium mine cannot be switched to other uses • Regulation. 'Have to clear extra hurdles' due to government concerns regarding negative externalities. **NB KAA can be treated as Evaluation and vice versa**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** Reasons why uranium is price elastic: • Time. Ability to store stockpiles of uranium, Figure 1 surplus suggests and 'stockpiles until 2020'. • 'Uranium is a relatively common metal'. Extract A Line 2 • Distinction between short run and long run and its significance for elasticity of supply. By 2018 mine in Uranium producing '2.2 million kilos a year'.	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for identifying/defining surplus, excess supply **Application** 1 mark for reference to context, e.g. • Reference to $530 or falling below (1) • Price mechanism in free market (signal, incentive/disincentive or ration) (1) **Analysis** 1 mark for linked development, e.g. • Steel supply contracts, movement back along supply curve if drawn (1) • Extension in demand for steel, movement forwards along demand curve if drawn (1) • Surplus of steel gradually removed (1) • New market equilibrium identified (1)  	**(3)**

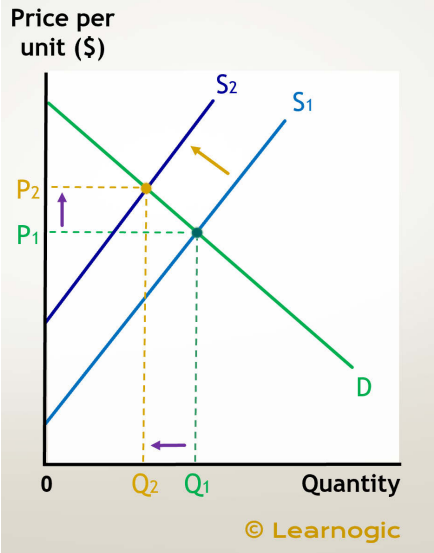
Question Number	Answer	Mark
4(b)	D	**(1)**

Question Number	Answer	Mark
5(a)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for identifying/defining excess demand, shortage **Application** 1 mark for application to university education, e.g. • Diagram indicates cut in tuition fees from £9 000 to £6 000 (1) • Universities lack cash so close down departments (1) • University now more affordable for applicants (1) **Analysis** 1 mark for linked development, e.g. • Lower maximum price illustrated or explained, price below market equilibrium (1) • Extension in demand, movement forwards along demand curve if drawn (1) • Contraction in supply of university places, movement backwards along supply curve (1)	**(3)**

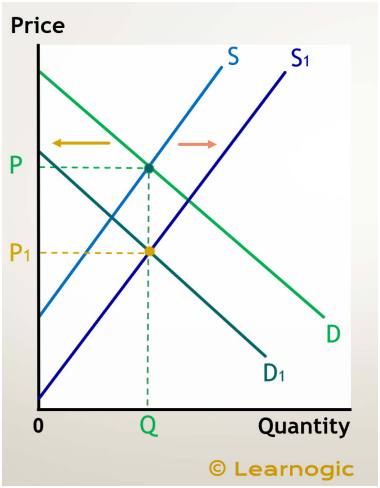
Question Number	Answer	Mark
5(b)	A	**(1)**

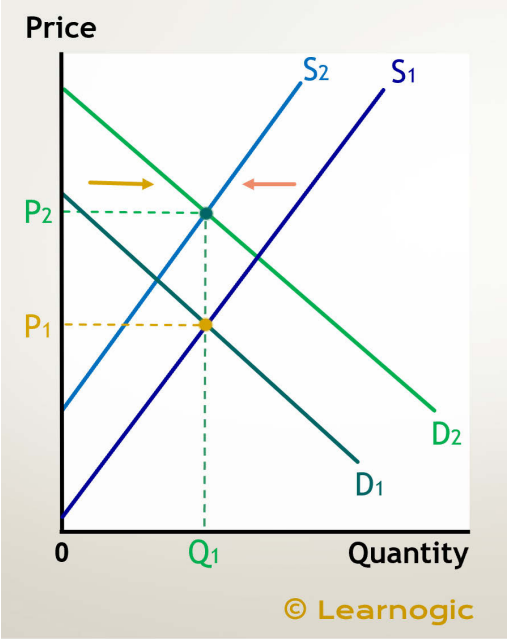
Question Number	Answer	Mark
4(a)	**The only correct answer is B** ***A*** *is not correct because a decrease in demand would cause a left shift in the demand curve* ***C*** *is not correct because a tax on the product would cause a left shift of the supply curve* ***D*** *is not correct because an increase in the cost of production would cause a shift in the supply curve to the left*	**(1)**

Question Number	Answer	Mark
4(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for correct understanding of market forces and resultant contraction in supply and extension in demand (1) **Application** 1 mark for, e.g. Reference to the fall in price to its market clearing level as firms reduce in order to sell excess (1) **Analysis** 1 mark for linked development e.g. the combination of a contraction in supply and increase in demand at lower price level to cause the market to reach equilibrium (1).	**(3)**

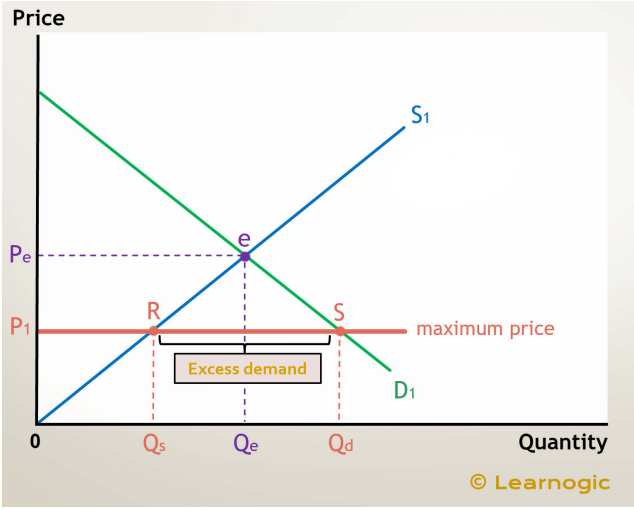
Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 2** **Knowledge** • Supply and demand diagram annotated to show a left shift in the supply curve (2) **Application** • New equilibrium price (1) • New equilibrium quantity (1)  NB – Award up to 2 diagrammatic application marks for other microeconomic effects based on correct knowledge e.g. – changing Consumer Surplus (1) or Producer Surplus (1) or Revenue (1) or Shortage (1)	**(4)**

Question Number	Answer	Mark
2(b)	**Analysis 1** **The only correct answer is A** **B** is not correct because the potential output is not likely to increase **C** is not correct because A is more likely than C which illustrates a reallocation of resources towards consumer goods. If anything a reallocation of resources towards more capital goods is more likely **D** is not correct because this illustrates an increase in actual output which the stem to the question does not provide evidence for	**(1)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for an increase in supply or a decrease in demand. This may be illustrated on a diagram **Application** 2 marks for using source data explaining change in supply and demand, e.g. • Estimated surplus (1) of approximately 7 million kg of uranium (1) • Kazakhstan's production has increased significantly/stockpiles (1) • Confidence in nuclear industry declined/Japan closed some of its nuclear plants (1) **Analysis** Accurate diagram – showing price fall (1) correct shift in demand **and** supply (1) e.g.  	**(5)**

6(a)	**Knowledge 1, Application 1, Analysis 3** **Knowledge and Analysis: (up to 4 marks)** Correctly labelled diagram annotated to show a shift left in supply curve **and** right in demand curve (1+1) e.g.  **NB two KAA marks are reserved for an accurate diagram: 1 mark for shifting demand, one for shifting supply. Or two separate diagrams, i.e. one showing shift in demand and another showing shift in supply can still get all 2 KAA** • Explanation that increased cost of production shift supply left causing price to rise (1) • Explanation that growing popularity shifts demand right causing price to rise (1) **Application: 1 for reference to Extract A e.g.** • Higher material costs/cost of components (chips) for consoles computers and smartphones (1) • Data reference to price of chips e.g. $0.20 each to more than $1 (1) • 'Growing popularity of home entertainment' or increase in demand for game consoles (1)	**(5)**

Question Number	Answer	Mark

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Understanding of maximum price.  The effect of a maximum price on consumers: • Energy prices more affordable for consumers, end of 'decade of rising energy bills', extension in demand for energy or increase in quantity demanded (inefficient use). The effect of a maximum price on producers: • Contraction in supply or decrease in quantity supplied, power stations turned off 'undermine energy market', decline in producer surplus or revenue/profit. **NB Level 3 responses must consider the effects on both energy consumers and producers.** **NB If no valid diagram then the maximum of Level 2 may be awarded**	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • It depends on whether and how far the maximum price is below the market equilibrium price. • It depends on the PES of energy. • It depends on the PED for energy. • Comment on the costs to consumers – loss of consumer surplus, energy shortages, 'higher prices in the future'. • Comment on the impact on producers – producer behaviour e.g. may move up to the price cap, reduce investment • Government failure e.g. distortion of price signals, unintended consequences	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
3(a)	**The only correct answer is A** ***B*** *is not correct because a shortage will be eliminated by a rise in rice rather than a fall in rice* ***C*** *is not correct because setting 'targets' is not a clear application of the rationing function using the price mechanism* ***D*** *is not correct because the lower NHS price will act as a discincentive*	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 2** **Knowledge/Understanding** 1 mark for reason and 1 mark for linked development. Possible answers include: • Risk/Imperfect information (1) which may lead to a misallocation of resources (1) • Inequality (1) provide for those priced out of unaffordable private care (1) • Positive externalities (1) spillover benefits to third parties i.e. employers/families (1) Diagram may illustrate this (1) • Growth/economic freedom/welfare safety net (1) ensure the ill can recover and return to workforce (1).	**(2)**

Question Number	Answer	Mark
3(c)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • Where one party in a transaction has more or superior information compared to another (1) • Providers know more than consumers or vice versa (1)	**(1)**

Question Number	Answer	Mark
4(a)	**The only correct answer is B** ***A*** *is not correct because as a quantitative skill this describes the range rather than median so acts as a distractor* ***C*** *is not correct because as a quantitative skill this describes the mode rather than median so acts as a distractor* ***D*** *is not correct because as a quantitative skill this describes the mean rather than median so acts as a distractor*	**(1)**

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Prices perform a **signalling function –** they adjust to demonstrate where resources are required. • Prices act as an **incentive function** – for consumers and/or suppliers • Prices perform a **rationing function**. • House price index fell e.g. in 2007-09 from 360 to 300 (-17%). House price index increased e.g. 2009-2014 from 300 to 375 (+25%). • Use of selected PES in Figure 1 • Diagram to explain price mechanism e.g. removal of shortages and surpluses • Allow use of economic thinkers/theories e.g. Smith's invisible hand/addressing the economic problem, Hayek's communication network.	**(9)**

Level	Mark	Descriptor
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Level 3	7-9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • Signals ignore negative externalities of building on green belt or higher risk of flooding. • Incentives lack perfect information or exhibit asymmetric information • Housing is an asset – speculative demand will prevent shortages from being eradicated – a "runaway train" Extract A. • Housing price mechanism fails to meet demand for affordable housing. • Regional inconsistencies – supply shifting inwards in parts of country or demand not increasing • Impact of recession/housing recovery fragile - prices volatile or continuously over-priced. • Long run/ short run distinction. • Lack of land/planning restrictions means PES remains inelastic. • Allow other government interventions/failure.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1-2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3-4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5-6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
4(a)	**Application 2** **Application** 2 marks for e.g. • (5 664 - 5 044)/5 044 x 100 (1) • 12.3% (1) **NB Allow 2 marks for correct answer (12.29, 12.3 or 12)**	**(2)**

Question Number	Answer	Mark
4(b)	**Knowledge 1, Analysis 1** **Knowledge** 1 mark for understanding e.g. • Understanding of consumer surplus (1) **OR** • Recognition that consumer surplus will fall (1) **Analysis** 1 mark for e.g. • Understanding of *why* consumer surplus will fall (1) **NB Can be shown via written or diagrammatic explanation**	**(2)**

Question Number	Answer	Mark
4(c)	**Application 1** **The only correct answer is C** ***A*** *is not correct because this is the change is consumer surplus* ***B*** *is not correct because this is the new area of consumer surplus* ***D*** *is not correct because this is the new area of producer surplus*	**(1)**

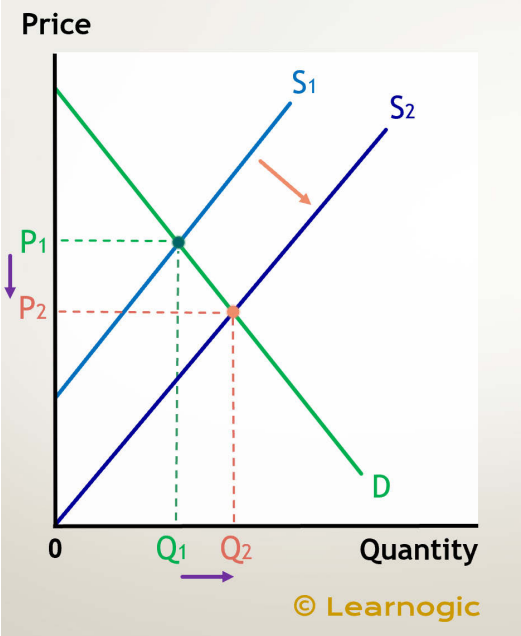
Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Knowledge** 2 marks for e.g. • Define producer surplus e.g. a measure of producer welfare or the difference between what producers are willing and able to supply a good for and the price they actually receive • Diagram to show the original demand and supply curve and equilibrium • Identify the original producer surplus **Analysis** 2 marks for e.g. • Diagram illustrates increased producer surplus (1) resulting from demand shifting out (1) **Application** 2 marks for e.g. • Explain that there is an increase in prices (1) as demand for houses rises (1) • Explain that there is an extension in supply or a rise in the housing availability • House builders will make a larger surplus (profit) • Producer surplus is likely to be only for new housing. With the existing housing stock, any increase in house prices would not be referred to as increasing producer surplus as the seller still has to find a home to live in. • Effect of PED/PES on size of producer surplus	**(6)**

Question Number	Answer	Mark
2(c)	B	**(1)**

Question Number	Answer	Mark
3(a)	**Application 2** **Application:** 568 × 1.8 million (1) Accept 1022 million or 1022.4 million for 2 marks. Accept 1,022,400,000 **NB If million is missing from the answer award up to 1 mark**	**(2)**

Question Number	Answer	Mark
3(b)	**Application 2** **Application:** 1 mark for the percentage of subsidy for consumers: **71 ÷ 568 X 100 = 12.5%** (1) 1 mark for the percentage of subsidy received by producers: **497 ÷ 568 X 100 = 87.5%** (1) Award 1 mark if the answers are transposed **NB** if no correct calculations, award up to 1 mark for: correct annotation of diagram depicting consumer and producer subsidy areas OR the actual consumer subsidy per unit (71 rupees) and producer subsidy per unit (497 rupees) OR consumer subsidy (127.8 million rupees) and Producer subsidy (894.6 million rupees)	**(2)**

Question Number	Answer	Mark
3(c)	A	**(1)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 1, Analysis 3** **Knowledge and Analysis:** (up to 4 marks) Correctly labelled diagram annotated to show a shift right in the supply curve (2) e.g. rise in subsidy  **NB: also accept a double shift right indicating an increase in subsidy.** **NB: also accept a rise in price, given prices annually linked to RPI, but less than it would have been.** **NB: 2 KAA marks are reserved for an accurate diagram** Explanation that subsidy increase is a rise in financial assistance OR cut in cost of production OR additional cash grant (2) Explanation that decreasing costs borne by producers is passed on to consumers as a fall in rail fares OR excess supply results in fall in rail fares (2) **Application:** 1 for reference to Figure 1 e.g. subsidy rises around £11 million (1) subsidy rises from £277 million to £287.9 million (1) subsidy increased by 3.9% (1)	**(5)**

Question Number	Answer	Mark
2(c)	**The only correct answer is C** ***A*** *is not correct because the flood defence scheme is non-exclusive* ***B*** *is not a private good because flood defence scheme is non-exclusive so you are unable to charge private individuals that benefit from the scheme* ***D*** *is not correct because it is a distractor in lacking meaning but also indicating that the candidate is confusing rivalry with the non-rivalrous nature of public goods*	**(1)**

Question Number	Answer	Mark
3 (a)	**Application 2** **Application 2:** 1 mark for appropriate calculation /formula e.g. $\frac{1.3 \times £489\,000}{100}$ (1) **OR** 489 000 ×0.013 (1) Answer = **£6 357** **Award 2 marks for correct answer (6 360)**	**(2)**

Question Number	Answer	Mark
3(b)	**The only correct answer is C** ***A*** *is not correct because the candidate has mistakenly done the average house price in North East of England to the average house price in London* ***B*** *is not correct because the candidate has made a computational error* ***D*** *is not correct because the candidate has made a computational error*	**(1)**

Question Number	Answer	Mark
3(c)	**Knowledge 1, Analysis 1** **Knowledge / understanding:** 1 mark for one reason e.g. • differences in average income or wealth (1) • employment or unemployment rates (1) • migration or population change (1) • foreign buyers (1) • availability of land to build on (1) **Analysis**: 1 mark for a linked development e.g. • Higher average income in London mean people are able to obtain larger mortgages and so pay higher prices (1) • Higher employment rate or lower unemployment rate in London mean greater demand for housing from its population (1) • Foreign buyers attracted to invest in London due to high rental returns or expectations of increase in value of property or better market knowledge (1) • Shortage of land to build on in London, especially with green belt restrictions (1)	**(2)**

Question Number	Answer	Mark
6(b)	**Knowledge 2, Application 2 Analysis 2** • Contribution towards littering and 'protecting of landscapes' – Extract A • Alternatives to non-single use bags are available • Habitual consumers will keep previously purchased single use/ 'bags for life' and will be used to bring to use on additional visits • Clearly evident in the fall in use of single use bags from 2014 (7500m) to 2021 (197m) as charges increased • Cost of purchasing new bags due to charge ensures that there is a financial cost/ consequence to continue purchasing new single-use bags – computational awareness • Rational and irrational behaviour discussion relevant **NB KAA can be treated as Evaluation and vice versa**	**(6)**

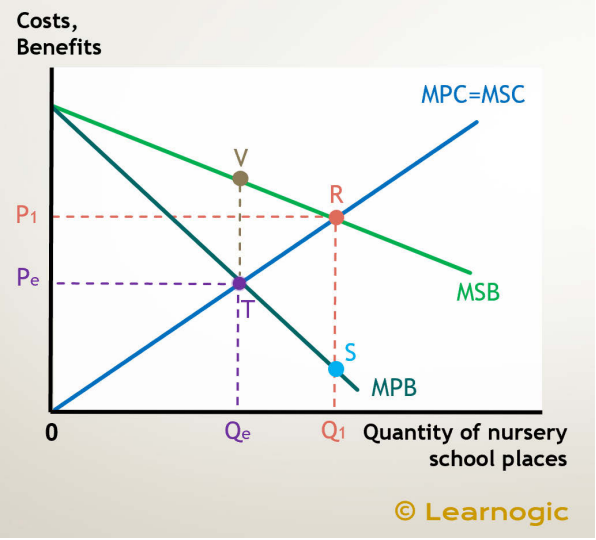
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Answer	Mark
6(b) continued	**Evaluation 4** • Consumers may simply forget/ be rushing/ to bring bags with them from previous visits • With consumers making increased visits to supermarkets specifically each week, it may not always be possible to bring previously purchased bags • Bags are still available from stores – and not sufficiently expensive to discourage consumption / not high enough price charge to warrant not re-purchasing for most • Plastic bags (10p) make up very small % of consumers income so negligible impact of purchasing • Computational weakness of not estimating or understanding the consequences of the increased cost(s) **NB KAA can be treated as Evaluation and vice-versa**	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
2(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition of external benefits e.g. • Positive externality (1) • When the social benefits of an economic action are greater than the private benefits (1) • External benefits = social benefits – private benefits (1) • Benefits accruing to a 3rd party (1) • Spillover effects (1) • Outside the price mechanism (1)	**(1)**

