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EDEXCEL INTERNATIONAL A LEVEL ECONOMICS: QUESTIONS BY TOPIC

Introductory concepts (1.3.1)

International A Level Economics · Unit 1: Markets in action

66 questions · 256 marks · Mark schemes included
Past papers January 2019 - June 2025 · 6 specification sub-topics

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HOW TO USE THIS BOOKLET

Questions are grouped by specification sub-topic and run from the lowest to the highest mark tariff, then oldest paper first.

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; < QUESTION brings you back.

Whenever a question refers to an extract, figure or table, those exact pages are printed immediately before it ("extracts & data").

A gold bar in the left margin marks exactly where the question sits on the original page.

Diagrams, graphs, tables and data are printed exactly as they appear in the original papers.

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48. Q9	IAL Unit 1 June 2019	4	80
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QUESTIONS

66 questions · 256 marks · 6 sub-topics

SUB-TOPIC 1.3.1.1

THE NATURE OF ECONOMICS

Sub-topic 1.3.1.1 · 1 question · 1 marks · lowest tariff first



SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following best describes the nature of economics?

- ☐ **A** Economics is a physical science
- ☐ **B** Economics is a social science
- ☐ **C** Economists investigate the allocation of unlimited resources to satisfy limited wants
- ☐ **D** Economists use scientific experiments keeping all variables unchanged

(Total for Question 1 = 1 mark)

2 Which **one** of the following roles is the state most likely to undertake in a mixed economy?

- ☐ **A** Providing subsidies to encourage the production of goods with external benefits
- ☐ **B** Providing subsidies to encourage the production of goods with external costs
- ☐ **C** Imposing a specific tax on the production of public goods
- ☐ **D** Imposing an ad valorem tax on the production of public goods

(Total for Question 2 = 1 mark)

3 Which **one** of the following is a function of money?

- ☐ **A** To reduce the risk of market bubbles arising
- ☐ **B** To ensure consumers feel valued
- ☐ **C** To enable consumers to minimise utility
- ☐ **D** To act as a method of deferred payment

(Total for Question 3 = 1 mark)

SUB-TOPIC 1.3.1.2

POSITIVE AND NORMATIVE ECONOMICS

Sub-topic 1.3.1.2 · 6 questions · 18 marks · lowest tariff first



SECTION A

Answer ALL questions in this section.

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 ☒.

- 1 Statement 1:** In 2017 the Kenyan Government spent Sh172.5 billion on healthcare. This is 8% of its annual budget.

Statement 2: The African Union believes African countries should spend 15% of their annual budgets on healthcare.

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

- ☐ **A** Both statements are positive
- ☐ **B** Statement 1 is positive and statement 2 is normative
- ☐ **C** Both statements are normative
- ☐ **D** Statement 1 is normative and statement 2 is positive

(Total for Question 1 = 1 mark)

- 2** The Chinese Government introduced a carbon emissions trading scheme. The objective of this tradeable pollution permit scheme is to reduce carbon emissions by

- ☐ **A** forcing highly polluting firms to buy permits from low polluting firms
- ☐ **B** forcing low polluting firms to buy permits from highly polluting firms
- ☐ **C** paying subsidies to firms who manage to reduce their carbon emissions
- ☐ **D** taxing firms who pollute less than their allowance

(Total for Question 2 = 1 mark)

- 3** Which **one** of the following is an example of market failure?

- ☐ **A** Lower prices create an incentive for firms to switch production to more profitable activities
- ☐ **B** Excessive administrative costs are involved in meeting environmental regulations
- ☐ **C** Government provision of street lights that is greater than the social optimum output
- ☐ **D** Insured consumers take more risks in the knowledge that the insurer will pay any resulting costs

(Total for Question 3 = 1 mark)



SECTION A

Answer ALL questions in this section.

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 ☒.

- 1 Statement 1:** The consumption of single-use plastic bags in Switzerland decreased by 80% after the Government introduced a tax on them.

Statement 2: Shops should be forced to charge consumers for single-use plastic bags to reduce the amount of plastic waste.

Which **one** of the following best describes the two statements?

- ☐ **A** Both statements are positive
- ☐ **B** Statement 1 is positive and statement 2 is normative
- ☐ **C** Both statements are normative
- ☐ **D** Statement 1 is normative and statement 2 is positive

(Total for Question 1 = 1 mark)

- 2** In April 2018, the Singapore Government passed a law allowing consumers to change electricity providers. Most consumers have not switched their electricity provider despite the opportunity to save, on average, 20% on their bills.

Which **one** of the following could explain this behaviour?

- ☐ **A** Consumers are good at computation
- ☐ **B** Consumers aim to maximise their utility
- ☐ **C** Consumers are influenced by the behaviour of others
- ☐ **D** Consumers feel undervalued by their current provider

(Total for Question 2 = 1 mark)

- 3** Which **one** of the following is an example of market failure?

- ☐ **A** The free-rider problem that results in the underprovision of public goods
- ☐ **B** Higher prices create an incentive for firms to increase the production of a good
- ☐ **C** New government regulations that result in excessive administration costs
- ☐ **D** Government provision of healthcare to move towards the social optimum output

(Total for Question 3 = 1 mark)



SECTION C

Study Extracts A, B and C and Figures 1 and 2 in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'information gap' (Extract B, line 3). (2)
- (b) Explain what is meant by 'positive economic statements'. Include **two** examples from the extracts to support your answer. (4)
- (c) Analyse **one** reason why 'the price of plastic waste material fell by more than 40%' (Extract A, line 2). (6)
- Illustrate your answer with a supply and demand diagram.
- (d) With reference to Extract B, examine the external costs associated with the consumption and disposal of plastic bags. (8)
- (e) With reference to Extract C, Figure 1 and Figure 2, discuss the microeconomic impact of the introduction of an indirect tax on plastic bags. (14)
- Illustrate your answer with an appropriate diagram.

Sources for use with Section C.

The market for plastics

Extract A Plastic waste prices fall

During 2017 the price of plastic waste material fell by more than 40%. This was mainly caused by China imposing a ban on the import of plastic waste. The loss of such a large market caused a decrease in the average price from £373 per tonne in February to £215 per tonne in December. This is the price paid by the businesses who recycle the waste material. 5

Craig Curtis, Managing Director of CS Recycling, commented that there were now dramatically fewer buyers for the plastic waste.

Extract B Plastic bags damaging the environment

Plastic bags have a significant impact on the environment. However, there appears to be an information gap since many people are not aware of the harmful effects caused by the disposal of plastic bags. These include:

- Plastic bags break down into smaller and smaller toxic pieces 5
- A plastic bag takes between 400 to 1 000 years to break down
- As it breaks down, plastic particles contaminate soil and waterways
- Plastic bags cause over 100 000 marine animal deaths every year
- Nearly 90% of the debris in our oceans is plastic
- Some of the food humans eat may be contaminated with toxins from plastic. 10

Extract C Reducing plastic bag use in the European Union (EU)

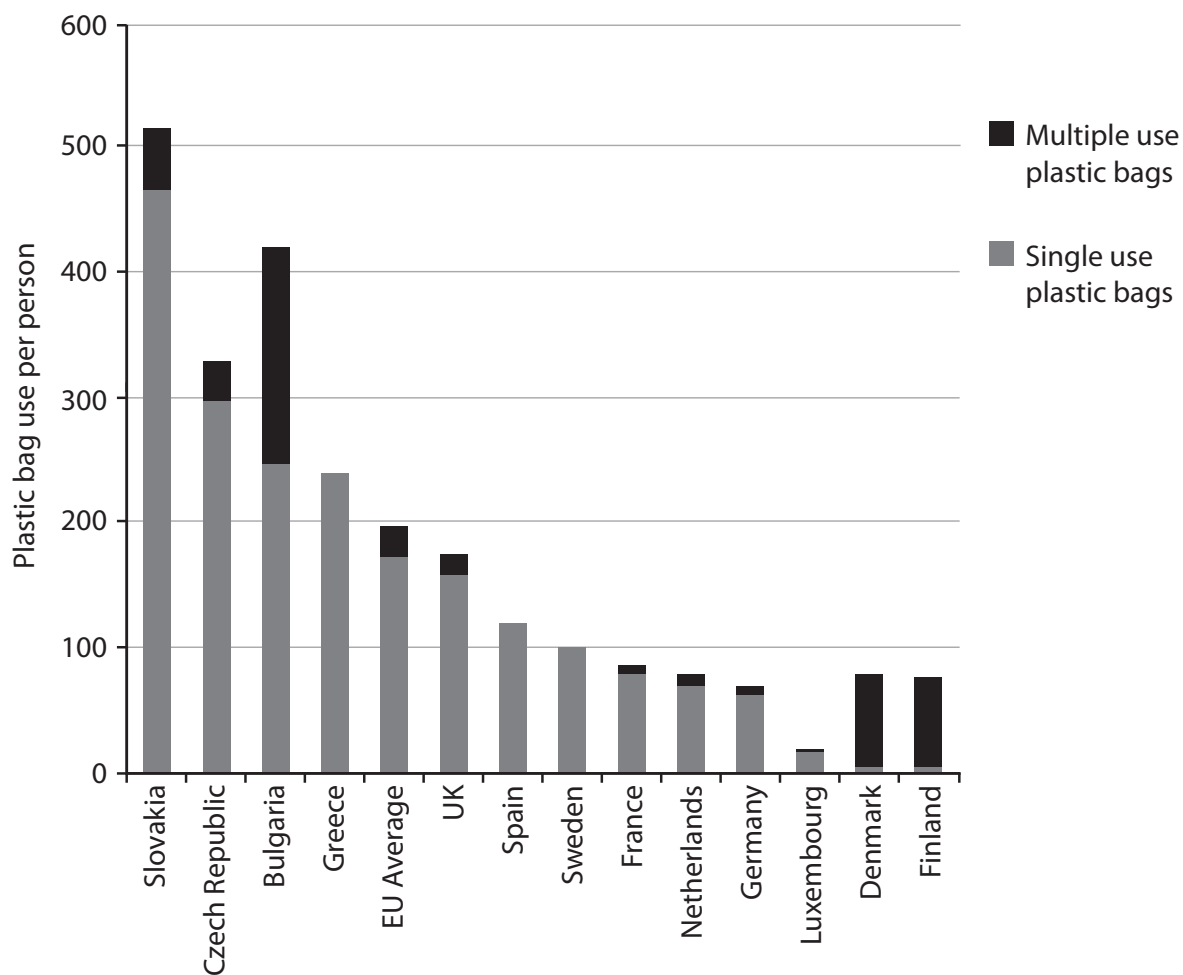
The yearly consumption of plastic carrier bags in the EU is nearly 100 billion. 92% of these are single use carrier bags. Around 3% of the marine litter in Europe is shopping bags.

In 1994 Denmark introduced a plastic bag tax of €0.27 per bag which supermarkets have passed onto consumers. However, clothing shops do not charge consumers for the bags and pay the tax themselves. In the year before the tax was introduced 800 million bags were used and in the year after the tax this dropped to 400 millions bags. The Danish Government found the tax on plastic bags raised just 0.03% of total tax revenue in 1995 and by 2014 this had fallen to 0.02%. 5

In January 2018 Greece introduced a plastic bag tax of €0.04 per bag. This resulted in a 75% decrease in the use of plastic bags compared with January 2017. Sales of reusable shopping bags increased by 5 000%. It is estimated that the average consumer will now only use 110 plastic bags per year. The EU target is 90 bags per person per year. 10

Figure 1 Revenues from the tax on plastic bags for Denmark

Year	Tax revenue
1995	€21 564 000
2000	€23 779 000
2005	€25 723 000
2010	€26 818 000
2015	€24 547 000

Figure 2 Plastic bag use per person in selected countries, 2010

12 (a) Define the term 'information gap' (Extract B, line 3).

(2)

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(b) Explain what is meant by 'positive economic statements'. Include **two** examples from the extracts to support your answer.

(4)

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SECTION C

Study Figure 1 and Extracts A, B and C in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'indirect tax' (Extract B, line 20). (2)
- (b) With reference to the **titles** of Extract A and Extract B, explain the difference between positive statements and normative statements. (4)
- (c) With reference to Figure 1 and Extract A, analyse **two** reasons why between 1 April 2020 and 1 January 2021 the world price of cotton increased. Illustrate your answer with a supply and demand diagram. (6)
- (d) With reference to Extract B, examine **two** external costs associated with the production of clothing. (8)
- (e) With reference to Extract C, discuss the impact of the removal of the subsidy paid to Indian clothing manufacturers on consumers and manufacturers. Illustrate your answer with an appropriate diagram. (14)

Sources for use with Section C

Cotton and clothing

Figure 1 World price of cotton, \$ per lb, April 2020 to January 2021

**Extract A World cotton price rises**

Between 1 April 2020 and 1 January 2021 the demand for face masks, bedsheets and surgical gowns increased. All require cotton in their production. During the same period there was a reduced cotton crop in Pakistan, the world's fourth largest supplier. High temperatures resulted in a decrease in the amount of cotton produced. Both these factors caused an increase in the price of cotton.

5



Extract B Clothing manufacturers should reduce environmental costs

Clothing retailers and manufacturers earn \$2.4 billion globally and directly employ 75 million people. The clothing industry is the world's third largest manufacturing sector.

The manufacture of clothing involves significant environmental costs. For example, on average, producing one pair of jeans requires 3 781 litres of water and creates 33.4 kg of carbon emissions. This includes the production of the cotton through to the delivery of the final product to stores. 5

According to the United Nations, each year:

- clothing manufacturers use 93 billion cubic metres of water
- 20% of all wastewater comes from clothes dyeing by manufacturers 10
- after use, 87% of clothing is burnt or disposed of in landfill
- clothing manufacturers produce 10% of annual global carbon emissions. This is more than all international flights and shipping combined.

Clothing retailers used to have four seasonal clothing ranges per year. However, many clothing stores now offer new ranges weekly. Between 2000 and 2020 the number of clothing items produced yearly increased from 50 billion to 100 billion. In 2019 a person bought, on average, 60% more clothing than in 2000 and more items of clothing are thrown away. Less than 1% of used clothing is recycled into new garments. 15

In response to the environmental damage caused by the clothing industry, Ireland's Government is considering the introduction of an indirect tax on clothing. 20

Extract C Indian Government to remove clothing subsidy

India employs 35 million workers in clothing manufacturing. Clothing accounts for 12% of India's exports. To protect this important industry the Indian Government used to pay a subsidy to clothing manufacturers. However, the US Government and the Turkish Government argued that this gave Indian manufacturers an unfair advantage. Consequently the Indian Government removed this subsidy in 2018. 5



12 (a) Define the term 'indirect tax' (Extract B, line 20).

(2)

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(b) With reference to the **titles** of Extract A and Extract B, explain the difference between positive statements and normative statements.

(4)

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9 Statement 1: "Between 2009 and 2019 extreme weather events and climate-related disasters cost the world economy \$1.5 trillion." World Meteorological Organization.

Statement 2: “80% of those surveyed think polluters should pay for their pollution through additional taxes.” Survey for the World Economic Forum.

With reference to both statements, explain the difference between normative statements and positive statements.

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(Total for Question 9 = 4 marks)



SUB-TOPIC 1.3.1.3

SCARCITY

Sub-topic 1.3.1.3 · 14 questions · 34 marks · lowest tariff first



- 5 The table shows the percentage of electricity generated by different sources for Portugal in 2016.

	%
Coal	22
Gas	22
Hydro	24
Oil	2
Solar	2
Wind	22
Other renewable	6

(Source: <https://www.iea.org/countries/Portugal/>)

Which **one** of the following can be deduced from the table?

- ☐ A Portugal generated 44% of its electricity from non-renewable sources
- ☐ B Portugal generated 50% of its electricity from renewable sources
- ☐ C Portugal generated most of its electricity from renewable sources
- ☐ D Portugal generated most of its electricity from non-renewable sources

(Total for Question 5 = 1 mark)



SECTION A

Answer ALL questions in this section.

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 ☒.

- 1 Which **one** of the following statements is a consequence of diminishing marginal utility?

- ☐ A Total utility will rise at a faster rate as more of a product is consumed
- ☐ B The supply curve for a product will slope upwards
- ☐ C The demand curve for a product will slope downwards
- ☐ D Total utility will rise at a constant rate as more of a product is consumed

(Total for Question 1 = 1 mark)

- 2 The table shows the changes in electricity generation from two sources in selected countries between 2019 and 2020.

	Coal	Solar
Italy	–31%	+12%
India	–20%	+6%
South Korea	–11%	+26%
USA	–40%	+45%

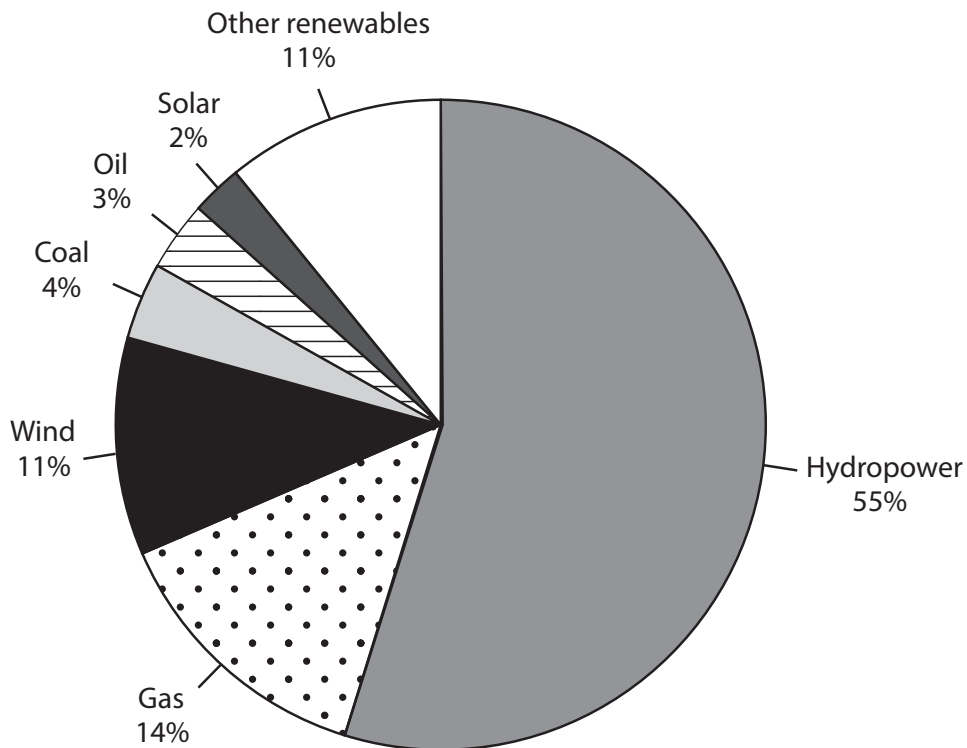
Which **one** of the following can be deduced from the table?

- ☐ A The largest percentage decline in the use of the non-renewable resource for electricity generation was in South Korea
- ☐ B The largest percentage increase in the use of the renewable resource for electricity generation was in the USA
- ☐ C In all countries the use of the non-renewable resource for electricity generation increased
- ☐ D In all countries the use of the renewable resource for electricity generation decreased

(Total for Question 2 = 1 mark)



5 The chart shows the sources of electricity generation for Brazil in 2021.



Which **one** of the following can be deduced from the chart?

- ☐ A Electricity is mostly generated from non-renewable resources
- ☐ B Electricity is mostly generated from renewable resources
- ☐ C 21% of electricity is generated using renewable resources
- ☐ D 79% of electricity is generated using non-renewable resources

(Total for Question 5 = 1 mark)

SECTION A

Answer ALL questions in this section.

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

1 Which **one** of the following has an opportunity cost of zero?

- ☐ A An economic good
- ☐ B A free good
- ☐ C A public good
- ☐ D A capital good

(Total for Question 1 = 1 mark)

2 In 2021 the UK's tradeable pollution permits scheme issued 4.4 million permits to airline companies. However, the industry only required 3.3 million permits.

Which **one** of the following is the likely result of supplying this number of permits?

- ☐ A The market price of permits will decrease
- ☐ B The market price of permits will increase
- ☐ C Airline companies will leave the market as a result of increased costs
- ☐ D Airline companies will have more incentive to invest in cleaner technology

(Total for Question 2 = 1 mark)

3 In North America the cross elasticity of demand for coffee with respect to a change in the price of milk was estimated to be -0.04 .

Which **one** of the following can be deduced from this information?

- ☐ A Coffee and milk are inferior goods
- ☐ B Coffee and milk are substitute goods
- ☐ C Coffee and milk are unrelated goods
- ☐ D Coffee and milk are complementary goods

(Total for Question 3 = 1 mark)



- 5 The table shows the proportion of electricity generated from different sources for Denmark in 2010 and 2021.

	Coal	Oil	Natural gas	Hydro	Wind	Solar	Other renewables
2010	43.8%	2.0%	20.3%	0.1%	20.1%	0.0%	13.7%
2021	13.2%	0.8%	4.6%	0.0%	48.6%	4.0%	28.8%

Which **one** of the following can be deduced from the table?

- ☐ A Most electricity was generated by renewable resources in 2010 and by non-renewable resources in 2021
- ☐ B Most electricity was generated by non-renewable resources in 2010 and by renewable resources in 2021
- ☐ C In 2010 66.1% of electricity was generated using renewable resources
- ☐ D In 2021 81.4% of electricity was generated using non-renewable resources

(Total for Question 5 = 1 mark)

- 6 In 2022 average house prices in China decreased by 2.1%. Research into the housing market in China estimated that the price elasticity of supply for new houses was 2.8.

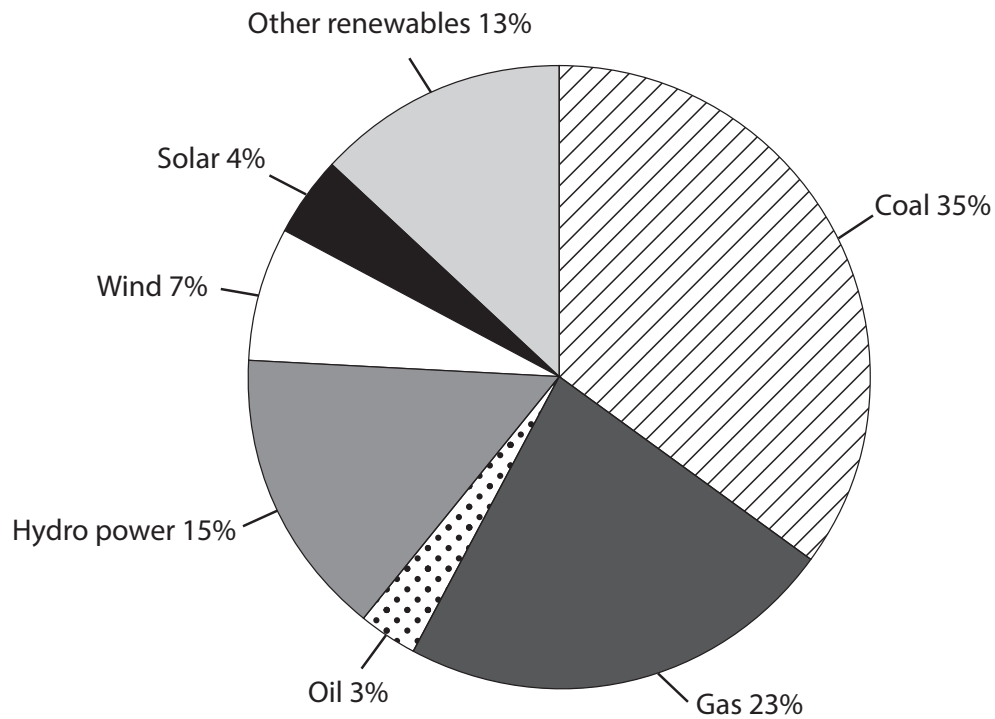
Ceteris paribus, which **one** of the following can be deduced from this information?

