EDEXCEL A-LEVEL ECONOMICS A

# ECONOMICS



## EXAM QUESTION PACK

UNIT 1 OLD SPECIFICATION PAPERS

STEMUP

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Write your name here

| Surname | Other names |
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**Pearson Edexcel GCE**

| Centre Number | Candidate Number |
|---|---|
| | |

# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Monday 16 May 2016 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question in Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

*Turn over* ▶

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P 4 5 7 7 9 A 0 1 4 0

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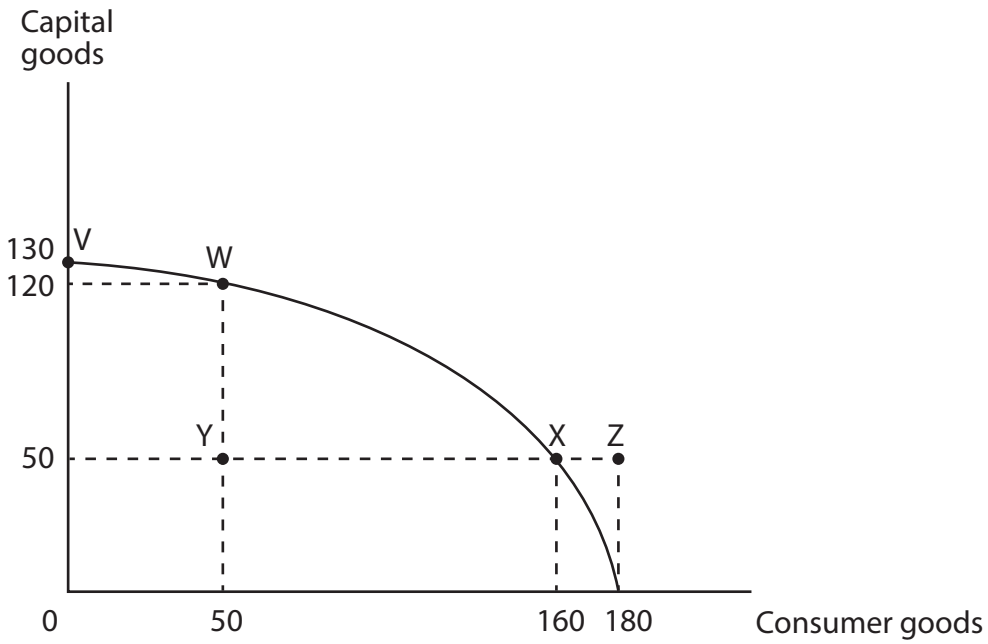
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## SECTION A

**Answer all the questions in this section.**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram shows a production possibility frontier for an economy. Which of the following is true?

**(1)**

**A** The opportunity cost of producing 50 consumer goods is 50 capital goods

**B** There are unemployed resources at V

**C** The opportunity cost of producing 180 consumer goods is 20 capital goods

**D** Future economic growth is likely to be higher at W than X

**Answer** ☐

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**Explanation**

**(3)**

**(Total for Question 1 = 4 marks)**

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**2** One function of the price mechanism is to

**(1)**

**A** eliminate surpluses of a good by allowing its price to rise

**B** avoid price fluctuations for scarce resources

**C** act as a signal to firms when making production decisions

**D** encourage government intervention to set minimum prices

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 2 = 4 marks)**

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**3** Which one of the following is most likely to result in an increase in producer surplus in the market for instant coffee? Use a diagram in your explanation.

**(1)**

**A** A successful advertising campaign promoting the health benefits of drinking tea

**B** New technology in the production of instant coffee

**C** A poor coffee harvest resulting from severe flooding in Vietnam and Brazil

**D** An increase in indirect taxes on instant coffee

**Answer** ☐

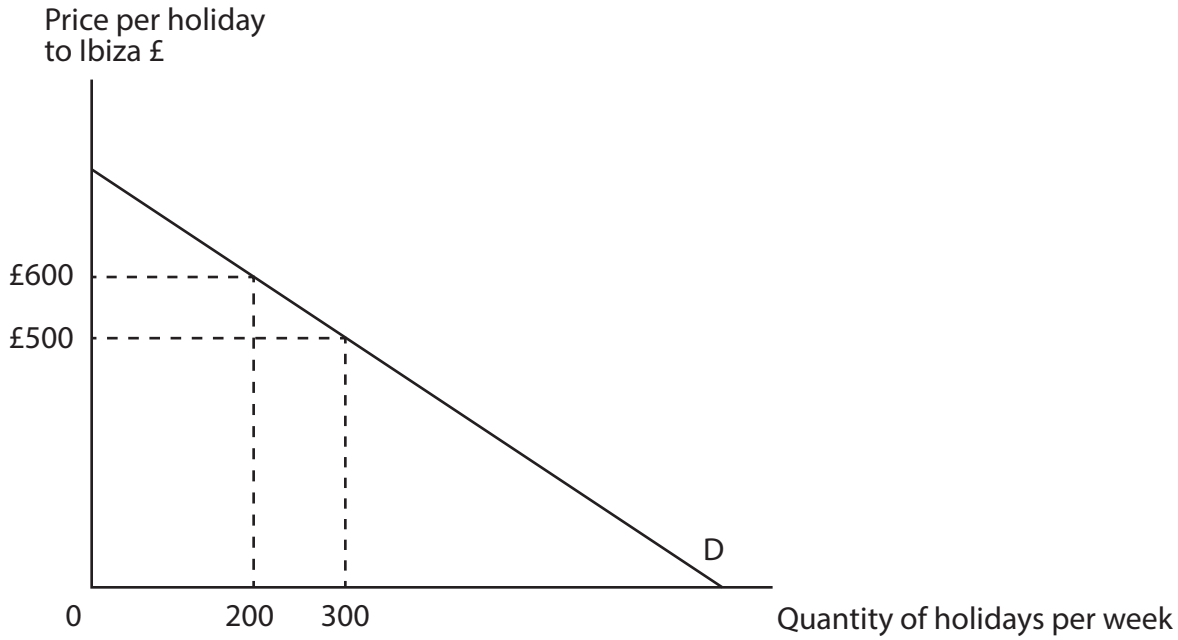
**Explanation**

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

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**4**




The diagram shows the demand curve faced by a firm selling holidays to Ibiza. If the firm increases the price of its holidays from £500 to £600 then, other things being equal, its weekly total revenue will

**(1)**

**A** increase, since demand is price inelastic

**B** decrease, since demand is price elastic

**C** increase, since demand is price elastic

**D** decrease, since demand is price inelastic

**Answer** ☐

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**Explanation**

**(3)**

**(Total for Question 4 = 4 marks)**

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**5** Estimates of income elasticity of demand for selected products in the UK

| Food item | Income elasticity of demand |
|---|---|
| Fish | 0.7 |
| Milk and Eggs | 0.9 |
| Meat | 1.2 |

(Source: https://www.gov.uk/government/publications/food-and-drink-elasticities)

Other things being equal, the data in the table suggest that:

**(1)**

**A** The demand for milk and eggs is price inelastic

**B** Meat and fish have a positive cross elasticity of demand

**C** Fish, milk and eggs are all inferior goods

**D** Meat has a higher income elasticity of demand than fish

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 5 = 4 marks)**

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

**(1)**

**A** The under-provision of street lighting in a free market economy

**B** A rise in unemployment resulting from an increase in the national minimum wage

**C** External benefits of higher education are internalised by the price mechanism

**D** Oil exploration firms exit the market in response to a decrease in the oil price

**Answer**

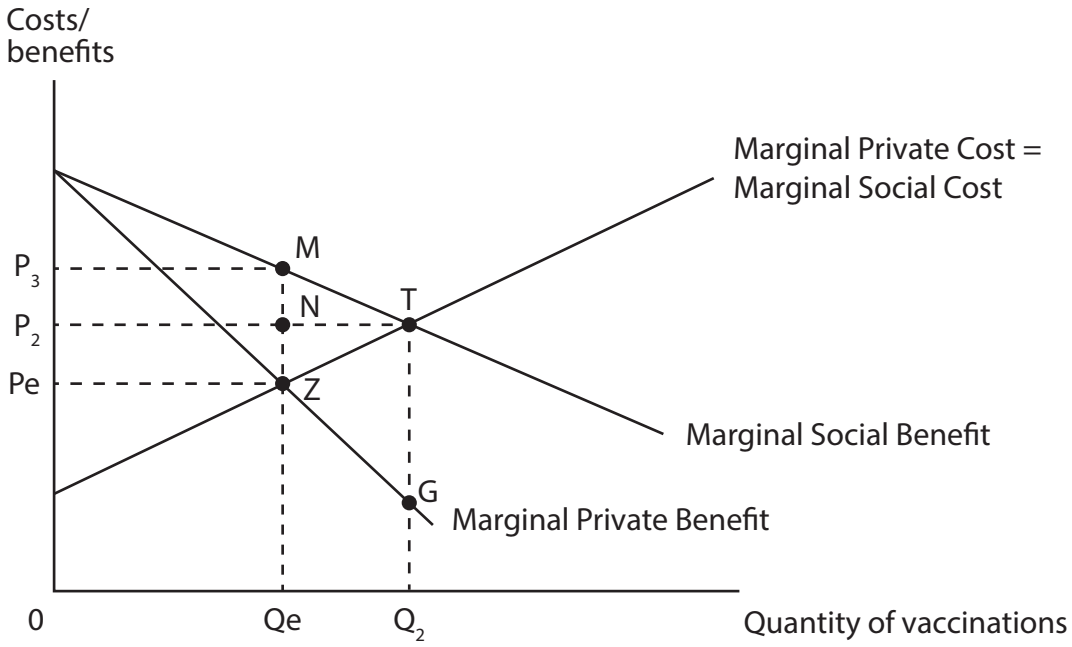
**Explanation**

**(3)**

**(Total for Question 6 = 4 marks)**

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**7**




The diagram shows the market for vaccinations. Assume there are no external costs. Which one of the following is true?