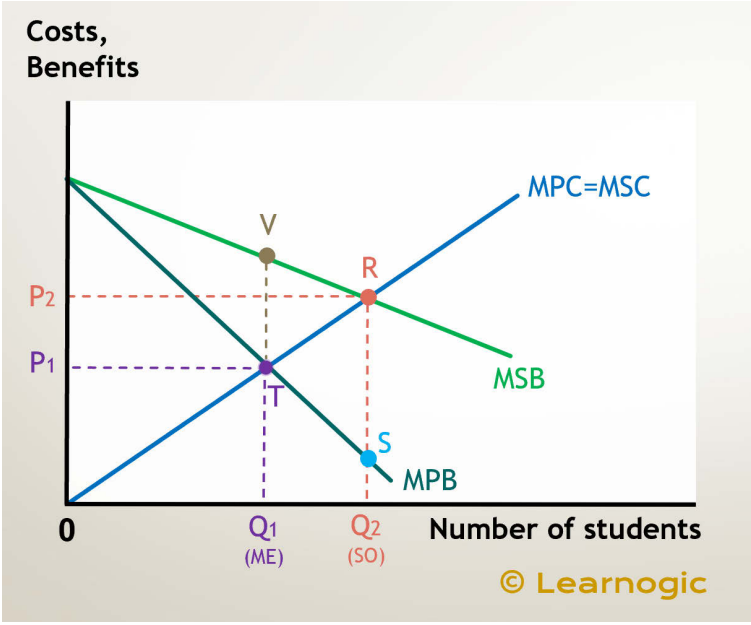
Question Number	Answer	Mark
2(b)	B	**(1)**

Question Number	Answer	Mark
2 (c)	**Application 2** Identify welfare gain area VTR (1) Annotate or identify the social optimum output as Q_1 or R or S (1)  	**(2)**

Question Number	Answer	Mark
3 (a)	C	**(1)**

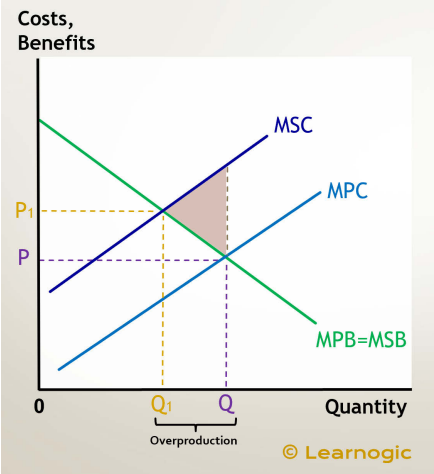
Question Number	Answer	Mark
3(b)	**Knowledge 1, Application 2** **Knowledge** One mark for identifying measure e.g. • tax on water or water consumers (1) OR • regulation (1) OR • subsidise water efficiency or substitute water provision to lake (1) OR • permits (1) **Application** 2 marks for linked application (1+1), e.g. • increased taxes/regulation would make it more expensive/less profitable (1) reducing consumption (1) • diagram e.g. showing supply shifting in (1) and quantity falling (1)	**(3)**

Question Number	Answer	Mark
1(b)	**Analysis 1** **The only correct answer is A** ***B*** *is not correct because both consumer surplus and producer surplus decrease* ***C*** *is not correct because producer surplus decreases* ***D*** *is not correct because consumer surplus decreases*	**(1)**

Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 2** 1 mark for the original market equilibrium where MPB = MSC (=MPC) 1 mark for correct shift from MPB to MSB 1 mark for showing the external benefit V to T 1 mark for welfare gain identified VRT 1 mark for the new equilibrium identified where MSB equals MSC (R) or (S) or Q2 Social Optimum. Diagram required e.g.  	**(4)**

Question Number	Answer	Mark
2 (b)	**Analysis 1** **The only correct answer is C** ***A*** *is not correct because an external benefit to a third party is not identified* ***B*** *is not correct because an external cost to a third party is not identified* ***D*** *is not correct because a private cost plus external cost to a third party is not identified*	**(1)**

Question Number	Answer	Mark
3 (a)	**Knowledge 2, Application 1, Analysis 1** **Knowledge and Application** 1 mark for understanding of pollution permits (1) 1 mark for appropriate linkage to industry/market/firms (1) 1 mark for how reducing permits reduce pollution (1) Award use of diagrams, for example: shifts the supply of permits inwards (1) which will push up the price per permit (1) OR Negative externality reduced **Analysis:** 1 mark for linked development of market incentives/government revenue e.g. Reducing pollution/Increase in price of permits (1).	**(4)**

Question Number	Answer	Mark
3 (a)	**Knowledge 2, Application 2** 1 mark for the correct labelling of MPC, MSB and/or MPB 1 mark for correct shift from MPC to MSC, divergent or parallel 1 mark for showing the external cost at market output Q (MSC>MPC) 1 mark for the new social optimum equilibrium (Q1) identified where MSC equals MSB (Q1) or overproduction 1 mark for welfare loss/gain identified 1 mark for quantity of waste water treatment Diagram required e.g. 	**(4)**

Question Number	Answer	Mark
3(b)	**Analysis 1** **The only correct answer is C** ***A*** *not correct because the fine will increase efforts by the firm to reduce illegal discharges* ***B*** *not correct because the fine will increase costs and reduce profits* ***D*** *not correct because the intervention will not result in a net welfare loss.*	**(1)**

Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge and analysis** Up to 3 marks for: • the meaning of externalities, e.g. effect on third party, outside the transaction, difference between social cost and private cost (1). Points might include: • use of plastic which is hard to recycle/other single use plastic arguments (1) • HFSS food can cause obesity and have third party effects (1) • more congestion/air pollution from food deliveries (1) • (positive) externality due to rise in productivity generated by cash rich, time poor professionals might allow people do impact third parties positively (1) **Application:** 2 marks for data (1+1 or 2): • 1.4 billion containers (1) or other plastic items to allow food to travel safely e.g. heat retention (1) • over-consumption / order more food (1) e.g. impact on other NHS users (1) • HFSS food (1) • falling profit margins (1) or increased competition in food delivery might mean wages fall so fewer wider macro benefits (1) • don't even have to get up/lack of exercise of consumers ordering from their sofa (1) **NB 2 marks may be awarded for a diagram** e.g. a negative externalities in production of food that has to be delivered	**(5)**

Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge and analysis (3) e.g.** • Understanding of social optimum quantity (1) • Imperfect / asymmetric information (1) means that consumers are not aware / do not perceive actual benefits (1) • Irrationality (1) leads to: • habitual consumption of unhealthy foods (1) • herd behaviour/influence of others/impact of advertising (1) • weakness at computation (1) • Positive externalities (1) • Cost of living crisis (1) reduces purchasing power /choosing cheap foods (1) • Supermarket promotion of low-cost products/unhealthy food is cheaper (1) so more affordable than healthy food (1) • Social trends e.g. convenience (1) choose packaged and processed options which are less healthy (1) • Lack of government intervention (1) • Consumers are unaware that the cheaper food is unhealthy (1) and therefore make their decisions on perceived benefit rather than actual benefit (1) **Application (2) e.g.** 2 marks for data (1+1 or 2): e.g. • Reference to BOGOF/ 3 for 2 in Extract A (1) • Extract A – consumers face heavy marketing for unhealthy foods (1) • Advertising and online promotion affect people so they seem to behave irrationally (1) • The restrictions banning HFSS adverts on TV before 9pm and paid-for adverts online were set for January 2024 (1) • Government rules limiting the location of unhealthy foods in shops began in 2022 e.g. checkouts and store entrances (1) • Own examples of external benefits and brand behaviour (1) **NB Maximum 2 marks for an effectively used diagram, as any of knowledge, analysis or application.**	**(5)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding** • Identification of one external and one private benefit: tax revenue (external); higher earnings (private) (1+1) **Application** 2 marks for, e.g. • 'the government will benefit greatly from additional tax revenues' (1) • 'the rest will be in the form of their extra spending power' (1) **Analysis** Linked development of why the education specifically benefits producers e.g. higher productivity enable firms to achieve lower costs and, therefore, lower prices (1+1) **Award up to 3 marks for each benefit**	**(6)**

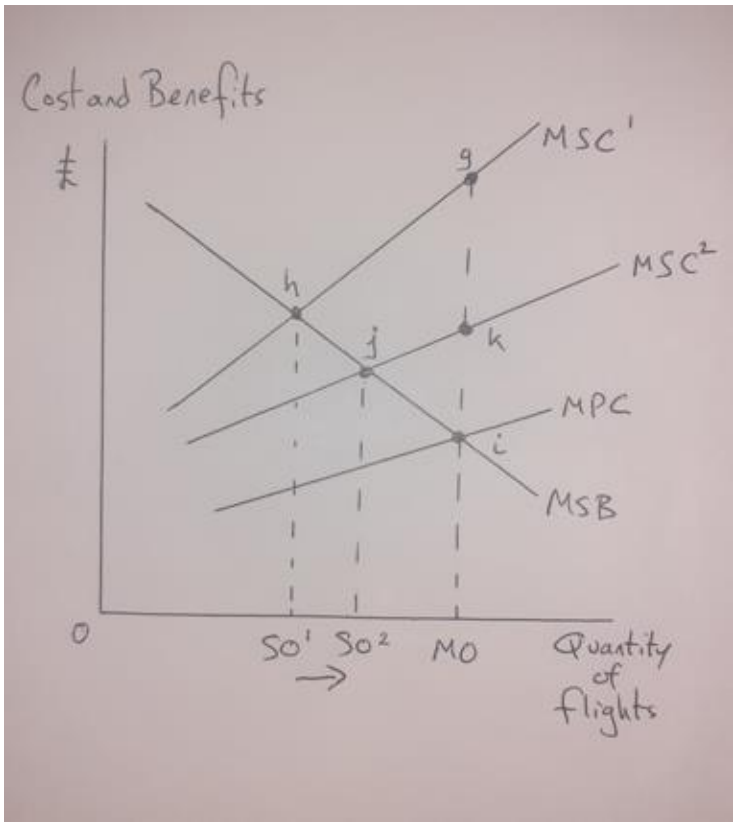
Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** Formula for percentage calculation (new-old)/old x 100. (1) (102357 – 45418)/45418 x 100 (1+1) = Accept any figure between 125 and 126 **NB Award 4 marks for a correct answer of 125%. Award up to 3 marks for correct working.**	**(4)**

Question Number	Answer	Mark
6(b)	**Knowledge 2, Application 2 Analysis 2** **Knowledge/understanding** Identification of two separate external benefits e.g. • Provision of unbiased information (1) • High quality programmes (1) • Educational benefits (1) • Reduce information gaps in markets (1) **Application** 2 marks for, e.g. • 'to provide impartial news and information' (1), • 'to show the most creative, highest quality and distinctive televised content' (1) • 'to support learning for people of all ages' (1) • 'quality programming' (1) • 'content for minority groups' (1) **Analysis** Linked development of why public service broadcasting creates external benefits e.g. consumption of public service broadcasting (1) raises educational levels which are expressed in terms of higher productivity and are manifest in higher wages, profits and per capita GDP (1) **Award up to 3 marks for each external benefit**	**(6)**

Question Number	Answer	Mark
1(b)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **NB an answer might provide positive externalities as KAA and negative externalities as evaluation** **NB do not award effects on copper mining firms, unless an indirect effect.** **NB an answer which does not relate both to firms and communities is limited to 5/6 KAA marks.** **NB do not award externalities themselves, e.g. pollution, the environment. Award the *impact.*** **Knowledge and Analysis** Knowledge/ implicit understanding of externalities **(1)** e.g. knowledge that externalities are an effect on third parties, or outside (or not accounted for by) the market mechanism, or the difference between private and social costs or benefits Firms (in businesses other than mining) Points showing the impact on **firms** might include: • farms lacking water because mining companies are using it **(1+1)** • high demand for energy means that other firms will face high energy costs **(1+1)** • high exchange rate can cause problems for other exporting firms **(1+1)** Communities Points showing the impact on **communities** might include: • problems of water access for households **(1+1)**, • large-scale transport causes noise, air pollution **(1+1)**, • people have to move away to find work (social dislocation) **(1+1)** • impact on employment and incomes as mining declines **(1+1)** • impact on firms that supply the mining sector **(1+1)** Some impacts could be seen as firms and communities, e.g. impact on wider economy of higher wages as firms have to compete with unionised highly paid copper miners for employment. **Application:**	

	• **Externality diagram** illustrating negative or positive impact using marginal analysis (up to 2 marks: 1 mark for correct MSC and MPC drawn, 1 mark for correct equilibrium shown/deadweight loss) • Water has to be pumped 200km (Extract B paragraph 4) which uses fossil fuels/is noisy/ugly/affects tourist areas • Mines are deeper and use more fuel (carbon emissions have impact on climate and therefore on welfare of many) • Desalination plants might affect other firms or consumers (this might be negative or positive) **Evaluation** (2 marks for any relevant point, two points 1 +1): • Positive externalities, e.g. ○ impact of local multiplier on economy, improved infrastructure affects other industries ○ Improved wages and working conditions for workers (in businesses other than mining) ○ The copper mining has already helped to fund improvements in welfare, such as the financial system and pensions ○ Benefits of higher value of currency, e.g. terms of trade improvement • Difficult to know how large the externalities are or who is bearing the cost • The benefits might outweigh the costs, e.g. reduction in poverty, improved fiscal powers, strength of financial markets, improved local infrastructure • Other standard evaluation points, e.g. Extract B a drought has made the problem more severe, time to acquire environmental impact assessments (Extract B paragraph 5) might not be a reliable indicator	**(8)**

Question Number		Mark
1(c)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Knowledge (1+1)** e.g. • Fall in consumption of non-renewable products (1) • Rise in tax revenues (1) • Reduction in external costs/greater environmental awareness (1) • Soft touch regulation/allows consumer choice (1) **Application (2 or 1+1)** e.g. • Use of reusable cups as a means of reducing demand for disposable cups (i.e. a substitute, Extract C) (1) • Extract B – 5p charge is a small proportion of £2.60 (1) • 85% reduction in plastic bags (1) • This might be illustrated through the use of a correct supply curve shift, e.g. a fall in consumption or production of cups on x axis (1) **Analysis (1+1)** e.g. • Indirect taxes may raise prices (1) • Increases in costs of production (1) • Link between unit tax, tax revenue and reduction in demand for cups (1) • A supply and demand diagram showing an indirect tax (supply shift upwards/leftwards) or an externalities diagram might be used (1) • tax revenue could be used to subsidise other products, e.g. recyclable cups (1) **Evaluation** (2 marks for any relevant point or 1+1). Points might include: • It depends if the tax is passed on to the consumer • Other policies may be considered e.g. new recycling specialist facilities, regulation • PED might be used, e.g. a 5p tax on the price of a £2.60 coffee might have very little effect on demand, or, a cup of coffee may be a small percentage of consumer income, depends on the availability of substitutes • Regressive nature of the tax – has a greater effect on lower incomes • Other approaches considered, e.g. subsidising reusable cups as in Ext B changing the technology in the recycling **NB award two advantages. A diagram can be credited as analysis or application (1+1) up to 2 marks in total.**	**(8)**

Question Number	Answer	Mark
6(b)	**Knowledge 2, Analysis 2, Application 2, Evaluation 2** **Knowledge/understanding:** 2 marks (1+1) e.g. • Social optimum is when MSC = MSB (1) • Social optimum position moves right (1) • Market equilibrium output (e.g. MO) position identified (1) • Downward sloping MSB (1) • MSC = MPC + MEC (1)  **Analysis:** 1 mark for linked explanation of each identified benefit (1+1) e.g. • Third party effects are lower (1) so external costs are lower/MEC falls (gi to ki) (1) • MSC shifts/skews right (1) showing new social optimum position (MSB=MSC) (1) • Welfare loss falls (1) from ghi to kji (1)	

	Application: 2 marks for reference to Extract B e.g. • Thomas Cook airline emissions are lower/switch fuel types/new engines (1) • In 2018 Thomas Cook Group Airline was included in the top 10 of the world's most fuel-efficient airline (1) • Lower insurance bills/clean up bills for companies/households at risk of flood damage/storms (1) loss of cattle/crops due to drought declines (1) • CO_2 emissions per passenger declines (1) quantity of flights increases (1) **NB These application points may be annotated on the diagram.** **Evaluation:** 2 marks for two evaluative comments, OR 2 marks for identification and linked development of one evaluative comment e.g. • Difficulty in measuring size of negative externality (1) third party effects (1) • CO_2 emissions from travel agents, hotels and holiday activities increase/remain high (1+1) • Computational problems in measuring CO_2 emissions from planes (1) faulty industry data (1)	**(8)**

1(b)

Knowledge 2, Application 2, Analysis 2, Evaluation 2

Knowledge/analysis: up to 4 marks e.g.

Knowledge of externalities/external cost e.g.

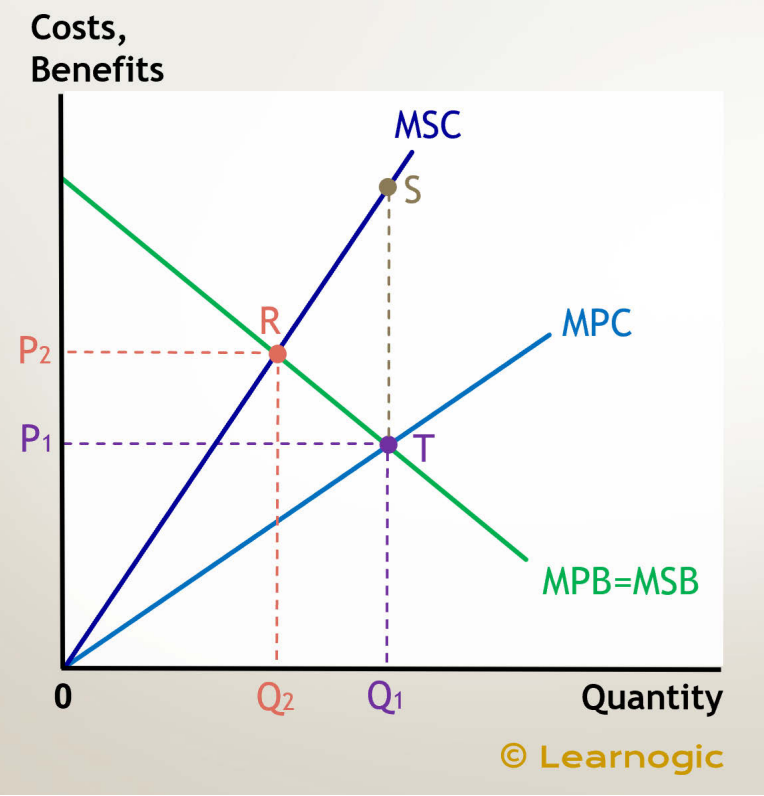
- Externalities are an effect on third parties (1)
- Outside the market mechanism (1)
- Social costs greater than private costs (1)

Identification of welfare loss occurring (may be shown on diagram, in addition to up to 2 marks for a correct diagram) (1)

1 mark for a likely externality, e.g.