- ☐ A The supply of new houses would decrease by 5.88%
- ☐ B The supply of new houses would increase by 5.88%
- ☐ C The supply of new houses would increase by 1.33%
- ☐ D The supply of new houses would decrease by 1.33%

(Total for Question 6 = 1 mark)

TOTAL FOR SECTION A = 6 MARKS

5 The chart shows the resources used to generate electricity globally in 2022.



(Source: <https://www.worldenergydata.org/world-electricity-generation/>)

Which **one** of the following can be deduced from the chart?

- ☐ A Electricity was mostly generated using renewable resources
- ☐ B Electricity was mostly generated using non-renewable resources
- ☐ C 58% of electricity was generated using non-renewable resources
- ☐ D 26% of electricity was generated using renewable resources

(Total for Question 5 = 1 mark)

SECTION C

Study Figures 1 and 2 and Extracts A and B in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'free good' (Extract A, line 7).

(2)

Between 2008 and 2016 weekly household real income increased by 2.7% in Australia.

- (b) With reference to Figure 1, explain the likely change in quantity demanded of lamb between 2008 and 2016.

(4)

- (c) With reference to Figure 2 and Extract A, analyse **one** reason why the price of lamb increased during 2017.

Illustrate your answer with a supply and demand diagram.

(6)

- (d) With reference to Extract B, examine the external costs resulting from increased meat production.

(8)

- (e) With reference to Extract B, discuss the likely effects of the introduction of an indirect tax on meat.

Illustrate your answer with an appropriate diagram.

(14)

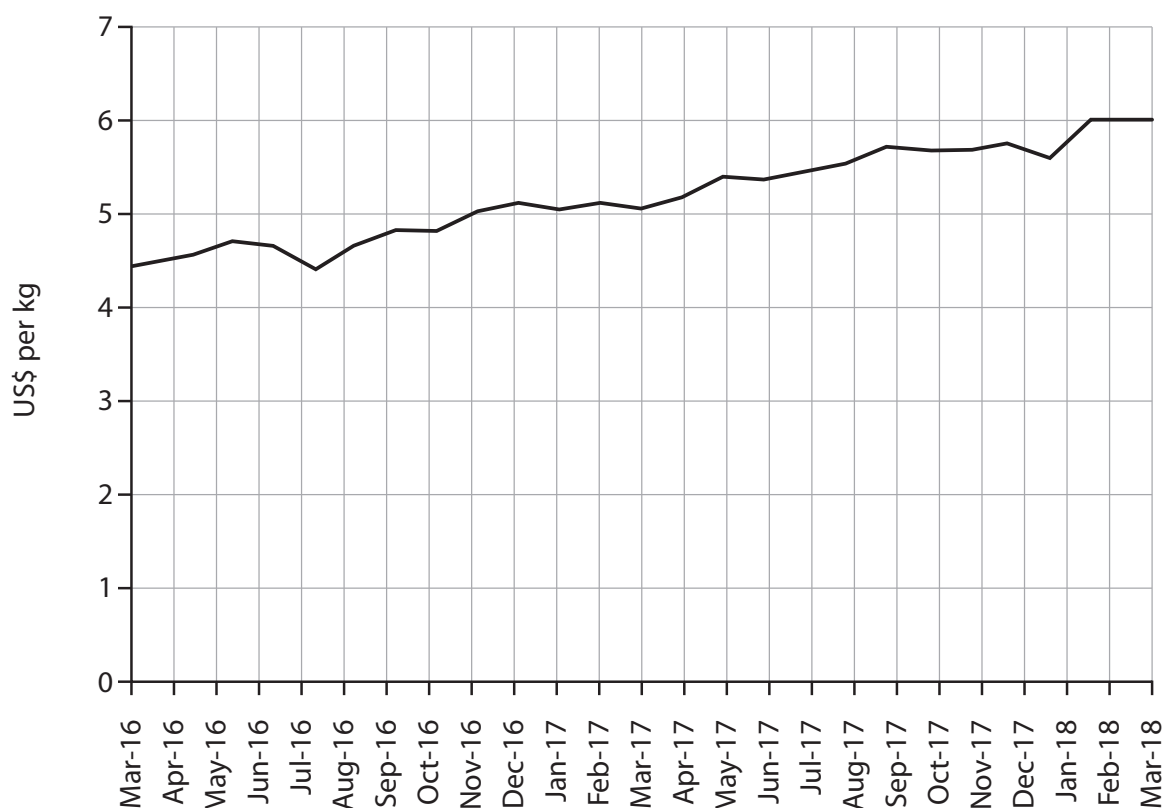
Sources for use with Section C.

The market for meat

Figure 1 Australian consumers' income elasticity of demand for lamb

	Income elasticity of demand (estimated)
Lamb	- 0.146

Figure 2 World price of lamb, US\$ per kg, March 2016 to March 2018



Extract A The price of lamb

The rise in the price of lamb has come at a time when supply is stable. Higher demand for lamb has been caused by a number of factors. Rising global incomes led to a 28% increase in demand for Australian lamb in 2017. At the same time demand has risen in the USA. Successful advertising campaigns have also contributed to increased demand.

5

The lambs in Australia are often allowed to walk and graze freely and most of their food is wild grass which is considered to be a free good.



Extract B Indirect tax on meat needed to address climate change

Meat consumption continues to increase around the world and meat production has risen in response. However, meat production has a damaging effect on the environment causing water pollution and 15% of all global greenhouse gas emissions. Excessive use of antibiotics to treat animals is also leading to a decline in the effectiveness of antibiotics used to treat human illnesses. 5

Many people consume too much meat, seriously damaging their health. This results in an increase in obesity, diabetes and cancer. For example, consuming 100 grams of red meat per day increases the risk of developing diabetes by 19%.

The Paris climate agreement set limits on the amount of global greenhouse gas emissions. However these targets will be missed unless taxes are used to restrict production and consumption. 10

One study looked at the impact of the introduction of a global meat tax. This study found a 40% tax on beef, a 20% tax on dairy products and a 8.5% tax on chicken would reduce emissions and save 500 000 lives a year. 15

The problems associated with meat production are not well-known by the public. One way to reduce emissions without the need for a tax would be for governments to provide the public with information on the external costs associated with meat production and consumption.

12 (a) Define the term 'free good' (Extract A, line 7).

(2)

Between 2008 and 2016 weekly household real income increased by 2.7% in Australia.

(b) With reference to Figure 1, explain the likely change in quantity demanded of lamb between 2008 and 2016.

(4)



SECTION C

Study Figure 1 and Extracts A and B in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'renewable resource' (Extract B, line 19). (2)
- (b) Explain what is meant by the term 'rational decision'. Refer to Extract B in your answer. (4)
- (c) Analyse why the global price of oil fell in the first quarter of 2020. Refer to Figure 1 and Extract A in your answer. (6)
- Illustrate your answer with a supply and demand diagram.
- (d) With reference to Extract A, examine **two** likely effects of the high level of indirect taxation on diesel and petrol in India. (8)
- (e) With reference to Extract B, discuss the likely microeconomic effects of the subsidy paid to the manufacturers of electric cars. (14)
- Illustrate your answer with an appropriate diagram.

Sources for use with Section C.

The markets for oil and electric cars

Figure 1 Global price of oil per barrel, US\$ 2016–2020



Extract A Oil price fall

The global price of oil fell in the first quarter of 2020 after governments restricted the movement of people. Many offices and factories closed, causing a significant reduction in production. With less transport and energy needed, the demand for oil decreased. Oil producing countries, led by Saudi Arabia, planned to reduce production in order to increase the price of oil. However, Russia increased its production, so Saudi Arabia responded by increasing its production.

5

In India the significant fall in the global oil price only resulted in a 7% decrease in the price of petrol and diesel. One reason for this is the high level of indirect taxation on petrol and diesel in the country. In India almost half the price of petrol and diesel is in the form of indirect taxation.

10



Extract B Canadian electric car subsidy

Road transportation accounts for 20% of Canada's carbon emissions. The Canadian Government aims to remove all petrol and diesel cars by 2040. However, in 2019 only 2% of cars were electric.

In 2019 the government introduced a \$5 000 subsidy to encourage electric car sales. This subsidy is paid to the manufacturers of electric cars. This will apply to electric cars with a price below \$45 000. There are just nine electric car models available for under \$45 000. 5

Indirect taxes are added to the price of a petrol Volkswagen (VW) Golf. With the subsidy it would be cheaper to buy the electric VW Golf. The rational decision would be to purchase the cheaper electric VW Golf. 10

A problem is that there are only 5 800 charging points that are accessible to Canada's 37 million population. By comparison, in Norway there are 176 000 charging points for the population of just 5 million. The Canadian Government is planning to spend \$130 million to increase the number of charging stations.

Electric cars have zero carbon emissions when being driven. However, to produce an electric car battery requires twice as much energy compared with the production of a petrol or diesel car battery. In addition, the electricity used to power the electric vehicle creates emissions if the electricity is generated using fossil fuels like coal. In Canada 60% of electricity is generated using hydroelectricity, a renewable resource, whereas in Norway it is 96%. 15
20

12 (a) Define the term 'renewable resource' (Extract B, line 19).

(2)

(b) Explain what is meant by the term 'rational decision'. Refer to Extract B in your answer.

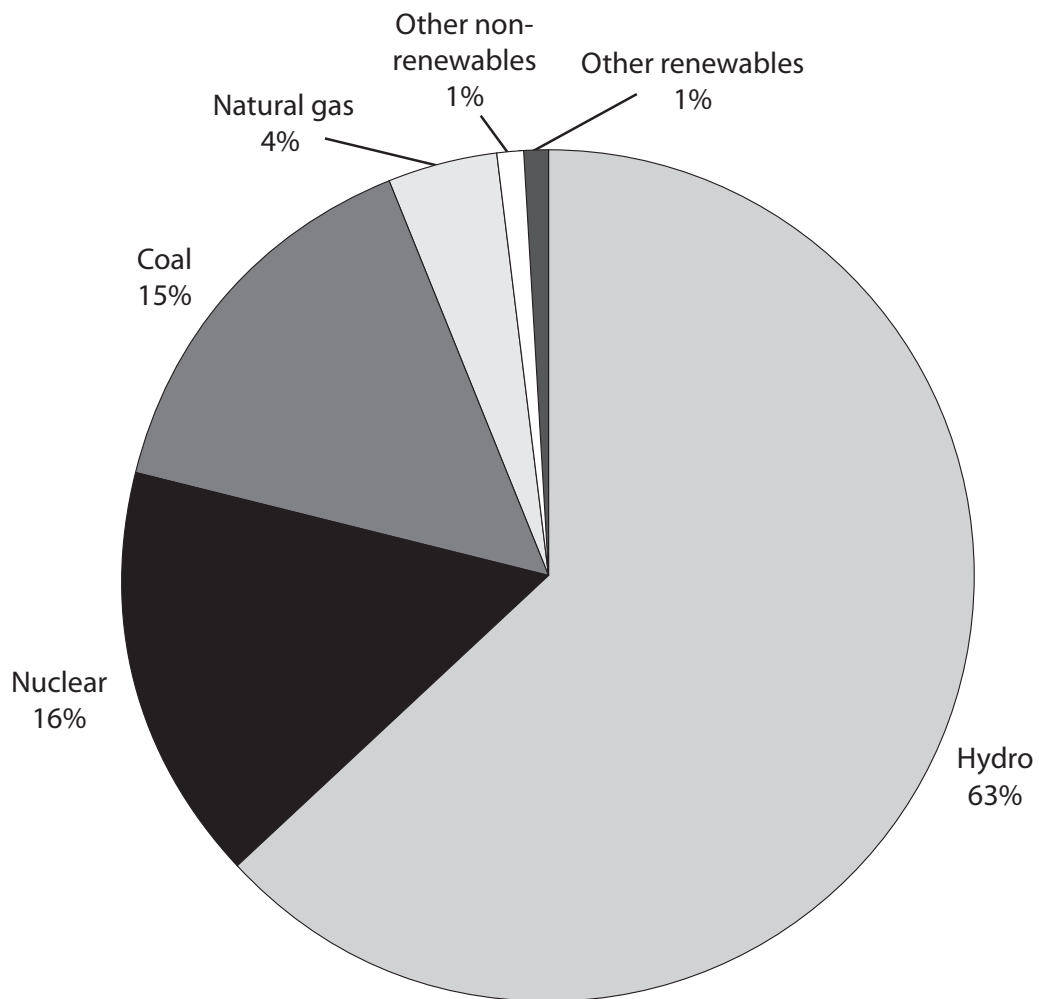
(4)



- Explain whether Lake Poopó is a free good or an economic good.



- 8 The chart shows how Canada's total electricity supply was generated from different resources in 2015.



(Source: <http://www.theenergycollective.com/jarretadams1/2292773/canada-working-toward-decarbonizing-its-grid>)

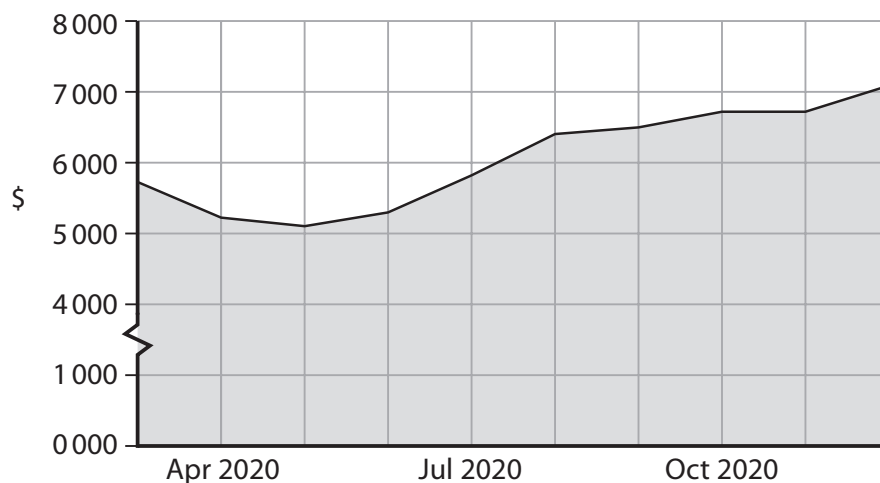


SECTION C

Study Figure 1, Extract A, Figure 2 and Extract B in the Source Booklet before answering Question 12.

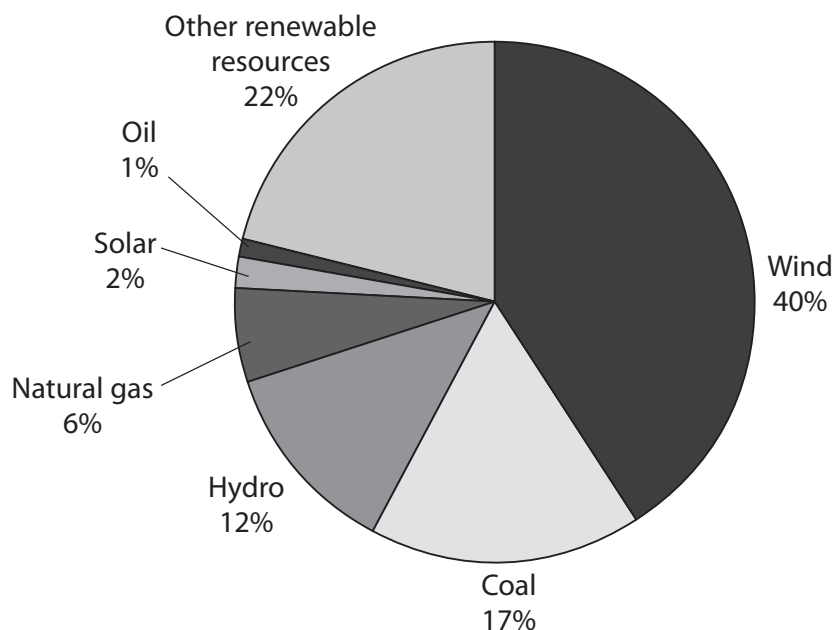
Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'external costs' (Extract B, line 3). (2)
- (b) With reference to Figure 2, explain the difference between 'renewable resources' and 'non renewable resources'. (4)
- (c) With reference to Figure 1 and Extract A, analyse **two** reasons why 'the world price of copper increased significantly' between May and December 2020. (6)
- Illustrate your answer with a supply and demand diagram.
- (d) With reference to Extract A, examine **two** likely effects of an increase in the price of copper on plumbing firms that replace water pipes in customers' homes. (8)
- (e) With reference to Extract B and your own knowledge, discuss the possible effects of a subsidy paid to manufacturers of battery electric buses (BEBs). (14)
- Illustrate your answer with an appropriate diagram.

Sources for use with Section C**The markets for copper, electricity and battery electric buses (BEBs)****Figure 1 World price of copper, \$ per metric tonne, March 2020 to December 2020****Extract A Copper prices rise**

Between May and December 2020 the world price of copper increased significantly. Speculators expected the global rate of economic growth to recover from the global health crisis and started to buy more copper. In addition, the Chinese Government made a substantial investment in infrastructure that required copper. Output of electric vehicles also increased. Each vehicle requires approximately 59 kg of copper in its production. 5

Most plumbers prefer to use copper pipes rather than plastic pipes. With the increased demand for copper for other purposes, it is likely that the price of copper pipes will increase significantly in the future.

Figure 2 Electricity generation by different sources in Denmark, 2018**Extract B Battery electric buses (BEBs)**

Diesel buses are used in city locations with large concentrations of people. They create external costs, including reducing air quality. Children who ride the bus to school are more likely to develop respiratory diseases, such as asthma, and to have higher rates of cancer.

5

BEBs are powered by electric batteries that run an electric motor. Bus batteries are recharged using the national electricity grid. BEBs do not have engines that use fossil fuels. Therefore, BEBs help to reduce greenhouse gas emissions and pollution in city centres. They also produce much less noise pollution than diesel buses.

In 2018 the price of a diesel bus was \$480 000, whereas the price of a BEB was \$887 000. This price difference has started to decrease. For a transport company, it is 2.5 times cheaper to run a BEB than a diesel bus. The maintenance costs are also far lower for a BEB as there are fewer component parts within the motor. On average, a BEB can travel 150 miles on a fully charged battery, whereas a diesel bus can travel 690 miles on a full tank of diesel.

10

15

In 2018 there were 386 000 BEBs globally. 99% of these were in China and 0.09% were in the USA. In response, the US Government allocated \$979 million of subsidies to increase the number of BEBs.

12 (a) Define the term 'external costs' (Extract B, line 3).

(2)

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(b) With reference to Figure 2, explain the difference between 'renewable resources' and 'non renewable resources'.

(4)

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With reference to Lake Chad, explain the difference between a free good and an economic good.

(Total for Question 8 = 4 marks)

SECTION C

Study Figure 1 and Extracts A, B and C in the Source Booklet before answering Question 12.

Write your answers in the spaces provided on the following pages.

- 12** (a) Define the term 'supply' (Extract A, line 8). (2)
- (b) With reference to Extract A, explain **one** advantage of Apple using energy produced from renewable resources. (4)
- (c) With reference to Figure 1 and Extract B, analyse **two** reasons why the 'world price of lithium increased by 191%' (Extract B, line 2).
Illustrate your answer with a supply and demand diagram. (6)
- (d) With reference to the last paragraph of Extract C, examine **two** likely effects on smartphone manufacturers of the growth in the market for refurbished smartphones. (8)
- (e) With reference to Extract C, discuss the microeconomic effects of the increase in smartphone manufacturing between 2011 and 2021. Refer to external costs in your answer.
Illustrate your answer with an externalities diagram. (14)

Sources for use with Section C

Renewables, lithium and smartphones

Extract A Apple's renewable commitment

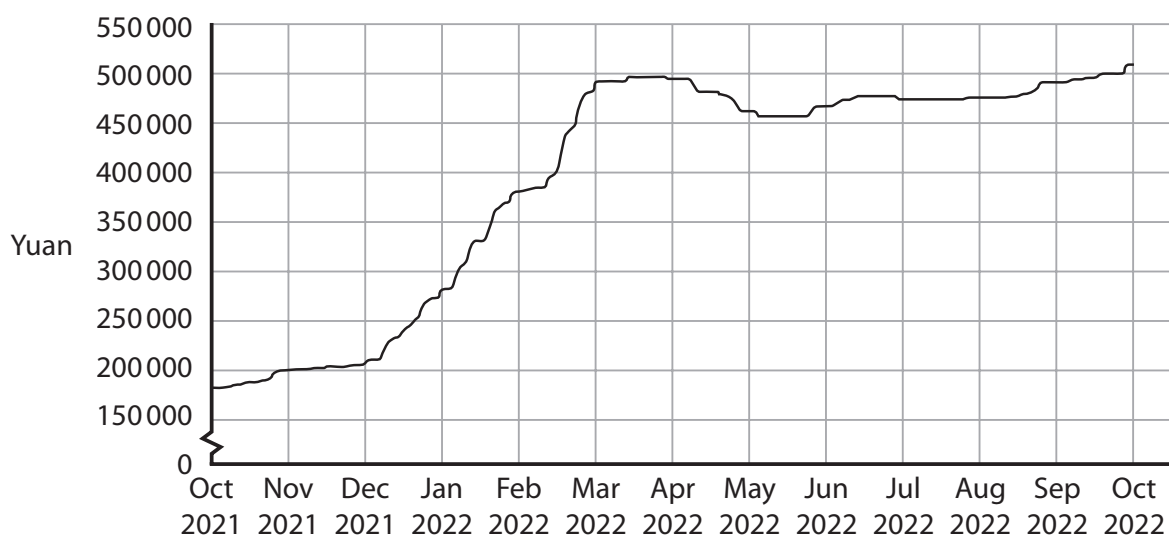
In 2020 100% of the energy used directly by Apple was from renewable resources. In 2022 it announced that 213 of its suppliers had agreed to use only renewable resources to power production. Examples of Apple's commitment to renewable energy include:

- investment in a 2 300 acre solar project in Texas
- a data centre in Denmark powered by a solar park and wind farm
- Apple's supplier, Keiwa, in Japan using renewable energy from a wind farm.