**(1)**

**A** The free market equilibrium quantity exceeds the social optimum quantity

**B** At the free market equilibrium quantity, marginal social cost exceeds marginal social benefit

**C** An increase in quantity from the free market equilibrium will lead to a net welfare gain

**D** At the free market equilibrium price there is an excess supply of vaccinations

**Answer** ☐

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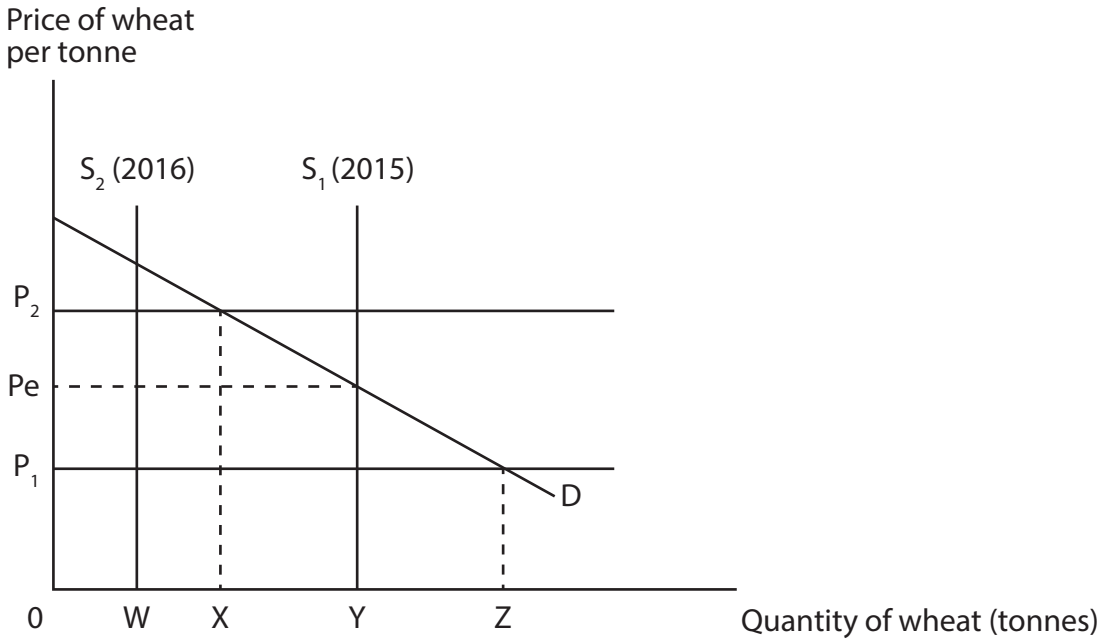
**Explanation**

**(3)**

**(Total for Question 7 = 4 marks)**

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**8**




The diagram shows a buffer stock scheme in the wheat market, where a government agency intervenes to ensure the price remains between $P_1$ and $P_2$. The 2016 harvest $S_2$ leads to

**(1)**

**A** an excess supply of wheat.

**B** the government agency selling wheat from its stockpile.

**C** price decreasing to $P_1$.

**D** the government agency buying wheat and adding to its stockpile.

**Answer** ☐

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**Explanation**

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

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## SECTION B

**Answer EITHER Question 9 OR Question 10**

**If you answer Question 9 put a cross in the box ☒ .**

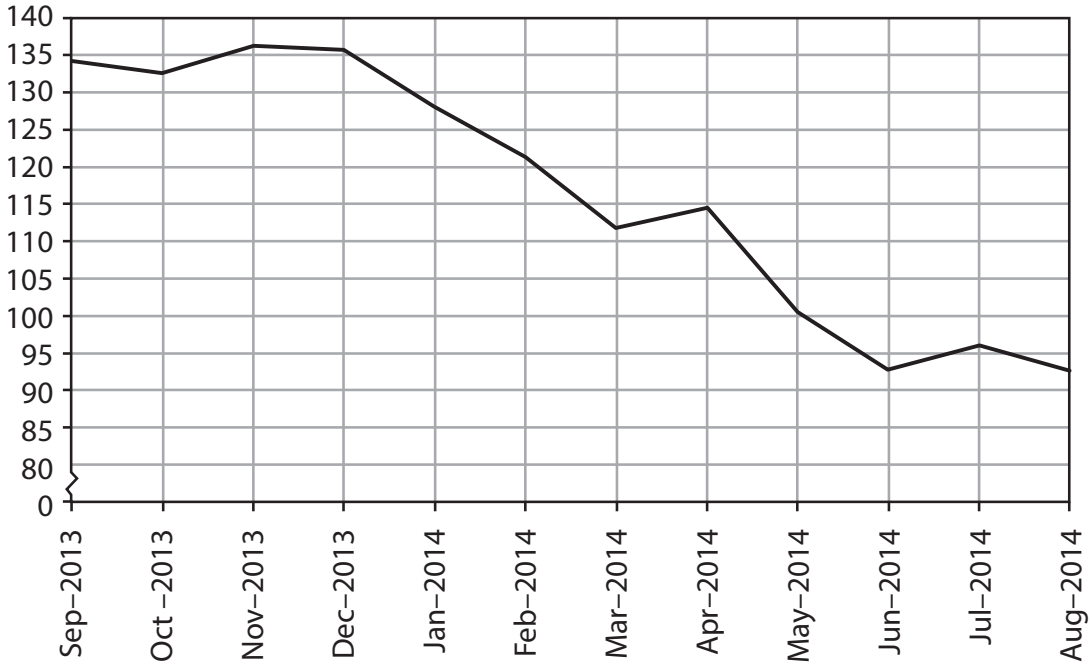
**Question 10 starts on page 28.**

**You should spend 55 minutes on this section.**

**9 The market for iron ore**

**Figure 1 Price of iron ore (September 2013 – August 2014)**

US dollars per tonne



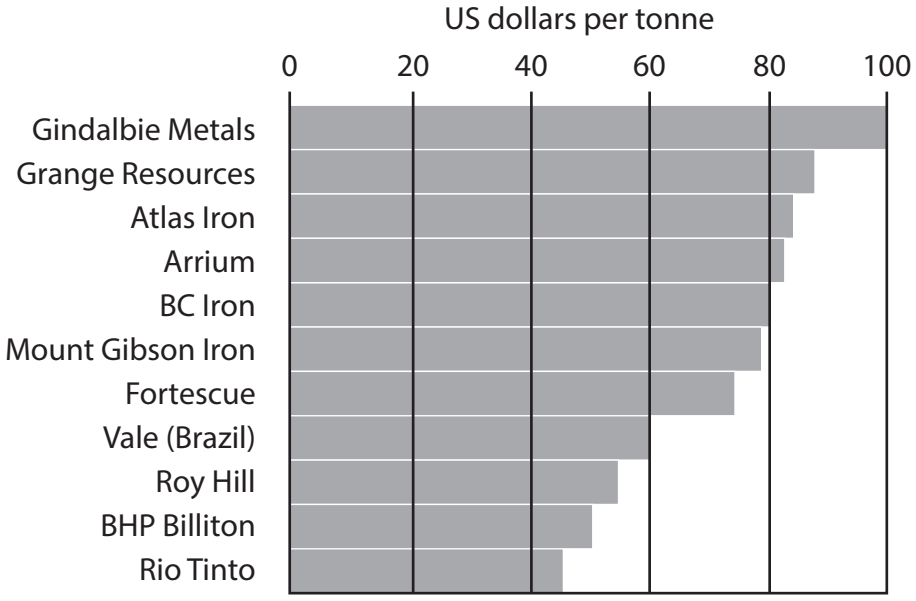

(Source: http://www.indexmundi.com/commodities/?commodity=iron-ore&months=12)

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**Figure 2 Mining companies: cost of producing one tonne of iron ore**




(Source: Reported in *FT*, 'Australia's iron ore producers steel themselves for casualties' Jamie Smyth and Lucy Hornby, 14th September 2014, http://www.ft.com/cms/s/0/9f3235d0-3a30-11e4-8aa2-00144feabdc0.html#axzz3TFuTxa6H)

**Extract 1 Falling iron ore prices**

The price of iron ore has fallen dramatically since September 2013 following a significant increase in production from the world's four largest miners of the commodity, Rio Tinto, BHP Billiton, Vale and Fortescue. This has come at a time of falling consumption of iron ore from China, the world's biggest customer. Iron ore is a key raw material in the production of steel.

The slump in iron ore prices is forcing high-cost iron ore producers to close down operations. Stockpiles of iron ore at Chinese steel mills are at record levels. Despite the fall in price, BHP Billiton has announced plans to increase annual production capacity of iron ore by 30% to 290 million tonnes by 2017. This follows Rio Tinto's plans to increase annual production capacity by 24% to 360 million tonnes by 2015. Both companies have managed to increase efficiency and cut production costs, but this has not prevented their share prices from falling. They are confident that long term demand for iron ore will grow from India, China and other Asian countries.

(Source: adapted from 'Rio Tinto vows to slug it out with BHP in iron ore production war', by Jamie Smyth, *The Financial Times*, 9th October 2014, http://www.ft.com/cms/s/0/302943a4-4f7f-11e4-a0a4-00144feab7de.html#axzz3TFuTxa6H)

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**Extract 2 Tax on Australian iron ore**

The Australian Government has criticised the mining companies' policy of increasing iron ore production that further reduces its price. Most of Rio Tinto's and BHP Billiton's iron ore is mined in Western Australia. Every $1 per tonne fall in the iron ore price causes a $300 million fall in the Australian Government's indirect tax revenue from sales of iron ore. The Government warned that it may be forced to raise taxes on each tonne of iron ore extracted.

(Source: adapted from 'Tumbling iron ore prices a concern for miners and the Treasury alike', The Guardian.com, 20th May 2014, http://www.theguardian.com/business/2014/may/20/tumbling-iron-ore-prices-a-concern-for-miners-and-the-treasury-alike)

**Extract 3 Emissions trading scheme scrapped in Australia**

Plans to introduce an emissions trading scheme (tradable pollution permits) for Australia's biggest polluting companies have been scrapped by the Government following concerns over its costs to the mining industry and the impact on investment and jobs. Australia will no longer join with the European Union's emissions trading scheme. The country is one of the world's biggest carbon emitters on a population per head basis because of the significance of its mining sector. The Government has replaced the scheme with a policy called Direct Action where grants are available for companies which reduce their pollution emissions.