- Air pollution (1)
- Impact on health of population (1)
- Climate change (1)

2 marks for diagram (may be awarded as K, An, or App)
1 mark for correct MSC and MPC drawn, 1 mark for correct equilibrium shown/deadweight loss)



NB If candidate does not draw a correct diagram the maximum KAA mark is 4/6

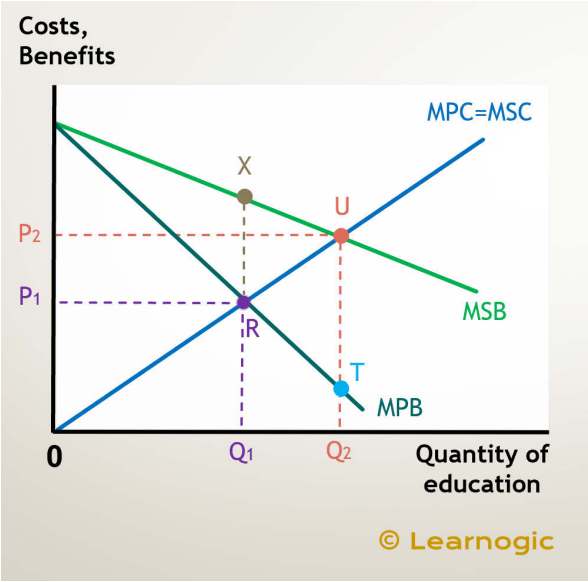
Question Number	Indicative content	Mark
1 (c)	**Knowledge 2, Application 2, Analysis 4** **Knowledge/implicit understanding:** Policies identified might include: • Indirect tax/charges • Ban or other regulation • Free bags/nets or other state provision • Fines • Behavioural economics policy **Application:** • Tax or charge on each item. Might be illustrated through a specific tax diagram or similar. • Ban in some parts of Turkey for specific types (carcinogenic black bags). Might be supported by a limit on supply diagram. • Fines for consumers and retailers in some parts of Turkey • Free bags/nets or other state provision in e.g. 20 000 in Corlu near Istanbul • 950 tonnes of plastic waste **Analysis:** • Explanation of process linking the intervention to the reduction in use of bags. • This might be shown through a diagram(s).	**(8)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
1 (c) continued	**Evaluation 4** • Charges work in other countries, e.g. UK • Emerging economies/countries might have more problems facing the cost of interventions e.g. inequality issue, poverty • The problem is much wider than plastic/single use bags, and the interventions will only affect a few on-street purchases • Likely to succeed because it taps into the social conscience of consumers and even a small charge may have a dramatic impact as in the UK • The tax/charge makes up a small proportion of income so many have minimal impact. PED is very inelastic/close to zero • Unintended consequences: e.g. multiple-use/ bags for life often contain more plastic and unless used many times can be more environmentally damaging • First paragraph suggests they are everywhere so given habitual behaviour people may continue to use them despite charges/ tax • opportunity cost of giving away 20 000 bags in a month – is this socially efficient?	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to the context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

	consumers' cost of living rising. Consumers are now forced to make a choice due to a lack of affordability. (1)	**(8)**

Question Number	Indicative content	Mark
6(d)	**Knowledge 2, Application 2, Analysis 4** • Understanding of private benefits and external benefits (may be implicit) • Explanation of **private benefits** gained from watching educational programmes: satisfaction from watching, improved progress at school, GCSE and SATs success, career development, higher earnings potential, less need to buy expensive revision guides, less requirement for private tutors, and increased consumer surplus • Two million weekly unique browsers • Peak use of 3.3million in GCSE exam period • £43 million to fund the Oak National Academy • Written by subject experts • Explanation of **external benefits**: skilled workforce, higher productivity, increased potential output, greater innovation, and wider third party effects • Diagram depicting private and external benefits e.g.  • Identification of market equilibrium (Q1) and social optimum (Q2) • Identification of triangle of welfare gain RXU • Identification of the external benefit (UT) • Equation showing MPB + MEB = MSB **NB: For KAA L3 candidates must refer to a private and an external benefit**	**(8)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(d) continued	**Evaluation 4** • Difficulty in measuring any monetary value to private benefit and external benefits • Time lag before both private and external benefits are seen • Cause and effect - many other factors influence the state of the UK workforce, competitiveness etc. • Government policy change/funding changes could offset any benefits • The production of television programmes could cause negative production externalities which offset the benefits, e.g. power consumption, manufacturing of devices • Wider social problems by encouraging children to spend more time on electronic devices e.g. obesity and addiction to online activity • Oak National Academy was created as an alternative to face to face education - so no additional education was necessarily consumed • Cost and opportunity cost issues e.g. £43 million expenditure • Greater significance during home schooling/ online provisions • Questioning effectiveness of online learning	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** Policies may include: • **Increase investment in training programmes** to raise quantity and quality of human capital and productivity / increase provision of modern apprenticeship schemes / it may involve government subsidies or tax breaks to firms. • **Recruit skilled workers from overseas** via careers fairs and trade journals / provides a ready supply of labour. Accept policies referring to geographical mobility of labour if linked to the energy sector. • **Change industry image** so it appeals to more female school leavers and graduates – this may involve restructuring of careers advice / marketing programmes and information on career paths and opportunities. • **Retain ageing workforce** by improving working conditions and rates of pay / offer flexible working hours and part-time work / raise state retirement age; older workers have higher levels of human capital and so productivity could be increased. **NB: For Level 3 response candidates must refer to at least one business policy and one government policy.** **NB: For Level 3 response candidates must refer to the energy sector.**	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • **Training programmes** involve (opportunity) costs to businesses and government / time period to train labour, especially in higher order technical skills / quality of training programmes. • **Recruitment of skilled workers from overseas** may create problems such as access to UK jobs following Brexit decision / language barriers / differences in qualifications and skills to those required / possibility of higher staff turnover if overseas workers intend to return home / family ties and high house prices may create geographical immobility of labour. • **Changing energy sector image** may require high levels of marketing expenditure / some jobs may not suit parents with family commitments. • **Retain older workers** could lead to problems of poor health and low productivity and ability to learn new tasks. Also the underlying skilled labour shortage remains – eventually older workers will retire. • **Other policies** to overcome labour shortage for example, new technology to substitute labour with capital, means that reducing labour immobility is not a priority.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

6(e)	**Knowledge 3, Application 3, Analysis 3** Government intervention to correct market failure – negative externalities of production Reduce overproduction – market output greater than social optimum Correct misallocation of resources – reduce welfare loss Reduce external cost/third party effects Government methods: • Indirect tax on electronic waste (specific) **or** on manufacturers of devices • Subsidies extending longevity of electronic items/ increase recyclable content • Provision of information/education – on electronic waste problems on packaging • Regulation – extending longevity of electronic items/ increasing recyclable content/fines for not recycling • Tradable pollution permits Reward relevant application e.g. candidates work out how much is not being recycled (700 000 tonnes) **NB for a level 3 answer there must be at least one reference to Extract D and two methods** **NB reward relevant diagram**	**(9)**

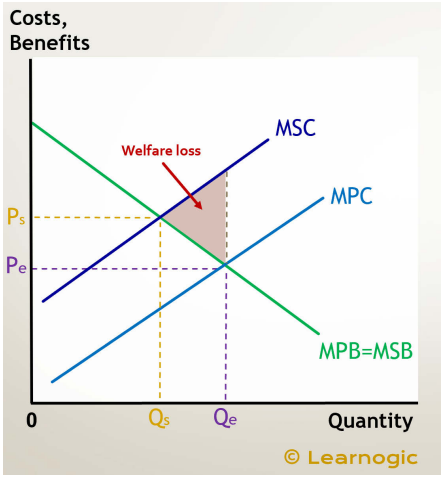
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.

Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using
		relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • Discussion of the effectiveness of the policies • Difficulty in measuring/quantifying and giving a monetary value to scale of negative externality/ overproduction/external costs • Consideration of the price elasticity of demand and supply/difficulty in changing behaviours • Some initiatives have worked in the past e.g. the recycling rate for big appliances, such as fridges and cookers, is about 80% • Depends on technological advances e.g. may reduce waste from small appliances/re-use/longer life-span of products • Information gaps: Consumers ignore the electronic waste labelling • Government failure: Unintended consequences - illegal dumping of small electronic products is likely to increase • Government failure: Excessive administrative costs – targeting subsidies, imposing fines • Timescale e.g. improving new products will take longer than recycling current items	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark

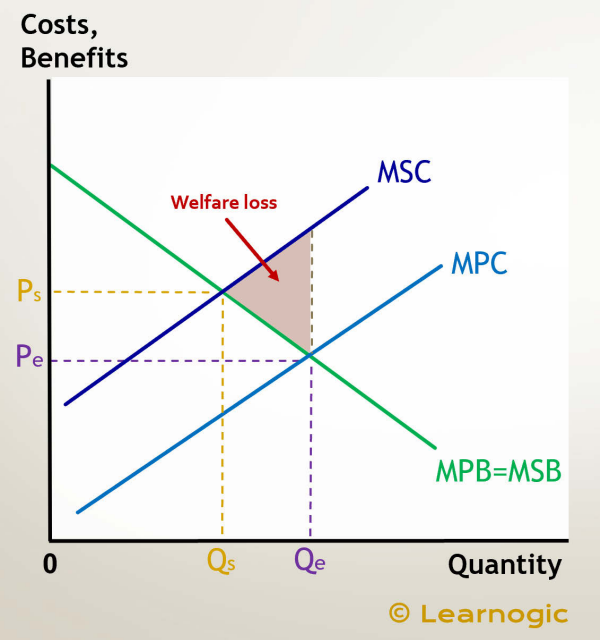
Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** Understanding of private and external costs <u>Private costs</u> Costs to **firms** to purchase capital machinery/ equipment to produce the plastic packaging/ products Costs to **firms** to purchase raw materials and inputs (derived demand) to produce the varieties of plastics required Consequently leading DWL and over-production of plastics beyond the social equilibrium of MSC=MSB Extract B - Businesses manufacturing or importing 10 tonnes or more a year of plastic packaging that contains less than 30% of recycled plastic are taxed at £200 per tonne <u>External costs</u> Any costs incurred on a third party e.g. environmental costs, litter, damage to wildlife, use of plastic, CO2 produced when manufacturing plastic, plastic micro-particles ending up in water system/ animals etc. Consequently leading to DWL and over production of plastics beyond the social equilibrium of MSC=MSB Extract C – 25,000 tonnes of waste from single use cups / coffee from chains and cafes  **NB Level 3 responses must consider both private and external costs of the production of plastic**	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** Points may include the following; • Increased recycling rates as a result of intervention such as taxes could reduce the implications for third parties/ external impact • Increased scale of production could limit the private costs to firms of packaging using plastic • Taxes can be applied (as in extract) to limit the external costs by increasing the cost/ price of plastic to firms and consumers • Estimation of the external costs is very difficult in terms of understanding the exact impact • Offset by benefits of plastic production in terms of protection of food and employment opportunities created • Impact of plastic pollution can fall on other countries/ economies and therefore external costs can be dispersed	**(6)**

	to other areas	

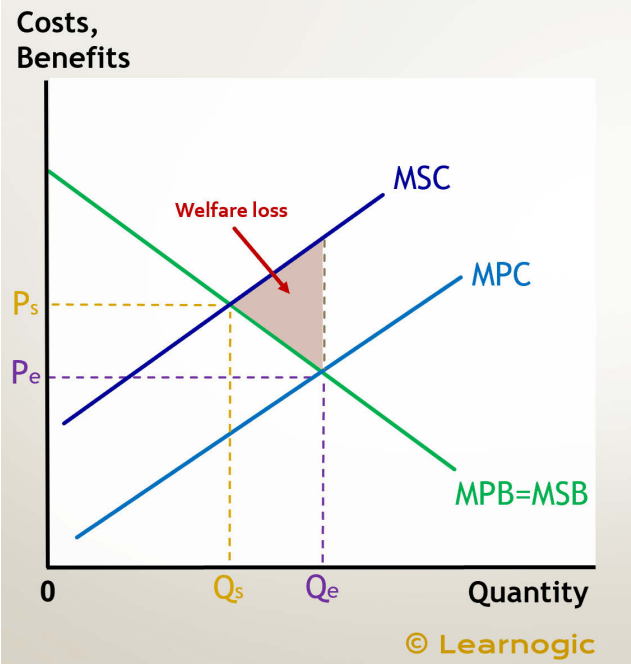
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Understanding of private and external costs in production  **NB Level 3 responses must consider the effects on both consumers and producers.** **NB If no valid diagram then the maximum of Level 2 may be awarded**	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** Details of the benefits of meat farming including; - Revenue/ profits to farmers - More sustainable farming methods limiting negative impacts - The ability to fund and support benefits to the environment including increased hedgerows and rewilding - Extent to which costs can be further mitigated	**(6)**

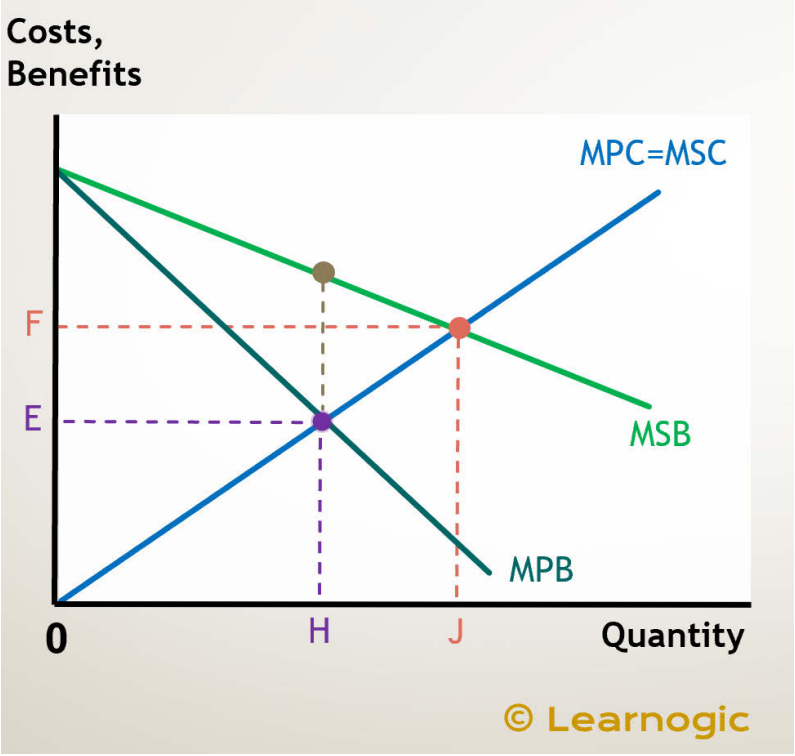
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6**  Diagram(s) accurately drawn – with clearly labelled 'welfare loss' shaded triangle Explain costs to third parties in context. External costs: • Risk of nuclear accident – local schools and businesses close, impact on property prices. • High doses of nuclear radiation leaks increase the risk of cancer – loss of family income, employment, contribution to local economy, costs to NHS. • Cost of storage for future generations – opportunity cost of resources (land) tied to this, resulting in loss of income to farmers for example. • Opportunity cost of subsidies to nuclear industry, subsidy cuts to solar businesses. **NB KAA can be treated as Evaluation and vice versa** **NB If there is no Diagram, max Level 3**	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** Reduced external costs in production of substitutes/external benefits may mean it is under-produced: • Curb greenhouse gas emissions which are causing climate change, by using nuclear, resulting in less flooding or storm damage reducing insurance costs to businesses. Extract C • Building new nuclear reactors allow positive local economic effects from job creation. • Provide 'affordable energy' helping businesses stay open thus protecting jobs and ending fuel poverty resulting in lower demands for health care. Other evaluation points might include: • Magnitude – depends on relative size of external cost. • Measurement difficult – putting a value on external costs. • Energy efficiency measures more preferable. • Short term/long term costs and benefits.	**(6)**

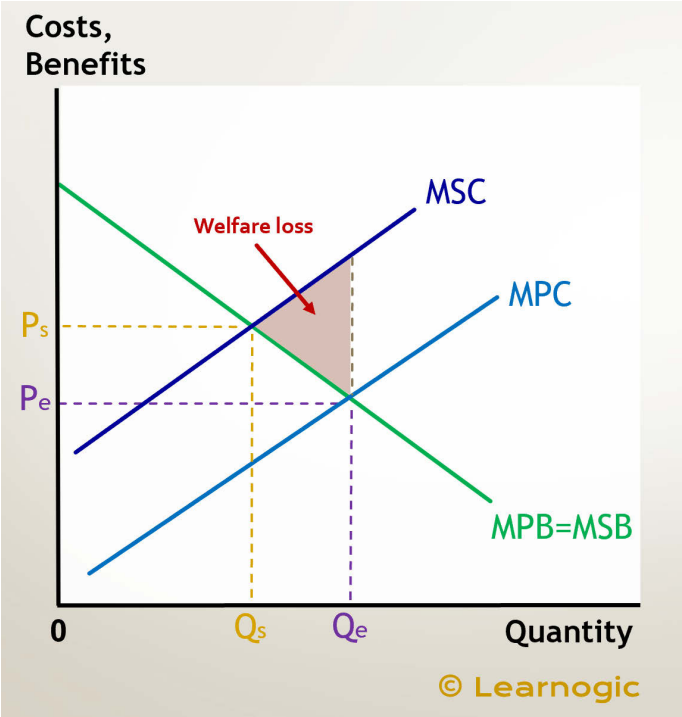
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Answer	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** Education creates positive externalities in consumption. Left to the market alone there will be under-consumption of education. This can be illustrated through an externalities diagram:  • The diagram above shows the marginal private benefit (MPB) and marginal social benefit (MSB) curves and the marginal private cost (MPC) and marginal social cost (MSC) curves for higher education • The external benefits of education are social benefits that spillover to benefit others in the society and future generations. These include lower government health, welfare, and prison costs; strengthened democracy, human rights, political stability, and social capital; less crime and poverty; environmental benefits; better international competitiveness; new ideas and diffusion of technology • Government intervention can be used to ensure that the optimum quantity of education, J, is consumed rather than the free market outcome at H	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	**1–3**	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	**4–6**	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	**7–10**	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	**11–14**	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Answer	Mark
6(g) continued	**Evaluation 6** • There is a significant issue of measurement where externalities are concerned • Many of the social benefits identified above are 'vague' and ambiguous • As a result there can be considerable 'government failure' in education • Understanding of government failure as intervention that results in a net welfare loss; how is government supposed to know which degree level subjects are in demand in the future? • Causes of government failure: ○ distortion of price signals ○ unintended consequences ○ excessive administrative costs ○ information gaps	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	**1–2**	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	**3–4**	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	**5–6**	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