5

The global supply of energy produced from renewable resources is expected to increase by 8% in 2022.

Figure 1 World price of lithium, yuan per tonne, October 2021 to October 2022



Extract B Demand for lithium

Between October 2021 and October 2022 the world price of lithium increased by 191%. Lithium production increased by 20% but demand increased by significantly more.

With rising oil prices many consumers switched from petrol and diesel cars to electric cars. These electric vehicles require lithium in the batteries. In 2021 global sales of electric vehicles increased by 108% to 6.75 million and in China sales grew by 157.5%. Sales of smartphones, that also use lithium batteries, increased by 11.4% in 2021 to 1.5 billion. 5

Extract C Smartphone manufacturing

Between 2011 and 2021 smartphone production increased from 472 million to 1 433 million. Globally 4.5 billion people owned a smartphone by the end of 2022. In 2022 smartphones will produce 146 million tonnes of CO₂ emissions which is 0.5% of global carbon emissions. These emissions are produced in the manufacturing, transportation, usage and recycling of smartphones. 5

Smartphone devices contain several precious and rare earth metals. The environmental costs of mining these metals can be significant. Extracting iron, aluminium and copper produces huge amounts of liquid and solid waste. For example, in 2015 33 billion litres of waste was spilt from an iron ore mine in Minas Gerais, Brazil. In addition, mining gold is a major cause of deforestation. 10

Smartphone manufacturers are producing phones which last longer but are more expensive. As a result consumers do not replace their smartphones so frequently. The market for smartphones that have been refurbished* is forecast to be worth \$65 billion by 2024. Typically, a consumer can sell a one-year-old smartphone for 50% of its original price. The manufacturer can sell the same refurbished smartphone for 80% of its original price. Unwanted smartphones in developed countries are desired in emerging countries. 15

* a refurbished smartphone is one that has been repaired and rebuilt.

(2)

(4)



SUB-TOPIC 1.3.1.4

PRODUCTION POSSIBILITY FRONTIERS

Sub-topic 1.3.1.4 · 17 questions · 58 marks · lowest tariff first



SECTION A

Answer ALL questions in this section.

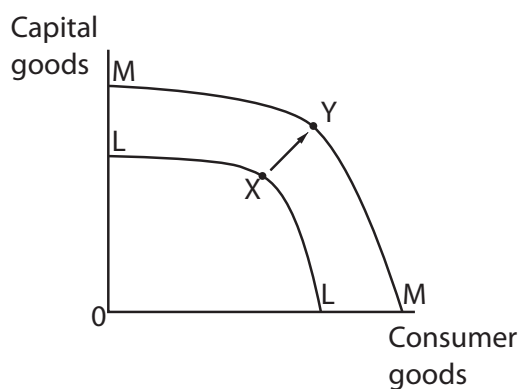
Questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

- 1 The diagrams show the production possibility frontiers for Singapore's economy. It is operating at point X on the production possibility frontier LL.

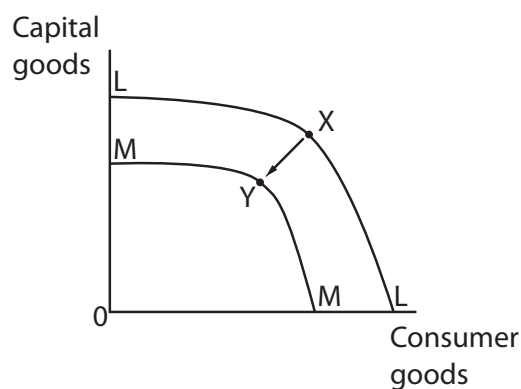
Singapore's population is expected to increase by 90 000 next year.

In which **one** of the diagrams does the movement from X to Y illustrate this expected increase in population if the economy still operates at its maximum productive potential?

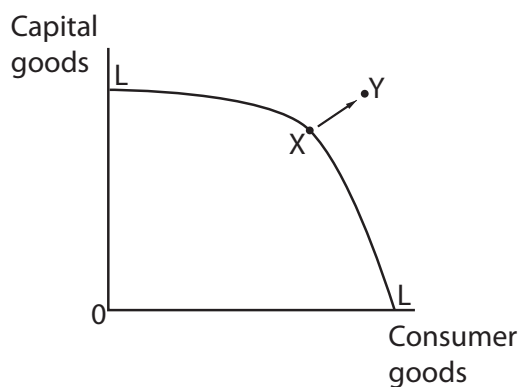
☒ A



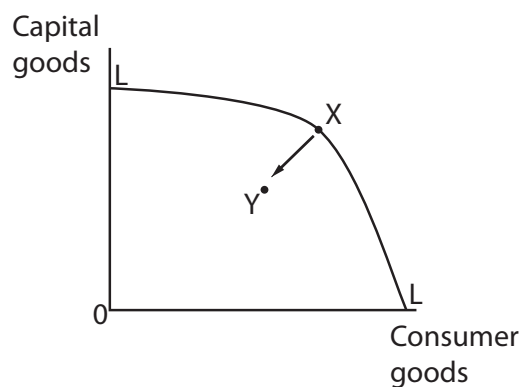
☒ B



☒ C



☒ D

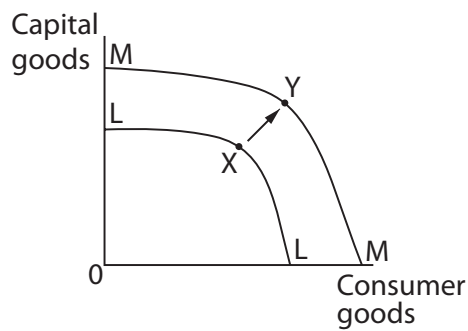


(Total for Question 1 = 1 mark)

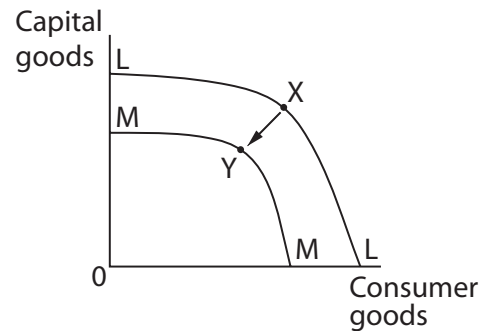
- 3 In April 2015 an earthquake in Nepal killed 8000 people. Assume the economy was operating efficiently at full employment.

Which **one** of the following diagrams best illustrates the impact of the earthquake on Nepal's economy assuming it continued to operate at full employment?

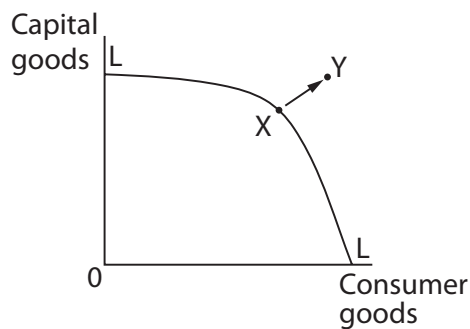
☐ A



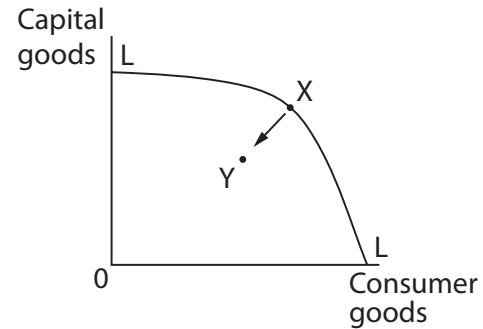
☐ B



☐ C

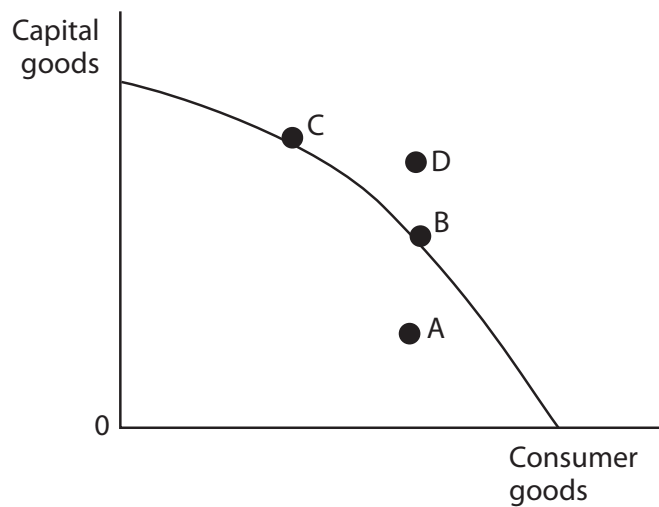


☐ D



(Total for Question 3 = 1 mark)

5 The diagram shows a production possibility frontier for an economy.



Which point on the diagram shows the position that will lead to the fastest rate of economic growth?

- ☐ A
- ☐ B
- ☐ C
- ☐ D

(Total for Question 5 = 1 mark)

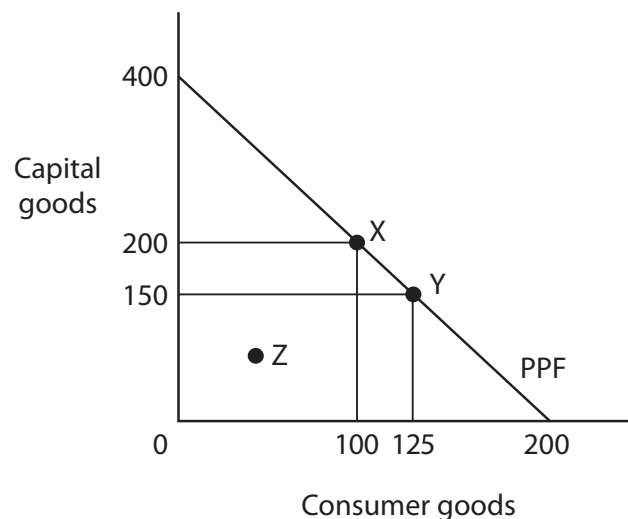
- 3 In the Netherlands the cross-elasticity of demand for organic meat with respect to a change in the price of non-organic meat is +0.5.

Which **one** of the following can be deduced from this information?

- ☐ A Organic meat and non-organic meat are substitutes
- ☐ B Organic meat and non-organic meat are normal goods
- ☐ C Organic meat and non-organic meat are unrelated goods
- ☐ D Organic meat and non-organic meat are complements

(Total for Question 3 = 1 mark)

- 4 The diagram shows the production possibility frontier for an economy currently operating at point X.



Which **one** of the following can be deduced from the diagram?

- ☐ A Point Z is unobtainable when using all available resources
- ☐ B Point Y would generate higher economic growth than point X
- ☐ C The movement from point X to point Y has an opportunity cost of 50 capital goods
- ☐ D The movement from point X to point Y has an opportunity cost of 25 consumer goods

(Total for Question 4 = 1 mark)

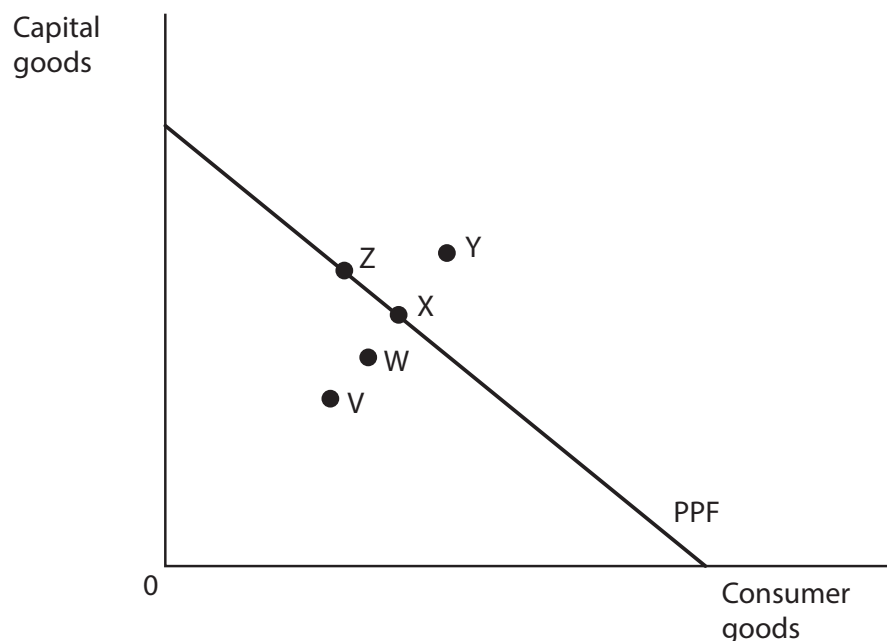
- 5 A relatively high rate of indirect taxation on fuel in the Philippines leads to the smuggling of fuel from neighbouring countries. This results in the Philippine Government losing \$750 million of tax revenue a year.

Smuggling is an example of which **one** of the following concepts?

- ☐ A Government failure
- ☐ B Market failure
- ☐ C Unobtainable production
- ☐ D Consumer inertia

(Total for Question 5 = 1 mark)

- 6 The diagram shows the production possibility frontier (PPF) for a small country.



Which **one** of the following can be deduced from the diagram?

- ☐ A The movement from X to Y is obtainable using current available resources
- ☐ B The movement from X to Z has an opportunity cost in terms of capital goods
- ☐ C The movement from V to W results in an increase in unemployed resources
- ☐ D The movement from W to X results from improved efficiency

(Total for Question 6 = 1 mark)

TOTAL FOR SECTION A = 6 MARKS



SECTION A

Answer ALL questions in this section.

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 ☒.

1 Which **one** of the following is an example of government failure?

- ☐ A Market forces eliminating excess supply of a product by enabling its price to fall
- ☐ B A market bubble emerging in the value of shares on the stock exchange
- ☐ C The introduction of a tax that causes a decrease in external costs
- ☐ D The introduction of a tax that causes an increase in smuggling

(Total for Question 1 = 1 mark)

2 The table shows the maximum production possibilities for a country in 2021 and 2022.

Year	Consumer goods		Capital goods
2021	220	OR	105
2022	195	OR	96

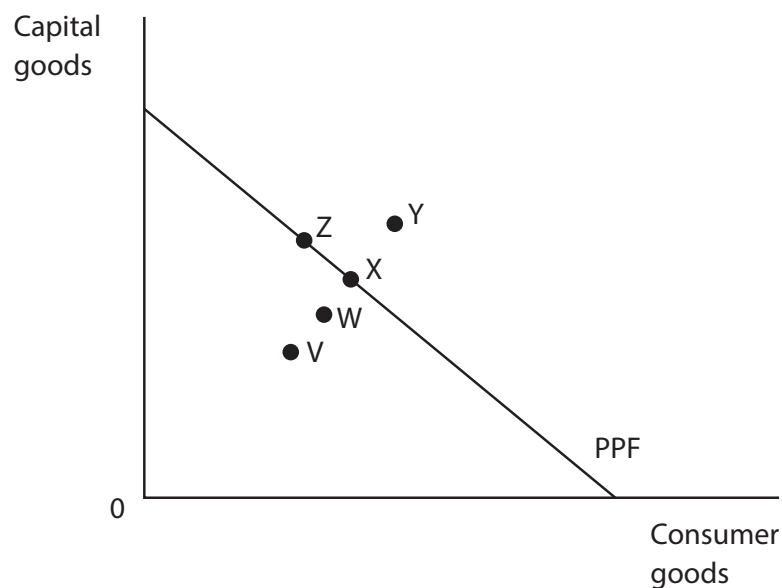
Which **one** of the following might have caused this change in the country's production possibilities?

- ☐ A A natural disaster
- ☐ B A rise in the rate of unemployment
- ☐ C An improvement in technology
- ☐ D An increase in the number of immigrants

(Total for Question 2 = 1 mark)



6 The diagram shows the production possibility frontier (PPF) for a small country.



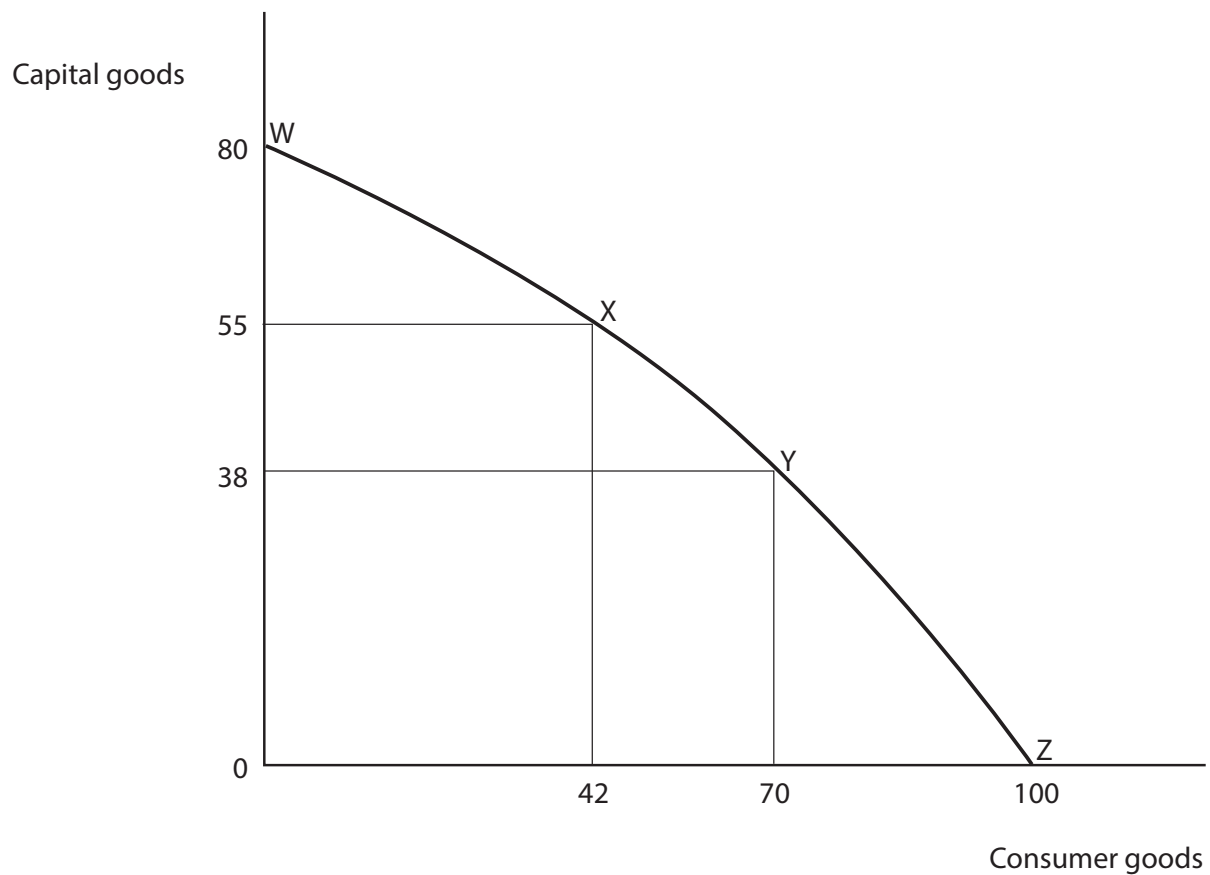
Which **one** of the following can be deduced from the diagram?

- ☐ A The movement from Z to Y is obtainable using currently available resources
- ☐ B The movement from Z to X has an opportunity cost in terms of consumer goods
- ☐ C The movement from V to W results in a decrease in unemployment
- ☐ D The movement from X to W results in an increase in efficiency

(Total for Question 6 = 1 mark)

TOTAL FOR SECTION A = 6 MARKS

4 The diagram shows the production possibilities for an economy.



Which **one** of the following can be deduced from the diagram?

- ☐ A The movement from W to X has an opportunity cost of 42 consumer goods
- ☐ B The movement from Y to Z has an opportunity cost of 30 consumer goods
- ☐ C The movement from X to Y has an opportunity cost of 17 capital goods
- ☒ D The movement from Y to X has an opportunity cost of 28 capital goods

(Total for Question 4 = 1 mark)

SECTION C

Study Figures 1 and 2 and Extracts A, B and C in the Source Booklet before answering Question 12.

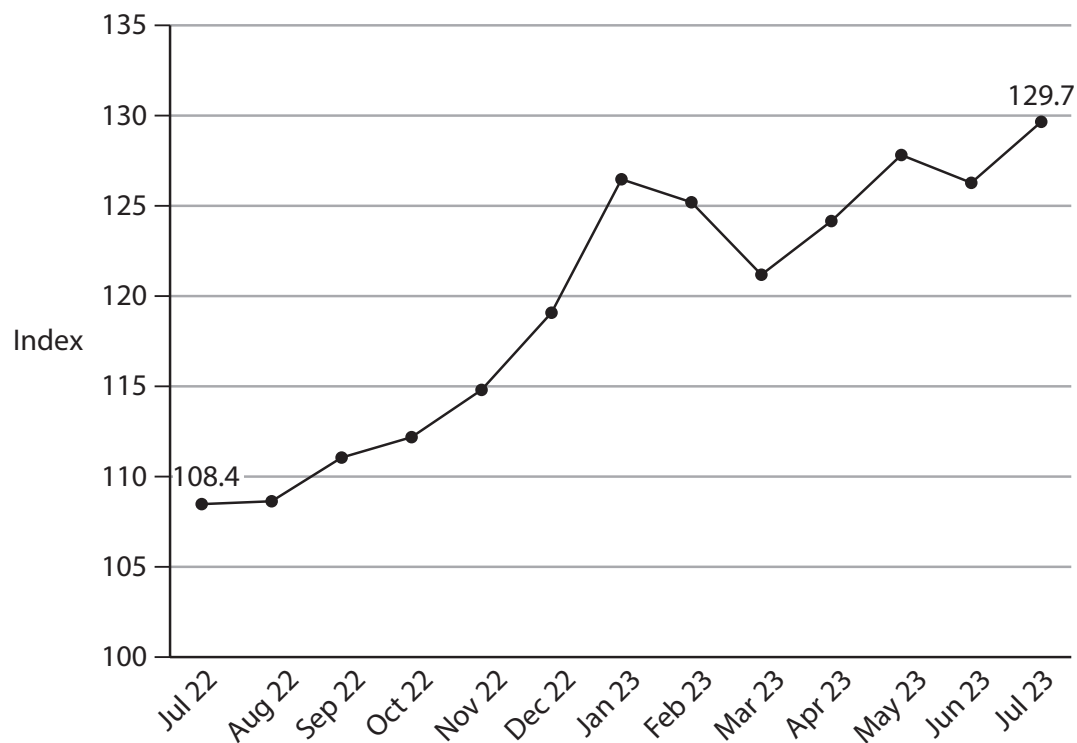
Write your answers in the spaces provided on the following pages.