The decision to halt the introduction of tradable pollution permits creates uncertainty over how the country will achieve its 5% carbon reduction target by 2020 and raises questions over the Government's commitment to tackling climate change.

(Source: adapted from 'Australia abolishes tax on carbon emissions', Jamie Smyth and Pilita Clarke, *Financial Times*, 17th July 2014, http://www.ft.com/cms/s/0/d852822a-0d67-11e4-bcb2-00144feabdc0.html#axzz3TFuTxa6H)

(a) With reference to Figure 1 and the first paragraph of Extract 1, explain the causes of the decrease in the price of iron ore over the period shown.

**(4)**

(b) With reference to Figures 1 and 2 and Extract 1, assess the possible economic effects of a fall in the price of iron ore on the producers of iron ore.

**(10)**

(c) With reference to Extract 1, explain the likely effect on the **market for steel**, following a fall in the price of iron ore. Use a supply and demand diagram in your answer.

**(6)**

*(d) With reference to Extract 2, evaluate the likely economic effects of an increase in indirect tax on sales of iron ore. Use a supply and demand diagram in your answer.

**(14)**

*(e) With reference to Extract 3 and your own knowledge, assess the potential benefits of tradable pollution permits for reducing carbon emissions.

**(14)**

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(a) With reference to Figure 1 and the first paragraph of Extract 1, explain the causes of the decrease in the price of iron ore over the period shown.

**(4)**

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(b) With reference to Figures 1 and 2 and Extract 1, assess the possible economic effects of a fall in the price of iron ore on the producers of iron ore.

**(10)**

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(c) With reference to Extract 1, explain the likely effect on the **market for steel**, following a fall in the price of iron ore. Use a supply and demand diagram in your answer.

**(6)**

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*(d) With reference to Extract 2, evaluate the likely economic effects of an increase in indirect tax on sales of iron ore. Use a supply and demand diagram in your answer.

**(14)**

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*(e) With reference to Extract 3 and your own knowledge, assess the potential benefits of tradable pollution permits for reducing carbon emissions.

**(14)**

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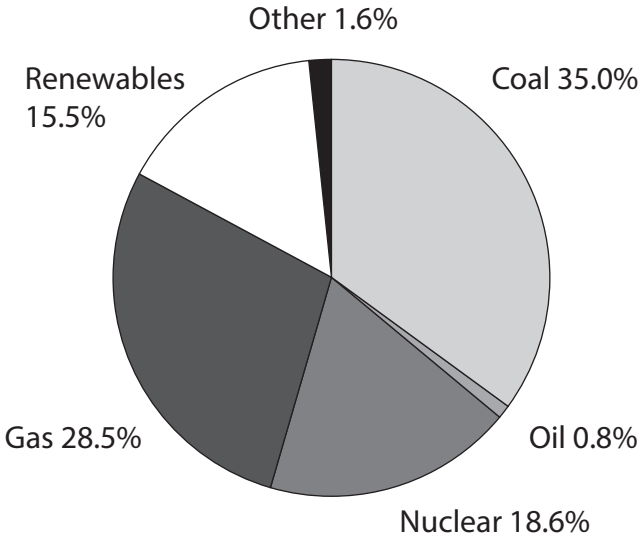
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**If you answer Question 10 put a cross in the box ☒ .**

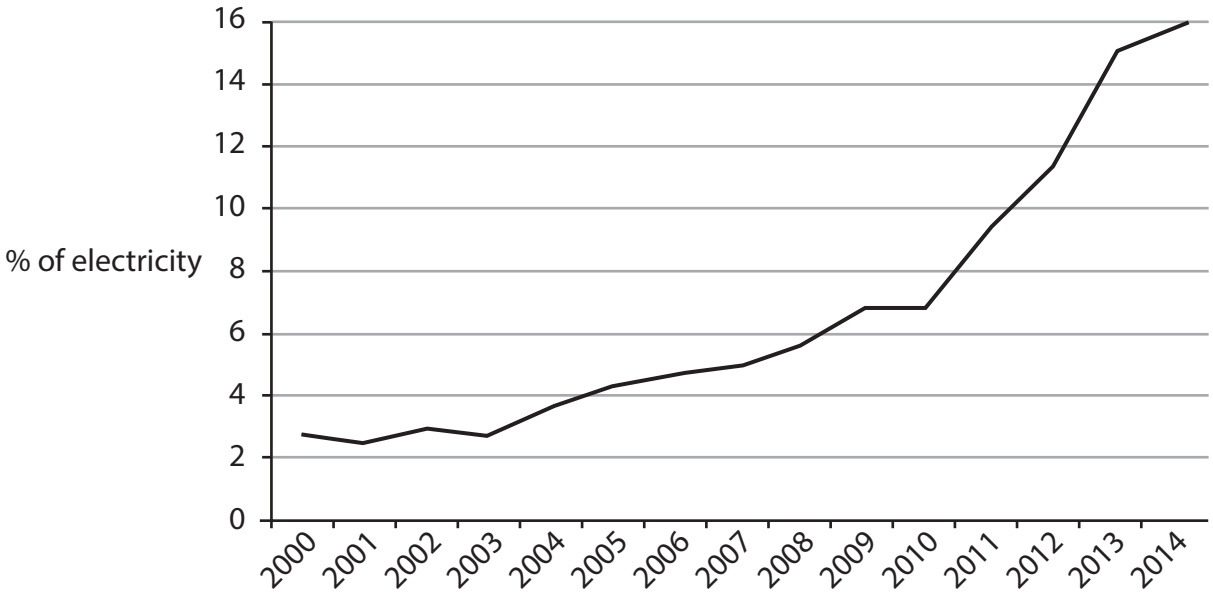
## 10 Renewable energy in the UK

**Figure 1 UK Electricity generation from different sources: (April–June 2013)**




(Source: UK Renewable energy roadmap update 2013; Department of Energy and Climate Change, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATIO___.pdf)

**Figure 2 Electricity generation from renewable sources as a proportion of total UK electricity production (2000-2014)**




(Source: https://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes)

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**Extract 1 Growth of renewable energy in the UK**

Renewable energy currently makes up around 16% of UK electricity supply. More than half of this comes from wind power – the UK has more wind potential than any other country in Europe. Production of renewable energy is set to increase significantly over the next fifteen years to exceed 30% of total electricity generation. Most coal power stations are set to be phased out by 2030 helping to reduce carbon emissions whilst gas supplies appear unreliable in the current political climate.

Wind, wave and tidal power currently provides employment for 34 500 people in the UK and is expected to create a further 70 000 jobs over the next decade. The economic benefits from such growth will be spread across the UK. The German company Siemens, for example, has announced plans to invest £160 million in building a wind turbine factory in Hull, in the north of England. Its partner in the project, Associated British Ports, will invest a further £150 million in local infrastructure. Together, they will directly create 1 000 jobs in a city hit hard by unemployment and poverty. Hull will become one of the world's leading locations for the production of wind turbines. The work involves many types of specialist jobs such as designers, engineers, welders, electricians and truck drivers.

(Source: adapted from 'Siemens to add 1000 UK jobs in wind turbine production', *The Guardian*, 25th March, 2014, http://www.theguardian.com/business/2014/mar/25/siemens-wind-turbine-production)

**Extract 2 Lack of competition in awarding subsidies for renewable energy**

Renewable energy requires subsidies to make it profitable. The Government has been criticised for awarding subsidies to renewable energy projects without any competition, undermining the interest of consumers. This refers to contracts worth £16.6 billion being awarded to companies involved in five offshore wind power and three biomass projects.

However, Energy and Climate Change Secretary, Ed Davey, said: "This government has been dealing with a legacy of chronic under-investment and neglect in our energy system. To keep the lights on in British homes and businesses we needed to move quickly to secure new capacity and give investors confidence – fast." Without the investment there is a danger of power cuts in the near future as demand exceeds supply.

(Source: adapted from 'Consumers not getting the best value for renewable energy subsidies, say MPs', *The Guardian*, 3rd October 2014, http://www.theguardian.com/environment/2014/oct/03/consumers-not-getting-best-value-for-renewable-energy-subsidies-say-mps)

**Extract 3 The costs of renewable energy**

The private costs of electricity generated from renewable energy sources are far greater than those from fossil fuels. The uncertainty of the weather also means renewable energy from wind and solar power is unreliable.

There are also external costs associated with the generation of renewable energy, especially wind power. These include the negative effects on the environment, homes and tourism. Industrial scale wind turbines exceed 450 feet tall to the tip of their blades. There are currently 680 onshore wind farms and 23 offshore wind farms in the UK. These figures are set to increase rapidly over the next twenty years.

(Sources: http://www.renewableuk.com/en/renewable-energy/wind-energy/onshore-wind/index.cfm and http://www.nowind.org.uk/, http://www.nowind.org.uk/ and replace with http://repealtheact.org.uk/blog/campaign-support-the-now-charter-www-nowind-org-uk)

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(a) With reference to Figure 1 and Extract 1, distinguish between renewable and non-renewable energy resources.

**(4)**

(b) With reference to the first paragraph of Extract 1, explain **two** likely benefits of the increase in energy generated from renewable resources.

**(6)**

(c) With reference to Extract 1, assess the likely benefits of the division of labour in the production of wind turbines.

**(10)**

*(d) Using the information provided and your own knowledge, assess the likely economic impact of government subsidies to renewable energy companies. Use an appropriate diagram in your answer.

**(14)**

*(e) Using the concept of external costs and referring to Extract 3, discuss the problems which might arise from a significant increase in the generation of renewable energy. Use a suitable diagram in your answer.

**(14)**

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(a) With reference to Figure 1 and Extract 1, distinguish between renewable and non-renewable energy resources.