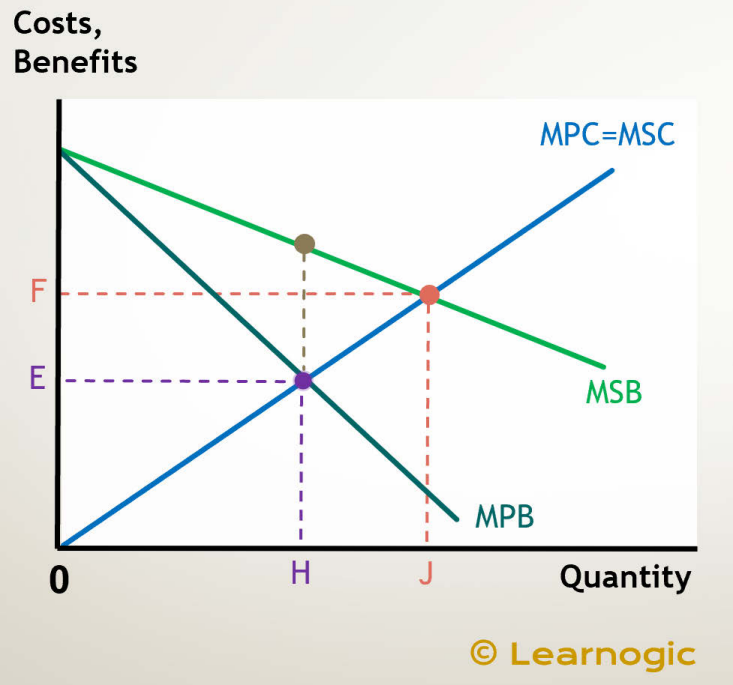
Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Overfishing is a negative externality in production. Diagram e.g.  **NB If there is no appropriate diagram - maximum level 3 KAA** Figure 1 shows the scale of the overfishing for different nations, e.g. Sweden's TAC is 52.4% above what the scientists advise. Multiple external costs are referred to in the Extracts. Extract B states that '90% of fish stocks are depleted.' The cod TAC should be reduced in order to reduce the extent of the overfishing. This would reduce the quantity caught from Q_e to Q_s. Possible external costs/third parties that might be affected • Fishing nets can damage wildlife, costing wildlife charities to rescue and rehabilitate animals • Fishing boats spill oil which has a negative impact	**(14)**

	on those swimming in the sea or wildlife, clear up for Environment Agency etc • Fishing industry throws any over catch back in to the sea, this can pollute the water • Smell from fishing industry can have a negative impact on those that live near the ports • Overfishing increases supply - lowers price and this has negative impact on manufacturers of other food items.	

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** • Hard to put a value on external costs - how do you value harm to wildlife • Some impacts are slow to emerge • External benefits may exist - jobs in fish food processing plants, boat building and net making industries • Technology improves meaning risk of oil spills reduces • Net manufacturers are developing safer nets - fishing industry more aware of the need to dispose of nets appropriately • New method of fishing are reducing the external costs • TACs have helped to reduce the external costs	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** The free-market approach to providing television content is based on subscription to paid services such as Netflix and advertising-funded commercial television stations Broadcasting has historically been provided publicly, financed through a mixture of television licence fees, appropriations from general taxation, and advertising Negatives with the free market approach; • Market provision leading to excessive advertising levels. Excessive advertising is an issue with commercial television • Under provision of resources to programming and whether these resources be used to produce appropriate programming • Left to the market alone there will be under-consumption of public service broadcasting. This can be illustrated through an externalities diagram:  ▯ The diagram below shows the marginal private benefit (MPB) and marginal social benefit (MSB) curves and the marginal private cost (MPC) and marginal social cost (MSC) curves for public service broadcasting	**(14)**

	▯ The external benefits of public service broadcasting are social benefits that spillover to benefit others in the society and future generations. These are seen in the public purposes of the BBC's Charter ▯ Government intervention can be used to ensure that the optimum quantity of provision, J, is consumed rather than the free market outcome at H	

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

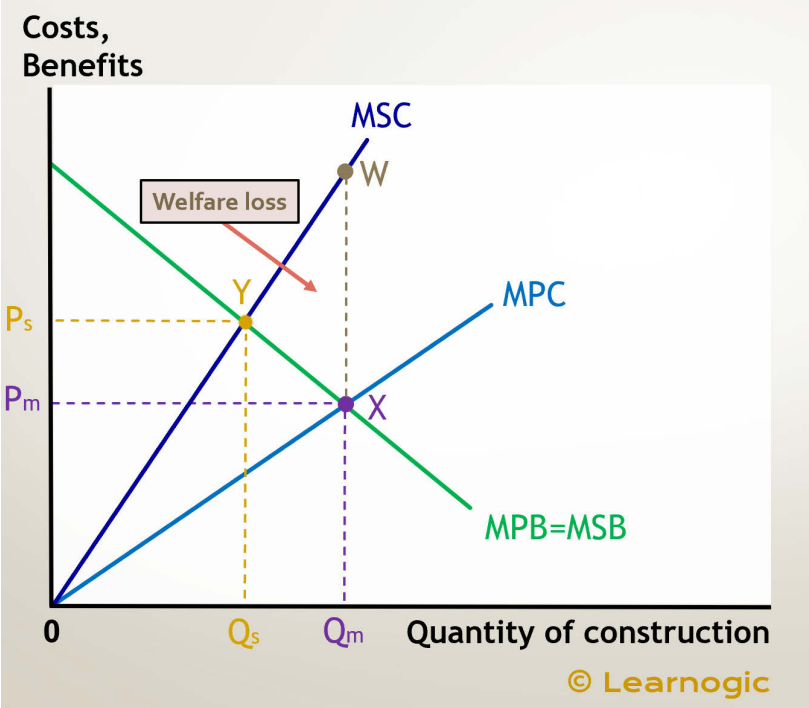
Question Number	Answer	Mark
6(g) continued	**Evaluation 6** Arguments in favour of the free market approach include: • Charging for usage allows content providers to improve the quality of their services. The 'streaming wars' are generating innovation and improved customer satisfaction • The greater the number of subscribers the more easily content providers can spread the costs of programming, leading to reduced prices • Greater efficiency when compared to public service provision Problems of public service broadcasting include: • There is a significant issue surrounding the funding of public service broadcasting. The five public purposes of the BBC's Charter are expensive to fulfil. • Content is expensive to create. The licence fee is seen as problematic because it is a regressive form of taxation, with everyone paying the same fee regardless of their income • As technology develops, it become even harder to sustain a compulsory licence fee when people have moved predominantly to alternative sources of information through the internet, digital channels and smart phones	**(6)**

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8** • Definition of a tax/ identification of an ad valorem tax. Economic effects include: • Increase in price and a reduction in demand for soft drinks which contain sugar / increase in demand for healthy drinks. • Reduction of consumer surplus and producer surplus/ profits (may be shown on diagram) • Tax acts to increase costs and may reduce profits. • Increased investment in healthier drinks. • Increase in tax revenue for government and impact on healthcare services and other services, for example dental care. • Improvements in quality of healthcare among population – fall in obesity, diabetes and heart disease. Reduced pressure on healthcare services. • A diagram of an indirect tax may be awarded, depicting an increase in price, a decrease in quantity and the area of tax collected. • A relevant externality diagram depicting a reduction in welfare loss. • A relevant cost and revenue diagram depicting the impact of an expenditure tax on firms. • Increase in life expectancy/ the quality of life/ productivity in the workforce. • Impact on employment in the soft drinks industry/impact on employment in substitute product markets. • Impact on income distribution / regressive tax **Evaluation 9** • Significance of price elasticity of demand in determining impact on price, quantity, employment and tax revenue. • Consideration of the impact on substitutes/ application of cross elasticity of demand e.g. switch to healthier substitutes. • Consideration of the incidence of tax on consumers and producers. • Difficulty in imposing the tax – different soft drinks products with different sugar content. • Extent of hidden/informal market. • Time factor - long term implications for government funding of pensions and healthcare. • Consideration of price elasticity of supply e.g. the ability of producers to switch to healthier drinks.	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** • Understanding of private costs and external costs (may be implicit). • Explanation of private costs in nuclear power station: purchase of land, machinery, construction of buildings, labour costs, security costs, raw materials. • Explanation of external costs: visual eyesore, impact on wildlife, impact on local property prices, air pollution, road congestion, risk of leak or contamination. • Diagram depicting private costs and external costs  ➢ Original MPB / MSB and MPC curves ➢ MSC curve (accept a parallel shift of the MSC curve) ➢ Identification of market equilibrium and socially efficient quantity ➢ Identification of triangle of welfare loss **NB: For a Level 4 response, candidates must include an accurate diagram and consideration of both private and external costs.**	**(25)**

Costs also include:

- Risk from major nuclear plant failure.
- Imperfect market knowledge: risk from incomplete technology for developing the nuclear reactor.
- Risk from foreign ownership and control of major nuclear power station (funded and built by French and Chinese companies).
- High price of electricity consumers will pay – above the market price.
- Accept macro point e.g. long term income outflow on the balance of payments.

Evaluation

- Difficulty in measuring and attaching a monetary value to private costs and external costs.
- Time lag in building plant – at least 10 years.
- Government intervention may reduce size of external costs e.g. construction noise abatement measure.
- Risk of government failure; some argue it could not withdraw from the Hinkley Point project without major loss of trade with China.
- Accept macro point e.g. short and long run effects on the balance of payments.

Significant private and external benefits from the project which offset costs and/or reduce welfare loss, may include:

- Employment and income creation / positive multiplier effects at local, national and international level / French and Chinese firms view it as a first step to securing further contracts from around the world.
- Increased security of energy supply for the future – some 7% of UK electricity for sixty years / given the closure of many coal power stations.
- Diversify UK energy production and so spread risks from uncertainty on non-renewable sources such as wind power and solar power.
- Stable price of electricity for consumers for next sixty years.
- Less damage to the environment / nuclear energy has low carbon emissions / easier for government to achieve internationally agreed carbon emission targets.
- Extremely tight safety regulations to be imposed on the building and operation of the nuclear power station / one of the greatest safety regulations in the world.

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
1 (e)	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** 16 marks for KAA, for effects of increased infrastructure spending Microeconomic effects may include: • Wages higher • Improved infrastructure affects firms e.g. businesses' fixed or variable costs fall as transport costs fall • Investment seen to boost business confidence, lead to further investment and spending within firms • External benefits/external costs associated with the project - especially given the size, number of runways and amount of traffic outlined in Extract C. • External economies of scale • Accept answers based on impact on costs and/or revenues if the building occurs in the private sector, with appropriate diagram Macroeconomic effects may include: • Redistribution of incomes • Outward shift of AD/injection (I or G) into circular flow (or further outward shift in AD) with multiplier effects, with macroeconomic impacts e.g. employment and incomes rising • AS shift right with a movement in capacity of the productive economy shown (Keynesian or Classical AS) • Fiscal loosening – effects of increased budget deficit if funded without increase in tax • Effects of a rise in tax, if linked to government decision to raise tax to fund the projects **NB for a Level 4 response there must be micro and macro effect (s). Some factors could be seen as micro or macroeconomics, such as a rise in tax, increased FDI, redistribution and confidence.** Up to 9 marks for evaluation. Points might include: • Opportunity cost of spending on infrastructure e.g. schools, or higher taxes, • Crowding out – financial or resource • Might be a white elephant project	

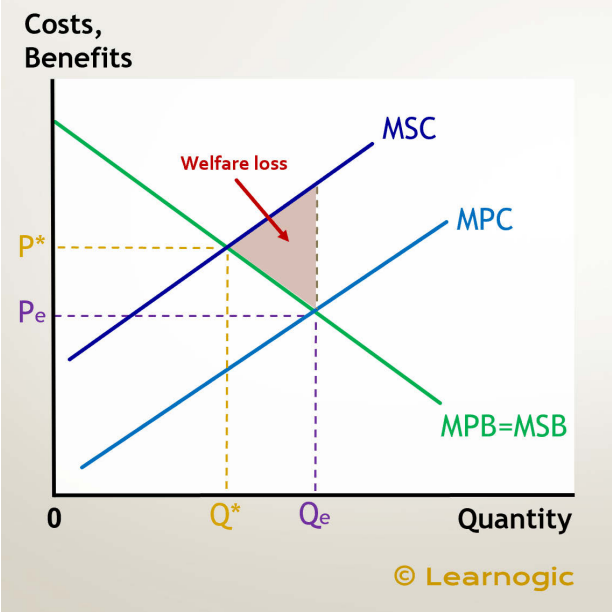
	• Depends on relations with EU/other countries as to whether the airport will reach full capacity • Depends on the size of the multiplier effect • Depends on the state of the financial sector • True costs not accounted for - externalities ignored • Large projects require a lot of coordination and getting behind schedule putting lives at risk. • Difficulty in placing value on external benefits and costs associated with the project	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays ability to apply knowledge in context but will focus on small range of elements. Demonstrates understanding by identifying relevant information. Demonstrates knowledge and understanding of terms, concepts, theories and models.
Level 2	5–8	Shows ability to apply economic ideas and relate them to economic problems in context. Displays knowledge and understanding of economic principles, concepts and theories to make limited analysis or narrow analysis.
Level 3	9–12	Analysis is clear and coherent with evidence well integrated, although may focus on some of the broad elements of the question more than others. Shows ability to apply economic ideas and relate them directly to the broad elements in the question.
Level 4	13–16	Analysis is relevant, clear and coherent with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic effects. A clear understanding of economic principles, concepts, theories and arguments.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of evaluative comments without explanation.
Level 2	4–6	Evaluative comments with limited explanations. Evidence of evaluation of alternative approaches which is generic or unbalanced leading to limited judgements.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to the context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
8	**Knowledge 4, Application 4, Analysis 8** Methods of government intervention may include: • indirect taxation - e.g. tax on petrol & diesel or new car sales • subsidies on public transport • subsidies on the development on electric vehicles • minimum prices e.g. on new petrol/diesel cars • maximum prices e.g. on public transport or electric vehicles • Emissions Trading Scheme on aviation but proposed extension to road transport • regulation e.g. ban on sale of petrol & diesel vehicles, vehicle emission checks, ban cars in certain areas, new builds to have charging points • road pricing schemes - congestion charges, low emission zones • improved public transport infrastructure • education & information schemes • further deregulation of public transport/creation of greater competition in markets • regulation by CMA of train operators to improve reliability of services/reduce prices • increase road tax/road tax incentives for low carbon emission vehicles • promotion of alternative forms of transport e.g. electric bikes, cycle lanes, car sharing, bus only lanes • incentives for working from home e.g. tax breaks • behavioural arguments **NB: For Level 4 KAA candidates must refer to the transport market (cars, roads, public transport etc.)** **NB – AT LEAST TWO METHODS FOR KL4 as "methods"** **Evaluation 9** • Criticisms of the likely effectiveness of policies • Government failure • Inelastic PED arguments • Weak substitute/XED arguments • Asymmetric information • Regulatory capture • Time lags • Prioritisation arguments • Short run v long run arguments • Combination of policies required • Cost and opportunity cost arguments • Measurement issues • Administration & enforcement issues • Arguments surrounding the manufacturing of electric vehicles/battery charging/poor infrastructure • Behavioural arguments	**(25)**

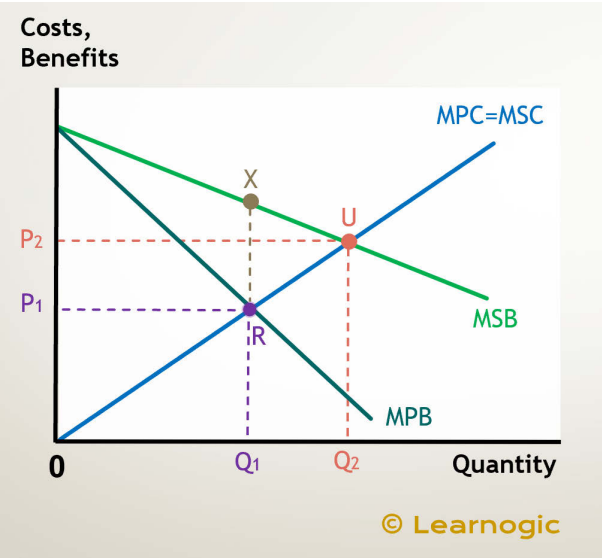
Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** **Microeconomic effects could include:** • Impact on firms' costs, revenue, profit (use of cost, revenue, profit diagram) • Impact on construction sector significant • Impact on labour markets e.g. geographical mobility of labour, labour market shortages, supply of labour in specific industries, demand for labour during construction, wage determination • Positive external benefits of less car travel • Employment/Wages - quicker transport e.g. for workers to access high paying jobs in London • Negative production externalities – private costs and external costs (use of diagram)  • Accept price on y-axis, MSC may be parallel or pivoted • PPF and growth arguments • Impact on house prices **Evaluation** • Magnitude of the project - £100 billion is significant • Affordability arguments • Opportunity cost arguments • Government failure arguments	**(25)**

	• Time lags and implementation lags • Type of infrastructure project built • Conflicts between objectives – cost versus benefits • Difficulty in valuing external costs • People may not have the skills (e.g. financial) to get these jobs • Whilst quicker, transport costs could be prohibitive • Environmental offset may compensate for the loss from construction • Extensive use of tunnels minimises environmental damage **NB Macroeconomic effects should be awarded at L2 maximum** **NB negative effects can be taken as KAA and positive effects as evaluation (and vice versa)**	