- 12** (a) Define the term 'capital goods'. (Extract C, line 5) (2)
- (b) With reference to Figure 1 and Extract A, analyse **two** reasons why the price of rice increased between July 2022 and July 2023.
Illustrate your answer with a supply and demand diagram. (6)
- (c) With reference to Figure 2, explain whether demand for **each** of the four selected food groups is price elastic or price inelastic. (4)
- (d) With reference to Extract B, examine **two** external costs associated with rice production. (8)
- (e) With reference to Extract C, discuss the benefits of subsidies paid to rice growers.
Illustrate your answer with an appropriate diagram. (14)

Sources for use with Section C.

The market for rice

Figure 1: Index of the world price for rice, July 2022 to July 2023 (July 2016 = 100)



Extract A Rice price rising

The global price of rice increased by over 19.6% between July 2022 and July 2023. Rice consumption in Africa and Asia is growing rapidly, as populations increase and incomes rise. In 2022 the population grew by 2.45% in Africa and by 0.83% in Asia. This compared to a 0.06% increase in Europe. In 2022 average real income growth was approximately 4% in Asia and 3.85% in Africa. In advanced economies the average increase in real incomes was only 2%.

5

Figure 2: Estimated price elasticities of demand in Japan for selected food groups

Food item	Estimate of price elasticity of demand
Vegetables	−0.77
Fish	−0.70
Meat	−0.52
Rice	−1.82

Extract B The impact of rice production

Rice production contributes 12% of global methane emissions and 1.5% of all greenhouse gas emissions. Vietnam's paddy fields, where the rice is grown, produce more carbon emissions than the country's transportation network.

Producing one kilogram of rice requires 2 500 litres of water. Rice production uses over 33% of the world's irrigation water. 5

Rice growers often use an insecticide to protect the crop from insects. In the USA these insecticides contributed to a 44% decline in the bee population in 2020.

On average, 90% of rice is consumed in the country in which it is grown. This limits the environmental damage caused by transporting rice abroad. 10

Extract C Indian Government intervention in the market for rice

The rice sector contributes \$51.58 billion to the Indian economy. India exports rice to 150 countries.

The Government supports rice growers by providing subsidies. These subsidies are used by farmers to invest in capital goods and to purchase fertiliser and water used in production. This can lead to over-farming that results in lower quality rice crops. 5

In 2021 the Indian Government spent \$6.9 billion on subsidising rice production.

In 2022 the Government decided to reduce expenditure on these subsidies. However, this caused mass protests from farmers that led to the Government increasing these subsidies to their previous levels. 10



12 (a) Define the term ‘capital goods’. (Extract C, line 5)

(2)



11 Lithuania's population decreased from 3.7 million in 1989 to 2.9 million in 2015.

Ceteris paribus, explain the likely impact of this change in population on Lithuania's production possibility frontier (PPF).

Illustrate your answer with a diagram.

(Total for Question 11 = 4 marks)

TOTAL FOR SECTION B = 20 MARKS

SECTION B

Answer ALL questions in this section in the space provided.

- 7** In 2000 the population of Qatar was 592 267. By 2018 the population had increased to 2 694 849. Most of this growth was caused by immigration.

Draw a diagram to illustrate the impact of this change in Qatar's population on its production possibility frontier.

(Total for Question 7 = 4 marks)



- 8** The table shows the change in the sales of capital goods and consumer goods compared to the previous month in the USA.

	Capital goods	Consumer goods
April 2020	-6.5%	-14.7%
May 2020	+2.3%	+17.7%

With reference to the table, explain the difference between 'capital goods' and 'consumer goods'.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

(Total for Question 8 = 4 marks)

SECTION B

Answer ALL questions in this section in the space provided.

- 7** In 2018 there were 1.59 million immigrants arriving in Germany and 1.19 million emigrants leaving Germany.

Draw a diagram to illustrate the likely impact of this population change on Germany's production possibility frontier.

Include an arrow to show the direction of the shift.

(Total for Question 7 = 4 marks)



- 8** Between 2018 and 2019 investment expenditure on capital goods in China fell from 47% of GDP to 43% of GDP. Over the same period, consumer expenditure increased from 38.7% of GDP to 38.8% of GDP.

With reference to China, explain the difference between 'capital goods' and 'consumer goods'.

(Total for Question 8 = 4 marks)



SECTION B

Answer ALL questions in this section in the spaces provided.

- 7** According to researchers, by 2030, Artificial Intelligence will potentially increase China's output by \$7 trillion.

Draw a diagram to illustrate the impact of Artificial Intelligence on China's production possibility frontier (PPF).

Include an arrow on your PPF diagram.

[illegible]

(Total for Question 7 = 4 marks)



11 In 2023 there were 999 700 more immigrants who entered the USA than emigrants who left the country.

Explain the likely impact on the USA's production possibility frontier (PPF) of this change in migration.

Illustrate your answer with a fully labelled PPF diagram.

[illegible]

(Total for Question 11 = 4 marks)

TOTAL FOR SECTION B = 20 MARKS



SECTION D**Answer ONE question from this section.****Write your answer in the space provided.****EITHER**

- 13** The table shows predictions about population change produced by the United Nations for selected countries.

Country	2021	2100
United Arab Emirates	9.4 million	14.1 million
Bolivia	12.1 million	18.8 million
Philippines	113.9 million	180.2 million

(Source: adapted from <https://ourworldindata.org/grapher/comparison-of-world-population-projections>)

Evaluate possible factors that could cause a rightward shift of a country's production possibility frontier.

Include at least one relevant diagram in your answer.

(Total for Question 13 = 20 marks)

OR

- 14** The table shows the total number of aeroplane flights globally and their contribution to global carbon emissions in 2009 and 2019.

	2009	2019
Total number of aeroplane flights	25.9 million	38.9 million
Global carbon emissions	2.0%	2.5%

Evaluate the likely impact of imposing indirect taxes on aeroplane flights to reduce carbon emissions.

Include at least one relevant diagram in your answer.

(Total for Question 14 = 20 marks)



SUB-TOPIC 1.3.1.5

SPECIALISATION AND THE ROLE OF MONEY AND FINANCIAL MARKETS

Sub-topic 1.3.1.5 · 18 questions · 97 marks · lowest tariff first



SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following best describes the nature of economics?

- ☐ **A** Economics is a physical science
- ☐ **B** Economics is a social science
- ☐ **C** Economists investigate the allocation of unlimited resources to satisfy limited wants
- ☐ **D** Economists use scientific experiments keeping all variables unchanged

(Total for Question 1 = 1 mark)

2 Which **one** of the following roles is the state most likely to undertake in a mixed economy?

- ☐ **A** Providing subsidies to encourage the production of goods with external benefits
- ☐ **B** Providing subsidies to encourage the production of goods with external costs
- ☐ **C** Imposing a specific tax on the production of public goods
- ☐ **D** Imposing an ad valorem tax on the production of public goods

(Total for Question 2 = 1 mark)

3 Which **one** of the following is a function of money?

- ☐ **A** To reduce the risk of market bubbles arising
- ☐ **B** To ensure consumers feel valued
- ☐ **C** To enable consumers to minimise utility
- ☐ **D** To act as a method of deferred payment

(Total for Question 3 = 1 mark)

SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following is an example of government failure?

- ☐ **A** Government intervention leads to a net welfare gain
- ☐ **B** A new environmental regulation leads to excessive administrative costs
- ☐ **C** Speculators cause a market bubble to emerge in the housing market
- ☐ **D** Free riders lead to the underprovision of public goods

(Total for Question 1 = 1 mark)

2 In 2018 government spending in South Korea accounted for 30.3% of GDP.
In Denmark government spending accounted for 52.1% of GDP.

Which **one** of the following describes economies where resources are allocated by both the government and the price mechanism?

- ☐ **A** Free market
- ☐ **B** Command
- ☐ **C** Mixed
- ☐ **D** Irrational

(Total for Question 2 = 1 mark)

3 Which **one** of the following is most likely to have a forward market?

- ☐ **A** Tablet computers
- ☐ **B** Designer clothing
- ☐ **C** Housing
- ☐ **D** Copper

(Total for Question 3 = 1 mark)



SECTION A

Answer ALL questions in this section.

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 ☒.

1 Which **one** of the following is a function of the price mechanism?

- ☐ **A** An increase in the price of hand sanitisers, caused by an increase in demand, will ration them to those who are most able to pay
- ☐ **B** A decrease in the price of carrots, caused by excess supply, provides farmers with the incentive to increase supply
- ☐ **C** A decrease in the price of tinned meat is a signal to producers that demand for it is increasing
- ☐ **D** An increase in the price of petrol is a signal to the government to impose a maximum price

(Total for Question 1 = 1 mark)

2 A clothing manufacturer originally organised production so that each worker made a garment from start to finish. However, in 2020, the manufacturer introduced the division of labour to garment production.

Which **one** of the following is a likely advantage of introducing the division of labour?

- ☐ **A** An increase in boredom
- ☐ **B** An increase in the cost of making each garment
- ☐ **C** An increase in output per worker
- ☐ **D** An increase in the time required for training

(Total for Question 2 = 1 mark)

SECTION A

Answer ALL questions in this section.

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 ☒.

1 Which **one** of the following is an example of government failure?

- ☐ **A** Overconsumption of sugar that creates external costs
- ☐ **B** Smuggling of petrol resulting from the introduction of an indirect tax
- ☐ **C** An increase in the price of timber that creates an incentive to increase its production
- ☐ **D** Government provision of flood defences to resolve the free rider problem

(Total for Question 1 = 1 mark)

2 Which **one** of the following is most likely to have a forward market?

- ☐ **A** Gold
- ☐ **B** Housing
- ☐ **C** Higher education
- ☐ **D** Street lighting

(Total for Question 2 = 1 mark)

SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following is a role of financial markets?

- ☐ **A** To collect tax revenues
- ☐ **B** To enable consumers to minimise their utility
- ☐ **C** To make funds available for individuals and businesses
- ☐ **D** To provide public goods

(Total for Question 1 = 1 mark)

2 In the UK, new consumers paid an average of £130 for home insurance in 2020. Consumers who had remained with the same insurance company since 2015 paid £238 for the same annual home insurance cover. Despite this, many consumers stay loyal to their insurance company.

Which **one** of the following is the most likely reason why consumers stay loyal to their insurance company?

- ☐ **A** Consumers feel undervalued
- ☐ **B** Consumers have good computational skills
- ☐ **C** The free-rider problem
- ☐ **D** Habitual behaviour

(Total for Question 2 = 1 mark)

SECTION A

Answer ALL questions in this section.

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

- 1 Which **one** of the following combinations best summarises how resources are allocated in a mixed economy?

	Price mechanism	Government intervention
☐ A	Yes	No
☐ B	Yes	Yes
☐ C	No	Yes
☐ D	No	No

(Total for Question 1 = 1 mark)

- 2 Which **one** of the following is an example of government failure?

- ☐ A The non-provision of public goods by private sector firms
- ☐ B External costs of production in the manufacture of Tesla cars
- ☐ C Asymmetric information between a private dental practice and its patients
- ☐ D Excessive administrative costs in the provision of state-owned services

(Total for Question 2 = 1 mark)

- 3 Forward markets are available at one-month, three-month and one-year intervals.

Which **one** of the following is most likely to have a forward market?

- ☐ A Furniture
- ☐ B Currencies
- ☐ C Smartphones
- ☐ D Clothing

(Total for Question 3 = 1 mark)

SECTION A

Answer ALL questions in this section.

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 ☒.

- 1** Singapore is considered to be close to being a free market economy, with low tax rates, minimal regulations on businesses and a reliance on the price mechanism.

Which **one** of the following is a disadvantage of a free market economy?

- ☐ **A** The profit incentive encourages investment
- ☐ **B** The non-provision of public goods
- ☐ **C** The possibility of government failure
- ☐ **D** An equal distribution of income

(Total for Question 1 = 1 mark)

- 2** Between November 2022 and November 2023, the average price of milk decreased by 36.8% in Ireland.

Which **one** of the following is most likely to result from the introduction of a minimum guaranteed price for milk above the equilibrium price?

- ☐ **A** An excess supply of milk
- ☐ **B** An excess demand for milk
- ☐ **C** An increase in consumer surplus
- ☐ **D** A decrease in producer surplus

(Total for Question 2 = 1 mark)

- 3** In 2022 it was estimated that \$5.8 trillion worth of money was circulating in the USA.

Which **one** of the following is a function of money?

- ☐ **A** To create a moral hazard
- ☐ **B** To extend property rights
- ☐ **C** To regulate financial markets
- ☐ **D** To act as a medium of exchange

(Total for Question 3 = 1 mark)



SECTION C

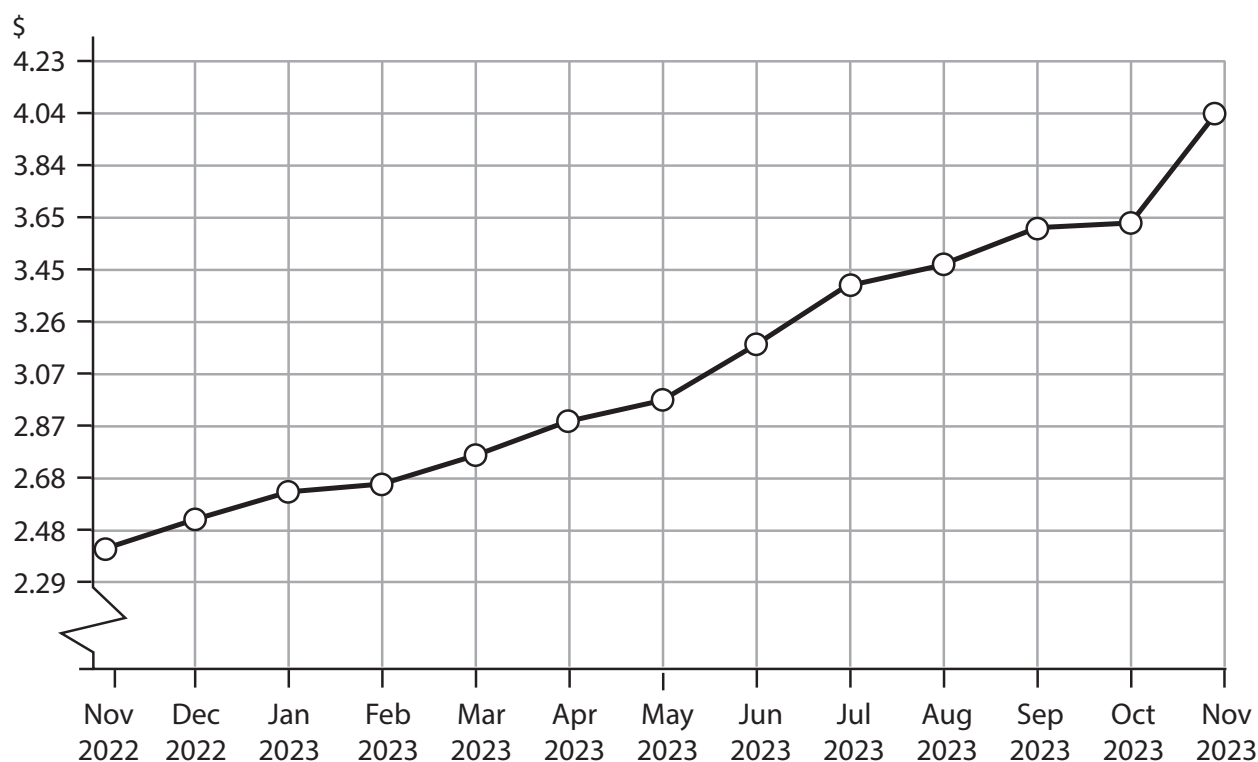
Study Figures 1 and 2 and Extracts A, B and C in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

- 12** (a) Define the term 'forward market'. (Extract A, line 10) (2)
- (b) With reference to Figure 1 and Extract A, analyse **one** supply factor and **one** demand factor that caused the price of cocoa to increase by approximately 68% between November 2022 and November 2023. (6)
- Illustrate your answer with a supply and demand diagram.
- (c) With reference to Figure 2, explain the term 'price inelastic supply'. Refer to the short-run and the long-run in your answer. (4)
- (d) With reference to Extract C, examine **two** effects of the Government of Ghana's decision to end the subsidies paid to cocoa farmers. (8)
- (e) With reference to Extract B, discuss the likely external costs associated with cocoa production. (14)
- Illustrate your answer with an externalities diagram.

Sources for use with Section C.

The cocoa market

Figure 1 World price of cocoa, dollars per kilogram, November 2022 to November 2023**Extract A Cocoa price rises rapidly**

By November 2023 cocoa prices were at their highest level for 46 years. Between November 2022 and November 2023 prices increased by approximately 68%.

Côte d'Ivoire, the world's largest grower, experienced a 36.3% decrease in production compared to the previous year. Flooding and swollen shoot disease on cocoa farms caused this significant fall in cocoa production.

5

More cocoa has been required by the chocolate and drinking chocolate markets. There is growing evidence of the health benefits of cocoa so chocolate makers and drinking chocolate makers have been increasing the cocoa content in their products.

The forward market price for cocoa for six months' time more than doubled between April 2023 and April 2024.

10

Figure 2 Estimated price elasticity of supply for cocoa

	Estimated elasticity
Short-run price elasticity of supply	+0.07
Long-run price elasticity of supply	+0.57

Extract B The true cost of cocoa production

Cocoa farming has resulted in the loss of large areas of rainforest. Over the last three decades the increase in cocoa farming has resulted in a 70% loss of the forests in Ghana and Côte d'Ivoire.

Between 2014 and 2019 the use of pesticides in the production of cocoa increased by 20% in Ghana and Côte d'Ivoire. These pesticides are often highly hazardous and may cause cancer. In addition, they can pollute drinking water and rivers. 5

The percentage of earnings for each sector involved in the chocolate market is as follows:

- Cocoa farmers 6.6%
- Transport businesses 2.1% 10
- Processors 7.6%
- Marketing businesses 4.3%
- Chocolate manufacturers 35.2%
- Retailers 44.2%

Many cocoa farmers have difficulty in meeting their basic needs. Some are even unable to afford sufficient food, shelter or clothing. As farmers struggle to survive financially, many now employ children. Between 2009 and 2019 the percentage of workers on cocoa plantations who were children increased from 5% to 24% in Ghana and Côte d'Ivoire. 15

Extract C Subsidies for cocoa farmers in Ghana

Between 2019 and 2020 the Government of Ghana increased the amount it spent subsidising cocoa farmers from \$200 million to \$400 million. The funds were paid to enable farmers to purchase fertiliser and to ensure that farmers' incomes were not too low. However, the Government found it difficult to fund these payments to cocoa farmers and it decided to end these subsidies in 2023. 5

1

12 (a) Define the term 'forward market'. (Extract A, line 10)

(2)

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Explain **one** role of financial markets in such an economy.



SECTION B

Study Figure 1 and Extracts A and B in the Source Booklet before answering Question 7.

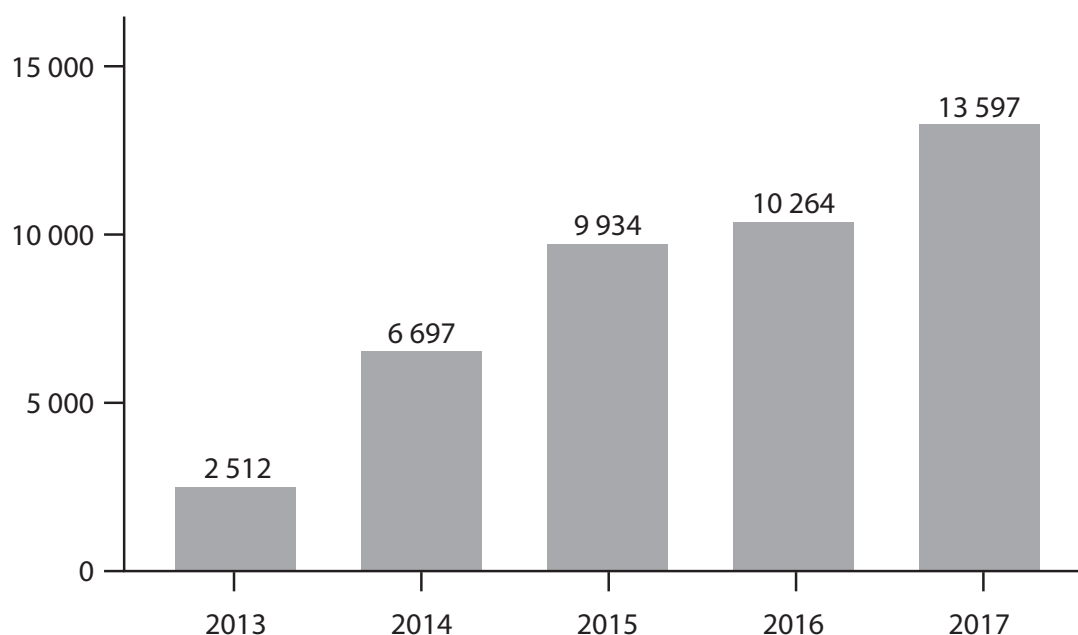
Write your answers in the space provided on the following pages.

- 7** (a) With reference to Figure 1, calculate the percentage change in electric car sales from 2013 to 2017. You are advised to show your working. (2)
- (b) With reference to Extract A and Extract B, explain what is meant by *specialisation*. (4)
- (c) With reference to Extract A, examine the likely effect of a decrease in variable costs on Tesla's profits.
Illustrate your answer with an appropriate diagram(s). (8)
- (d) With reference to Extract B, analyse the relationship between price elasticity of demand and total revenue.
Illustrate your answer with an appropriate diagram(s). (6)
- (e) With reference to the information provided, discuss the significance of barriers to entry and exit in the electric car market for new entrants, such as Dyson. (14)

Sources for use with Section B.

The electric car market

Figure 1 UK electric car registrations, 2013 – 2017



Extract A Financial performance of Tesla

Tesla is a large American corporation that specialises in the production of electric cars. In January 2017 the company had a 30% market share for electric cars in the USA.

Between 2010 and March 2018, Tesla recorded only two profitable quarters. The company made its biggest quarterly loss of \$709.6 million in quarter one of 2018. It was failing to produce enough of its 'Model 3' mass market electric car. For example, 20 000 'Model 3' cars should have been produced in December 2017. However, during the whole of quarter four of 2017, Tesla manufactured only 2 425 cars.

5

The 'Model 3' is the most important part of Tesla's plan to become a mass market car manufacturer. At one stage, it had more than 500 000 potential consumers on its waiting list. However, in April 2018 the company admitted that some buyers had cancelled their orders for Tesla cars.

10

Senior managers have been looking for ways of decreasing the company's variable costs. This may require the sourcing of cheaper car parts and reducing the number of workers on production lines.