**(4)**

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(b) With reference to the first paragraph of Extract 1, explain **two** likely benefits of the increase in energy generated from renewable resources.

**(6)**

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(c) With reference to Extract 1, assess the likely benefits of the division of labour in the production of wind turbines.

**(10)**

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*(d) Using the information provided and your own knowledge, assess the likely economic impact of government subsidies to renewable energy companies. Use an appropriate diagram in your answer.

**(14)**

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*(e) Using the concept of external costs and referring to Extract 3, discuss the problems which might arise from a significant increase in the generation of renewable energy. Use a suitable diagram in your answer.

**(14)**

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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**

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# Mark Scheme (Results)

## Summer 2016

## Pearson Edexcel GCE in Economics (6EC01) Paper 01 Competitive Markets: How they work and why they fail

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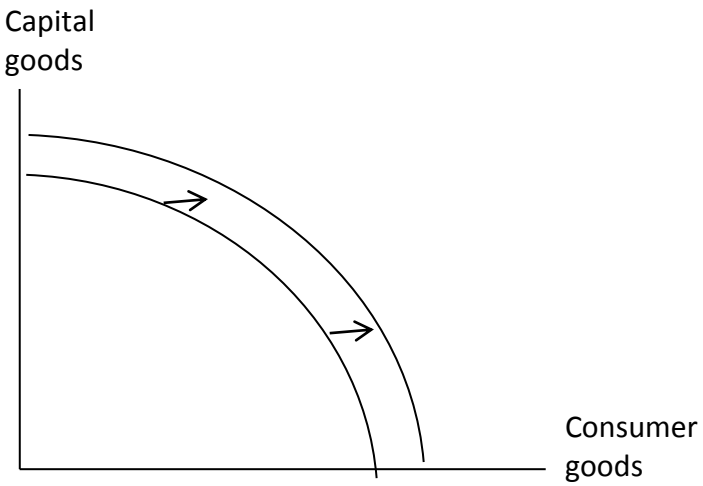
## General Marking Guidance

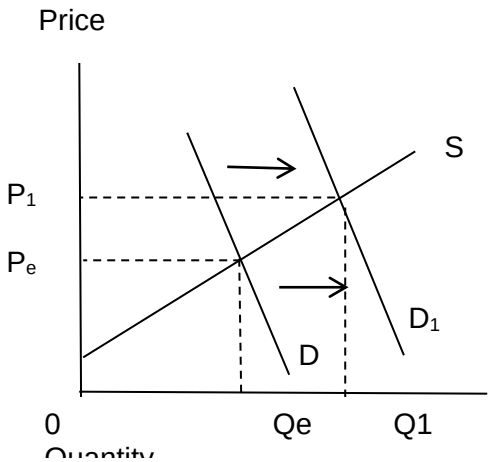
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

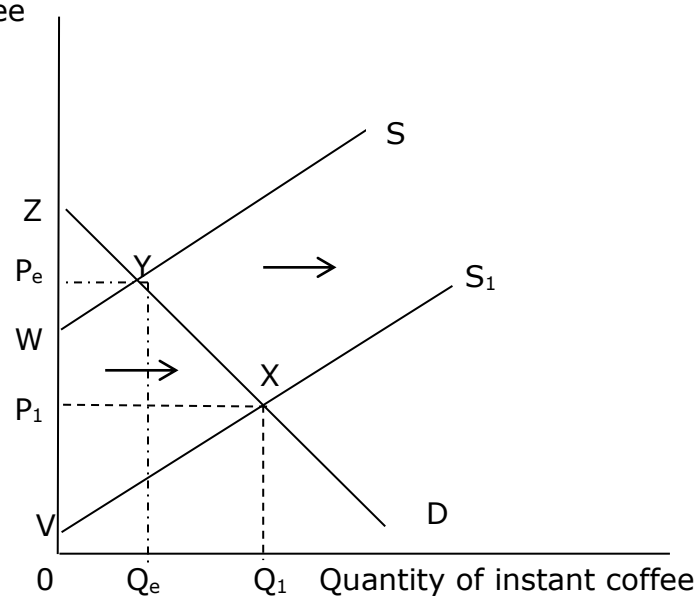
**FOR ALL QUESTIONS: No markscheme can cover all possible responses. Therefore, reward analysis which is relevant to the question even if this is not specifically identified in the markscheme.**

**NB: Up to 3 marks can be awarded for rejecting 3 incorrect options if a valid reason is given (with 1 mark for each option rejected).**

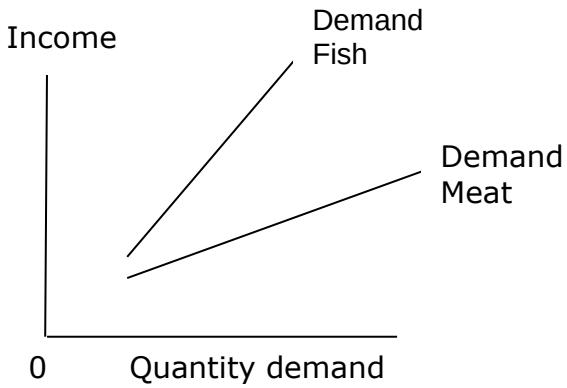
**NB: Up to 3 explanation marks can be awarded even if candidate selects incorrect key.**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | • **D (1 mark)**<br>• Definition of production possibility frontier (maximum output potential for an economy when all its resources are fully / efficiently employed). (**1 mark**).<br>• Explanation of the effects of economic growth on the production possibility frontier e.g. it will shift outwards (this may be annotated on diagram) **OR** award for definition of economic growth e.g. an increase in real output / an increase in the productive capacity of an economy.(**1 mark**)<br>  <br>• Application to question: more capital goods are being produced at W / capital goods help to produce more goods in the future. (**1 mark**)<br>**Rejection marks**<br>• Option A incorrect since the opportunity cost of 50 consumer goods is 10 capital goods. (**1 mark**)<br>• Option B incorrect since there is full employment of resources at V since it is on the production possibility frontier. (**1 mark**)<br>• Option C incorrect since the opportunity cost of 180 consumer goods is 130 capital goods. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | • **C (1 mark)**<br><br>• Definition of price mechanism (e.g. the interaction of supply and demand to allocate resources / the use of market forces to allocate resources). (**1 mark**)<br><br>• Written explanation of the price mechanism functioning e.g. an increase in demand will raise price and so give a signal to firms to raise output / due to the profit motive **OR** a decrease in demand will reduce price and so signal to firms to reduce output / due to the profit motive. (**1+1 marks**)<br><br>• Diagram showing a rise in demand leading to a higher price and more output **OR** a fall in demand leading to a lower price and less output. **(1 mark)**<br><br>  <br><br><br>**Rejection marks**<br>**Accept suitable explanations but not a simple reversal of option keys**<br><br>• Option A incorrect since to eliminate a surplus, price needs to fall so that '**quantity demand equals supply'** / an increase in price will only make the surplus greater as the market moves away from equilibrium (**1 mark**).<br><br>• Option B incorrect since price fluctuations is part of the operation of the price mechanism in allocating scarce resources to reach equilibrium in the market / buffer stocks schemes or minimum price schemes are typically used to reduce price fluctuations. (**1 mark**)<br><br>• Option D incorrect since government intervention is to correct market failure such as low prices for harmful goods e.g. tobacco and alcohol. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | • **B (1 mark)**<br><br>• Definition of producer surplus (the '**difference'** between the price firms are willing to supply a good for and the actual market price / the area above the supply curve and below the market price). (**1 mark**)<br><br>• New technology in the production of instant coffee leads to a lower cost of production. (**1 mark**)<br><br>• Diagrammatic explanation depicting:<br>➢ The increase in the supply curve with equilibrium positions. (**1 mark**)<br>➢ The original producer surplus (e.g. PeYW). (**1 mark**)<br>➢ The new producer surplus (e.g. $P_1XV$). **(1 mark)**<br><br>**OR** a written explanation to this effect. (**1 mark**)<br><br>Price per kilo instant coffee<br>  <br><br><br>**Rejection marks**<br>• Option A incorrect since tea and coffee are substitutes. An increase in consumption of tea is likely to cause a decrease in demand for coffee (and so reduce producer surplus). (**1 mark**)<br>• Option C incorrect as poor coffee harvest will increase production costs for instant coffee / decrease the supply of coffee. (**1 mark**)<br>• Option D incorrect as an increase in indirect taxes will shift supply curve for instant coffee inwards. (**1 mark**) | **(4)** |