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

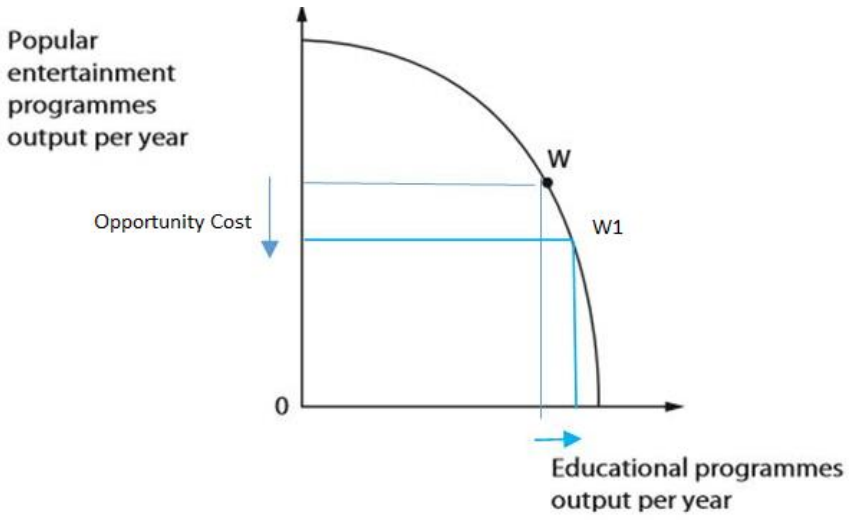
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
8	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** **Microeconomic effects could include:** • Impact on firms' costs, revenue, profit (use of cost, revenue, profit diagram) • Impact on schools, colleges and universities particularly significant • Accept discussion of different funding models, with the Department for Education taking over role of the Education and Skills Funding Agency (ESFA) in March 2025. This previously funded education for learners aged 16 to 19-years-old • Impact on labour markets e.g. occupational mobility of labour, labour market shortages, supply of labour in specific industries, demand for labour e.g. maths teachers, wage determination • Increased skills so better employment prospects and higher wages/standard of living • Positive consumption externalities – private and external benefits • Use of diagram e.g. RXU is potential welfare gain, RX size of external benefit, etc.  • PPF and growth arguments **Evaluation** • Magnitude of spending - depends on how much	**(25)**

	spending on education is increased • Affordability arguments • Opportunity cost arguments • Some people are less suited to Maths and may struggle to make progress • People may be suited to focusing on other areas • Government failure arguments • Time lags and implementation lags – education takes a long time to have an impact, policies take time to be designed and implemented • Type of education included in the policy e.g. what level of maths • Conflicts between objectives – cost versus benefits • Difficulty in valuing external benefits • Impact on long-term size of labour force **NB Macroeconomic effects should be awarded at L2 maximum** **NB negative effects can be taken as KAA and positive effects as evaluation (and vice versa)**	

Question Number	Answer	Mark
4(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for correct definition of inferior good e.g. as incomes rise demand falls or YED formula = %△Qd/%△Y Or as incomes falls more demand for inferior goods **Application** 1 mark for, e.g. 1 mark for calculating percentage change in income = 1.5/24.2 =+6.2% 1 mark for calculating YED = -3%/+6.2% = -0.48 (accept range -0.48 to -0.5) **Analysis** 1 mark for linked development e.g. bus travel is an inferior good as YED is negative (1). Or explanation of the inverse relationship (1).	**(3)**

Question Number	Answer	Mark
5(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. • Measure of the welfare (utility) that people gain from consuming goods and services • Difference between the total amount that consumers are willing and able to pay and the total amount that they actually pay. • Diagram showing area under the demand curve and above the market equilibrium price.	**(1)**

Question Number	Answer	Mark
5(b)	**Application 2** **Application** 2 marks for, e.g. An additional point to the right of W indicating movement of resources towards educational programmes (1) and the resulting opportunity cost, showing a fall in output of popular entertainment programmes (1). The following diagram earns 2 marks:  	**(2)**

Question Number	Answer	Mark
5(c)	**The only correct answer is C** ***A*** *is not correct because this is providing an example of government finances rather than being non-excludable or non-rivalrous as a definition of a public good.* ***B*** *is not correct because this is confusing popularity with public goods, rather than being non-excludable or non-rivalrous as a definition of a public good.* ***D*** *is not correct because this is confusing benefits to third parties as members of the public rather than being non-excludable or non-rivalrous as a definition of a public good.*	**(1)**

Question Number	Answer	Mark
1(a)	**The only correct answer is C** ***A*** *is not correct because it is a quasi-public good* ***B*** *is not correct because it is a public good* ***D*** *is not correct because it is a quasi-public good*	**(1)**

Question Number	Answer	Mark
1(b)	**Knowledge 1 Application 1 Analysis 1** **Knowledge and Analysis up to 2 marks e.g.** Recognition that flood defences are public goods (1) • Non-excludable (1) • Non-rival (1) • Public sector provision funded by taxation is more effective (1) • Free rider problem (1) **Application 1 mark e.g.** • Government investment of £74m in the Calder Valley (1) • Individuals may refuse to pay but still use services leading to insufficient funds to build flood defences (1)	**(3)**

Question Number	Indicative content	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** • Knowledge – public goods are non-excludable and non-rivalrous • Application - Extract C suggests public parks exhibit these features Reasons why they are public goods • 'free use' i.e. do not have to pay to enter • 'share the park with other users' • 'no exclusive use of the park' • Park run users 'share the park' with other users indicating one person using the park for a run does not have an impact on another person's enjoyment so non-rival. **NB Reasons for/against being a public good may be presented as either KAA or EV**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(c) continued	**Evaluation 4** Reasons against being public good • Local authorities planning on charging parkrun participants using public parks • Public parks already have exclusive areas e.g. booking tennis courts or football pitches • Parks may be rivalrous in consumption e.g. Hundreds of park run participants may get in the way of other users. • Parks are also excludable because they already have exclusive areas, gates can be closed at certain times	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** • Identification of broadcasting as a public good having the qualities of non-rivalry and non-excludability • Broadcasting is non-rivalrous because one person's consumption of the service does not interfere with another person's consumption • Broadcasting is non-excludable because a TV aerial or broadband router is all that is required to access services • Public service broadcasting such as the BBC is freeto-air funded partially by the TV licence • The marginal cost of providing a pure public good to an extra user is zero, and this implies that, in order to achieve allocative efficiency, the charge for the product should be zero • Private sector businesses are unlikely to consider providing pure public goods because they will not be able to make any profit at a zero price, and many consumers can take a free ride on such goods because of non-excludability	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Answer	Mark
6(c) continued	**Evaluation 4** • Public service broadcasting faces enormous challenges as the industry experiences a technological revolution. Most of the UK's 25 million TV homes have access to multi-channel services such as Freeview digital terrestrial service. A large number have access to Sky TV, Netflix and the other subscription services • Digital broadcasters can now exclude non-payers using set-top boxes. The BBC and ITV broadcasting services continue to be completely non-rival and it is this that really matters in the context of the services that the BBC provides • Questioning the extent of the effect over time. How significant is this? • Possible perception that some paid for television content/ license fee cost means service is in essence regressive, excluding those on lower incomes • Quasi public goods as not fully non-excludable and also element of rivalry due to caps on sharing of accounts • Judgement should focus on how important this effect is **NB KAA can be treated as Evaluation and vice-versa**	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6 (g)	**Knowledge 4, Application 4, Analysis 6** • Candidates may illustrate through use of appropriate diagram. • Public goods: non excludable and non rivalrous, e.g. flood defence schemes. • Failure of free market – free rider problem. • Externalities – positive or negative, e.g. housing may create these. • Information gaps: markets may have asymmetric information, e.g. insurance companies having incomplete information on risk of flooding. • Candidates may consider other types of government provision.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1-3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4-6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two-stage chain of reasoning only.
Level 3	7-10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance
Level 4	11-14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** • Unintended consequences. • Magnitude • Government failure, e.g. flood defences. • Opportunity cost of government provision. • Ineffectiveness of government provision, e.g. climate change – better to abandon areas, • Information gaps. • Non-beneficiaries pay. • Anti-competitive.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1-2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3-4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning
Level 3	5-6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement

Question Number	Answer	Mark
4(a)	**Knowledge 3 Application 1** **Knowledge/understanding (3)** 1 mark for e.g.: • Understanding of asymmetric information and information gaps • This is an example of market failure • Buyers and sellers have different levels of information • Seller knows the history of the vehicle • Buyer finds it hard to distinguish between a high quality and a low-quality vehicle • Prices and incentives to sell are affected • Risk of 'lemons' sees buyers, uncertain of quality, only willing to pay an average price for cars, discouraging sellers of high-quality cars from participating • Faults more costly to fix nowadays due to sophisticated electronics in cars • Many modern cars are more reliable so less of a problem • Allow use of a diagram to show information gap **Application (1)** 1 mark for e.g. • 750 000 consumers face unresolved problems • Older vehicles more likely to have faults • Increased risks to potential buyers • Own used car examples	**(4)**

Question Number	Answer	Mark
4(b)	**The only correct answer is B** ***A*** *is not correct because firms tend to maximise profits* ***C*** *is not correct because this is an example of irrational behaviour* ***D*** *is not correct because this is an example of irrational behaviour*	**(1)**

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2 Analysis 2** **Award up to 3 marks for each reason**: **Knowledge/understanding** • Identification of two separate reasons: inertia, computational problems, information gap, all providers increasing prices over time. (1) **Application** 1 mark for, e.g. • 'Irrational consumers pay the price'. (1) • Energy prices have risen by 158% in the last 15 years.(1) • Four million households are still on the most expensive energy rates. (1) **Analysis** Linked development of why not switching to a supplier offering lower prices (1) **e.g.** • Inertia (1) despite a decade of rising energy bills (1) as consumers do not have the time or motivation to switch (1).	**(6)**

Question Number	Answer	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding** 2 marks for e.g. • producers know more than consumers (1) or the information is incomplete or imperfect (1) • misallocation of resources (1) **Application** 1+1 mark for e.g. • risk of requiring health care is an unknown (1) • Doctors know more than patients (1) **Analysis** Up to 2 marks for any one of the following in linked development to market failure OR two limited examples of analysis (1+1): • Under consumption of healthcare (1) so patients' health conditions deteriorate (1) • Consumers overcharged for health treatment (1) as they are unaware of the true cost of health care (1) • Unnecessary treatment (1) as consumers unaware of health needs (1) • Patients lack of awareness of waiting times and NHS priorities (1)	**(6)**

Question Number	Indicative content	Mark
6(d)	**Knowledge 2, Application 2, Analysis 2** • Identification of information gaps as a cause of market failure **Information gaps as main cause of food waste e.g.** • Food suppliers lack market information: e.g. predicting size of harvests – dependent on climate/ pest control and disease/ time lags in growing crops and raising livestock. • Supermarkets lack market information: e.g. predicting household demand – depends on tastes and fashion which may change/ population and migration changes/ impact of competitors. • Consumers lack market information: e.g. uncertainty over how to store food or whether food is fit for consumption after sell-by dates. **Irrational behaviour as main cause of food waste e.g.** • Computation issues e.g. consumers perceived demand may exceed actual demand for food / difficulty in comparing the different size of food products to fit with the actual amount of food required. • Habitual behaviour e.g. consumers may have a tendency to purchase more food than required/ better to have too much than too little food. • Influence of other people's behaviour e.g. consumers may purchase food that they might not want. • Impulse buying e.g. due to advertising or use of special offers. NB These points could count as Evaluation and the Evaluation points as KAA. NB A Level 3 response would typically consider both 'information gaps' and 'irrational behaviour'. NB There may be overlap between information gaps and irrational behaviour as possible causes of food waste.	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(d) continued	**Evaluation 4** • Consideration of relative proportions of food waste e.g. supermarkets appear favourable compared to food suppliers and households. • Other factors could cause food waste e.g. ➢ Misleading advertising by firms so consumers purchase food they do not want. ➢ Transport and storage problems due to road congestion / problems of importing food from overseas. • Consideration of whether it is rational to assume that consumers seek to maximise utility in allocating their expenditure / and firms seek to maximise profits in making production decisions. • Long run information gaps may narrow and irrational behaviour may reduce e.g. improved labelling and social enterprise, advice to customers on how to store food and use leftovers or use of new technology to extend freshness of food. NB These points could count as KAA and the KAA as evaluation.	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Information gaps as main cause of consumers failing to switch** ➢ Consumers lack market information on the price of their landline bill in relation to other providers ➢ Main target audience (the elderly) lacks the knowledge to shop around online and use price comparison sites ➢ Switch to online billing and direct debit payments means many households are unaware ➢ Automatic price changes made by BT ➢ Hard to compare prices as all bundles comprise of different services ➢ Lack of awareness of competitor prices and packages **Irrational behaviour as main cause of consumers failing to switch** ➢ Computation issues e.g. consumers do not understand their pricing structure ➢ Habitual behaviour/status quo bias/brand loyalty e.g. consumers may have a tendency to purchase the same service over time ➢ Consumers do not have the time to shop around or look for better deals ➢ Consumers want to avoid the disruption of changing provider ➢ Strong brand of BT leading to an inelastic demand Other factors could be causing this: ➢ Misleading advertising or price plans ➢ Lack of provision in all areas e.g. fibre optic or bundles ➢ Tie in contracts & automatic renewals ➢ Information overload ➢ Size of savings may not be significant enough to go through switching ➢ Line quality may vary so not similar packages/non-price considerations make BT offer the best. **NB For Level 3 response candidates need at least two reasons but are not required to use both 'information gaps' and 'irrational behaviour'.** **NB There may be overlap between information gaps and irrational behaviour as reasons.**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(c) continued	**Evaluation 4** • Counter arguments made to the reasons raised • Significance of the reasons provided • Consideration of whether it is rational to assume that consumers seek to maximise utility in allocating their expenditure • Long run information gaps may narrow and irrational behaviour may reduce e.g. improved price plan information & actions of the regulator	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6 (g)	**Knowledge 4, Application 4, Analysis 6** Distinction between free market, mixed and command economies: reference to Adam Smith, Friedrich Hayek and Karl Marx Disadvantages of free market approach: • Free market under provision of health services, with large external benefits (SMB>SMC analysis), below social optimum. • Sick unable to work – loss of potential output, PPF. • Addressing concerns on affordability to access health care, insurance and information gaps e.g. preventative earlier treatments for elderly and children. • Misallocation of resources on administration of charges. • Profit incentive misallocating resources ahead of patient needs. • Asymmetric information on need to pay for treatment and quality of care. • Missing markets for elderly, children, remote rural areas.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Functions of the price mechanism to allocate resources in private health sector or NHS: • rationing • incentive • signalling • 'Private health care increases choice for users, encourages competition and drives up standards of care.' • Mixed economy acts as a compromise between the advantages and disadvantages of a free market economy and a command economy. • Mixed economy features disadvantages of both a free market economy and a command economy and has no advantages of either. • NHS is more efficient and offers better care than private sector so why allow private sector to exist. • NHS waiting lists and lack of choice. • Information failures.	**(6)**

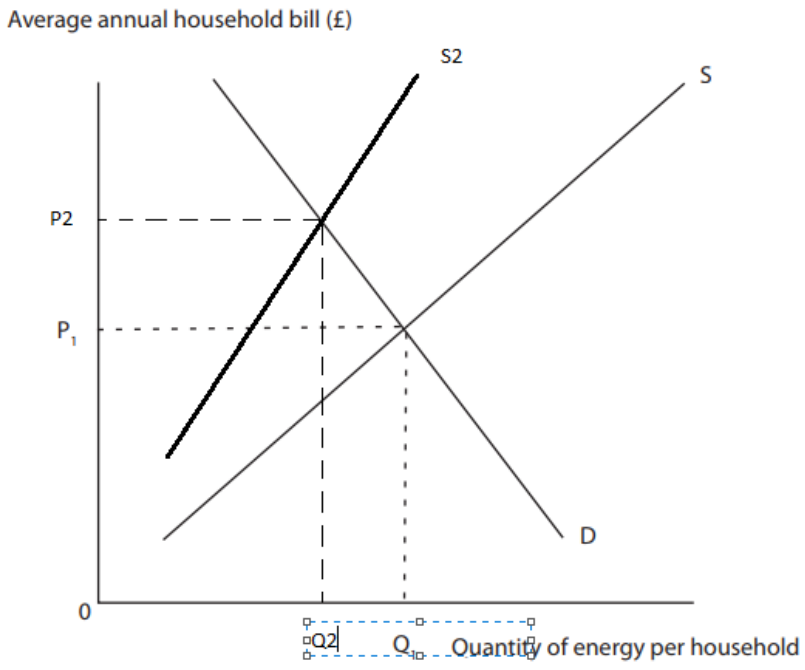
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Answer	Mark
3(a)	**Knowledge 1** **Knowledge** 1 mark for definition, e.g. • Government grant (1) or government policy designed to encourage production or consumption (1) money given (1)	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1** C	**(1)**

Question Number	Answer	Mark
3(c)	**Application 2** **Application** 2 marks for e.g. • New supply curve drawn and labelled, showing an inwards/leftwards shift (1) • New equilibria labelled, showing a rise in price and/or decrease in quantity (1) OR 2 marks for e.g. • New demand curve drawn and labelled, showing an inwards/leftwards shift (1) • New equilibria labelled, showing a decrease in price and/or decrease in quantity (1)	**(2)**

Question Number	Answer	Mark
4(a)	**Application 1** **The only correct answer is A** ***B*** *is not correct because the candidate has mistakenly divided 1070 by 0.5* ***C*** *is not correct because the candidate has mistakenly multiplied 1070 by 1.005* ***D*** *is not correct because the candidate has mistakenly multiplied 1070 by 1.05*	**(1)**

Question Number	Answer	Mark
4(b)	**Application 2**  1 mark for skewed (pivoted) leftward shift of supply curve 1 mark for new equilibrium **NB if a parallel leftward shift of supply with correct new equilibrium maximum 1 mark**	**(2)**

Question Number	Answer	Mark
4(c)	**Knowledge 1** **Knowledge** 1 mark for definition, e.g. an indirect tax is imposed on producers (suppliers) by the government (1) tax on good or service which is added to their price (1) tax on consumer expenditure (1)	**(1)**

Question Number	Answer	Mark
5(a)	**Application 1** **The only correct answer is C** ***A*** *is not correct because they may multiplied 8.75 by -0.1* ***B*** *is not correct because they have mistakenly taken 2017 as the original year in the percentage change calculation* ***D*** *is not correct because the percentage change in quantity demanded has not been multiplied by -0.1.*	**(1)**

Question Number	Answer	Mark
3(a)	**The only correct answer is C** ***A*** *is not correct because the supply curve shift has been ignored* ***B*** *is not correct because this is the cost to the consumer* ***D*** *is not correct because this is the total amount received by the producer*	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for identification of opportunity cost e.g. the next best alternative forgone. **Application** 1 mark for specific reference to government spending e.g. schools and hospitals. **Analysis** 1 mark for analysis of problem e.g. the economic and social case for a subsidy should be judged carefully on the grounds of efficiency and fairness. Government subsidies inevitably carry an opportunity cost and in the long run there might be better ways of saving energy.	**(3)**

Question Number	Answer	Mark
4(a)	**The only correct answer is C** ***A*** *is not correct because* OP_1HQ_1 *is the total cost of the product plus tax revenue producers' share of the tax* ***B*** *is not correct because* P_2P_1HJ *is the consumers' share of the tax* ***D*** *is not correct because* P_3P_2JK *is the producers' share of the tax*	**(1)**

Question Number	Answer	Mark
4(b)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/understanding** 1 mark for correct definition of specific tax e.g. specific tax is a set amount per unit of the product sold **Application** 1 mark for e.g. of specific tax such as: • fuel duty • alcohol and tobacco duty • gambling duties • air passenger duty • sugar tax **Analysis** 1 mark for linked development e.g. to internalise the externalities accruing to the consumption of products causing external costs (1). Reference to 'sin taxes' (1). Raising revenue (1).	**(3)**

Question Number	Answer	Mark
5(a)	**Knowledge 1** **Knowledge/understanding** 1 mark for definition, e.g. This occurs when government intervention in the economy causes a net welfare loss/decline in economic welfare.	**(1)**