15

Extract B New entrants in the luxury electric car market

Dyson was established in 1991. It has become a very successful technology company with its headquarters in the UK. It specialises in the design and manufacture of domestic appliances such as vacuum cleaners, hand dryers and hair dryers. In 2018 Dyson employed 12 000 workers worldwide. The company has built a reputation for creating and producing a range of high quality and innovative products. 5

Its latest project is to design and produce an electric vehicle. Dyson plans to invest \$2.7 billion, split evenly between battery technology and vehicle development. Initially, the company will be targeting the luxury segment of the electric car market. This is a niche that Tesla almost exclusively occupies. Demand is significantly more price inelastic in this part of the market. 10

However, it is possible that barriers to entry and exit could create problems for Dyson. The experience of Apple may prove to be relevant. Apple abandoned its plans to manufacture electric cars when both the high initial capital costs and the complexities of the production process became apparent. 15

The badge on the front of a luxury car is all-important. Possibly a Dyson brand associated with domestic appliances might lack sufficient appeal for potential consumers. However, Dyson's previous success when marketing new products may be repeated in the electric car market.

There is also likely to be significant competition in the luxury electric car market. For example, Jaguar is about to launch the iPace, a competitor to Tesla's Model S. Porsche, Audi and BMW all have new luxury electric car models due to be on sale by late 2020. Several other companies are set to enter the market for luxury electric cars. 20

Finding buyers is another challenge. For example, Tesla had to spend heavily on setting up its own retail network to compete with the established distribution channels of the large car manufacturers. 25

- 7 (a) With reference to Figure 1, calculate the percentage change in electric car sales from 2013 to 2017. You are advised to show your working.

(2)

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- (b) With reference to Extract A and Extract B, explain what is meant by *specialisation*.

(4)

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- 9 Adam Smith wrote that by applying the division of labour in a pin factory, ten workers were able to increase production from 200 pins per day to 48 000 pins per day.

Explain **one** advantage to firms of using division of labour to organise production.

(Total for Question 9 = 4 marks)



Explain **one** advantage to a car manufacturer of using the division of labour to organise production.

[illegible]

(Total for Question 9 = 4 marks)



With reference to Thailand, explain **one** role of financial markets.

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting or typing. There are no margins, text, or other markings on the page.

8 The construction of a house requires many different types of worker. These include:

- bricklayers
- carpenters
- plasterers
- electricians
- painters and decorators.

Explain **one** advantage of specialisation in house construction.

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(Total for Question 8 = 4 marks)

SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

- 13** Adam Smith identified that if workers completed every stage of production individually they would each produce 10 to 20 pins per day. The application of the division of labour in a pin factory enabled ten workers to produce 48 000 pins per day.

Evaluate the advantages of the division of labour in organising production.

(Total for Question 13 = 20 marks)

OR

- 14** The European Union (EU) operates a tradeable pollution permit scheme which affects 12 000 businesses including energy producers, airlines and the steel industry.

Evaluate the use of tradeable pollution permits to reduce pollution.

(Total for Question 14 = 20 marks)



SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

- 13** In 2018 the Government of Uganda introduced an indirect tax on mobile internet usage. The aim was to raise tax revenue. Consumers had to pay a tax of 200 shillings per day to use services including Facebook, Twitter and Instagram. In the six months that followed the introduction of the tax, mobile internet usage decreased from 47.4% to 35% of the population.

Evaluate the likely microeconomic effects of the introduction of this indirect tax.

(Total for Question 13 = 20 marks)

OR

- 14** In 2019, in Sweden, on average:

- households saved 16.5% of their incomes
- households borrowed 189% of their incomes
- a consumer made 349 debit card payments.

With reference to the information above and your own knowledge, evaluate the role of financial markets in an economy.

(Total for Question 14 = 20 marks)



SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

13 In 2022 consumers in the UK who did not switch suppliers for different services at the end of their contracts were paying a total of £1.3 billion more than those consumers who chose to switch suppliers. It is estimated that this applied to:

- 630 000 consumers with mortgages
- 1.5 million consumers with mobile phone contracts
- 7 million broadband consumers.

Evaluate possible reasons why consumers did not switch suppliers for these services.

(Total for Question 13 = 20 marks)

OR

14 The division of labour applies to many types of production and occupation, including:

- in the textile industry, workers are responsible for specific parts of the production process
- in healthcare, workers have different roles including doctors, nurses, cleaners and administrators.

Evaluate the advantages of the division of labour for businesses **and** workers. Refer to an industry of your choice in your answer.

(Total for Question 14 = 20 marks)



SUB-TOPIC 1.3.1.6

FREE MARKET, MIXED AND COMMAND ECONOMIES

Sub-topic 1.3.1.6 · 10 questions · 48 marks · lowest tariff first



SECTION A

Answer ALL questions in this section.

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 ☒.

1 Which **one** of the following best describes the nature of economics?

- ☐ **A** Economics is a physical science
- ☐ **B** Economics is a social science
- ☐ **C** Economists investigate the allocation of unlimited resources to satisfy limited wants
- ☐ **D** Economists use scientific experiments keeping all variables unchanged

(Total for Question 1 = 1 mark)

2 Which **one** of the following roles is the state most likely to undertake in a mixed economy?

- ☐ **A** Providing subsidies to encourage the production of goods with external benefits
- ☐ **B** Providing subsidies to encourage the production of goods with external costs
- ☐ **C** Imposing a specific tax on the production of public goods
- ☐ **D** Imposing an ad valorem tax on the production of public goods

(Total for Question 2 = 1 mark)

3 Which **one** of the following is a function of money?

- ☐ **A** To reduce the risk of market bubbles arising
- ☐ **B** To ensure consumers feel valued
- ☐ **C** To enable consumers to minimise utility
- ☐ **D** To act as a method of deferred payment

(Total for Question 3 = 1 mark)

SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following will cause a movement along the demand curve in the market for rice?

- ☐ **A** An increase in the global population
- ☐ **B** An increase in real incomes
- ☐ **C** A decrease in the price of noodles
- ☐ **D** A decrease in the price of rice

(Total for Question 1 = 1 mark)

2 Which **one** of the following is an advantage of a free market economy?

- ☐ **A** The profit motive gives firms the incentive to be more efficient
- ☐ **B** Public goods may be under-provided by the price mechanism
- ☐ **C** Goods may be over-provided compared with the social optimum level of output
- ☐ **D** Government intervention leads to the correction of market failure

(Total for Question 2 = 1 mark)

3 Which **one** of the following is an example of market failure?

- ☐ **A** Government provision of flood defences that is greater than the social optimum output
- ☐ **B** Doctors prescribe too many medicines because the cost is covered by health insurance
- ☐ **C** Lower prices create an incentive for firms to switch production to more profitable activities
- ☐ **D** Unintended consequences that follow the introduction of an indirect tax

(Total for Question 3 = 1 mark)

SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following is a role of the government in a mixed economy?

- ☐ **A** To provide public goods such as street lighting and flood defences
- ☐ **B** To subsidise goods that cause external costs
- ☐ **C** To tax goods that cause external benefits
- ☐ **D** To introduce regulations that cause excessive administration costs

(Total for Question 1 = 1 mark)

2 Which **one** of the following is an example of market failure?

- ☐ **A** Excessive administration costs associated with government regulation
- ☐ **B** Diminishing marginal utility occurring as consumption increases
- ☐ **C** Rising stock market prices causing a market bubble
- ☐ **D** Unintended consequences after the introduction of a tax

(Total for Question 2 = 1 mark)



SECTION A**Answer ALL questions in this section.**

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 ☒.

1 Which **one** of the following is an example of government failure?

- ☐ **A** Government intervention leads to a net welfare gain
- ☐ **B** A new environmental regulation leads to excessive administrative costs
- ☐ **C** Speculators cause a market bubble to emerge in the housing market
- ☐ **D** Free riders lead to the underprovision of public goods

(Total for Question 1 = 1 mark)

2 In 2018 government spending in South Korea accounted for 30.3% of GDP.
In Denmark government spending accounted for 52.1% of GDP.

Which **one** of the following describes economies where resources are allocated by both the government and the price mechanism?

- ☐ **A** Free market
- ☐ **B** Command
- ☐ **C** Mixed
- ☐ **D** Irrational

(Total for Question 2 = 1 mark)

3 Which **one** of the following is most likely to have a forward market?

- ☐ **A** Tablet computers
- ☐ **B** Designer clothing
- ☐ **C** Housing
- ☐ **D** Copper

(Total for Question 3 = 1 mark)



SECTION A

Answer ALL questions in this section.

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 ☒.

1 Which **one** of the following is a role of the government in a mixed economy?

- ☐ **A** To ration resources according to the price mechanism
- ☐ **B** To charge indirect taxes on goods with external benefits
- ☐ **C** To pay subsidies to manufacturers of goods that produce external costs
- ☐ **D** To introduce a tradeable pollution permit scheme to reduce external costs

(Total for Question 1 = 1 mark)

2 In 2019 an energy consumer in the UK could save an average of £290 by changing to a different energy supplier. In 2019 over 6.4 million households changed energy supplier.

Which **one** of the following could explain this behaviour?

- ☐ **A** Consumers being valued by the original supplier
- ☐ **B** Consumers aiming to maximise utility
- ☐ **C** Consumers being poor at computation
- ☐ **D** Consumers aiming to minimise utility

(Total for Question 2 = 1 mark)



SECTION A

Answer ALL questions in this section.

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

- 1 Which **one** of the following combinations best summarises how resources are allocated in a mixed economy?

	Price mechanism	Government intervention
☐ A	Yes	No
☐ B	Yes	Yes
☐ C	No	Yes
☐ D	No	No

(Total for Question 1 = 1 mark)

- 2 Which **one** of the following is an example of government failure?

- ☐ A The non-provision of public goods by private sector firms
- ☐ B External costs of production in the manufacture of Tesla cars
- ☐ C Asymmetric information between a private dental practice and its patients
- ☐ D Excessive administrative costs in the provision of state-owned services

(Total for Question 2 = 1 mark)

- 3 Forward markets are available at one-month, three-month and one-year intervals.

Which **one** of the following is most likely to have a forward market?

- ☐ A Furniture
- ☐ B Currencies
- ☐ C Smartphones
- ☐ D Clothing

(Total for Question 3 = 1 mark)

SECTION A

Answer ALL questions in this section.

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

- 1** Singapore is considered to be close to being a free market economy, with low tax rates, minimal regulations on businesses and a reliance on the price mechanism.

Which **one** of the following is a disadvantage of a free market economy?

- ☐ **A** The profit incentive encourages investment
- ☐ **B** The non-provision of public goods
- ☐ **C** The possibility of government failure
- ☐ **D** An equal distribution of income

(Total for Question 1 = 1 mark)

- 2** Between November 2022 and November 2023, the average price of milk decreased by 36.8% in Ireland.

Which **one** of the following is most likely to result from the introduction of a minimum guaranteed price for milk above the equilibrium price?

- ☐ **A** An excess supply of milk
- ☐ **B** An excess demand for milk
- ☐ **C** An increase in consumer surplus
- ☐ **D** A decrease in producer surplus

(Total for Question 2 = 1 mark)

- 3** In 2022 it was estimated that \$5.8 trillion worth of money was circulating in the USA.

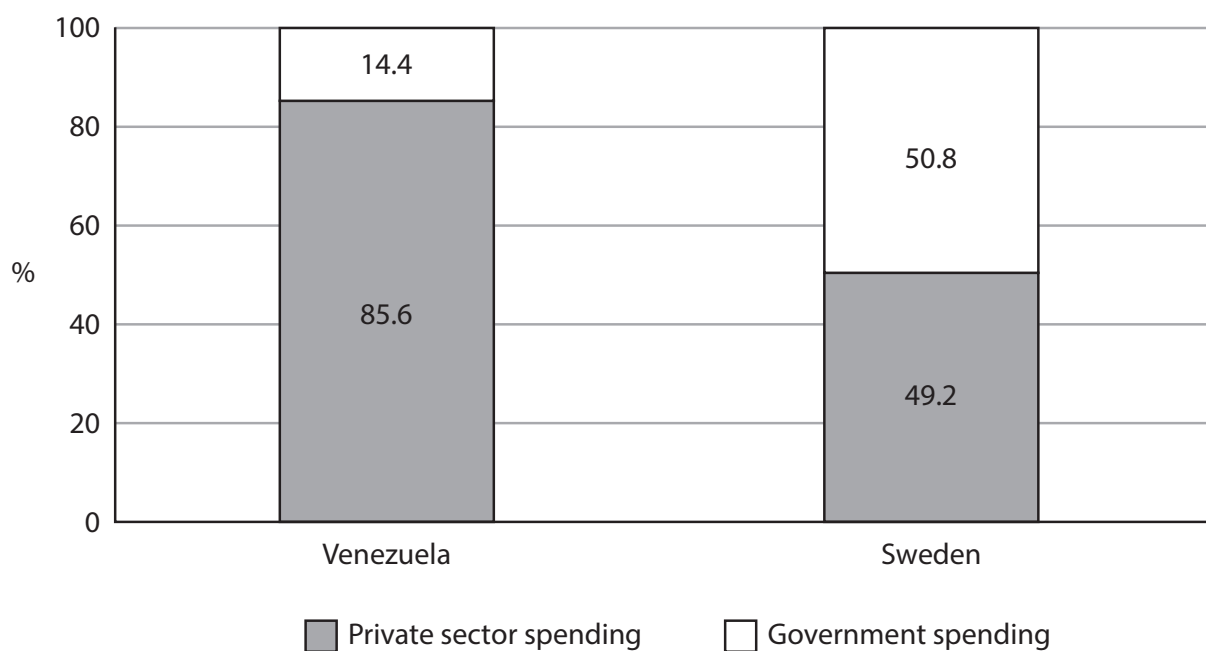
Which **one** of the following is a function of money?

- ☐ **A** To create a moral hazard
- ☐ **B** To extend property rights
- ☐ **C** To regulate financial markets
- ☐ **D** To act as a medium of exchange

(Total for Question 3 = 1 mark)



- 5 The chart shows the share of government spending and private sector spending in Venezuela and Sweden in 2023.



Which **one** of the following can be deduced from the chart?

- ☐ A Venezuela is a free market economy
- ☐ B Sweden is a command economy
- ☐ C Sweden is a free market economy and Venezuela is a command economy
- ☐ D Sweden and Venezuela are both mixed economies

(Total for Question 5 = 1 mark)

SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

- 13** In 2007 Ireland's Government spending as a percentage of GDP was 35.9% and by 2019 it had fallen to 25.1%.

Evaluate the possible benefits of an economy moving closer to being a 'free market economy'.

(Total for Question 13 = 20 marks)

OR

- 14** In Australia 50% of consumers are still with the bank they first joined. Banking with one of the 4 largest banks is costing consumers about AUD1 500 per year. In the UK consumers loyal to their broadband supplier pay 12% more than those who switch to better deals.

Evaluate ways that would encourage and enable consumers to make rational decisions.

(Total for Question 14 = 20 marks)



SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

- 13** In 2020 the Fraser Institute identified Hong Kong as being the closest to a free market economy in the world. This was based on Hong Kong's low tax rates, low government spending and the low level of business regulation.

Evaluate the advantages of a free market economy.

(Total for Question 13 = 20 marks)

OR

- 14** The Government of the United Arab Emirates provides its citizens with free primary and secondary education and free healthcare. In 2020 the Government announced that it would spend \$136 million on flood defences and that it will build the world's tallest lighthouse in Dubai.

Evaluate the advantages of state provision of goods and services.

(Total for Question 14 = 20 marks)



MARK SCHEMES

official mark schemes, in the same order as the questions



Question	Quantitative skills assessed	Answer	Mark
1	–	B	(1)
2	–	A	(1)
3	–	D	(1)
4	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	C	(1)
5	QS8: Make calculations of elasticity and interpret the result	C	(1)
6	QS8: Make calculations of elasticity and interpret the result	B	(1)

Section A

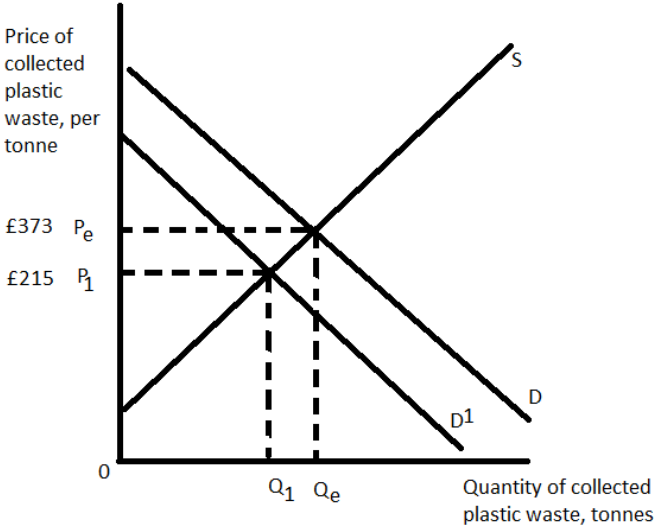
Question Number	Quantitative skills assessed	Answer	Mark
1	–	B	(1)
2	–	A	(1)
3	–	D	(1)
4	QS9: Interpret, apply and analyse information in written, graphical and tabular forms	B	(1)
5	QS9: Interpret, apply and analyse information in written, graphical and tabular forms	C	(1)
6	QS8: Make and interpret calculations of elasticity	D	(1)

Section A

Question Number	Quantitative skills assessed	Answer	Mark
1	–	The only correct answer is B A is not correct because statement 2 is normative and not positive C is not correct because statement 1 is positive and not normative D is not correct as statement 1 is positive and statement 2 is normative	(1)
2	–	The only correct answer is C A is not correct because if consumers were good at computation they would calculate that they could save 20% and switch B is not correct because if people aimed to maximise utility they would switch as the money they have could be spent on other goods D is not correct because if consumers felt undervalued by their current provider they would be more likely to look for a provider that does value them	(1)
3	–	The only correct answer is A B is not correct because this is a function of the price mechanism C is not correct because this is government failure D is not correct because this is the government correcting the market failure	(1)



Question	Explain what is meant by 'positive economic statements'. Include two examples from the extracts to support your answer. Answer	Mark
12 (b)	Knowledge 2 Application 2 Knowledge Up to 2 marks for definition of positive economic statements • Statements that can be supported/proved or refuted (1) with evidence/ facts / empirical evidence / scientifically (1) • Objective / not subjective (1) • Statements that are value free / not based on value judgements (1) Application Up to 2 marks for application to data, e.g.: • China imposing a ban on the import of plastic waste (1) • Prices decreased from £373 per tonne in February to £215 in December 2017 (1) • Plastic bags break down into smaller and smaller toxic pieces (1) • A plastic bag takes between 400 to 1 000 years to break down (1) • As it breaks down, plastic particles contaminate soil and waterways (1) • Plastic bags cause over 100 000 marine animal deaths every year (1) • Nearly 90% of the debris in our oceans is plastic (1) • Food can be contaminated with toxins (1) • The yearly consumption of plastic carrier bags in the EU is nearly 100 billion (1) • 92% of carrier bags are single use (1) • Around 3% of the marine litter in Europe is shopping bags. (1) • In 1994 Denmark introduced a plastic bag tax of €0.27 per bag • Before the tax 800 million bags were used in Denmark (1) • After the tax this dropped to 400 million (1) • The Danish Government found the tax on plastic bags raised just 0.03% of total tax revenue in 1995 (1)	(4)

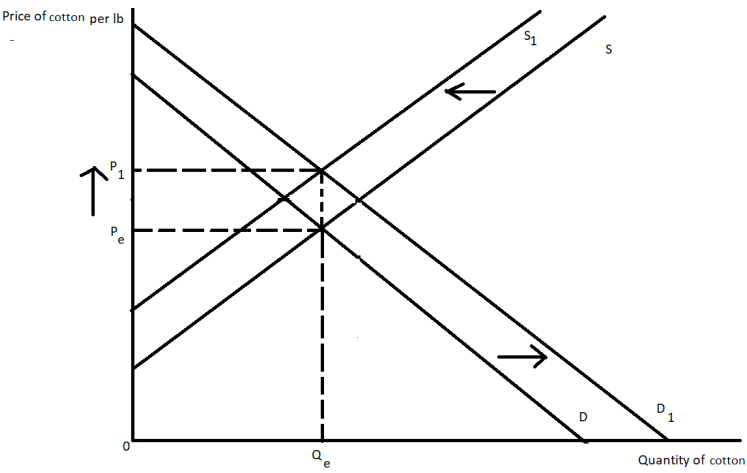
Question	Analyse one reason why 'the price of plastic waste material fell by more than 40%.' (Extract A, line 2). Illustrate your answer with a supply and demand diagram. Answer	Mark
12 (c)	Knowledge 2, Application 2, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for the diagram showing: • Original supply, demand and equilibrium (1) • leftward shift in demand (1) Analysis Up to 2 marks for development of how reason(s) leads to lower prices, e.g.: • There are less companies willing to buy the material (1) • Meaning sellers have to accept a lower price for the goods (1) • There will be a contraction in supply (1) • Final equilibrium showing lower price (1) Application Up to 2 marks for reference to the data from Extract A: • The price falls from £373 to £215 per tonne (1) • With China banning the import of collected waste plastic (1) • There are now dramatically fewer buyers for the plastic waste (1) 	(6)

Question Number	Answer	Mark
8	Knowledge 2, Application 2 Knowledge 1 mark for defining 'positive statement.' - Value free/ can be verified with evidence/ objective/ based on facts (1) 1 mark for defining 'normative statement.' - Based on value judgement/ cannot be verified or proven/ subjective (1) Application 2 marks for applying to the statements e.g.: - Statement 1 is positive as you can verify whether \$140bn was spent on renewable subsidies / \$260bn was spent on non-renewable subsidies/ check if the government subsidised (1) - Statement 2 is normative as the word 'should' shows it is a value judgement/ suggests a course of action based on a person's value judgement (1)	(4)

Section C

Question	Define the term 'indirect tax' (Extract B, line xx).	Mark
	Answer	
12 (a)	Knowledge 2 1 mark for: • Expenditure/sales/consumption tax/tax added to the price of a good (1) And 1 mark for any 1 of the following: • Paid to the government through a third party (1) • Could be ad valorem or specific tax (1) • Increases costs (1) • Decreases supply (1) • Used to discourage consumption (1) • Examples of indirect taxed including VAT/excise duties/customs duties (1) • Ireland plans to introduce an indirect tax on clothing (1)	(2)

Question	With reference to the titles of Extract A and Extract B, explain the difference between positive statements and normative statements.	Mark
	Answer	
12 (b)	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 2 Application 2 Knowledge 1 mark for definition of positive statements: • Based on facts/can be proven with evidence/value free/objective/scientific approach to decision making (1) 1 mark for definition of normative statements: • Based on value judgments/not based on facts/cannot be proven with evidence/ subjective/non-scientific approach to decision making (1) Application Up to 2 marks for application: • 'World cotton price rises' is a positive statement as the price data/Figure1 can be used to prove prices rose (1) • 'Clothing manufacturers should reduce environmental costs' is a normative statement as indicated by reference to 'should' (1)	(4)