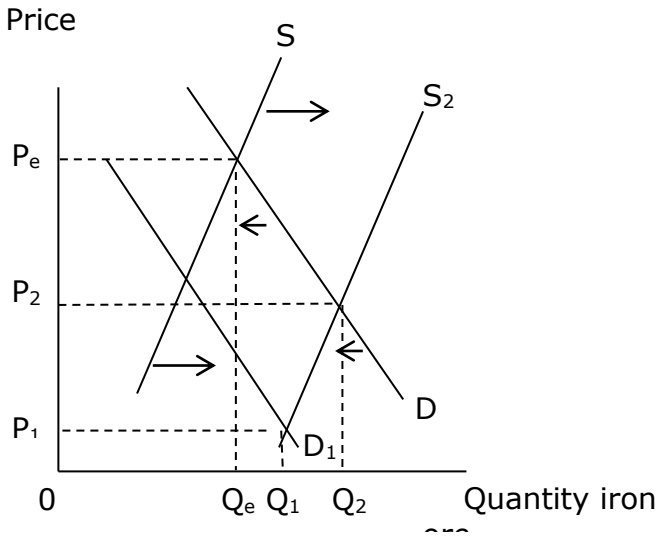
| Question Number | Answer | Mark |
|---|---|---|
| **4** | • **B** (**1 mark**)<br><br>• Definition of price elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in its price) or (%ΔQD ÷ %ΔP = PED).<br>**OR**<br>Explanation of price elastic demand (a rise price will cause a greater proportionate fall in demand). (**1 mark**).<br><br>• Definition of total revenue (the total amount of money received by producers from selling a given quantity of a good / price multiplied by total quantity = total revenue). (**1 mark**)<br><br>• Calculation of the decrease in total revenue from £150,000 to £120,000 or a reduction of £30,000 / this can be shown by annotation of the diagram. (**1 mark**)<br><br>• Calculation of price elasticity of demand: -33% ÷ +20% = -1.65 (**1+1 marks**).<br><br>**NB: Accept answer without minus sign**<br><br>**NB: Award 1 mark for correct workings if the final calculation is incorrect** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | • **D (1 mark)**<br><br>• Definition of income elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in income) or (%ΔQD ÷ %ΔY = YED). (**1 mark**)<br><br>• Meat is income elastic in demand (or above 1) compared to Fish which is income inelastic in demand (or below 1). (**1 mark**) **NB: Do not double award with use of rejection technique**<br><br>• Normal goods have a positive income elasticity of demand (such as meat, milk, eggs and fish). (**1 mark**)<br><br>• Numerical application, for example, a 10% increase in income leads to a 12% increase in demand for meat or a 7% increase in demand for fish. (**1 mark**)<br><br>• Diagram depicting demand for meat having a higher income elasticity of demand than that for fish. (**1 mark**)<br><br>  <br><br><br>**Rejection marks**<br>• Option A incorrect since no information is provided on price elasticity of demand / option B incorrect since no information is provided on cross elasticity of demand. (**1 mark**)<br>**NB: Award up to 1 mark for rejection of options A and B if the reasons given are the same.**<br><br>• Option C incorrect since inferior goods have a negative income elasticity of demand or minus figures / the three goods have a positive income elasticity of demand and so are normal goods. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | • **A (1 mark)**<br><br>• Definition of market failure (the price mechanism fails to allocate resources efficiently / leads to a net welfare loss). (**1 mark)**<br><br>• Definition of public goods (non-rivalry and non-excludability). Also accept 'non-rejectable' if included as one of the two characteristics required. **(1 mark)**<br><br>• Definition of a free market economy (resources are allocated by the price mechanism - so no government intervention). (**1 mark**)<br>**NB: a maximum of 2 marks available for definitions**<br><br>• Explanation of free rider problem: it is possible for people to consume street lighting without paying for it once it is provided / little incentive for producers to provide sufficient quantities as they cannot charge consumers of the good.<br>(**1+1 marks**.<br><br>**Rejection marks**<br>• Option B incorrect since an increase in the national minimum wage which causes unemployment is an example of government failure. (**1 mark**)<br><br>• Option C incorrect since the price mechanism internalising external benefits from higher education means the market is working efficiently as MSB=MSC / the social optimum output position is reached. (**1 mark**)<br><br>• Option D incorrect since oil exploration firms exiting a market in response to a decrease in demand is the price mechanism operating to allocate resources efficiently / an example of the market working efficiently to reach a new equilibrium. (**1 mark**) | **(4)** |

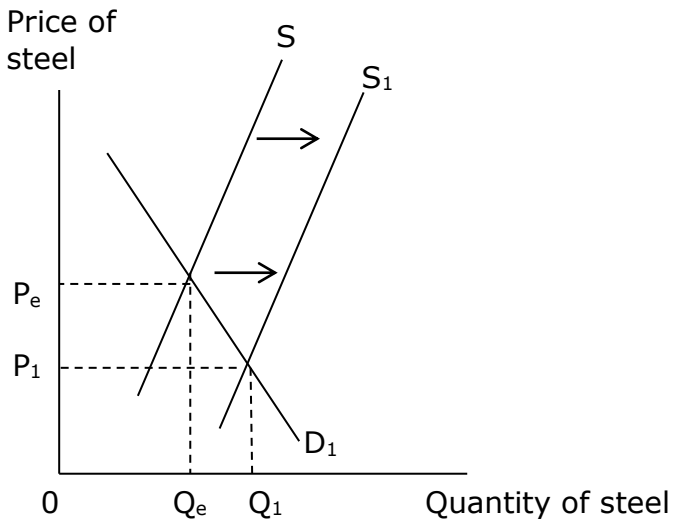
| Question Number | Answer | Mark |
|---|---|---|
| **7** | • **C (1 mark)**<br>• Definition of welfare gain (the excess of social benefit over social cost for a given quantity). (**1 mark**)<br>• Identification or annotation of diagram to identify welfare gain as area MTZ (accept welfare loss). (**1 mark**)<br>• Identification of (T) (output $Q_2$) as the social optimum position and (Z) (output Qe) as the free market equilibrium position. (**1 mark**)<br>• Definition of external benefits: (positive third party effects / benefits external to an exchange / benefits the price mechanism ignores / benefits outside the market transaction / difference between social benefits and private benefits / positive spillover effects). (**1 mark**)<br>**NB: do not award for definition of external cost**<br>• Application to vaccinations: welfare gain or external benefits include a reduction in the spread of diseases since more people vaccinated / more profits for firms as less absenteeism from work due to ill health. (**1 mark**).<br><br>**Rejection marks**<br>• Option A incorrect since the free market output (Qe) or (Z) is less than the social optimum output ($Q_2$) or (T) (**1 mark**).<br>**NB: Do not double award**<br>• Option B incorrect since marginal social cost is Z (or Pe) which is less than marginal social benefit of M (or $P_3$). (**1 mark**)<br>**NB: must refer to Z (or Pe) and M (or $P_3$) to award a mark**<br>• Option D incorrect since supply equals demand at the free market price / MPC=MPB at the free market price. (**1 mark**). | **(4)** |

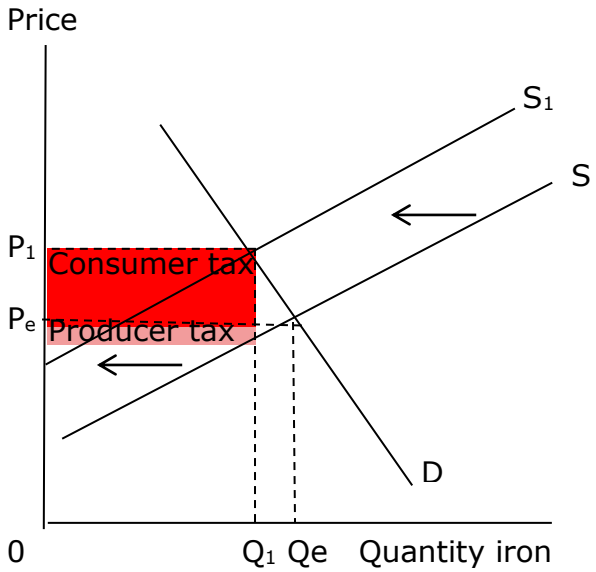
| Question Number | Answer | Mark |
|---|---|---|
| **8** | • **B (1 mark)**<br><br>• Explanation of buffer stock (for example, an agency buys or adds to its stocks in times of a good harvest and sells from its stocks in times of a poor harvest). (**1 mark**)<br><br>• Identification that without intervention the price will rise above $P_2$ in 2016 (this may be annotated on the diagram). (**1 mark**)<br><br>• The agency sells WX from its stockpile. This may be shown by annotation of the diagram but must be labelled or identified in the answer. (**1 mark**)<br><br>• The agency gains revenue of $0P_2$ multiplied by WX by selling its stocks. This may be shown by annotation of the diagram but must be labelled or identified as in the answer. (**1 mark**)<br><br>**Rejection marks**<br>• Option A incorrect since there is a poor harvest that leads to an excess demand for wheat of WX.<br><br>• Option C incorrect since for price to decrease to $P_1$ there has to be a harvest of output Z. (**1 mark**)<br><br>• Option D incorrect since the agency will only buy wheat if a very good harvest (beyond output Z). (**1 mark**)<br>**NB: do not double award** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **KAA = 4 marks**<br>• **NB: to achieve the full 4 marks the response must include both demand and supply factors – otherwise cap at 3 marks.**<br>• Explicit use of data from Figure 1 on fall in price of iron ore since September 2013 e.g. from $134 per tonne to $93 per tonne / around 30% fall in price. (**accept approximations of these figures**). (**1 mark**)<br>• Price has decreased due to an increase in supply / production of iron ore from the world's four largest miners of the commodity. (**1+1 marks**)<br>• Price has decreased due to a decrease in demand / falling consumption of iron ore from China, the world's biggest customer. (**1+1 marks**)<br>• Award for a diagram (**up to 2 marks**)<br>➢ Increase in supply curve with new equilibrium price. (**1**)<br>➢ Decrease in demand curve with new equilibrium price. (**1**)<br>**NB: candidates are not required to draw diagram to gain full marks**<br>  <br> | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **KAA = 6 marks**<br>• **NB: Only award marks for the effects on the producers of iron ore.**<br>• The fall in price of iron ore is likely to reduce revenue **or** profits **or** producer surplus for iron ore producers / share prices have fallen / dividends likely to fall for shareholders / less funds for investment in long run. (**1+1+1 marks**)<br>• Award for accurate diagram depicting new and old producer surplus. (**1 mark**)<br>• Producers may make losses or exit the industry / reference to Figure 2 which shows some mining companies to be highly vulnerable to falling prices e.g. Gindalbie Metals and Grange resources / link the price of ore ($93) to cost of mining the ore for one or more of the companies in Figure 2. (**1+1+1 marks**)<br>• Danger of less competition in the industry as firms exit or new projects are not started as mentioned in Extract 1 / development of the point e.g. lead to market failure where firms might exploit consumers via higher prices in long run. (**1+1 marks**)<br>• Iron ore producers forced to cut production costs or increase efficiency / development of point e.g. shut down marginal mines or cut wages or employment / redundancies paid. (**1+1+1 marks**)<br>• It may lead to merger activity among the iron ore producers / development of point e.g. Glencore bid for Rio Tinto. (**1+1 marks**). | |