Question Number	Answer	Mark
5(b)	**Knowledge 2** **Knowledge** 1 mark for reason and 1 for linked development Possible answers include: • Positive externalities (1) resulting from people using railways rather than roads (1) • Risk/imperfect information (1) if the project is undertaken by the private sector it may be less likely to happen (1)	**(2)**

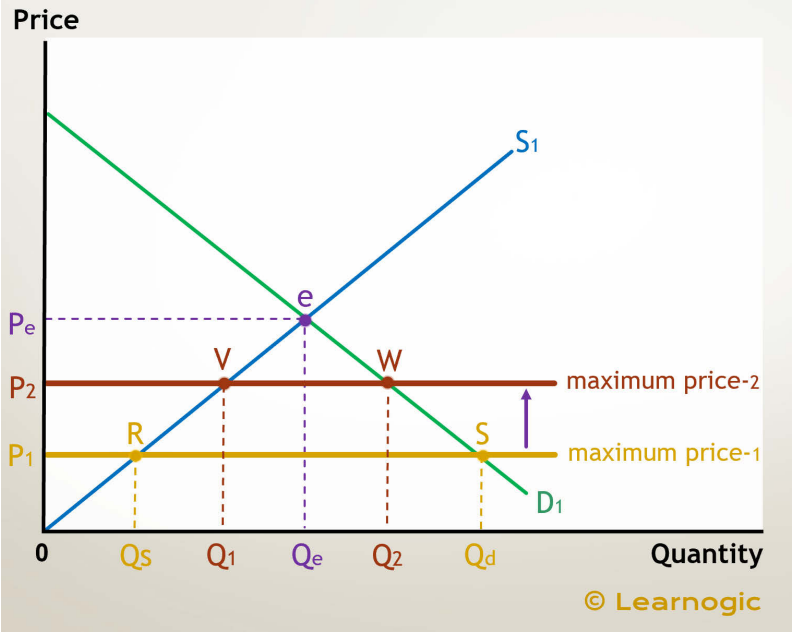
Question Number	Answer	Mark
5(c)	**The only correct answer is A** ***B*** *is not correct because this would cause the demand for rail travel to shift to the left* ***C*** *is not correct because this would cause the supply curve to shift to the right* ***D*** *is not correct because this would cause the supply curve to shift to the right*	**(1)**

Question Number	Answer	Mark
2 (a)	**Knowledge 1** **Knowledge** 1 mark for accurate definition e.g. A minimum price is the lowest price that can legally be set (1) The price floor below which cannot be charged (1)	**(1)**

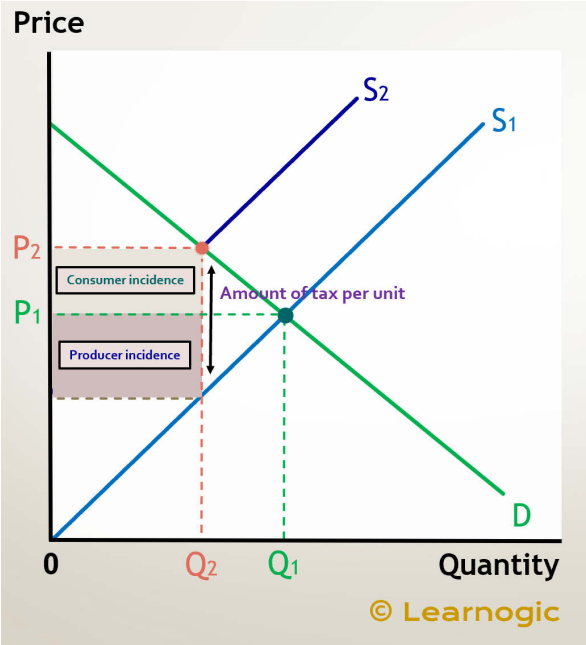
Question Number	Answer	Mark
2(b)	**The only correct answer is B** ***A*** *is not correct because it is the loss of consumer surplus resulting from the minimum price* ***C*** *is not correct because it is the gain in producer surplus resulting from the minimum price* ***D*** *is not correct because it is the amount spent by the consumer and the EU*	**(1)**

Question Number	Answer	Mark
2(c)	**Knowledge 2** **Knowledge** 1 mark for identifying likely problem and 1 mark for linked development. **One** problem e.g. • At P2 there is a surplus/ excess supply (1) which has to be paid for through higher taxes (1) • This surplus may have to be stored (1) The surplus storage will cost money to maintain the facilities (1) • Opportunity cost of the intervention buying (1) e.g. spending on education (1) • Unintended consequences (1) e.g. firms increase supply (1) • Reference to 'underground markets' • Higher prices for consumers	**(2)**

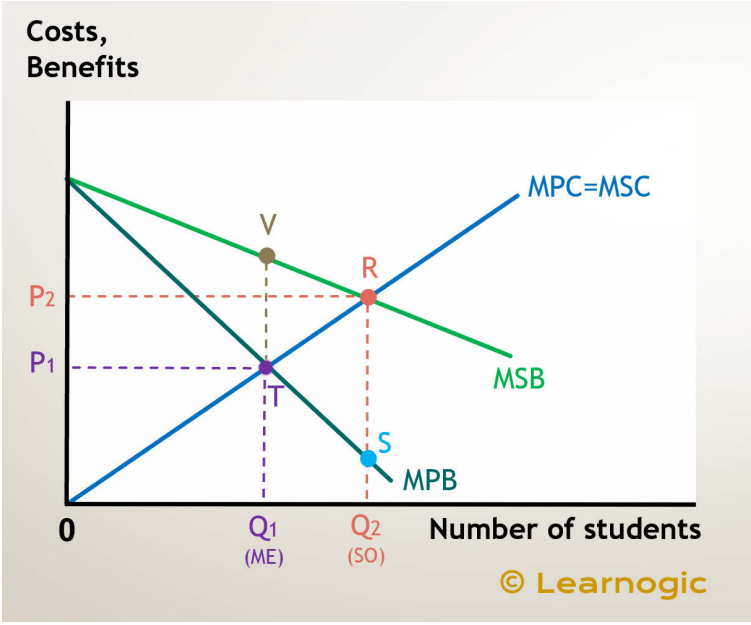
Question Number	Answer	Mark
1(a)	**The only correct answer is C** *is not correct because this is the change divided by the new price* *is not correct because this is a distractor* ***D** is not correct because 694 is the change in price*	**(1)**

Question Number	Answer	Mark
1(b)	**Application 2** Identifies original maximum price below equilibrium (1) Identifies the new maximum price above original (1) £1277 (1) & £1971(1) for new and original permitted  	**(2)**

Question Number	Answer	Mark
1(c)	**Knowledge 1** **Knowledge/Understanding:** 1 mark for definition, e.g. • The price at which supply equals demand. • The balanced point with no tendency to change • No excess demand or excess supply • Market clearing price	**(1)**

Question Number	Answer	Mark
1(a)	**Knowledge 2, Application 2** **Knowledge** - Correct drawing of a demand and supply diagram annotated to show a parallel left (1) shift in the supply curve (1) **Application** - consumer tax incidence shown (1) - producer tax incidence shown (1)  **NB: Award application mark for correctly identifying on diagram amount of tax per litre is set at 58 pence per litre. PED does not have to be price inelastic.**	**(4)**

Question Number	Answer	Mark
1(b)	**Analysis 1** **The only correct answer is A** ***B*** *is not correct because both consumer surplus and producer surplus decrease* ***C*** *is not correct because producer surplus decreases* ***D*** *is not correct because consumer surplus decreases*	**(1)**

Question Number	Answer	Mark
2(a)	**Knowledge 2, Application 2** 1 mark for the original market equilibrium where MPB = MSC (=MPC) 1 mark for correct shift from MPB to MSB 1 mark for showing the external benefit V to T 1 mark for welfare gain identified VRT 1 mark for the new equilibrium identified where MSB equals MSC (R) or (S) or Q2 Social Optimum. Diagram required e.g.  	**(4)**

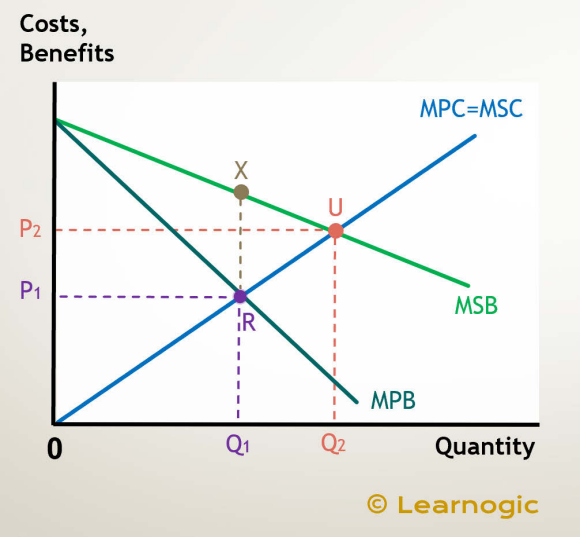
Question Number	Answer	Mark
2 (b)	**Analysis 1** **The only correct answer is C** ***A*** *is not correct because an external benefit to a third party is not identified* ***B*** *is not correct because an external cost to a third party is not identified* ***D*** *is not correct because a private cost plus external cost to a third party is not identified*	**(1)**

Question Number	Answer	Mark
3 (a)	**Knowledge 2, Application 1, Analysis 1** **Knowledge and Application** 1 mark for understanding of pollution permits (1) 1 mark for appropriate linkage to industry/market/firms (1) 1 mark for how reducing permits reduce pollution (1) Award use of diagrams, for example: shifts the supply of permits inwards (1) which will push up the price per permit (1) OR Negative externality reduced **Analysis:** 1 mark for linked development of market incentives/government revenue e.g. Reducing pollution/Increase in price of permits (1).	**(4)**

Question Number	Answer	Mark
3 (b)	**Analysis 1** **The only correct answer is B** ***A*** *is not correct because regulation may cause the distortion of price signals as a problem* ***C*** *is not correct because regulation may result in the problem of information gaps* ***D*** *is not correct as regulation may result in the problem of excessive administrative costs*	**(1)**

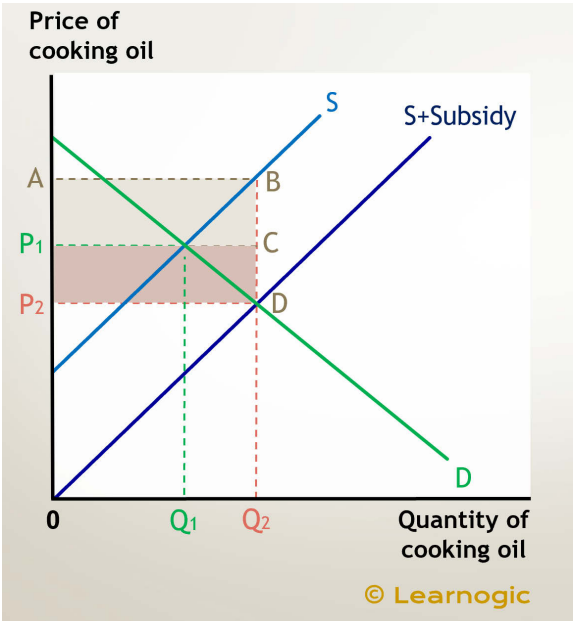
Question Number	Answer	Mark
4 (a)	**Knowledge 1, Analysis 1** **Knowledge / understanding and Analysis e.g :** • Total cost rises (1) at an increasing rate (1) • Total costs continue to rise (1) but more steeply (1) • MC > AC, therefore AC rises (1) • • MC > AC (1) therefore TC increases at a faster rate (1) candidates may draw the TC curve to show it rising more rapidly NB : responses may be shown on the diagram beyond point Z.	**(2)**

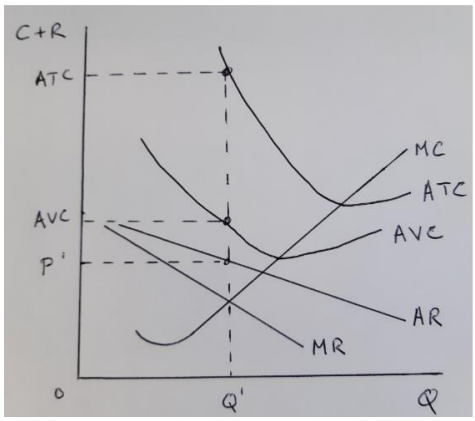
Question Number	Answer	Mark
3(a)	**The only correct answer is A** ***B*** *is not correct because making normal profit happens when AR=AC* ***C*** *is not correct because making supernormal profit means AR>AC* ***D*** *is not correct because the firm is not productively efficient*	**(1)**

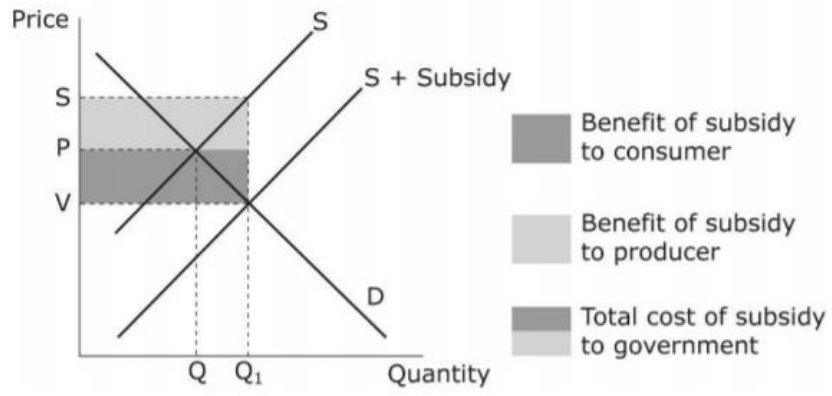
Question Number	Answer	Mark
3(b)	**Knowledge 2, Application 2** • 1 mark for MSB above MPB • 1 mark for the original market equilibrium where MPB=MPC at Q_1 • 1 mark for the social optimal equilibrium where MSB=MSC at Q_2 • 1 mark for welfare gain area UXR identified Diagram required e.g.  **NB MSB may be parallel or pivoted**	**(4)**

4(a)	**Knowledge 2 Application 1 Analysis 1** **Knowledge and Analysis: Up to 3 marks for one reason e.g.** • Maximum price is the ceiling price above which the price does not go (1) • Maximum price is set below the market equilibrium price (1) • Increases student affordability (1) causing an extension in demand / low-income students increase uptake (1) • Encourages consumption (1) internalising external benefits / third party effects (1) • Increase in consumer surplus (1) because the price of tuition has fallen (1) • Government may want to increase the proportion of young people at university (1) to increase future labour productivity (1) and therefore increase the external benefit/tax yield/revenue (1) **Application: Up to 1 mark for a relevant example e.g.** • Maximum undergraduate tuition fees in England are £9 250 (1) • Fees at the same level for 2 years (1) **NB A diagram may be used to earn knowledge, application or analysis marks (2)** **NB Must be one reason**	**(4)**

Question Number	Answer	Mark
4(b)	**The only correct answer is B** ***A*** *is incorrect as there would be an extension in demand* ***C*** *is incorrect as there would be excess demand* ***D*** *is incorrect as there would be a contraction in supply*	**(1)**

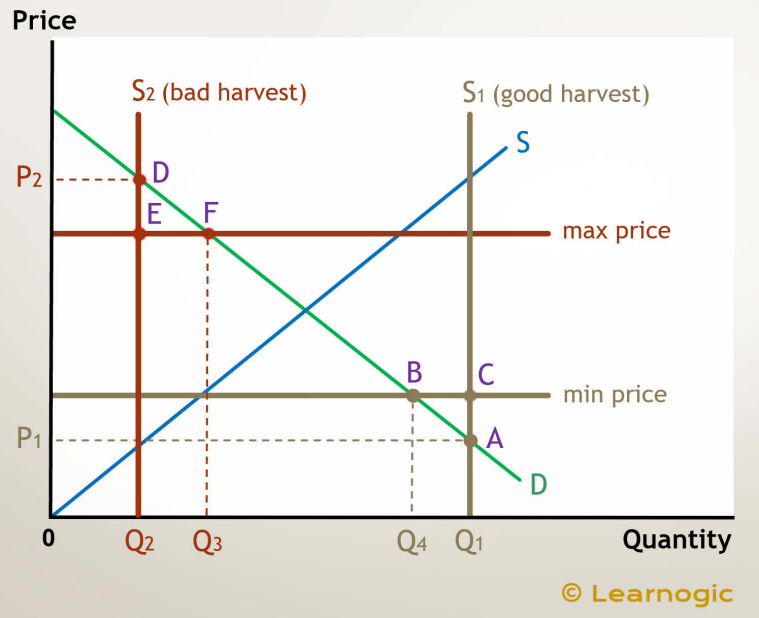
Question Number	Indicative content	Mark
2(a)	**Knowledge 2, Application 2, Analysis 1** **Knowledge and analysis** **Up to 3 marks; points might include:** • Understanding of what a **cost** of subsidy is (1) e.g. opportunity cost to the government (1) **Maximum 2 marks for an effectively used diagram.** Diagram may show: ○ shift right in supply (1) ○ the total amount of government spending/cost e.g. $ABDP_2$ (1) ○ subsidy per unit e.g. B to D (1) ○ area of producer subsidy (1) ○ area of consumer subsidy (1) ○ lower price e.g. P1 to P2 (1) Diagram e.g.  **NB Only award *consumer* subsidy diagram with an increase in demand if fully justified**	**(5)**

Question Number	Indicative content	Mark
6(d)	**Knowledge 2, Application 2, Analysis 4** **Case for subsidy:** • Subsidy is financial aid, grant • In long run required more to cover AC • Subsidy may have lowered AC, may be shown as shift on diagram • Benefit of subsidy to producer may cover their AVC in short-run or AC in long-run. • Avoid government rescuing 600 000 travellers • Avoid government paying benefits to up to 21 000 employees and those losing jobs in related industries e.g. hotels • Subsidy may have leveraged help from banks and shareholders • Thomas Cook may have recovered - Package holidays may have come back into fashion – aging population**.** Recession may have seen a rise in demand for package holidays as an inferior good, YED negative • Diagram may be used, for example:  OR	

	Incidence of a Subsidy  **NB a diagram is not required** **NB case against subsidy may be seen as KAA and case for as evaluation or vice versa.**	**(8)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(d) continued	**Evaluation 4** **Case against subsidy** Lack of finance • £150 million not enough - £1.5 billion loss. • Needed help from bank loan (zombie-firm), shareholders or another company taking over Thomas Cook. Not willing to help. • £1.5 billion loss in May 2017, already in long-run • Cheaper and more effective to nationalise to rescue employees and suppliers Merger with MyTravel • Diseconomies of scale, LRAC>AR • Lack of synergy • Loss making business Falling demand for Package holidays • AR shifting in • Booking online through competitors rather than Thomas Cook high street outlets • Package holiday inferior good, YED negative. • Climate change – stay at home. Opportunity cost Dependency Government lacks funds- budget deficit Moral hazard No consequences for the failings of management will teach other businesses who get into commercial difficulties that government will pick up the pieces **NB: Case against subsidy may be seen as KAA and case for as evaluation or vice versa.**	**(4)**

2(c)	**Knowledge 2, Application 2, Analysis 4** **Knowledge and analysis** Problems might include: • costs of storage and security • perishability and quality issues • opportunity cost/ fiscal burden • distortion of price signals: government failure • consecutive good harvests: run out of funds to purchase stock • consecutive bad harvests: run out of stock to release/sell • not all producers may agree to be a part of the scheme eg undercutting prices/foreign dumping • difficult to set the "right" floor price: e.g. if floor price is set too high, then there will be surpluses every year • difficult to set the "right" ceiling price: e.g. if ceiling price is set too low, then there will be insufficient stocks available in times of a shortage • does not prevent all price fluctuations and therefore farmer revenues can still fluctuate. This may be shown by an accurately drawn and labelled diagram eg;  **NB Accept diagrams showing only minimum or maximum price** **NB A buffer stock diagram is not *required* for KAA Level 3**	**(8)**

	NB maximum of L2 without understanding of buffer stocks.	