Question	With reference to Figure 1 and Extract A, analyse two reasons why between 1st April 2020 and 1st January 2021 the world price of cotton increased. Illustrate your answer with a supply and demand diagram. Answer	Mark
12 (c)	Knowledge 2, Application 2, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for the diagram showing: • Original supply, demand and equilibrium (1) • Final equilibrium showing higher equilibrium price and change in quantity (1) Analysis Up to 1 mark for analysis linked to demand factor e.g.: • Increased demand for cotton as more demand for masks/bedsheets/surgical gowns/for healthcare (1) Up to 1 mark for analysis linked to supply factor e.g.: • Pakistan crop decreased/decrease in amount of cotton produced/high temperatures in Pakistan (1) Application 1 mark for application to Figure 1 • Price increased from \$0.54 per lb to \$0.80 per lb between 1 April 2020 and 1 January 2021 Up to 2 marks for diagram: • Rightwards shift in demand (1) • Leftwards shift in supply (1)  NB: Quantity may rise or fall dependent on size of shifts in S and D	(6)

9	Knowledge 2, Application 2 QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for definition of normative statements e.g.: • Statements that contain value judgements/ cannot be proven/ not based on fact/ subjective (1K) 1 mark for definition of positive statements • Statements that are value free/ can be proven/ based on fact/ objective (1K) Application Up to 2 marks for applying to stem e.g.: • Statement 1 is positive (1AP) • Statement 2 is normative (1AP)	(4)
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Question	Ceteris paribus, calculate the difference between the percentage change in quantity demanded for flights within developed countries and the percentage change in quantity demanded for flights within developing countries. Show your workings. You may use the last column for your calculations. Answer	Mark
10	Knowledge 1, Application 3 Quantitative skills assessed: QS8: Make calculations of elasticity and interpret the result. QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms Knowledge 1 mark for definition/the formula of income elasticity of demand $\frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}} /$ $\text{YED} \times \% \text{ change in income} = \% \text{ change in quantity demanded (1)}$ Application Up to 3 marks for calculations: - Change in quantity demanded in developed countries $1.5 \times 2.5 = 3.75\%$ - Change in quantity demanded in developing countries $2.0 \times 3.4 = 6.8\%$ Difference between percentages $6.8\% - 3.75\%$ $= 3.05 \text{ percentage points (1)}$ NB: if correct answer (e.g. 3.05/ 3.05 pp) is given, award full marks regardless of working Accept reasonable rounding Accept positive or negative responses Award 3 marks for 3.05%	(4)

Question	Ceteris paribus, explain the likely impact on excess supply of this increase in the minimum price. Illustrate your answer with a supply and demand diagram. Answer	Mark
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Section A

Question	Quantitative skills assessed	Answer	Mark
1	–	D	(1)
2	–	A	(1)
3	–	B	(1)
4	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	D	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	C	(1)
6	QS8: Make calculations of elasticity and interpret the result	A	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because this occurs when there is increasing marginal utility B is not correct because diminishing marginal utility is not related to the supply curve D is not correct because diminishing marginal utility means the utility will rise at a slower rate as more of the product is consumed	(1)
2	QS2: Calculate, use and understand percentages, percentage changes and percentage point changes QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A the largest percentage decline in the use of the non-renewable resource was in the USA C is not correct because in all countries the use of the non-renewable resource decreased D is not correct because in all countries the use of the renewable resources increased	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the data provided are for cross elasticity of demand and not income elasticity of demand C is not correct because unrelated goods would have an XED of zero D is not correct because complements have an XED which is negative	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because point Z is obtainable because it is inside the PPF	(1)



Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because this is an example of asymmetric information B is not correct because this is an example of asymmetric information D is not correct because market failure occurs when there is asymmetric information	(1)
2	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because consumer goods gain utility for an individual B is not correct because the sea defences have an opportunity cost C is not correct because the sea defences are non-excludable and non-rival whereas private goods are excludable and rival.	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because complements have a negative XED C is not correct because unrelated goods have an XED of 0 D is not correct because there is no information on income	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because this is the area of consumer surplus C is not correct because the area the government will spend is GHKJ D is not correct because this is the total revenue to farmers	(1)
5	QS2 Calculate, use and understand percentages, percentage changes and percentage point changes QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because more electricity is generated using renewable resources C is not correct because 21% is the total for non-renewable resources D is not correct because 79% is the total for renewable resources	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because an economic good has an opportunity cost C is not correct because when providing a public good other items may be sacrificed D is not correct because investing in a capital good has an opportunity cost in terms of consumer goods	(1)
2	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the excess supply of permits will result in the price decreasing C is not correct because the cost of buying permits will decrease D is not correct because there is less incentive to invest in cleaner technology when permits are cheaper	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because there is no information on income elasticity of demand B is not correct because substitute goods have a positive XED C is not correct because the value of XED is not zero	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because the PED will be 0 B is not correct because the PED will be between 0 and -1 D is not correct because the PED will be -infinity	(1)



5	QS2 Calculate, use and understand percentages, percentage changes and percentage point changes QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because Denmark generated more non-renewable resources in 2010 and more renewable resources in 2021 C is not correct because a higher proportion of electricity was generated from non-renewable resources in 2010 D is not correct because a higher proportion of electricity was generated using renewable resources in 2021	(1)
6	QS2 Calculate, use and understand percentages, percentage changes and percentage point changes QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the supply of new houses would decrease C is not correct because the supply of new houses would decrease D is not correct because the PES has been divided by the price change	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because this is an advantage of a free market economy C is not correct because a free market economy does not have government intervention D is not correct because a free market economy is likely to result in an unequal distribution of income	(1)
2	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the minimum price is above the equilibrium price resulting in excess supply C is not correct because the increase in price will result in a decrease in consumer surplus D is not correct because the minimum price is likely to result in an increase in producer surplus	(1)
3	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because moral hazard is a market failure B is not correct because this is not a function of money C is not correct because this is a role of the government/central bank	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because the gain would be 42 consumer goods B is not correct because the gain would be 30 consumer goods D is not correct because the gain would be 28 capital goods	(1)
5	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because renewable resources generated 39% which is less than 50% C is not correct because non-renewable resources generated 61% of electricity D is not correct because renewable resources generated 39% of electricity	(1)

Section C

Question Number	Define the term 'free good' (Extract A, line 7). Answer	Mark
12 (a)	Knowledge 2 Up to 2 marks for defining a 'free good', e.g.: • A free good is a good with zero opportunity cost (1) This means it can be consumed in as much quantity as required without reducing the availability to others (1). • Product is so abundant (1) that it is impossible for a price to be charged (1). • Abundant in supply (1) with no opportunity cost (1). • A good that is not scarce (1) and does not have to be bought or traded (1).	(2)
Question Number	Between 2008 and 2016 weekly household real income increased by 2.7% in Australia. (b) With reference to Figure 1, explain the likely change in quantity demanded of lamb between 2008 and 2016. Answer	Mark
12 (b)	Knowledge 2 Application 2 Knowledge Up to 2 marks for definitions of income elasticity of demand (YED) and inferior good: • The responsiveness of quantity demanded to a change in income. OR Formula for YED: $\frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}} \quad \mathbf{(1)}$ • Inferior good has an income elasticity which is negative (1). Application 1 mark for reference to the direction of change, e.g.: • The negative YED means that a rise in income will lead to a fall in quantity demanded /Quantity demanded will fall as income increases (1) 1 mark for reference to the actual change, e.g.: • The YED is less than 1 so quantity change will be less than proportional/ less than 2.7%/ 0.39% change (1) NB = - (1) 0.39% (1)	(4)

Section C

Question Number	Answer	Mark
12 (a)	Knowledge 2 Up to 2 marks for defining a 'renewable resource', e.g.: • A resource that can be used again and again (1) • A resource that does not deplete with use (1) • A resource that does not run out (1) • A resource that is naturally replenished (1) • A resource that is infinite (1) • An example is hydroelectricity (1) NB: do not reward other examples not in Extract B	(2)

Question Number	Answer	Mark
12 (b)	Knowledge 2 Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms Knowledge 2 marks for definition of rational decision making: • Rational decision-making is where consumers maximise (1) utility/benefits/satisfaction (1) Application Up to 2 marks for application to Extract B: • Consumers would purchase the E-Golf/ With added indirect taxation the VW Golf is more expensive than the subsidised electric VW Golf (1) • Consumers will save money on the purchase of an electric car/on the lower running and fuel costs which can then be spent on other goods and services that gain utility (1)	(4)

Question Number	Lake Poopó in Bolivia used to provide the local community with water to irrigate the quinoa fields. By 2017 there had been a 98% reduction in the size of the lake. The community could no longer use the lake for irrigation. Explain whether Lake Poopó is a free good or an economic good.	Mark
9	Knowledge 1, Application 1, Analysis 2 Knowledge Up to 1 mark for defining 'free good' or 'economic good', e.g.: - Free good is a resource which is so abundant that its availability is not a constraint on economic activity/ a good with no opportunity cost OR Economic good is a good that derives utility/ a good with scarcity and therefore an opportunity cost/ scarcity means people may be willing to pay for it (1). Analysis Up to 2 marks for explaining why the lake might be a free good or economic good e.g.: - The lake provides water to irrigate quinoa (1) with abundant supply of water thus likely to be a free good (1). - The lake reducing in size means less water for irrigation is available (1) this scarcity suggests it is an economic good (1). Application Up to 1 mark for applying this to Lake Poopó, e.g.: - The lake is now 2% of its former size/there has been a 98% reduction in the size/lake used it irrigate quinoa fields (1).	(4)

Question Number	The table shows the quantity of bottled water supplied and the quantity of bottled water demanded at different prices. An advertising campaign results in an increase in demand of 100 bottles of water at each price. Using the data in the table, calculate the equilibrium price for bottled water after the advertising campaign. Show your workings. You may wish to use the last column in your calculation.	Mark																								
10	Knowledge 1, Application 3 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for defining what equilibrium is Equilibrium is found where supply and demand intersect/ balance (1). Quantity demanded and supplied are the same (1) (may be shown on a diagram) Application Up to 2 marks for completing the final column. One for ¥12 and one for any other calculation: <table><tr><th>Price of bottled water (yuan)</th><th>Original quantity demanded</th><th>Original quantity supplied</th><th>New quantity demanded</th></tr><tr><td>¥10</td><td>700</td><td>200</td><td>800</td></tr><tr><td>¥11</td><td>600</td><td>300</td><td>700</td></tr><tr><td>¥12</td><td>500</td><td>400</td><td>600</td></tr><tr><td>¥13</td><td>400</td><td>500</td><td>500</td></tr><tr><td>¥14</td><td>300</td><td>600</td><td>400</td></tr></table> One mark for explaining where equilibrium occurs Equilibrium occurs at a price of ¥13 (1) +1 K mark for implied understanding of equilibrium NB: if correct answer (¥13) is given, award full marks regardless of working. If currency (¥) is missing but 13 is given award 3.	Price of bottled water (yuan)	Original quantity demanded	Original quantity supplied	New quantity demanded	¥10	700	200	800	¥11	600	300	700	¥12	500	400	600	¥13	400	500	500	¥14	300	600	400	(4)
Price of bottled water (yuan)	Original quantity demanded	Original quantity supplied	New quantity demanded																							
¥10	700	200	800																							
¥11	600	300	700																							
¥12	500	400	600																							
¥13	400	500	500																							
¥14	300	600	400																							

Question Number	With reference to Canada's electricity generation, explain the difference between 'renewable resources' and 'non-renewable resources'. Answer	Mark
8	Knowledge 2, Application 2 Knowledge 1 mark for defining 'renewable resources' • An economic resource which is not depleted by use/ replenishes after use/ can be used continuously/ be used again and again (1). 1 mark for defining 'non-renewable resources' • An economic resource that cannot be replaced/ replenished once used/ resource that is finite (1). Application 1 mark for applying to the Canada's energy generation for a renewable resource, e.g.: • Hydro (1) • Other renewables could include solar/ wind (1) 1 mark for applying to the Canada's energy generation for a non-renewable resource, e.g.: • Coal/ Natural gas (1). • Most electricity generated is renewable (1)	(4)

Question Number	Singapore's economy is highly dependent on trade with the rest of the world. In 2017, Singapore's exports were 173.3% of its GDP. Explain one role of financial markets in such an economy. Answer	Mark
9	Knowledge 1, Application 1, Analysis 2 Knowledge 1 mark for identifying one role of financial markets, e.g.: • to make funds available to businesses and individuals/ • to facilitate the exchange of goods and services/ trade • to provide forward markets in commodities and currencies/ exchange of currencies • to provide a market for equities/ • to facilitate saving (1). Or 1 mark for defining financial market The bringing together of buyers and sellers to exchange financial products Analysis Up to 2 marks for explaining how the role supports economic transactions e.g.: • So that firms can borrow money (1) to be able to buy capital goods from abroad (1). • When consumers wish to purchase foreign goods they can pay using debit and credit cards (1) and banks will transfer money electronically to the foreign firm they buy from (1). • With commodity prices being volatile this helps create stability in terms of having a predictable price (1) which can be traded on at a future date when the goods are imported (1). • Enables firms to sell shares (1) to raise money to fund expansion to sell more goods to foreign customers (1). • So that consumers can accumulate money (1) to be able to spend on goods from abroad (1). Application Up to 1 mark for applying to how this facilitates more trade in goods and services, e.g.: • This will enable firms to increase output to be able to sell more products (1). • As buying and selling goods becomes easier the volume of international trade is likely to increase (1).	(4)

Question Number	With reference to the change in how electricity was generated, explain the difference between 'renewable resources' and 'non-renewable resources'.	Mark
	Answer	
8	Knowledge 2, Application 2 Knowledge 2 marks for defining 'renewable resources' and 'non-renewable resources' • Renewable resources are resources that can be used again and again/used repeatedly/resources that do not diminish/do not deplete/replenished naturally in short time (1) • Non-renewable resources are resources that deplete with use/resources that do diminish/used up quicker than it can be replenished/supply is finite (1) Application 2 marks for applying to the data in the table e.g.: • Hydro/wind/solar are renewable (1) • Coal/gas are non-renewable (1)	(4)

Question Number	Adam Smith wrote that by applying the division of labour in a pin factory, ten workers were able to increase production from 200 pins per day to 48 000 pins per day. Explain one advantage to firms of using the division of labour to organise production. Answer	Mark
9	Knowledge 1, Application 1, Analysis 2 QS1: Calculate, use and understand ratios and fractions. QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for identifying an advantage of the division of labour, e.g.: • Increased output per worker/increased productivity/lower training costs/reduce costs per unit/machinery can replace workers (1) OR 1 mark for definition of division of labour, e.g. • Where production is broken down into tasks and each worker focuses on one task Application 1 mark for applying to the stem/Adam Smith/ pin factory or production, e.g.: • Output per worker has increased from 20 to 4 800/workers will only be trained in one element of putting together the pins (1) Analysis Up to 2 marks for linked expansion of the advantage e.g.: • The workers will focus on one task (1) and will become experts at that task (1) • The workers will not need to keep changing tools (1) enabling them to save time (1) • Workers will only need to be trained in how to do one task (1) rather than having to know how to complete every stage of production (1) • With the same number of workers being able to produce more output (1) the costs of making each item will be lower (1) • The tasks become simpler (1) and can often be automated (1)	(4)

Question	With reference to Figure 2, explain the difference between 'renewable resources' and 'non-renewable resources'.	Mark
	Answer	
12 (b)	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 2 Application 2 Knowledge 1 mark for definition of renewable resources: - Resources that could be used again and again/replenish themselves/not finite/infinite/ will not run out (1) 1 mark for definition of non-renewable resources: - Resources that are finite/will run out/cannot be used again and again/do not replenish (1) Application Up to 2 marks for application: - Renewable includes wind/hydro/solar/76% in Denmark renewable (1) - Non-renewable includes coal/natural gas/oil/24% in Denmark non-renewable (1) NB do not reward other renewable or non-renewable resources not listed NB do not reward can be renewed or cannot be renewed	(4)

Question	With reference to Figure 1 and Extract A, analyse two reasons why 'the world price of copper increased significantly' between May and December 2020. Illustrate your answer with a supply and demand diagram. Answer	Mark
12 (c)	Knowledge 2, Application 2, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for the diagram showing: • Original supply, demand and equilibrium price and quantity with correctly labelled axis (1) • Final equilibrium showing higher price (1) Analysis Up to 2 marks for analysis linked to demand taken from Extract A e.g.: • Speculators started to buy copper/expected global rate of economic growth to recover (1) • Chinese Government investing in infrastructure (1) • Output of electric vehicles increased therefore demand for copper rose (1) Application 1 mark for application to Figure 1 focused on May and December 2020 • Price increases from \$5 100 (accept \$5 000 to \$5 200) in May 2020 to \$7 100 (accept \$7 000 to \$7 200)/ increased \$2 000 (accept \$1 800 to \$2 200)/ 39% increase in price between May and December (accept 35%-45%) (1) 1 mark for diagram: • Rightwards shift in demand (1) (accept more than one shift of demand to the right)	

Question	With reference to Lake Chad, explain the difference between a free good and an economic good.	Mark
	Answer	
8	Knowledge 2, Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for understanding of 'free good', e.g. - Free good is a resource which is so abundant that its availability is not a constraint on economic activity/in unlimited supply/a good with no opportunity cost/good does not have a price (1) 1 mark for understanding of 'economic good', e.g. - Economic good is a good that derives utility/a good with scarcity and therefore an opportunity cost/scarcity means people may be willing to pay for it (1) Application 1 mark for reference to Lake Chad as a free good in 1960, e.g. • In 1960 water from the lake was a free good/lake used to provide irrigation to farmers for their crops suggesting free good (1) 1 mark for reference to Lake Chad as an economic good in 2017, e.g. • By 2017 the farmers could no longer use the lake for irrigation suggesting it is an economic good/has an opportunity cost (1)	(4)

Question	With reference to Extract A, explain one advantage of Apple using energy produced from renewable resources.	Mark
	Answer	
12 (b)	Knowledge 2 Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for understanding of renewable resources: • A resource that once used can be reused/used again and again/ Supply is unlimited/ infinite resource / Resource once used will regenerate quickly (1) 1 mark for an advantage • Renewable energy is often cleaner/less polluting than non-renewables/fossil fuels (1) • Will help reduce carbon emissions/external costs associated with non-renewable resources (1) • Renewable resources do not use up/deplete the resource like non-renewable do (1) • Prices of renewable resources are likely to be more stable than those of non-renewable resources (1) • Demand for Apple products may rise if it is seen as an environmentally friendly business (1) Application Up to 2 marks for application: • In 2020 100% of the energy used directly by Apple was from renewable resources (1) • 213 of its suppliers had agreed to use only renewable resources to power production of Apple's products (1) • Investment in a 2 300 acre solar project in Texas (1) • A data centre in Denmark is powered by a solar park and wind farm (1) • Supplier Keiwa in Japan will take its renewable energy from a wind farm (1)	(4)

Section A

Question Number	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	A	(1)
2	–	C	(1)
3	–	A	(1)
4	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	B	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	B	(1)
6	QS8: Make and interpret calculations of elasticity	D	(1)

Section A

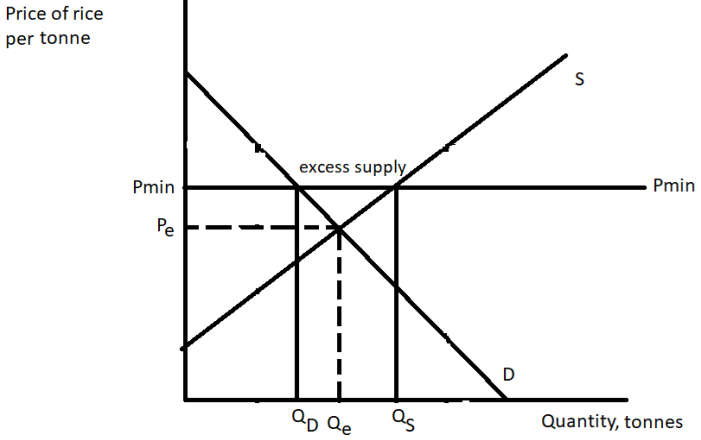
Question Number	Quantitative skills assessed	Answer	Mark
1		The only correct answer is A <i>B is not correct because the subsidy would lead to increased quantity and external costs- the government role is to reduce external costs</i> <i>C is not correct because the tax on the good would lead to decreased quantity and a reduction in external benefits- the government role is to reduce external costs</i> <i>D is not correct because this is a government failure and not a role of the government</i>	(1)
2	–	The only correct answer is C <i>A is not correct because this is a government failure</i> <i>B is not correct because diminishing marginal utility occurs in any normally functioning market</i> <i>D is not correct because this is a government failure</i>	(1)
3	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B <i>A is not correct because this would be the result of an increase in productive capacity</i> <i>C is not correct because the movement to y is unattainable given current resources</i> <i>D is not correct because position y would imply that some resources are unemployed</i>	(1)

4	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because the social optimum quantity is Q_2 and price is P_2 B is not correct because the market equilibrium quantity is Q_1 and price is P_1 C is not correct because RST is the area of welfare loss	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because this position shows unemployed resources B is not correct because at B there are fewer capital goods consumed than at C so growth will be slower D is not correct because this point is unattainable using current resources	(1)
6	QS8: Make calculations of elasticity and interpret the result	The only correct answer is B A is not correct because a decrease in real income will result in a less than proportionate decrease in demand for butter C is not correct because a decrease in real income will result in a less than proportionate increase in the demand for margarine D is not correct because the data is about income elasticity and not price elasticity of demand.	(1)

		B is not correct because at point Y there are fewer capital goods so the growth rate will be slower. D is not correct because the movement to Y results in a gain of 25 consumer goods	
5		The only correct answer is D A is not correct because this is an example of poor computation B is not correct because they are more likely to switch if they do not feel valued C is not correct because this is an example of herding/being influenced by others' behaviour	(1)
6	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because this is the producer incidence C is not correct because this is the tax revenue earned by the government/includes both consumer and producer incidence D is not correct because this multiplies the Sol 0.60 by the wrong quantity (380 000)	(1)

4	QS4: Construct and interpret a range of standard graphical forms QS8: Make calculations of elasticity and interpret the results QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because the change in price and quantity are both positive so the PES will be positive B is not correct because the value of PES is positive as both price and quantity increase C is not correct because this has been calculated using the formula the wrong way round	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the government intervention causes the net welfare loss not the market C is not correct because this is positions above the PPF D is not correct because this is when consumers do not have the energy to find better deals	(1)
6	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because position Y is unobtainable B is not correct because the opportunity costs is in terms of consumer goods C is not correct because the movement shows a decrease in unemployed resources	(1)