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|---|---|---|
| | **Evaluation: 2+2 or 3+1 or 1+1+2 marks**<br>➢ Evaluative use of data.<br>➢ Low-cost producers are likely to gain an increase in market share / may end up with higher revenue and profits in the long term / reference to Figure 2 which indicate that Rio Tinto and BHP have lowest costs and so room for further price cuts.<br>➢ Discussion of future demand / higher future prices: Extract 1 refers to expected growth in long term demand from China and other Asian countries which will help to raise prices.<br>➢ Discussion on magnitude of price fall e.g. Figure 1 shows around a 30% or one-third fall in two years / discussion of the increase in production capacity and how this may depress prices for a long period of time.<br>➢ Iron ore producers may also produce other goods such as steel and so may not lose out from falling prices / they mine other commodities and so can cope with falling revenues or profits in part of their business.<br>➢ Iron ore producers may use cash reserves or other sources of finance to stay in the industry. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA = 6 marks**<br>• Falling price of iron ore will reduce production cost for producing steel. (**1 mark**).<br>• The production or supply of steel may increase and so lead to a fall in price (**1 mark**).<br>• Further development of impact on the market for steel e.g. higher consumer surplus or producer surplus / some steel firms are adding to their stockpiles / consideration of price elasticity of demand. (**1+1 marks**)<br>• NB: do not award for reference to complementary goods.<br>• Diagram (**up to 3 marks**)<br>➢ Original demand and supply of steel with equilibrium price and quantity (**1**)<br>➢ Increase in supply of steel (**1**)<br>➢ New equilibrium price and quantity of steel (**1**)<br>**NB: if no suitable diagram award up to 3 marks**<br>  <br> | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)*** | **KAA = 8 marks**<br>• Definition of indirect tax (a compulsory charge or levy on the expenditure of a good). (**1 mark**)<br>• The tax acts as if there is an increase in costs of production. (**1 mark**)<br>• Indirect tax diagram (**up to 4 marks**)<br>➢ Original demand and supply curve with equilibrium price and quantity (**1**)<br>➢ Inward shift of supply curve to $S_1$ with new equilibrium price and quantity (**1**)<br>➢ Tax area identified (this must be explicit) (**1**)<br>➢ Tax areas for consumers and producers identified (**1**)<br>**NB: accept ad valorem tax which shows a pivotal movement of the supply curve.**<br>  <br><br>**NB: If no relevant diagram award a maximum of 6 out of 8 KAA marks**<br>• Explanation that the tax causes price to rise and output to fall. (**1 mark**)<br>• Explanation of impact on profits or revenue of iron ore producers / share price and dividends implications. (**1+1 marks**)<br>• Investment implications / possible exit from industry (**1+1 marks**) | |

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| | • Job losses / with development e.g. welfare costs to the government. (**1+1 marks**)<br><br>• The tax will reduce producer surplus / application to diagram. (**1+1 marks**)<br><br>• Mining firms may be less competitive on international markets / with development e.g. they may relocate. (**1+1 marks**)<br><br>• Accept any relevant economic effect on consumers and government. (**1+1 marks**).<br><br>**6 Evaluation marks (2+2+2 or 3+3 or 1+2+3 or any combination up to four points)**<br>• Discussion of price elasticity of demand for iron ore or price elasticity of supply of iron ore / the more price inelastic demand, the less tax burden on iron ore producers.<br><br>• Discussion of how mining companies may try and make efficiency savings to remain competitive / cut wages or increase productivity.<br><br>• Discussion of magnitude of tax / with development.<br><br>• Discussion of short run and long run effects e.g. firms might hold prices and accept lower profits in short run but be forced to raise prices in the long run. Also tax may change in the long run.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(14)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **KAA = 8 marks** (**3+3+2 or 2+2+2+2 or 2+2+2+1+1**)<br>➢ Definition or understanding of tradable pollution permits (e.g. a cap placed on carbon emissions of firms through the issue of permits which can be purchased and sold). (**1 mark**).<br><br>**Potential benefits of tradable pollution permits to reduce pollution**<br>(Accept reference to the EU Emissions Trading Scheme)<br><br>➢ A market created for buying and selling carbon permits where the price mechanism can internalise external costs / link up with EU in move to create a global emissions trading scheme. (**1+1 marks**)<br><br>➢ Award for suitable diagram depicting the internalisation of external costs from production. (**up to 3 marks**)<br><br>➢ Incentives for firms to reduce pollution or invest in clean technology / firms can sell excess permits to other firms or bank surplus permits for future years. (**1+1 marks**)<br><br>➢ An effective way for the Australian government to achieve its 5% carbon emissions reduction target by 2020 / especially as pollution permits can be reduced over time as part of a plan. (**1+1 marks**)<br><br>➢ Australia is one of the world's largest carbon polluters per head of population so the scheme is justified to help reduce global emissions. (**1 mark**)<br><br>➢ Government can raise funds by selling some pollution permits or fining firms / revenue can be used to reduce effects of pollution / subsidise cleaner technology / compensate victims. (**1+1+1 marks**) | |

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| | **6 Evaluation marks (2+2+2 or 3+3 or 1+2+3 or any combination up to four points)**<br><br>**Candidates may consider costs and disadvantages of tradable pollution permits**<br><br>➢ Data reference from Extract 3 of the increase in costs to the mining industry and a danger of less jobs and less funds for investment.<br><br>➢ Structural unemployment may be created in mining areas.<br><br>➢ Little incentive for firms to reduce pollution since heavy polluters can purchase surplus permits from other firms / rather than invest in expensive clean technology.<br><br>➢ Problem that most countries in the world are not part of emissions trading schemes / for example, China, so little impact on reducing global carbon emissions.<br><br>➢ The valuation of pollution permits may be too risky to leave to the market / disputes arise over allocation of permits / too many or too few allocated to the market.<br><br>➢ It may be difficult for new entrants to the market / development of this e.g. high cost of permits or existing firms not releasing permits for sale.<br><br>➢ Other measures might be more effective in reducing carbon emissions e.g. Policy of Direct Action which involves grants to firms / development.<br><br>➢ Cost to the government of monitoring and enforcing emissions trading scheme / problem of asymmetric information.<br><br>➢ Accept macro arguments: for example, multiplier effect of job losses in mining communities or impact on balance of payments. | **(14)** |

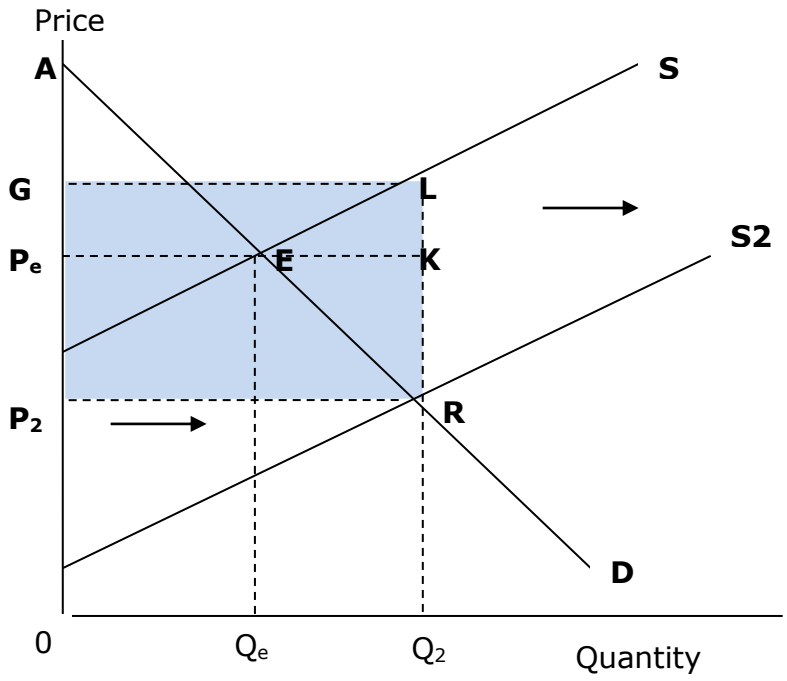
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| | The quality of written communication will be assessed in this question based on the candidate's ability:<br>➢ To present an argument and conclude on the basis of that argument.<br>➢ To organise information clearly and coherently.<br>➢ To use economics vocabulary appropriately.<br>➢ To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **KAA = 4 marks**<br>• Explanation of renewable energy resource: energy that can be used without supply being diminished / a sustainable resource available for future generations. (**1 mark**)<br>• Identification of a renewable energy resource from Extract 1 (wind, wave or tidal power, solar power). (**1 mark**)<br>• Explanation of non-renewable energy resource: use of energy which diminishes the supply available / it is finite in supply and so non-sustainable for future generations. (**1 mark**)<br>• Identification of a non-renewable energy resource from Extract 1 or Figure 1 (fossil fuels such as oil, coal and gas; accept nuclear power). (**1 mark**)<br>• Award for definition of 'resource' (factor input or agent used to produce goods and services). (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA = 6 marks**<br>Identification of two benefits in the generation of energy from renewable resources (**1+1 marks**) and their development (**2+2 or 3+1 marks**).<br><br>Be prepared to award for use of economic analysis<br><br>**Benefits include:**<br>➢ **Reduction in carbon emissions** / as renewable energy is often regarded as carbon neutral or more environmentally friendly and so can slow down climate change / less air pollution that cause respiratory diseases / increase life expectancy or quality of life.<br><br>➢ **Increase the reliability of UK energy supply as less dependent on coal and gas** / less dependent on imports of fossil fuels from countries like Russia / it will help diversify UK energy sources / the long term price of fossil fuels likely to rise as they run out and so renewable energy price may be cheaper in long run.<br><br>➢ **Increase use of a sustainable energy source**: / UK has more wind power potential than any other country in Europe / it will replace the energy supply from coal power stations being phased out by 2030 / help UK meet EU renewable energy targets.<br><br>➢ **Employment creation:** an extra 70 000 jobs created over the next decade / this will help reduce poverty and inequality in problem areas / it could lead to greater investment into renewable energy.<br><br>**NB: Accept a mixture of these points** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **KAA = 6 marks**<br>• Definition of the division of labour (production of a good is broken down into different tasks and labour allocated to each task / labour become specialised in particular jobs for the production of wind energy). (**1 mark**).<br>• Application to wind power production: Extract 1 refers to designers, engineers, welders, electricians, truck drivers. (**1 mark**)<br>**Explanation of the benefits of division of labour:**<br>➢ Increase productivity of labour or increase output per head / may lead to higher earnings for labour. (**1+1 marks**)<br>➢ Reduction in costs per unit of output or increase in efficiency / which may increase profits. (**1+1 marks**)<br>➢ More choice of jobs. (**1 mark**)<br>➢ Diagram showing an increase in supply and reduction in price. (**1 mark**)<br>➢ Repetition means workers become more skilled / improve quality of their work. (**1+1 marks**)<br>➢ Faster at their specific jobs due to repetition or an increase in skills / less time taken in moving between jobs. (**1+1 marks**)<br>➢ More effective use of capital in production / factory space or machinery in constant use so greater efficiency. (**1+1 marks**)<br>**NB: Award a maximum of 4 KAA marks if no reference made to wind power.** | |