Knowledge, application and analysis		
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Question Number	Indicative content	Mark
2(c) continued	**Evaluation 4** • Advantages of buffer stocks, e.g. ○ less starvation/food poverty ○ minimises food shortages ○ prices do not go too high/price stability ○ maintains farmers' incomes ○ more certainty in markets allows planning for investment/output ○ cheap for the government to operate as they buy at low prices and sell at high prices ○ governments can distribute free food at times of crisis (Extract F) ○ export rice (Extract F) Other evaluation might include: • not enough information to say e.g. storage, security and transport costs	

	• size of the buffer stock is small relative to total population • depends on the product being stored.	**(4)**

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** Reasons for government intervention e.g. to correct market failure Link intervention to reducing carbon emissions. Appropriate diagram(s) accurately drawn. Ways might include: • Indirect taxation (ad valorem and/or specific) on carbon emissions providers e.g. coal/gas power stations, or workplace parking, reference to taxes directed at getting people out of their cars • Subsidies to solar/wind/nuclear energy/cycling/public transport • Maximum price on low/zero carbon emissions providers and minimum prices on carbon emitters. • Tradable pollution permits e.g. EU emissions trading scheme. • Provision of information, energy efficiency measures. • Regulation e.g. shut down all coal-fired power stations by 2025, reduction in car emissions by using low emission zones. **NB KAA can be treated as Evaluation and vice versa** **NB If there is no Diagram, max Level 3**	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
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Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Why the ways given may or may not be successful e.g. • Distortion of price signals. • Unintended consequences, energy shortages. • Excessive administrative costs, pollution permits. • Information gaps, external costs of non-carbon based energy sources, questioning link between carbon emissions and climate change. • Government failure to provide, solar and wind power 'vary with weather', nuclear accidents. • Relative benefits/costs of government intervention versus market based solutions.	**(6)**

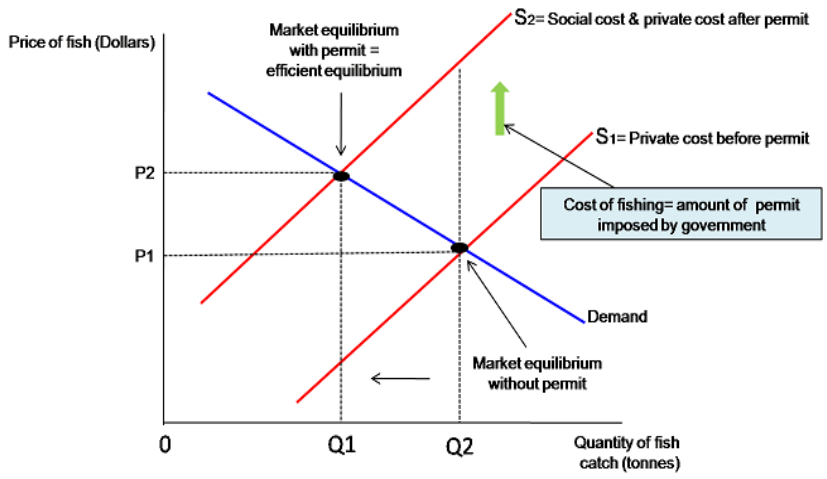
Level	Mark	Descriptor
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Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Define excess demand. Application of excess demand to state funded health care. Government interventions: Factors influencing demand and supply (PES) that may result in the removal of excess demand (new hospitals built/doctors trained). Purpose of intervention with reference to market failure and using diagrams in various contexts: • government spending on direct provision increases supply • charging for NHS health care rations • indirect taxation (ad valorem or specific) on sugar/high fat content food/drinks or cutting taxes on healthier lifestyle options • subsidies on healthy food/gym memberships • maximum and minimum prices on healthy and unhealthy food/drinks Other methods of government intervention: • state provision of public goods e.g. public parks • provision of information e.g. 5 a day • regulation e.g. restricting sugar content • o subsidising private treatment	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6 (f) continued	**Evaluation 6** Government failure to reduce excess demand. Understanding of government failure as intervention that results in a net welfare loss; consumers face an under provision of food/drink that satisfies them i.e. marginal social benefits now exceed marginal social costs. Consumer choice restricted e.g. heavily subsidised healthy school meals and regulations against unhealthy options. Causes of government failure: • distortion of price signals • unintended consequences – charging for health care results in under consumption. • excessive administrative costs • information gaps – what is healthy, concerns about low sugar food/drink contents • time lag of the policies • magnitude depending on size of funding change. Irrational consumer behaviour - peer pressure.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

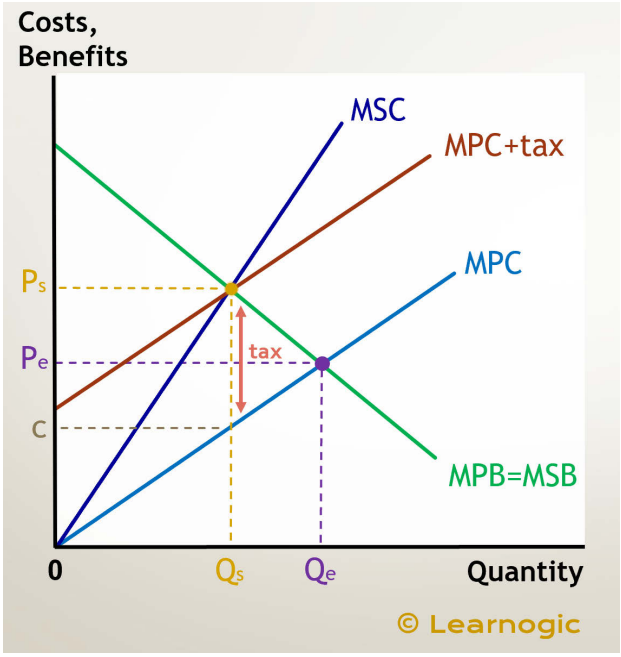
Question Number	Indicative content	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** **Do not award policies involving changes in the total allowable catch (TAC) per country** There are a range of policy options available to reduce over-fishing: Ways might include: • Provision of information, so that consumers can be encouraged to consume sustainably • Regulation e.g. designated areas for fishing allowing stocks to recover • Extension of property rights to international waters • Agreements on shares of fish that can be caught • Imposing indirect tax on fish to reduce consumption • Subsidy paid to firms to use safer technology • Minimum price for fish • Government permits awarded to fishing companies may be tradable • The answer may be supported using a relevant diagram e.g.  **NB If there is no appropriate diagram - maximum level 3 KAA**	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Evaluation of policies might include; • Unintended consequences, such as illegal fishing • Excessive administrative costs • Information gaps, with consumers unaware of the extent of the damage being caused by over-fishing, not knowing level of tax to implement etc. • UK may increasingly over-fish since leaving the EU • Relative benefits/costs of government intervention versus market-based solutions • Government unaware of the right level of intervention	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Define government intervention Government intervention is regulatory action taken by government that seek to change the decisions made by individuals, groups and organisations about social and economic matters. The extracts contain examples of the external costs of producing and consuming streamed content and the market failure associated. • The carbon footprint produced by fans watching a month of Netflix's top 10 global TV hits is equivalent to driving a car to Saturn • Every activity in the chain required to stream video, from the use of huge data centres and transmission over Wi-Fi and broadband to watching the content on a device, requires electricity. The majority of this is generated by emitting greenhouse gases Policies should target specific issues • Use of a tax on usage to increase costs for subscribers and to reduce the over consumption/ production • The imposition of a carbon tax is intended to internalise these externalities. The final price of the good should include the external costs and not just the private cost. Those who cause environmental costs should be made to pay the full social cost of their actions	**(14)**

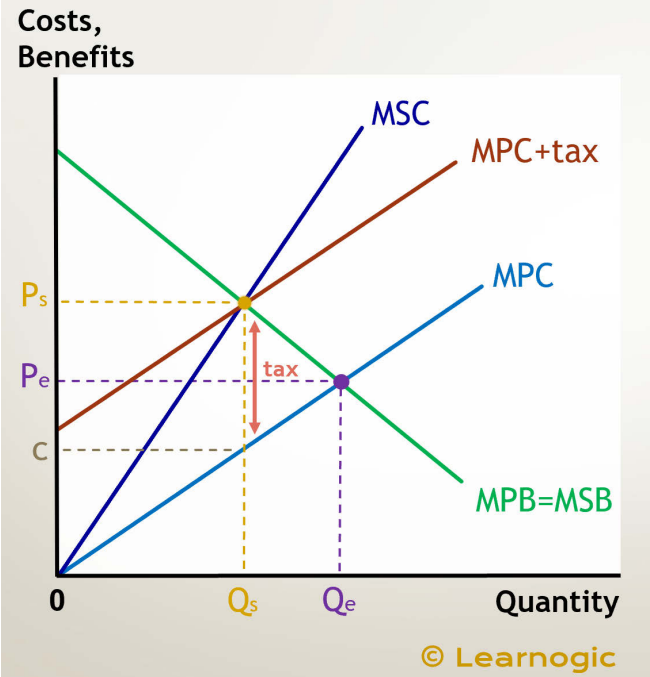


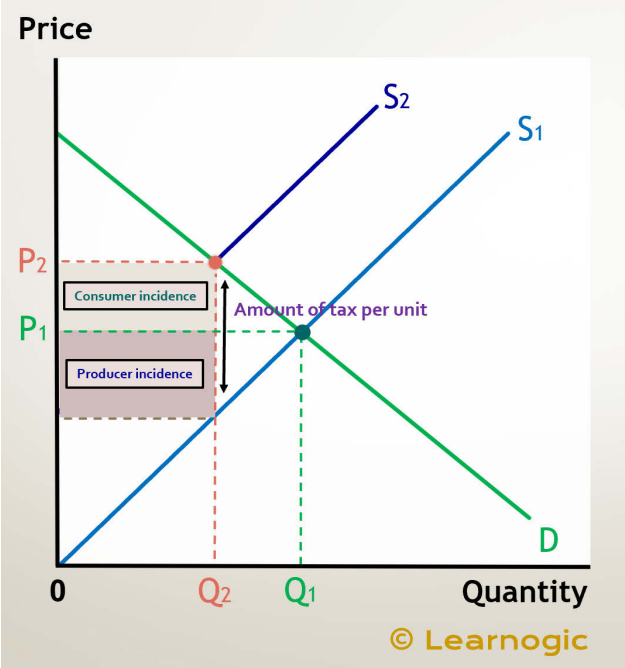
- With the tax, consumers now face the full social cost (MSC). Quantity falls from Qe to Qs. Qs is socially efficient because marginal social cost = marginal social benefit
- Alternatives such as provision of information may be used to inform subscribers of the issues being caused and reduce the asymmetric information problem
- The focus of any government intervention could encourage alternative forms of entertainment and recreation
- Improve information on the environmental effects or to use regulation to limit viewing hours for individuals

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** Effectiveness of policies used 'in a free market dominated by US firms' Intervention – tax • Production may shift to countries with no or lower carbon taxes. (so-called 'pollution havens') This can give developing countries an incentive to encourage production processes which cause pollution, i.e. there is 'outsourcing' of pollution • The cost of administrating the tax may be quite expensive reducing its efficiency • It is difficult to evaluate the level of external cost and how much the tax should be • Possibility of tax evasion. Higher taxes may encourage firms to hide carbon emissions • If demand is price inelastic, the tax may have to be very high to reduce demand significantly. In the short term, firms may not feel they have many alternatives. Though, over time, demand will become more elastic as more alternatives are generated • Impact on income inequality/fairness/impact on poorer communities Other methods can be discussed including; Regulation of number of hours of content watched by individuals Subsidies of more energy efficient devices from which to consume content	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to
		context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Impacts of tax introduced for plastic food packaging including the following; • Increased price of food • Reduced consumer surplus • Incentives for producers to use recycled packaging • Further tax revenue to the government which could be hypothecated to mitigate externalities e.g litter/ fund additional interventions • Increased price acting as nudge/ shove in order to change behaviour of consumers • Reduced impact upon the environment/litter as disincentive for firms to use excessive packaging • Possible use of diagram highlighting social optimum of reduced consumption/ production of plastic - or use of supply and demand diagram/incidence of tax concept to highlight where the burden will fall in terms of the increased costs to package food Diagrams may include; -Reduced externality through taxation  	**(14)**

	-Tax applied – increasing price/reducing quantity  **NB If there is no valid diagram, max Level 3**	

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models.

		Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** • Depends on the Price Elasticity of Demand for particular foods – whether price increase is passed on • Discussion of possible subsidy or alternative being more effective in incentivising use of different materials in order to reduce use of plastics in packaging • Depends on magnitude of the tax and its duration, if it will continue to be set at this rate • Is the level of tax sufficient to change behaviour of firms and indirectly, consumers through increased prices • As discussed within the extract, 30% recycled plastic avoids the tax and therefore a somewhat limited impact of the tax • If the tax is set too high, could lead to a misallocation of resources (government failure) – with non-compliance causing increased enforcement costs (further government failure)	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.

Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

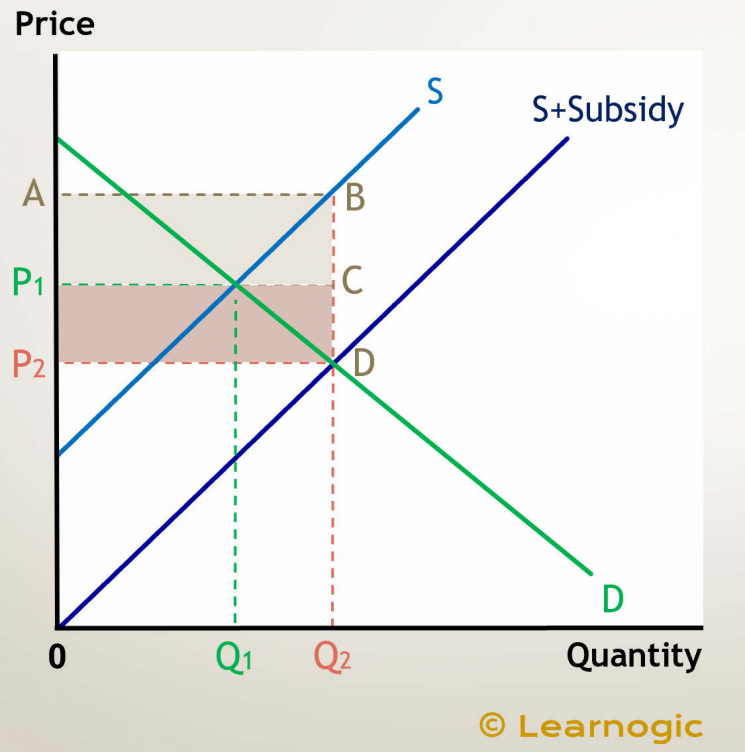
Question Number	Indicative content	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** Policy options may include; • Subsidies for alternatives and highlighting decreases in prices for such goods – leading to incentives for firms to undertake research into alternatives and reduce the market failure associate with excess production/ consumption • Information provision – solving asymmetric information failure by informing consumers and producers of the market failure caused by plastic waste • Further taxation on the consumption or production of plastic & hypothecation of this tax revenue to fund alternative(s) • Bans on plastic packaging – highlight impact of prohibition, leading to removal of specific plastics used in different areas • Minimum price for plastic to be used by firms – which would act as a disincentive for firms to incorporate within their production • Regulation of use and need for additional recycling – the development of increased recycling of plastic waste would limit the externalities associated and ensure lower levels of market failure **NB If there is no valid diagram, max Level 3**	**(14)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems

		in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Why the interventions given may or may not be successful in reducing market failure e.g. • Incidence of the tax/ Price elasticity of demand of the product associated with the plastic waste • Distortion of price signals – i.e. through minimum price implementation • Unintended consequences, other implications • Excessive administrative costs • Information gaps – not estimating the market failure/ external costs effectively enough • Government failure to provide sufficient subsidies – or to set too high/ low and may not lead to an optimal allocation of resources • Relative benefits/costs of government intervention versus market based solutions or other comparisons or interventions. • Opportunity cost of spending on solutions	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Various microeconomic impacts of a reduction in the subsidy provided for supporting farming/ agriculture Use of subsidy diagram to highlight the impact upon price and quantity supplied  Diagram(s) accurately drawn – with clearly labelled change in equilibrium and market price - Missing markets – farmers/ businesses/ producers of animal products may leave markets if profits/ revenue fall due to higher prices - Increased price due to contraction in supply **NB KAA can be treated as Evaluation and vice versa** **NB If there is no Diagram, max Level 3**	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** • Depends upon the incidence of the subsidy • Other factors affecting cost(s) of production could be of greater or less importance • Depends on the proportion of income a subsidy makes up – this is different for the various different types of farming	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6(g)	**Knowledge 4, Application 4, Analysis 6** - The effect of a tax will shift the supply curve to the left and raise the price of the product. - The tax should reduce the consumption of animal products towards the social optimum. - Impact upon consumer surplus due to impact upon the market - Price paid for animal products will rise and quantity reduced - Extract A – tax introduced to reflect the cost of	

	externalities - $35 billion tax revenues into the EU - $15 billion being directed to farmers **NB KAA can be treated as Evaluation and vice versa** **NB If there is no Diagram, max Level 3**	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
1(d)	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** 16 marks for KAA, for effects of increased spending on education to promote heathy eating in the UK. Microeconomic effects may include: • Effects of increased demand for healthy foods/consumer surplus/increased prices (may include supply and demand diagram) or fall in price of HFSS foods • Positive externalities in consumption are internalised (may include divergent MSB and MPB diagram and corresponding movement toward social optimum at MSB=MSC) • Impact on firms which make unhealthy products – increased costs if they diversify/reduced demand e.g. use of healthier ingredients with higher costs. This might be shown on a cost/revenue diagram. • Increased profits for healthy food producers e.g. shown on a costs/revenue diagram • labour market issues, e.g. workforce becomes healthier, and reduced obesity might make workers more productive (increase marginal product) • Opportunity cost of spending on education Macroeconomic effects may include: • Effects on price level and output as G increases, with multiplier effects. May be shown by shift out in AD with effects on price level and real output. • Healthier workforce shifts out the LRAS, with impact of lower prices and higher output • Fiscal implications – crowding out, effect on balancing budget **NB for a Level 4 response there must be micro and macro effect (s). Opportunity cost/shift in PPF/labour markets/competitiveness etc. can be used as micro or macro.** 9 marks for evaluation – questioning might include: • Expansionary fiscal policies not necessarily happening. It might mean expenditure elsewhere is cut (opportunity cost arguments) • Trade-off between objectives e.g. increased spending might cause inflation, depends on the state of the fiscal balance, multiplier etc. • Questioning whether education is effective, or whether other policies are needed, e.g. tax, banning advertisements • Education might be counter-productive/role of state might be questioned e.g. government failure, crowding out effect	**(25)**