Section B

Question	Answer	Mark
7	Draw a diagram to illustrate the impact of the introduction of this minimum price for rice. Knowledge 1, Application 3 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for showing knowledge on diagram • Original supply and demand (1) Application Up to 3 marks for the following information included on diagram: • Minimum price above equilibrium price (1) • Quantity demanded and supplied at minimum price (1) • Excess supply/surplus (1) 	(4)

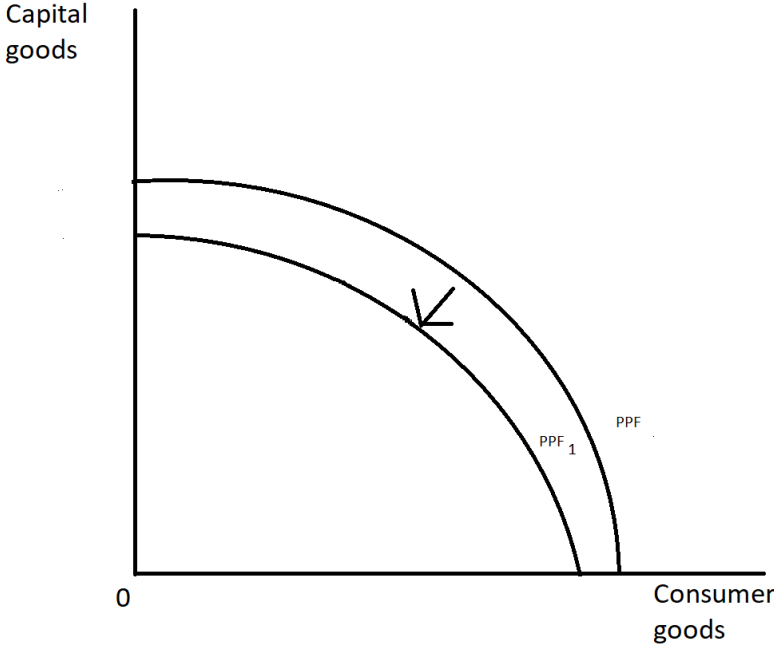
Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because this illustrates that the market is functioning correctly B is not correct because this is an example of market failure C is not correct because this is government intervention succeeding in eliminating the market failure	(1)
2	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because increased unemployment means that the economy operates further inside the PPF C is not correct because an improvement in technology would result in the PPF shifting outwards D is not correct because an increase in immigration will result in an increase in productive potential	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because the PED value for diesel is the only type of car whose demand is inelastic B is not correct because the demand for petrol and electric cars is elastic D is not correct because the demand for electric cars is elastic so increasing the price will result in a decrease in total revenue	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because the market equilibrium quantity is at Q_1 B is not correct because the social optimum quantity is at Q_2 C is not correct because the welfare gain area is equal to the area UWX	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because inertia is about consumers finding that the effort to secure a better deal is too great B is not correct because the free-rider problem is associated with public goods D is not correct because a market bubble emerges when the price of an asset rises above its true value	(1)

6	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because Y is unobtainable using current resources B is not correct because the opportunity cost is in terms of capital goods D is not correct because the movement from X to W results in a decrease in efficiency/unemployment	(1)
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Section C

Question	Define the term 'capital goods'. (Extract C, line 5)	Mark
	Answer	
12 (a)	Knowledge 2 Up to 2 marks for understanding of 'capital goods.' e.g.: • Man-made aids to production (1) • Used in the production of other capital goods or consumer goods (1) • Spending on machinery/buildings/vehicles (1) • Goods that increase productive potential /shifts PPF to the right (1) • Indian Government subsidies are used by farmers to invest in capital goods (1)	(2)

Question Number	Lithuania's population decreased from 3.7 million in 1989 to 2.9 million in 2015. Ceteris paribus, explain the likely impact of this change in population on Lithuania's production possibility frontier (PPF). Illustrate your answer with a diagram. Answer	Mark
11	Knowledge 1, Application 1, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms Knowledge 1 mark for defining production possibility frontier: - PPF is the maximum production potential using all available resources (1). OR 1 mark for original PPF on diagram Application 1 mark for the following diagram, showing the shift in PPF:  OR 1 mark for reference to stem: - Population has decreased by 0.8m	

	Analysis Up to 2 marks for likely impact of this change: • Production possibilities fall (1) as less labour is available (1). • Lithuania has fewer factors of production (1) so it can produce fewer consumer and capital goods (1). • Economic growth rate is likely to decline (1) as it has a smaller labour force (1).	(4)
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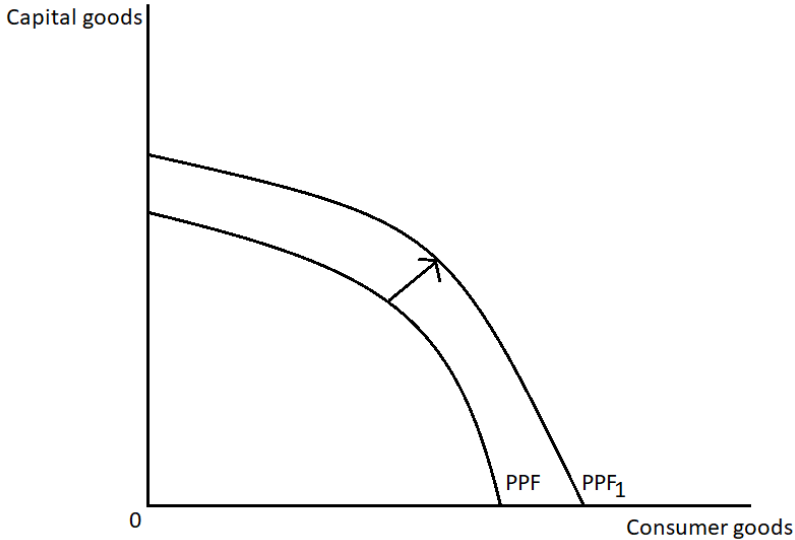
Section B

Question	Draw a diagram to illustrate the impact of this change in Qatar's population on its production possibility frontier.	Mark
7	Answer Knowledge 1, Application 3 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge • Correct labelling of the axes (e.g. with capital and consumer goods/ two other relevant goods/ good A and B) (1) Application Up to 3 marks for the following information included on diagram: • Drawing the original PPF (1) • Drawing a new PPF shifted to the right (1) • Making it clear that it has shifted outwards through the use of an arrow or labelling the curves (e.g. PPF to PPF₁) (1) PPFs may be drawn as straight line or concave to the origin.	(4)

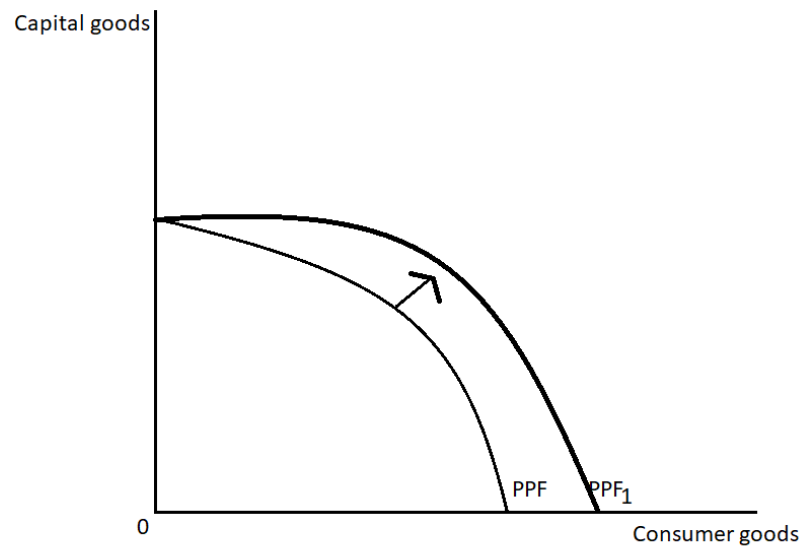
Question	With reference to the table, explain the difference between 'capital goods' and 'consumer goods'.	Mark
	Answer	
8	Knowledge 2, Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. QS2: Calculate, use and understand percentages, percentage changes and percentage point changes. Knowledge 1 mark for defining 'capital goods' - Capital goods are man-made aids to production/goods used in the production of other goods/examples such as machinery/tools, buildings (1) 1 mark for defining 'consumer goods' - Consumer goods sold to individuals to satisfy their wants and needs (1) Application 1 mark for applying explicitly to the data in the table linked to capital goods e.g.: - Sales of capital goods declined 6.5% in April compared to March/ sales of capital goods grew 2.3% in May 2020 compared to April 2020 (1) 1 mark for applying to the data in the table linked to consumer goods e.g.: - Sales of consumer goods declined 14.7% in April compared to March/ sales of capital goods grew 17.7% in May 2020 compared to April 2020 (1)	(4)

Question	Most of the Netherlands is below sea level and is therefore liable to flooding. The Dutch Government spends €1 billion per year on flood defences. Explain one reason for the provision of this public good by the Dutch Government. Answer	Mark
9	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1, Application 1, Analysis 2 Knowledge 1 mark for definition of public goods e.g.: - Public goods are non-excludable and non-rival (1) Application 1 mark for applying to the stem, e.g.: - The Dutch Government spends €1 billion per year on flood defences (1) Analysis Up to 2 marks for explaining one reason e.g.: - Due to the free rider problem (1) consumers would use the flood defences without paying (1) - Not being able to generate revenue from providing flood defences (1) means it is unlikely firms will generate profit from providing the goods (1) - Due to non-excludability people can benefit from flood defences (1) without paying for their provision or upkeep (1) - Due to non-rivalry one person benefiting does not reduce the protection for others (1) so if one person was to put flood defences in place all locals would benefit without paying (1) - Flood defences would not be provided by the private sector (1) as the private sector has no profit incentive to provide flood defences (1)	(4)

Section B

Question	Draw a diagram to illustrate the likely impact of this population change on Germany's production possibility frontier. Include an arrow to show the direction of the shift. Answer	Mark
7	Knowledge 1, Application 3 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for showing knowledge on diagram • Appropriately labelled axes (1) Application Up to 3 marks for the following information included on diagram: • Original PPF (1) • Directional arrow to show outward shift (1) • New PPF further from the origin (1)  NB Accept straight line PPFs NB Capital goods or consumer goods may be labelled on either axis/Accept other reasonable alternatives on the axes e.g. goods and services NB Award 3 marks if increase in only one of the goods is illustrated (as shown below)	

NB award maximum of 2 marks if axis not labelled appropriately



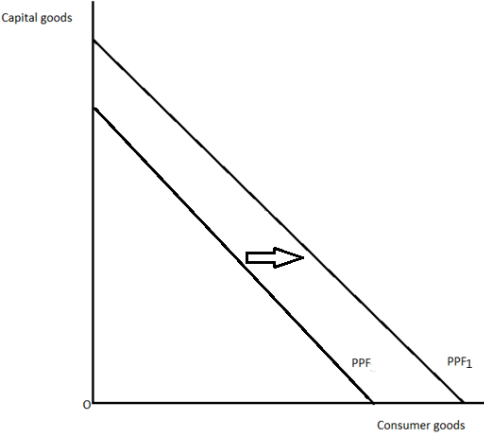
(4)

Question	With reference to China, explain the difference between 'capital goods' and 'consumer goods'.	Mark
	Answer	
8	Knowledge 2, Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 2 marks for understanding of 'capital goods' and 'consumer goods', e.g. • Capital goods are man-made aids to production/ Goods used in the production of other capital and/or consumer goods/ Includes machines/tools/vehicles/buildings (1) • Consumer goods are goods used by consumers/ Goods that people buy to use themselves/ Goods purchase to gain utility/satisfy current needs and wants (1) Application 2 marks for reference to China e.g.: • Expenditure on capital goods was 47% in 2018/ 43% in 2019/capital expenditure decreased 4 percentage points (1) • Spending on consumer goods increased from 38.7% to 38.8%/ 0.1 percentage point increase (1) • The changes in expenditure in China may result in a reduction in the rate of economic growth/increase current living standards (1)	(4)

Question	Explain one microeconomic reason why the Singapore Government provides streetlights.	Mark
9	Answer Knowledge 1, Application 1, Analysis 2 QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for definition of market failure or public goods e.g.: • inefficient allocation of resources Or non-excludable and non-rival (1) Application 1 mark for applying to the stem, e.g.: • Streetlights are a public good/ • 95 000 streetlights replaced/ • 19 000 streetlights replaced on average each year (1) Analysis Up to 2 marks for explaining one reason e.g.: • Private sector firms are unable to profit from supplying public goods (1) as consumers will free ride them without paying / it is impossible to exclude people (1) • When one person consumes the good it does not limit the consumption by others (1) so that it is difficult for private sector firms to charge people to use the good (1) • The price mechanism leads to the private sector not allocating enough resources to public goods (1) so the government steps in to correct the market failure (1) • Governments provide them as they ensure safety (1) and private sector firms not providing them could mean it is unsafe (1)	(4)

Section B

Question	Draw a diagram to illustrate the impact of Artificial Intelligence on China's production possibility frontier (PPF). Include an arrow on your PPF diagram. Answer	Mark
7	Knowledge 1, Application 3 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for showing knowledge on diagram • Original PPF (1) Application Up to 3 marks for the following information included on diagram: • Correctly labelled axes (1) • For drawing PPF shifted to the right (1) • Arrow showing shift to the right (1) N.B. Accept straight-line or curved PPF diagram N.B. Accept other appropriate labels for axis- e.g. agricultural goods and manufactured goods, goods and services, good A and , good B N.B Capital good and consumer good labels can be reversed N.B. If price and quantity or no labels on axes maximum 1 mark should be awarded N.B. Each PPF curve does not need labelling	(4)

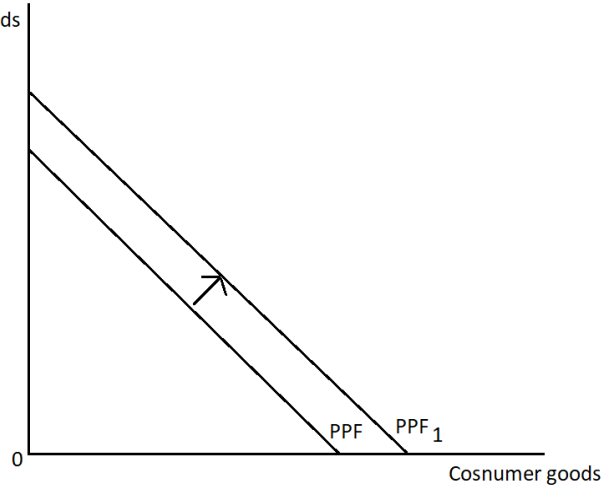
Question	Explain the likely impact on the USA's production possibility frontier (PPF) of this change in migration. Illustrate your answer with a fully labelled PPF diagram. Answer	Mark
11	Knowledge 1, Application 1, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for definition of PPF e.g.: - Production Possibility Frontier is the maximum possible production using all available resources (1) Application 1 mark for correct shift of PPF diagram: - Outward/rightward shift of PPF (1)  NB Accept curved PPF Analysis Up to 2 marks for: - An increased population in the USA would increase the number of workers/ more factors of production available (1) - Increase in the output of capital goods and consumer goods that can be produced (1) - Identifying that this illustrates economic growth/an increase in productive potential (1)	(4)

Section D

Question	Evaluate possible factors that could cause a rightward shift of a country's production possibility frontier. Include at least one relevant diagram in your answer. Indicative content
13	Quantitative skills assessed QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • PPF- shows the maximum possible production using all available resources Factors that could cause a rightward shift of a country's PPF • Population increase from 9.4m to 14.1m (UAE)/12.1m to 18.8m (Bolivia)/113.9m to 180.2m (Philippines) increases the size of the available workforce • More immigration- increases the size of the labour force and production possibilities • Offering more work visas, offer payments to migrants may encourage immigration, increasing labour force • Families having more children, will eventually result in larger workforce • Use of benefits, subsidies and tax breaks to encourage families to have more children, to increase workforce • Investment in capital goods will increase productivity • Use of subsidies and tax breaks to encourage investment in capital goods • More research and development will result in better production processes increasing output • Encourage research and development- helping to improve innovation and increasing productive potential • Development of artificial intelligence may replace tasks completed by humans • Increase spending on education to develop skills to improve productivity • Increase spending on healthcare to improve health- reducing time lost to absenteeism, sickness • Increase retirement age so people stay in the labour market for longer • Reduce school leaving age so that people start to become productive earlier • Offer training courses to improve skills and productivity • Discovery of new natural resources PPF diagram- accept straight line or curved PPFs



Capital goods

**NB Award maximum of Level 3 if no diagram is included**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.

	Evaluation (8 marks) – indicative content • Immigrating to a country may not be attractive if jobs are not available in the right areas • Immigration may cause pressure on public services • If immigrants do not find suitable opportunities productive potential will not rise • Payments to migrants create an opportunity cost • Financial rewards for having more children are unlikely to exceed the costs of having more children • Subsidies to encourage investment in capital goods create opportunity costs • Much research and development is unproductive and not all ideas will improve production possibilities • Artificial intelligence may come with unknown risks and costs • Spending on education may be in the wrong areas- resulting in smaller impact on productive potential • Increase in spending on healthcare will only have an impact if it is preventative • Increasing the retirement age may cause unrest as people are forced to work longer • If people leave education earlier they may be less skilled • Possible information failure, government failure if training is in wrong areas • Time lag e.g. long delay between increased birth rate and increased production possibilities	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Question	Evaluate the likely impact of imposing indirect taxes on aeroplane flights to reduce carbon emissions. Include at least one relevant diagram in your answer. Indicative content
14	Quantitative skills assessed QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • Definition of indirect taxation- expenditure tax • Specific tax/Ad valorem tax- ○ Increase costs of production ○ Shifts/pivots supply to the left, S to S_1 ○ Increased equilibrium price charged to consumers P_e to P_1 ○ Decreases equilibrium quantity of flights for consumers, Q_e to Q_1 ○ Reduced quantity of aeroplane flights will result in a reduction in fuel use and in total global carbon emissions. Therefore there will be a reduction in external costs ○ Tax revenue received by the government $ABCP_1$ ○ Use tax revenue to fund research into technology to reduce emissions/ fund alternatives ○ Producer surplus decreases/ airline/ airport profits fall ○ Consumer surplus decreases FEP_e to FCP_1

Section A

Question Number	Quantitative skills assessed	Answer	Mark
1		The only correct answer is B <i>A is not correct as this is successful government intervention</i> <i>C is not correct as this is market failure</i> <i>D is not correct as this is market failure</i>	(1)
2	–	The only correct answer is C <i>A is not correct as this economy only has price mechanism allocating resources</i> <i>B is not correct as this economy only has the government allocating resources</i> <i>D is not correct as this is where firms do not maximise profit and consumers do not maximise utility</i>	(1)
3	–	The only correct answer is D <i>A is not correct as forwards markets are found for commodities and currencies</i> <i>B is not correct as forwards markets are found for commodities and currencies</i> <i>C is not correct as forwards markets are found for commodities and currencies</i>	(1)
4	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B <i>A is not correct as utility is maximised at 4 glasses of milk</i> <i>C is not correct as consumption of the fifth glass results in decreasing marginal utility</i> <i>D is not correct as utility is maximised at 4 glasses of milk</i>	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because firms would supply less if the price decrease C is not correct because the price decrease would be caused by lower demand D is not correct because government intervention is not a function of the price mechanism	(1)
2		The only correct answer is C A is not correct because increased boredom is a disadvantage B is not correct because costs to make each garment are likely to decrease D is not correct because less time will be required for training as they focus on fewer parts of the production process	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because Caribbean holidays are a luxury/normal good B is not correct because healthcare does not have an income elasticity of demand value above +1 D is not correct because there is no data on price elasticity of demand	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because Q_1 is the market equilibrium output B is not correct because Q_2 is the social optimum output C is not correct because ABC is the welfare gain	(1)
5	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because if too few permits were issued the price would be higher B is not correct because if too many permits were issued the price for carbon permits would be falling/lower C is not correct because a decrease in the demand for permits would reduce their price	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	–	The only correct answer is B A is not correct because this is a market failure C is not correct because this is a function of the price mechanism D is not correct because this is the government intervening to correct the market failure	(1)
2		The only correct answer is A B is not correct because housing is not a commodity or currency C is not correct because there is no forward market in higher education D is not correct because street lighting is a public good that has non-excludability and non-rivalry	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because the data provided is for cross elasticity of demand and not for income elasticity of demand B is not correct because the data provided is for cross elasticity of demand and not for income elasticity of demand C is not correct because fish and rice are substitutes as the value of XED is positive	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because the diagram does not consider the relationship between income and quantity demanded B is not correct because the diagram does not consider the relationship between price and quantity supplied	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1		The only correct answer is C A is not correct because it is the government's role to collect tax revenues B is not correct because financial markets have no role in minimising utility D is not correct because the government provides public goods	(1)
2	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because if consumers felt undervalued they are more likely to leave B is not correct because if consumers have good computational skills they will calculate the fact they are paying £108 more C is not correct because the free-rider problem relates to the underprovision of public goods	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because the demand for the railway tickets in Guadalajara is price inelastic C is not correct because an increase in the price of railway tickets in Monterrey will increase total revenue D is not correct because there is no data on income provided	(1)

Section A

Question	Quantitative skills assessed	Answer	Mark
1	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because this is a free market economy C is not correct because this is a command economy D is not correct because this type of economy does not exist	(1)
2	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because this is market failure B is not correct because this is market failure C is not correct because this is market failure	(1)
3	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is B A is not correct because furniture is not purchased using forward markets C is not correct because smartphones are not traded on forward markets D is not correct because clothing is not traded on forward markets	(1)
4	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A B is not correct because the welfare loss area is found by going up from the market equilibrium at point W C is not correct because this is producer surplus at the market equilibrium D is not correct because this is producer surplus at the social optimum	(1)



Section C

Question	Define the term 'forward market'. (Extract A, line 10)	Mark
	Answer	
12 (a)	Knowledge 2 QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. 1 mark for understanding of future price e.g. • Priced in advance/ • At a future date/for future delivery (1) 1 mark for understanding of the following e.g.: • Buyer and seller set an agreed price/ • For a commodity/gold/copper/foreign exchange/ • The forward market price for cocoa for 6 months' time more than doubled (1)	(2)