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| | • **Evaluation (2+2 marks or 3+1 marks)**<br><br>**Consideration of disadvantages**<br><br>➢ Boredom and monotony of particular work / this could reduce productivity or quality of output / lead to high staff turnover / increase in recruitment costs.<br><br>➢ Risk of workers being replaced by machines.<br><br>➢ Wind power firms may be vulnerable to dependency upon key types of workers / designers or installation workers.<br><br>➢ Time required and cost involved in training workers for specific jobs / immobility of labour e.g. shortage of skilled workers or workers not willing to move to Hull / growth of wind power projects across world mean skilled workers have other choice of jobs.<br><br>➢ The benefits of higher productivity may be offset by higher wages. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **KAA = 8 marks**<br>• Definition of subsidy (government grant to increase production or lower price of a good). (**1 mark**)<br>• The subsidy acts to help reduce production costs. (**1 mark**)<br>• Diagram of subsidies to renewable energy firms (**up to 4 marks**).<br>➢ Original demand and supply curves with equilibrium price and quantity (**1**)<br>➢ Shift the supply curve to the right with equilibrium price and quantity (increase) (**1**)<br>➢ Area of subsidy identified ($GLRP_2$) (this must be explicit) (**1**)<br>➢ Producer (GLKPe) and consumer ( $KRP_2Pe$) subsidy areas identified (**1**)<br>  <br><br>**NB: If no suitable diagram provided, award a maximum of 6 KAA marks.** | |

**Positive effects include:**

- Encourage energy firms to supply more renewable energy and reduce supply of non-renewable energy / increase diversity of energy supplies. (**1+1 marks**)

- Reduce pollution associated with non-renewable resources / development of this point e.g. reduces growth in global warming. (**1+1 marks**)

- Increase profits and revenue / employment creation in renewable energy sector. (**1+1 marks**)

- Increase in consumer or producer surplus / annotation of area on diagram or written explanation. (**1+1 marks**)

- Award macro economic benefits. (**up to 2 marks**)

**Evaluation 6 marks (2+2+2 or 3+3 or 4+2 or any combination up to four points)**

- Opportunity cost of government spending on subsidies to renewable energy firms / money could be spent on healthcare and education.

- Discussion of significance of price elasticity of demand e.g. incidence of subsidy and impact on price and output.

- Discussion of magnitude and time period of subsidies – appear huge at £16.6 billion / development of point e.g. is the subsidy large enough to encourage investment into the renewable energy sector? / uncertainty of energy policy following change of government.

- Discussion of short run and long run e.g. time taken to build wind farms or possible withdrawal of subsidies.

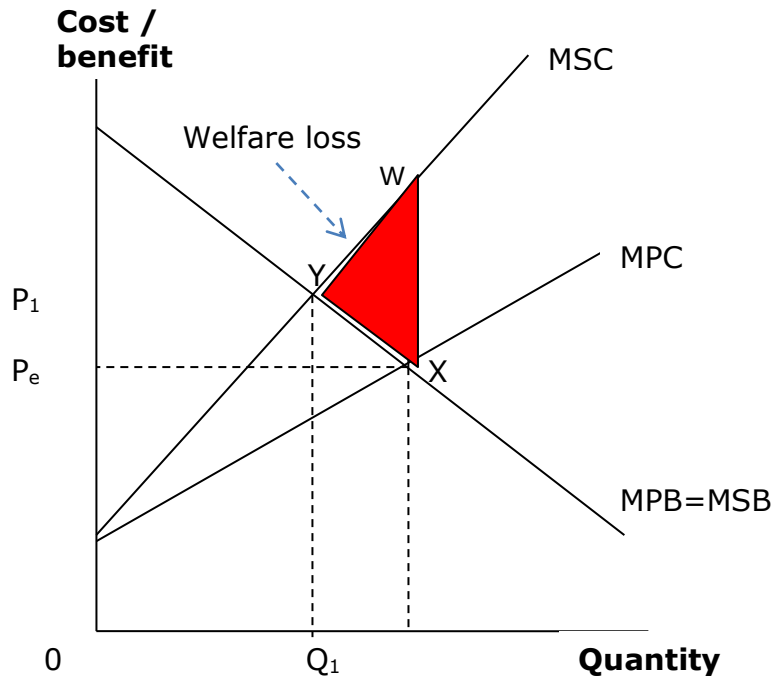
- Extract 2 refers to the lack of competition in awarding of contracts with subsidies / consumers could end up paying higher prices / less choice / less quality of service provision.

**(14)**

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|---|---|---|
| | ➢ Firms may become inefficient due to receipt of funds from subsidies / firms may become dependent on government subsidies.<br><br>➢ Discussion of reliability of renewable energy / external costs associated with wind farms and solar farms.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **KAA = 8 marks**<br>• Definition of external costs: Negative third party effects / costs external (outside) a market transaction or exchange / costs the price mechanism fail to take into account / negative spillover effects / difference between social costs and private costs (**1 mark**).<br>• Definition of market failure (where price mechanism leads to an inefficient allocation of resources. (**1 mark**)<br>• Explanation of external costs from generating renewable energy with some development, for example:<br>➢ Environmental impact – visual eyesore; damage to wildlife such as birds; noise pollution from wind turbines. (**up to 2 marks**)<br>➢ External costs in construction e.g. noise and road congestion. (**up to 2 marks**)<br>➢ Falling property values; harder to buy and sell homes near to wind and solar farms. (**up to 2 marks**)<br>➢ Decrease in tourist visits and consequences for local income, employment and services. (**up to 2 marks**)<br>• Generation of renewable energy involves higher privates costs compared to non-renewable energy / so consumers face higher prices / issue of fuel poverty. (**up to 2 marks**) | |

- Diagram (**up to 4 marks**)




  - Original MB and MPC curves with equilibrium position. (**1**)
  - MSC curve (accept a parallel shift of the MSC curve). (**1**)
  - Identification of market equilibrium and socially efficient position. (**1**)
  - Identification of triangle of welfare loss. (**1**)

**NB: If no diagram, award a maximum of 6 KAA marks.**

**6 Evaluation marks (2+2+2 or 3+3 or any combination up to four points)**

- Difficulty in quantifying external costs and attaching monetary value / applied to renewable energy.
- Discussion of magnitude of renewable energy projects. 680 onshore and 23 offshore wind farms.
- Long term consequences: society's attitude may change over time / wind farms could become tourist attractions.
- Compensation sometimes paid e.g. local community activities funded by renewable projects.

| | | |
|---|---|---|
| | ➢ There are significant benefits from the generation of renewable energy e.g. employment creation, sustainable energy source, less carbon pollution, more diversity in energy supply, meet EU government targets. (**NB: award up to 4 marks**)<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(14)** |

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Write your name here

| Surname | Other names |
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**Pearson Edexcel GCE**

| Centre Number | Candidate Number |
|---|---|
| | |

# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Monday 11 May 2015 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question in Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

*Turn over* ▶

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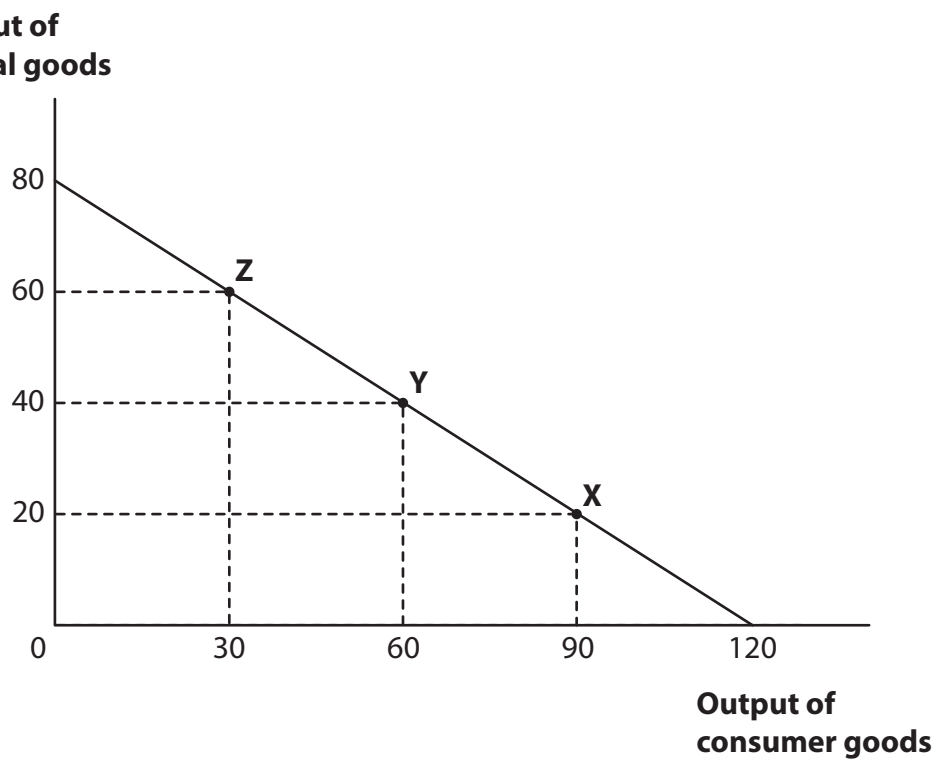
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## SECTION A

**Answer all the questions in this section.**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram shows a production possibility frontier for an economy which is currently operating at point **X**. Which **one** of the following is true?