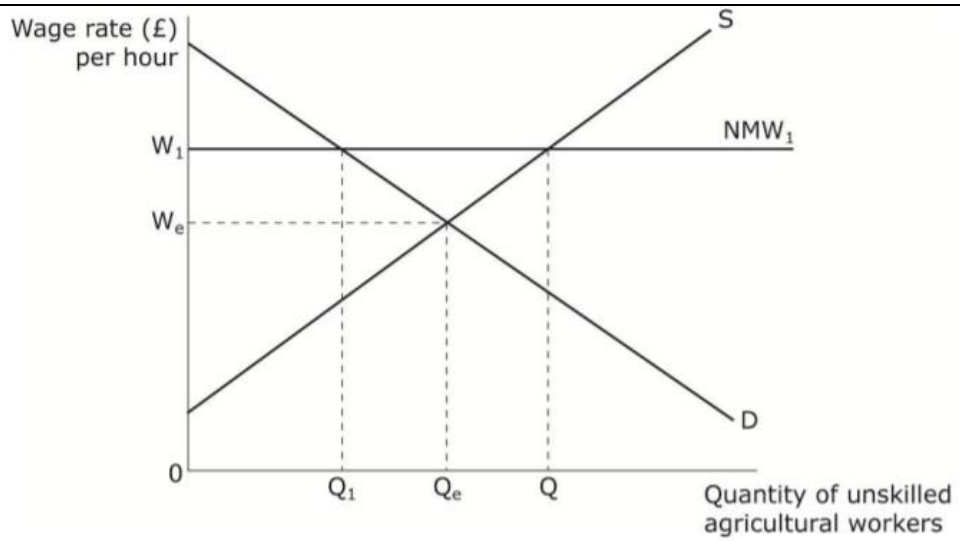
Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic factors. The answer demonstrates logical and coherent chains of reasoning.
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

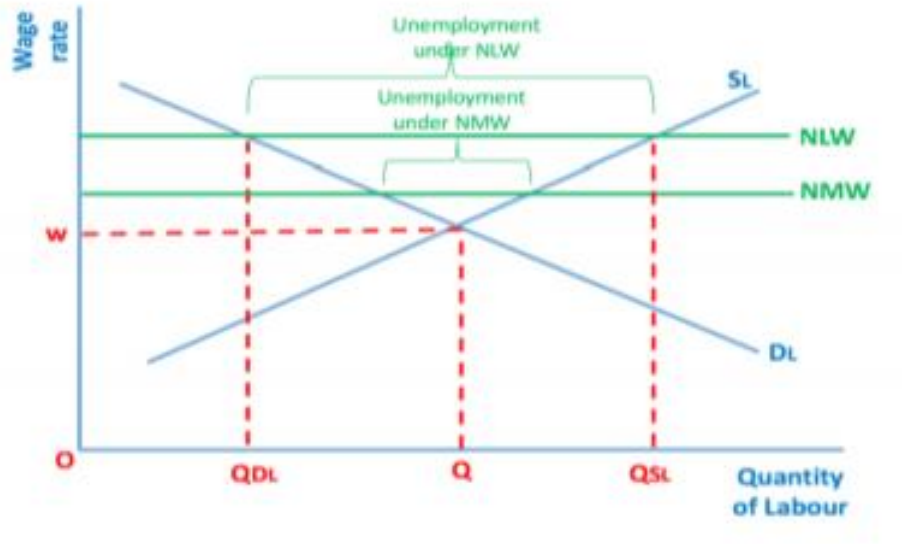
Question Number	Indicative content	Mark
1(e)	**Knowledge 4, Application 4, Analysis 8 Evaluation 9** 16 marks for KAA, for effects of increase in tax on HFSS foods. Microeconomic effects may include: • Rational economics implies people will change consumption patterns. Consumer preferences will change away from HFSS foods e.g. as consumers switched to cheaper brands and crossed the border to Sweden and Germany to do their shopping (Extract C). • An ad valorem or specific tax diagram might be used to illustrate the effects on prices/quantity in each market, and the incidence of tax • Cross elasticity of demand – evidence (e.g. Extract C) that a rise in price may cause a rise in demand for healthy food. • Welfare changes, e.g. loss of consumer, producer surplus/higher prices and deadweight welfare loss. This might be shown with an externalities diagram, e.g. positive in consumption of healthier foods. • Impact on firms, e.g. loss in profits on HFSS as costs rise/demand falls. This might be illustrated using a costs/revenue diagram; increased profits for healthier options. • Impact on labour market. Healthier workers, or effects of cut in real wages as costs of living increase. Changing employment opportunities. e.g. reduced employment for HFSS manufacturers and increased employment for healthy foods firms. Macroeconomic effects may include: • Redistribution (micro or macro issue): indirect taxes of this sort are regressive, disproportionately affecting the elderly and the poor. Taxes on HFSS foods moderate consumers, as well as the obese overeaters they are intended to target. • Cost push inflation – a one-off rise in prices. This might be shown by an upwards/leftwards movement of AS • Effects on incomes/net exports – may be linked to a fall in AD, e.g. in Denmark the policy helped push up food prices in a year in which real wages fell by 0.8%. • Governments might gain revenue which can be used elsewhere in the economy / lose revenue – Laffer curve (Extract C) **NB for a Level 4 response there must be micro and macro effect (s). Opportunity cost/shift in PPF/labour markets/productivity/competitiveness etc. can be**	

	used as micro or macro. Up to 9 marks for evaluation. Points might include: • Depends if firms respond by cutting prices (Extract B) • The tax makes people buy other unhealthier food (in Extract C) e.g. increases price and people may substitute to cheaper even unhealthier or low-quality alternatives that are more affordable • Tax is not an efficient deterrent to obesity. The policy had a very limited impact on the consumption of HFSS in the data foods: 80% of Danes did not change their shopping habits at all (Ext C). Not only is demand for food relatively inelastic, prices often fluctuate, and consumers become immune to changes • Depends on magnitude- the proportion of income may be low • The price elasticity of demand will determine the incidence of the tax - inelastic larger consumer incidence and elastic larger producer incidence. • Depends on how funds are used - e.g. to promote healthy eating through subsidies and education • The intervention may mean free markets work less well – theory of unintended consequences • Other unintended consequences e.g. counterfeit, smuggling	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic factors. The answer demonstrates logical and coherent chains of reasoning.
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** • Minimum wage – legally enforced wage floor • Wage set above market equilibrium wage • Increasing from £8.72 to £10.50 • Extension in supply of labour • Contraction in demand for labour • Excess supply of labour Drawback of increase • Unemployment in specific labour market • Firms close in specific market - rise in variable/fixed cost depending on market • Additional drawbacks of minimum wage Wage elasticity of demand • Proportion of labour costs relative to total costs • Ease and cost of factor substitution • PED for final product, derived demand Wage elasticity of supply • Relative skills required in specific market • Income effect • Substitute effect • Allow suitable minimum wage diagram e.g.	**(25)**





NB a diagram is not required
NB for Level 4 the candidate must refer to a specific labour market.

Evaluation

- Benefits of increase
- Increased labour mobility into specific market
- Increased productivity
- Counters monopsony employer abuse
- Firms decide to now train labour as paying higher wage
- Improved customer service/social objectives achieved
- Improved living standards/reduced relative poverty e.g. north of England
- Additional benefits of minimum wage

	• Minimum wage set below equilibrium – in parts of country • Does not apply to some workers in specific market • Relative price elasticity of demand for labour • Relative price elasticity of supply • Short-run/Long-run considerations – substitute capital, qualifications and training • Labour in specific market is not homogenous • Backward bending supply of labour • Cost of labour relative to other factor inputs • Ability of firm to relocate/move into another market • Problems measuring productivity	

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
1 (e)	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** 16 marks for KAA, for effects of increased government intervention. Microeconomic effects may include: • Minimum price, living wage enforced, planning issues, tax, health and safety • Rise in wages (if wage floors introduced) will have a large impact on costs. Might be shown on increasing NMW diagram • Effect on price of car washes – consumer surplus falls, output falls, price increases • Impact on quantity of labour/marginal revenue productivity • Impact on productivity • Diagram to show the effect of the intervention approach, e.g. of minimum price as solution to market failure • Price of a car wash might be passed on to higher wages Macroeconomic effects may include: • Income equality improvements – may use Gini coefficient or Lorenz curve • Prices rise – inflationary effects • reduction in levels of poverty • effects on growth – inflexibility in markets can reduce I or FDI • might improve environmental standards • Reduced employment **NB for a Level 4 response there must be micro and macro effect (s). Employment or welfare issues could be seen as micro or macro, for example, can be used as either micro or macroeconomics** **NB for a Level 4 response there must be reference to an industry**	

	9 marks for evaluation – points might include: • Government failure, e.g. regulatory capture, asymmetric information • depends on impact of other events such as UK leaving the EU, high unemployment from recent Global Health Crisis • effect on workforce of employment regulation depends on elasticity for demand for labour, and degree with which it can be replaced with capital • depends on PED of HCW market as a whole • consumers might also have increases in wages • some firms will face decreased demand and go out of business. Loss of jobs and other economic activity • depends on the PED and PES in factor market and product market as a whole • Wash Mark Certificates not government regulation may have more of an impact in improving quality and conditions for workers and reducing pollution than government action	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays ability to apply knowledge in context but will focus on small range of elements. Demonstrates understanding by identifying relevant information. Demonstrates knowledge and understanding of terms, concepts, theories and models.
Level 2	5–8	Shows ability to apply economic ideas and relate them to economic problems in context. Displays knowledge and understanding of economic principles, concepts and theories to make limited analysis or narrow analysis.
Level 3	9–12	Analysis is clear and coherent with evidence well integrated, although may focus on some of the broad elements of the question more than others. Shows ability to apply economic ideas and relate them directly to the broad elements in the question.
Level 4	13–16	Analysis is relevant, clear and coherent with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic effects. A clear understanding of economic principles, concepts, theories and arguments.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of evaluative comments without explanation.
Level 2	4–6	Evaluative comments with limited explanations. Evidence of evaluation of alternative approaches which is generic or unbalanced leading to limited judgements.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to the context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
1(e)	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** 16 marks for KAA, for effects of increased minimum wage Microeconomic effects may include: • rise in wages will benefit very low paid workers. Might be shown on increasing NMW diagram • effect on cost to firms e.g. reduced profit margins. Might be shown on a cost and revenue diagram. • excess supply of hospitality workers • effect on prices consumer surplus falls, output falls, price increases • impact on quantity of labour demanded/contraction of labour demand • impact on productivity • inefficient resource allocation due to distortion of price mechanism Macroeconomic effects may include: • income equality improvements – may use Gini/Lorenz • prices rise – inflationary effects • reduction in relative poverty • AD: increase in consumption as incomes increase/fall in investment as profits fall • SRAS: cost-push • LRAS: if investment falls, then LRAS shifts in • reduced employment • higher income tax revenue • lower unemployment related benefits **NB for a Level 4 response there must be micro and macro effect (s) and use of data with reference to restaurants or other food delivery services. Employment or welfare issues could be seen as micro or macro, for example, can be used as either micro or macroeconomics.** **NB Effects in KAA could be used as evaluation and vice-versa.**	**(25)**

	9 marks for evaluation – points might include: • effect on firms depends on how much wage costs are as a proportion of overall costs • impact on real output depends on level of spare capacity/elasticity of LRAS/magnitude of multiplier • effect on workforce of employment regulation depends on elasticity for demand for labour, and degree with which it can be replaced with capital • depends on PED of food delivery firm market as a whole • consumers might also have increases in wages so profits might not fall • some firms will face decreased demand and go out of business. Loss of jobs and other economic activity • depends on the PED and PES in factor market and product market as a whole • LRAS might rise as economically inactive workers enter labour force to look for jobs • higher tax revenue may not occur if unemployment increases or investment decreases • higher unemployment related benefits if unemployment increase • productivity/motivation arguments	

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays ability to apply knowledge in context but will focus on small range of elements. Demonstrates understanding by identifying relevant information. Demonstrates knowledge and understanding of terms, concepts, theories and models.

Level 2	5–8	Shows ability to apply economic ideas and relate them to economic problems in context. Displays knowledge and understanding of economic principles, concepts and theories to make limited analysis or narrow analysis.
Level 3	9–12	Analysis is clear and coherent with evidence well integrated, although may focus on some of the broad elements of the question more than others. Shows ability to apply economic ideas and relate them directly to the broad elements in the question.
Level 4	13–16	Analysis is relevant, clear and coherent with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems covering both microeconomic and macroeconomic effects. A clear understanding of economic principles, concepts, theories and arguments.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of evaluative comments without explanation.
Level 2	4–6	Evaluative comments with limited explanations. Evidence of evaluation of alternative approaches which is generic or unbalanced leading to limited judgements.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to the context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Indicative content	Mark
7	**Knowledge 4, Application 4, Analysis 8** Explanation of methods of government intervention may include: ● price regulation e.g. energy price cap ● direct support from government to households ● grants/subsidies ● enhancing competition through promotion of small business/ breaking up large energy suppliers ● state ownership arguments ● threat of windfall tax which forces companies to pass on falls in wholesale costs to households ● separate retail and wholesale divisions ● education/information campaigns to help households reduce energy usage ● CMA investigation into price fixing/collusive behaviour ● Legislation to decouple gas and electric prices ● Encouragement of smart meters to reduce information gap **NB - for Level 4 KAA candidates must refer to the energy market** **NB – Must be at least TWO METHODS FOR KL4 as "methods"** **Evaluation 9** ● Asymmetric information ● Regulatory capture ● Time lags ● Prioritisation arguments ● Short run v long run arguments ● Combination of policies required ● Government failure ● Unintended consequence e.g. energy retailers leave market ● Cost and opportunity cost arguments ● Scale of support needed could change ● Other sources of gas supply ● Depends on type of tariff e.g. pre-payment meters are more expensive ● Depends on type of household	**(25)**

Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially-developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** Distortion of consumer or producer behaviour due to the impact of an economic decision (1) **Application** 2 marks for using source data from extract such as; • 30% tax/ £200 per tonne tax on plastics (1) • 'Was 'designed to provide incentives to business to recycle' (1) • 'Inflationary pressures within the supply chain' (1) • Food manufacturers are particularly impacted as 'use 40% of packaging within the UK' (1) **Analysis** Reference to relevant unintended consequences; • More products brought pre-wrapped in plastic to avoid need for the plastic bag (1) • Use of thinner plastic which increases food waste (1) • Purchasing of products online increases co2 impact (1) • Due to the incidence of the tax, falling on consumers (1) it may have a regressive impact (1) upon the lowest incomes. • Prices increasing for consumers (1) passed on predominantly if demand were inelastic / or leaving people worse off (1)	**(5)**

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** • Effects include changing property prices, rental market, affordability, shifts in demand and supply, welfare changes, environmental impact, cost to firms, cost to government, or impact on other markets. • Methods of intervention – e.g. subsidies, taxation, provision of information, regulation, direct provision of housing, flood defences, Help to Buy and rent controls. One type of intervention is sufficient as long as considering range of micro-effects. • Purpose of Government intervention to correct market failure – housing shortages and affordability. Possibility of further market and government failure. • Use of Figure 1 to indicate UK's PES may increase. • Use of Extract B: to increase property supply "making new homes available more quickly". • Candidates may consider macro issues in a micro context if part of a chain of reasoning that identifies micro impact e.g. provides incentive to build more housing increases employment. NB KAA can be positive or negative effects.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1-3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4-6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two-stage chain of reasoning only.
Level 3	7-10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance
Level 4	11-14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(f) continued	**Evaluation 6** • Magnitude – extent of government intervention. • Measurement difficulty • Short run, long run issues. • Information gaps. • Unintended consequences - mortgage help may become ineffective in catching a 'runaway train' • Impact on different interest groups. • Distortion of price signals. • Opportunity cost to Government. • Environmental impact e.g. flooding NB EV can be positive or negative effects.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1-2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3-4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning
Level 3	5-6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement

Question Number	Indicative content	Mark
6 (g)	**Knowledge 4, Application 4, Analysis 6** Positive/negative effects of government intervention on tobacco cigarettes and or e-cigarettes with reference to market failure and using diagrams in various contexts: • Indirect taxation (ad valorem and specific) • Subsidies for tobacco replacements • Minimum cigarette price • Provision of information e.g. public health campaign • Regulation e.g. banning smoking in public places or advertising. • Direct provision – nicotine patches and e-cigarettes on NHS prescription Diagrams may be used to illustrate the above.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Negative or unsuccessful impact of the intervention methods. Understanding of government failure as intervention that results in a net welfare loss – tobacco cigarette tax revenue exceeding tobacco related NHS expenditure. Causes of government failure: • Distortion of price signals – harm reduction instead of prevention, consuming e-cigarettes rather than quitting • Unintended consequences – e-cigarettes draw in new users acting as a gateway to smoking; regulating e-cigarettes protect tobacco from competition; tobacco smuggling • Excessive administrative costs – slow down e-cigarette innovation • Information gaps – little research on long term effects of e-cigarettes • Ineffective as PED <1; diminishing returns of tax and regulations. Price inelastic demand diagram. Other evaluation approaches include: • Consideration of the extent of government intervention e.g. could it be more regulated • Free market approach might be more effective • Depends on the country being considered • Short run and long run	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Appendix 1

Question 6e directed candidates to "Assess" for 15 marks. In order to be in line with the support materials for this specification, this question should instead have directed candidates to "Discuss" for 15 marks. In order to ensure that all candidates received the fairest possible outcome, examiners were briefed on a levels-based marking structure for both command words. The body of the mark scheme includes the levels structure for the "Assess" command word as written in the paper. The levels structure that examiners considered for the "Disucss" command word is included below.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Identification of determinants of price elasticity of demand • Application – PED tobacco cigarettes -0.35; PED e-cigarettes -1.9. Reasons why tobacco cigarettes being relatively price-inelastic, e-cigarettes relatively price-elastic e.g.: • habitual consumption • tobacco broadly defined • proportion of income spent on tobacco cigarettes lower than switching cost of buying reusable e-cigarette kit • number of close substitutes • tobacco addictive necessity, e-cigarettes luxury (not yet addicted to). NB to access Level 3 candidates need to consider tobacco and e cigarettes.	**(9)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but

		the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • significance of determinant • e-cigarettes habit forming • tobacco cigarettes narrowly defined • proportion of income spent on tobacco cigarettes is rising • becoming closer substitutes • tobacco addiction waning as lost glamour and health warnings, e-cigarettes nicotine addiction. • longer term response to rising tobacco prices	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.