Question	With reference to Figure 1 and Extract A, analyse one supply factor and one demand factor that caused the price of cocoa to increase by approximately 68% between November 2022 and November 2023. Illustrate your answer with a supply and demand diagram. Answer	Mark
12 (b)	Knowledge 2, Application 2, Analysis 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for the diagram showing: • Original supply, demand and equilibrium price and quantity (1) • New equilibrium quantity and increased price having shifted both demand and supply (1) Analysis 1 mark for one supply factor from Extract A: • Côte d'Ivoire 36.3% decrease in production / • Caused by swollen shoot disease on cocoa farms / • Flooding (1) 1 mark for one demand factor from Extract A: • More cocoa has been required by the chocolate and drinking chocolate markets / • There is growing evidence of the health benefits of cocoa so chocolate makers and drinking chocolate makers have been increasing the cocoa content in their products (1) Application Up to 2 marks for diagram or for reference to Figure 1.: • Shift supply to the left (1) • Shift demand to the right (1) • Figure 1- price rises from approximately \$2.40 to \$4.04 per kg between November 2022 and November 2023 (1)	

Question Number	Rimac manufacture electric cars. With the first model, the Concept_One, an individual worker was responsible for building each car from start to finish. Only seven were manufactured. In 2017 €30 million was spent on developing a factory which would use the division of labour to manufacture 200 Concept_Two cars. With reference to the market for car manufacturing, explain one benefit of the 'division of labour'.	Mark
8	Knowledge 2, Application 2 Knowledge Up to 2 marks 1 mark for defining 'the division of labour' e.g. The division of labour is where the production process is broken down into stages and each worker focuses on a specific task (1). Up to 2 marks for explaining one benefit, e.g. • Less training is required (1) as workers will only need to be trained on one task (1). • Productivity will increase (1) as workers do not have to keep changing tools/ as workers become highly skilled at specific tasks (1). • Capital may replace workers (1) saving on labour costs (1). Application Up to 2 marks for applying to the market for car manufacture, e.g.: • Production of cars increases from 7 to 200 cars (1) • Rather than training staff how to put together all components of the car (1) you can spend less time training on a specific task such as fitting the windscreen (1). • Rimac can put in place a production line where some tasks will be completed by robots/capital (1) which can be cheaper to run when compared to paying wages (1).	(4)

	• Contracts can be agreed with certainty ensuring more confidence and therefore more goods and services likely to be traded internationally (1). • By firms being able to grow they will be able to increase the quantity of goods they buy from abroad and sell to abroad (1). • Consumers are then able to use the savings to make larger purchases for example of cars from abroad (1). • This helps exports to reach 173.3% of its GDP (1). • Singapore depends on international trade (1).	
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Question Number	In September 2017, Centrica increased the price of gas and electricity by 12.5%. Before the price rise Centrica had 12 800 000 customers but this fell by 800 000 after the price increase. Ceteris paribus, calculate the price elasticity of demand for gas and electricity from Centrica. Show your workings. Answer	Mark
10	Knowledge 1, Application 3 Quantitative skills assessed: QS8: Make and interpret calculations of elasticity. Knowledge • 1 mark for the formula for price elasticity of demand: $\frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}} \quad \textbf{(1)}$ OR • 1 mark for identifying that the good is relatively price inelastic. • The demand for Centrica's gas and electricity is price inelastic because the percentage change in price is greater than the percentage change in quantity demanded. Application Up to 3 marks for calculations: • Change in quantity ÷ original quantity $-800\,000 \div 12\,800\,000 \times 100 = -6.25\% \textbf{(1)}$ • % Change in quantity ÷ % change in price $-6.25\% / 12.5\% \textbf{(1)} = -0.5 \textbf{(1)}$ NB: if correct answer (-0.5) is given, award full marks regardless of working	(4)

Question	With reference to Extract A and Extract B, explain what is meant by <i>specialisation</i> .	Mark
	Answer	
7(b)	Knowledge 2 Application 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for knowledge of specialisation • A firm uses its resources to produce a specific product/service OR a specific range of products/services (1) • Specialisation leads to a division of labour, whereby workers carry out specific jobs/tasks (1) • Specialisation may result in an increase in efficiency (1) • Specialisation often leads to an increase in productivity (1) • Specialisation may reduce a firm's LRAC/lead to economies of scale (1) Application Up to 2 marks for application to the contexts 1 mark for application to Extract A • Tesla specialises in the production of electric cars (1) • Tesla's products include the Model 3/Model S (1) 1 mark for application to Extract B • Dyson specialises in domestic appliances (1) • Dyson's products include vacuum cleaners/hand dryers/hair dryers (1)	(4)

Question	With reference to Extract A, examine the likely effect of a decrease in variable costs on Tesla's profits. Illustrate your answer with an appropriate diagram(s).	Mark
7(c)	Answer Knowledge 2 Application 2 Analysis 2 Evaluate 2 Quantitative skills assessed: QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge Up to 2 marks for drawing a diagram that shows knowledge of: • Original supernormal profit/loss area (1) • New supernormal profit/loss area after MC and AC shift down (1) Analysis Up to 2 marks for explanation of or diagrammatic representation of: • Profit maximising price will fall from OP_1 to OP_2 (1) • Increase in profit maximising output from OQ_1 to OQ_2 (1) • Revenue would rise from $OP_1 \times OQ_1$ to $OP_2 \times OQ_2$ (1) N.B. Allow 1 mark for answers which have only shifted AC curve as follows • Increase in supernormal profit/fall in loss (1) Application Up to 2 marks for reference to Extract A, e.g.: • Senior managers are considering ways of decreasing variable costs (1) • Lower cost car parts (1) • Reducing the number of workers on production lines (1) • Tesla making a quarterly loss of \$709.6m in one quarter (1)	

Question Number	In 2019 Netflix increased the price of its basic subscription streaming service from \$7.99 to \$8.99 in the USA. It was estimated that there would be an 8% decrease in the number of consumers with Netflix subscriptions. <i>Ceteris paribus</i>, calculate the price elasticity of demand for the basic subscription for Netflix. Show your workings. Answer	Mark
10	Knowledge 1, Application 3 Quantitative skills assessed: QS8: Make calculations of elasticity and interpret the result. Knowledge 1 mark for the formula for price elasticity of demand: <u>% change in quantity demanded</u> % change in price OR 1 mark for identifying that the good has relatively price inelastic demand/ The PED is inelastic as a rise in price sees quantity demanded change by a smaller percentage (1) Application Up to 3 marks for calculations: - Change in price ÷ original price $1 \div 7.99 \times 100 = 12.52\%$ (1) % Change in quantity ÷ % change in price $-8\% \div 12.52\%$ (1) = -0.6/-0.64/-0.639 (1) NB: if correct answer (-0.6/-0.64/-0.639) is given, award full marks regardless of working. NB: (0.6/0.64/0.639) would be awarded 3 marks.	(4)

Question	Explain one advantage to a car manufacturer of using the division of labour to organise production.	Mark
	Answer	
9	Knowledge 1, Application 1, Analysis 2 QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge and Analysis 1 mark for understanding division of labour e.g.: - where production is broken down into tasks and each worker specialises on one task (1K) 1 mark for one advantage of using the division of labour and up to 2 marks for linked expansion - increase in productivity (1K) as each worker is able to produce more output (1AN) which helps a car manufacturer to produce cars more cheaply than his competitors (1AN) - decreased unit costs/decreased costs of production (1K) as each worker is able to produce more goods whilst receiving the same pay (1AN) enabling a car manufacturer to lower his prices/increase profit margins (1AN) - time saving (1K) as workers do not need to keep changing tools (1AN) and can spend more time focused on production (1AN) - workers become more proficient at one skill (1K) as they spend so long on the task that they become experts (1AN) and this helps with the speed of them completing the task (1AN) - less training required (1K) as workers only need to be trained to do one task/rather than training in whole production process (1AN) so the car manufacturer experiences reduced costs of training staff (1AN) - workers can focus on tasks that suit their skills (1K) which means they are more likely to complete jobs they enjoy (1AN) and are more likely to be motivated (1AN) Application 1 mark for applying to Henry Ford car company or a car manufacturer, e.g.: - one worker will focus on the tyres/windcreens/chassis/steering wheel/engine/painting/each worker will add a different component/part to the car/each worker moves from producing a whole car to one part (1AP)	(4)

Question	With reference to Thailand, explain one role of financial markets.	Mark
	Answer	
9	Knowledge 1, Application 1, Analysis 2 QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for one role e.g.: • to facilitate saving/ • to make funds available to businesses/governments/individuals/ • to facilitate the exchange of goods and services/ • to provide forward markets in commodities and currencies/ • to provide a market for equities • to provide a market for buyers and sellers to exchange financial goods and services (1K) Application 1 mark for applying to stem e.g.: • During 2022 in Thailand 10% of income was saved/ • Banks made loans to the private sector of THB 4 809bn in October 2022 (1AP) Analysis up to 2 marks for linked expansion, e.g. • It allows individuals to save up for a later purchase (1AN) such as a deposit for a house (1AN) • It allows firms to borrow money (1AN) to make investments in new capital goods/ help the business to grow (1AN) • Consumers can pay for goods and services (1AN) and the funds are transferred to the business / using credit cards where funds are transferred from the credit card company to the business (1AN) • It allows businesses to make purchases for future deliveries (1AN) at a set price in the future (1AN) • It enables firms to sell shares (1AN) to raise for finance for expansion (1AN)	(4)



Question	Explain one advantage of specialisation in house construction. Answer	Mark
8	Knowledge 1, Application 1 Analysis 2 Quantitative skills assessed: QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Knowledge 1 mark for a definition of specialisation/ division of labour e.g.: • Where production is broken down into tasks and each worker focuses on a job / • Where workers concentrate on narrow range of tasks • Where businesses focus on producing a narrow range of goods (1) Application 1 mark for data linked to a task e.g: • Bricklayers focus on brickwork/ laying bricks/ carpenters complete joinery/ woodwork plasterers plaster walls/ electricians complete electrical work/ painters paint walls/ceilings (1) Analysis 1 mark for an advantage and one mark for linked development: • Productivity will be higher/output per worker will be higher/ output will increase (1) so workers do not need to keep changing tools (1) • Workers need training in a narrower range of skills (1) helping lower training costs for the housebuilder (1) • Each worker becomes more skilled at the particular job (1) helping to ensure higher quality houses are produced (1) • Helping to reduce the cost of constructing each house (1) enabling house builders to make more profit (1) • Helping to construct houses more rapidly (1) which means revenue can be raised sooner from selling houses (1)	(4)

Section D

Question	Evaluate the advantages of the division of labour in organising production.	
	Indicative content	
13	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • Division of labour– where production process is broken down into tasks and workers focus on one task • When one worker does all stages of production, they will need to change tools and this takes time • Smith found that workers will produce only 10 to 20 pins per day • $10 \times 10 = 100$ OR $10 \times 20 = 200$ is the possible production before specialisation • 4 800 is output per worker after division of labour is applied • If the pin factory breaks down tasks with one worker cutting, another sharpening etc they will use one tool and save time • Significantly increase output per worker per hour/productivity/efficiency • Using one particular tool workers may become faster • By paying the same wage for each worker and with them producing more production costs fall/ costs per unit fall • Training costs will fall as they will only need training in one area, not in all stages of production • Workers focus on one job and may become experts at the job helping them to increase output further • Workers can gain loyalty and a sense of achievement from their branch of the production • There is no need to move around the manufacturing unit; the half-finished good comes to the worker • Workers can concentrate on those jobs which best suit their skills and temperament • Businesses may be able to replace workers with machines if the job is easily automated • If costs are lower, businesses may be able to charge lower prices	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context.

		A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
Evaluation (8 marks) – indicative content • If workers are highly specialised, then the job can become monotonous, very boring and repetitive. This can lead to low labour morale • If workers lose the motivation to concentrate and do a good job, mistakes may creep in as they get bored. Quality may fall • Adam Smith himself recognised this potential problem and advocated education of the workforce so that they wouldn't get too demoralised by their repetitive job • Workers may leave causing issues with staff retention. Therefore, businesses might need to spend more on recruitment to replace workers that leave • An assembly line could grind to a halt if there is a blockage in one particular area/ interdependence • If one worker is absent production can stop • Not all production processes can be broken down in this way • Repetitive tasks completed by workers can be replaced by machinery/capital leading to unemployment		
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Question	In 2019, in Sweden, on average: - households saved 16.5% of their incomes - households borrowed 189% of their incomes - a consumer made 349 debit card payments With reference to the information above and your own knowledge, evaluate the role of financial markets in an economy. Indicative content
14	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content - Define financial markets- any market where financial products are traded - Roles of financial products include - To facilitate saving- 16.5% of income saved by households - So that consumers can save for future purchases of consumer goods/luxury goods/expensive goods/save for emergencies - So that producers can save for future purchases/capital goods/save for when they have cash flow problems - So financial providers have funds to be able to lend to consumers and firms - Without the financial sector providing funds to businesses they will struggle to buy capital goods to improve the business/households will spend a long time saving to be able to make large purchases such as housing/cars - To make funds available to businesses - Enabling businesses to fund investment in capital goods to make them more productive - To make funds available to individuals - households borrow 189% of their income - Enabling consumers to improve their living standards by being able to consume more consumer goods - Enabling consumers to consume now and to then pay back in future - To facilitate the exchange of goods and services- 349 debit card payments per year - Reducing the need for firms to hold large quantities of cash- which is expensive to handle for businesses - Enabling purchases to be made online without the need for cash to be transferred - Making it easier for consumers and producers to trade with each other quickly

		▪ Without the financial sector facilitating the exchange of goods and services consumers will need to use cash, this is difficult for online purchases and larger purchases/costs businesses to hold money ○ To provide forward markets in commodities and currencies ▪ This helps firms to buy products today at an agreed future price ▪ This helps make buying products from abroad/ commodities more predictable ▪ By agreeing the exchange using a forward market ensures that adverse movements in the exchange rate do not affect the business ▪ Without forward markets orders of commodities would be made and the price paid could vary significantly making it difficult to plan for both producer and consumer ○ To provide a market for equities ▪ Enables consumers to buy equities/shares in firms- to later earn a dividend each year ▪ Enables firms to raise finance by selling shares which helps businesses to expand/spend on capital goods ▪ Enables individuals to invest in businesses to earn dividends and to buy and sell shares to make profits ▪ Without providing a market for equities businesses would struggle to find the funds to expand
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach, which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using appropriate examples which are fully integrated to address the broad elements of the question.



		Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
	Evaluation (8 marks) – indicative content • With low interest rates the reward from savings will be minimal and few will save • Market bubbles e.g. businesses and households may borrow too much causing asset prices to rise significantly • Over lending by financial institutions may mean that businesses and households are not able to repay loans • During economic crises businesses/households may not always be able to repay • Moral hazard: financial providers may offer high risk loans which are unlikely to be paid back • Banks may stop lending if they are worried about bad debts • Financial providers often charge to facilitate the exchange of goods and services which increases costs of doing business • Forwards markets in commodities and currencies may see you agree a price but you end up paying more than you would had you paid the market price on the future date • Stock markets can be highly volatile such that firms can have share prices fall leading to losses • There are no guarantees that dividends will be paid for example when firms make losses or invest	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Question	The division of labour applies to many types of production and occupation, including: • in the textile industry, workers are responsible for specific parts of the production process • in healthcare, workers have different roles including doctors, nurses, cleaners and administrators. Evaluate the advantages of the division of labour for businesses and workers. Refer to an industry of your choice in your answer. Indicative content
14	Quantitative skills assessed QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • Division of labour-breaking down production into tasks and each task is completed by a different worker • In textile production, one worker might focus on cutting, sewing, dyeing, packaging - enabling them to become experts at that job • In healthcare: ◦ doctors performing specialist operations ◦ nurses providing personal care ◦ cleaners ensuring safe and secure environment ◦ administrators completing paperwork • Firms that use the division of labour will find output increases as workers specialise in different jobs • The productivity improves as output per worker rises because workers do not need to keep changing tasks • With rising output per worker on the same pay costs to make each product will fall • More efficiency as less resources/time are wasted • With lower costs per unit the firms may be able to charge a lower price/ generate higher profit per sale • Some tasks can be simplified such that a machine can do the job- this automation may result in reduced labour costs • Workers need to be trained on fewer tasks, reducing the time spent on training and therefore reducing cost of training • Healthcare workers can train in a more specialised area/for more hours so can develop expertise and become more skilled • Workers can focus on jobs that best fit their abilities, thereby making them more productive and employable • As workers become more expert in that one task, they can demand higher salaries/wages e.g. cardiologists, paediatricians, surgeons N.B. Award a maximum of level 3 if there is not reference to both business and workers

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
	Evaluation (8 marks) – indicative content • If workers are highly specialised, this may result in the job being monotonous, boring and repetitive • The boring and repetitive nature of the job may result in low labour morale • Workers will find it difficult to move to other jobs as they are specialised in only one task • If workers are replaced by machines then unemployment may result • With monotony/boredom/low morale productivity is likely to fall • Workers may leave the business resulting in a need for employers to spend more on recruiting and training new staff • If workers lose the motivation to concentrate and do a good job, mistakes may creep in lowering quality • An assembly line could grind to a halt if there is a blockage in one particular area if tasks are interdependent • Industrial action by one group of workers may negatively impact other tasks in the production process • Different impact will be felt by different industries	

Level	Mark	Descriptor
	0	No rewardable material.



Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Section A

Question	Quantitative skills assessed	Answer	Mark
1	–	The only correct answer is D- To introduce a tradeable pollution permit scheme to reduce external costs A is not correct because rationing occurs without government intervention within the price mechanism B is not correct because indirect taxes would be used for goods with external costs C is not correct because subsidies would be paid to encourage external benefits	(1)
2		The only correct answer is B- Consumers aiming to maximise utility A is not correct because being valued by the original supplier would mean they would not change supplier C is not correct because being poor at computation would mean they cannot calculate the benefit from changing supplier and would not change D is not correct because changing supplier will save money that can be used to gain utility from purchasing other goods	(1)
3	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C- The demand for refrigerators is price inelastic A is not correct because the demand for clothes dryers is price inelastic B is not correct because the price elasticity of demand for dishwashers is not zero D is not correct because washing machines have price inelastic demand	(1)
4	QS6: Calculate total revenue QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is A- Total revenue will rise by €13 500 B is not correct because €58 500 is the total revenue after the price is reduced to €1.30 C is not correct because revenue will rise as demand is elastic in this section of the demand curve	(1)

4	QS4: Construct and interpret a range of standard graphical forms QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because total revenue would increase as demand is price inelastic/ this is the gain in revenue from the higher price ($90 \times \\$1 = \\$90\,000$) B is not correct because total revenue would increase as demand is price inelastic/ this is the loss in revenue due to the decrease in the quantity sold ($15 \times \\$3 = \\$45\,000$) D is not correct because this shows the additional revenue from those consumers that continue to buy the product and ignores the lost revenue from those who stop buying at the higher price/ this is the gain in revenue from the higher price ($90 \times \\$1 = \\$90\,000$)	(1)
5	QS4: Construct and interpret a range of standard graphical forms QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is D A is not correct because the free market has no government and in Venezuela 14.4% of its economy is government B is not correct because a command economy would have 100% of spending by the government C is not correct because Venezuela and Sweden are mixed economies with both the price mechanism and the government allocating resources	(1)
6	QS8: Make calculations of elasticity and interpret the result QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	The only correct answer is C A is not correct because the demand for all four chocolate bars is price elastic B is not correct because there is no information on the income elasticity of demand D is not correct because a 5% increase in price will result in an 8% decrease in quantity demanded	(1)

Section D

Question	Evaluate the possible benefits of an economy moving closer to being a 'free market economy'.	
	Indicative content	
13	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • Definition of free market economy- resources are allocated by the price mechanism with little/no government intervention • Mixed economy- where resources are allocated by the price mechanism and government • Ireland is a mixed economy with government spending 35.9% of GDP in 2007 and 25.1% in 2019 • Reduced by 10.8 percentage points over 12 years • Movement towards more free market- more resources are allocated by price mechanism and less by the government Benefits of a free market economy • Resources are allocated efficiently to where expected profit is highest • Competition between firms creates better products for consumers • The profit motive encourages firms to spend money to create better products • Resource allocation is determined by the pattern of consumer demand rather than by the government • Competition between firms encourages them to lower prices to keep customers • Reduces risk of government failure as less resources wasted in expensive administration by governments • Incentive to work harder as workers can earn more Candidates should be rewarded for relevant use of a diagram.	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.

Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
Evaluation (8 marks) – indicative content Disadvantages of free market economy • Can lead to significant inequality • Some firms can become powerful raising prices • Non- provision of public goods • Underprovision of goods with external benefits such as health and education • Overprovision of goods that cause external costs • Instability- e.g. after financial crises/lockdown Other evaluative comments • Magnitude- sizeable reduction in government spending as a proportion of GDP- 10.8 percentage point substantially less government involvement • Ireland is still a mixed economy despite the reduction in the share of government spending • The amount of government spending in Ireland may not have fallen despite the percentage falling if GDP was increasing • 25.1% may mean that the public goods and key public services are still provided • Need data on other factors to determine whether Ireland has benefitted or not by its movement towards free market economy • Just over €1 in every €4 is still government spending so still significant government involvement in the economy		
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Section D

Question	Evaluate the advantages of a free market economy. Indicative content
13	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. Knowledge, application and analysis (12 marks) – indicative content • Free market economies- where price mechanism/supply and demand determine resource allocation/where government has minimal involvement in decisions • Hong Kong closest to free market- low tax rates, low government spending and the low level of business regulation Advantages • Incentives to work hard in order to increase incomes • Profit incentive means firms have incentive to be efficient • Consumers are free to choose the goods and services they desire • Producers are free to create products to meet customer needs • Firms are likely to use profits to develop new processes helping to reduce costs and improve efficiency/productivity • Profits invested in innovative new products which better meet consumer needs • Government failure avoided e.g. ○ surpluses & shortages resulting from price controls ○ information gaps meaning the intervention is not always the best option ○ can create unintended consequences such as smuggling ○ creates excessive administrative costs. • No expensive central planning • Competition between firms may help lower price and increase quantity of goods available • Market forces (invisible hand) helps to clear the market when there is excess demand/excess supply/disequilibrium • Disadvantages of command economy

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.

	Evaluation (8 marks) – indicative content Disadvantages • Underprovision of public goods- non-rivalry and non-excludability creates a free rider problem and private sector firms cannot generate profits- impacts on the provision of streetlights, roads, defence, sea defences • Underprovision of healthcare/education- services with external benefits where people underestimate the benefit • Overconsumption - people may consume goods ignoring external costs of their consumption e.g. pollution and congestion have negative impacts on third parties • Private sector health care can be inefficient and expensive- US health insurance costs • Can create inequality: ◦ where the rich inherit and have more wealth ◦ low skilled/unskilled/disabled/sick have low income with no support from the state in the form of welfare payments ◦ free market may result in high levels of unemployment • Large powerful firms can emerge that exploit customers by charging high prices and restricting output • When demand is low unemployment may rise leaving some with no income • Markets can be unstable: ◦ Market bubbles can emerge and burst ◦ Creates uncertainty for businesses • Depends on the extent to which an economy acts as a free market economy- even Hong Kong still has taxes and regulation so is not a pure free market economy.
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.