**(1)**

**A** The opportunity cost of producing 90 units of consumer goods is 20 capital goods

**B** Moving to point **Y** will decrease the rate of economic growth compared to point **X**

**C** The opportunity cost of increasing the output of capital goods is constant

**D** Moving to point **Z** will increase current living standards

**Answer**



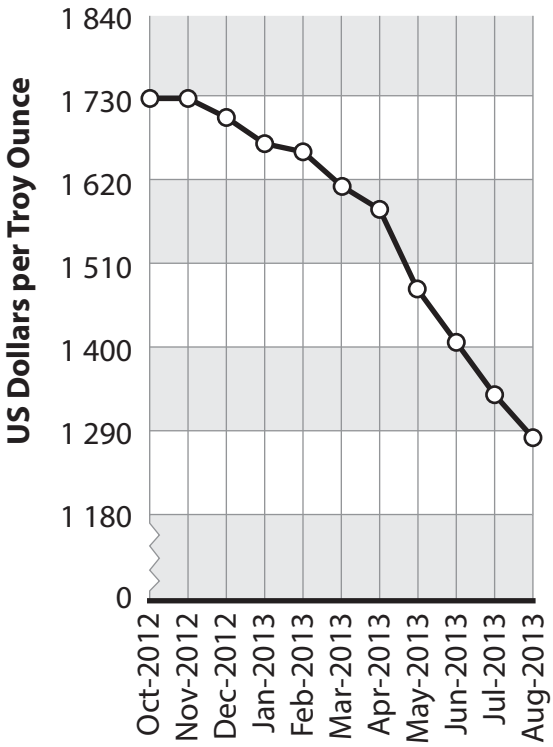
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**Explanation**

**(3)**

**(Total for Question 1 = 4 marks)**

**2**




(Source: http://www.indexmundi.com/commodities/?commodity=gold&months=60)

The graph shows the price of gold per Troy Ounce between October 2012 and August 2013. Which **one** of the following is a possible reason for the trend shown over the period?

**(1)**

**A** An increase in demand for gold jewellery in India and China

**B** The sale of gold reserves by several European Central banks including Cyprus and Germany

**C** An increase in the cost of machinery used in South African gold mining

**D** Speculative buying of gold following expectations of rising inflation

**Answer** ☐



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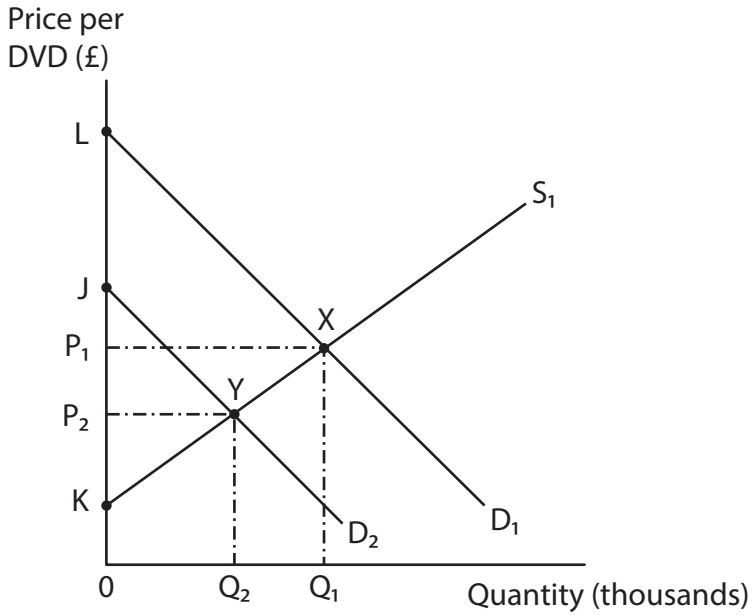
**Explanation**

You may use a demand and supply diagram in your answer.

**(3)**

**(Total for Question 2 = 4 marks)**

**3**




The diagram shows the market for DVDs. A decrease in demand from $D_1$ to $D_2$ will cause a fall in

**(1)**

**A** producer surplus to $P_2JY$

**B** consumer surplus to $LXP_1$

**C** producer surplus to $P_2YK$

**D** consumer surplus to $0P_2YQ_2$

**Answer**



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**Explanation**

**(3)**

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

**4** A jewellery retailer reduces the price of designer bracelets from £200 to £180 each. As a result, quantity demanded rises from 20 to 25 per month. The best estimate of price elasticity of demand for this jeweller's designer bracelets is

**(1)**

**A** −2.5

**B** −1.25

**C** +0.4

**D** +2.5

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 4 = 4 marks)**



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**5** The Institute for Fiscal Studies reported that between 2007 and 2012, average real incomes fell by 7.5% for families with young children. Over the same period it found that these families reduced their expenditure on fruit and vegetables but increased it on processed foods which contain high levels of fat and sugar.

Other things being equal, this information suggests that

**(1)**

**A** the change in quantity of fruit and vegetables demanded in response to a change in price of processed foods is negative

**B** fruit and vegetables are normal goods and processed foods are inferior goods

**C** the price of fruit and vegetables has risen more slowly than the price of processed foods

**D** fruit and vegetables are inferior goods and processed foods are normal goods

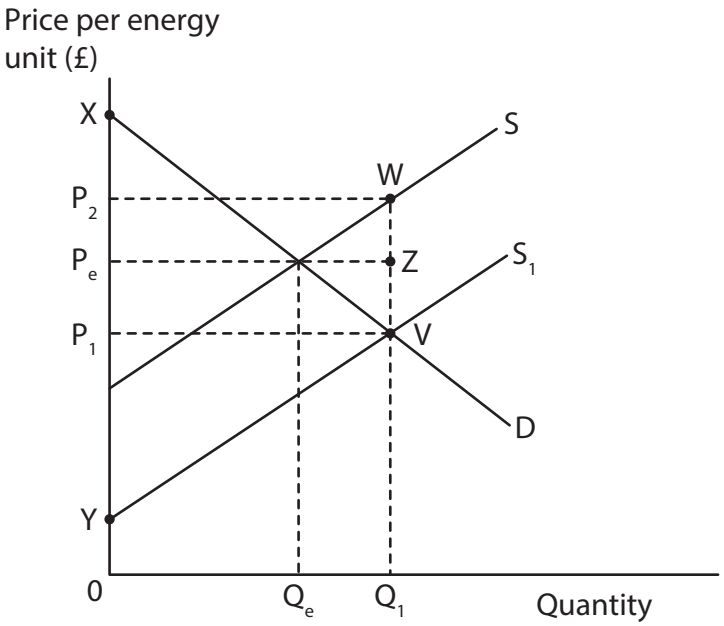
**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 5 = 4 marks)**

**6**




The diagram shows the effect of a government subsidy to producers of solar power.
The total government expenditure on the subsidy will be

**(1)**

**A** $0P_2WQ_1$

**B** $P_2P_eZW$

**C** $P_1VZP_e$

**D** $P_1VWP_2$

**Answer**



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**Explanation**

**(3)**

**(Total for Question 6 = 4 marks)**

**7** In September 2013, clothing workers in Bangladesh demanded an increase in the industry minimum wage from $38 to $100 a month. Such an increase in the minimum wage is likely to

**(1)**

**A** affect the level of employment among clothing workers

**B** decrease the supply of labour in the clothing industry

**C** increase the demand for labour in the clothing industry

**D** decrease the price of clothing in shops

**Answer** ☐

**Explanation**

You may use a supply and demand diagram in your answer.

**(3)**

**(Total for Question 7 = 4 marks)**



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**8** Market failure may arise in an economy when

**(1)**

**A** train fares rise in response to an excess demand for rail travel

**B** government taxes on petrol reduce the number of motor vehicle journeys

**C** external benefits from bus travel are ignored by the price mechanism

**D** loss making taxi firms exit the market

**Answer** ☐

**Explanation**

You may use a supply and demand diagram in your answer.

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

## SECTION B

**Answer EITHER Question 9 OR Question 10**

**If you answer Question 9 put a cross in the box ☒ .**

**Question 10 starts on page 28.**

**You should spend 55 minutes on this section.**

### 9 The UK Housing Market

**Figure 1 Annual percentage increase in share prices of the seven largest house builders (to November 2013)**

| Company | % change |
|---|---|
| Berkeley Group | 29.6 |
| Bovis Homes | 33.8 |
| Bellway | 43.5 |
| Redrow | 58.4 |
| Taylor-Wimpey | 59.5 |
| Barratt Developments | 60.1 |
| Persimmon | 63.3 |

(Source: Financial Times, 1 November 2013)



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**Figure 2 Average house prices, annual earnings and unemployment rates by selected regions in UK, 2013**

| Region | Average house price | Average annual earnings | Unemployment rate (%) |
|---|---|---|---|
| North East | £149 000 | £25 584 | 10.4 |
| Yorks and Humber | £167 000 | £25 572 | 8.9 |
| North West | £166 000 | £26 416 | 8.3 |
| West Midlands | £188 000 | £26 936 | 9.8 |
| East of England | £257 000 | £31 096 | 6.7 |
| South East | £304 000 | £35 552 | 5.8 |
| London | £437 000 | £39 312 | 8.3 |
| | | | |
| UK | £247 000 | £29 536 | 7.7 |

(Sources: http://www.ons.gov.uk/ons/dcp171778_286243.pdf http://www.ons.gov.uk/ons/search/index.html?newquery=weekly+region+earnings)

**Extract 1 Rising house prices**

Average house prices in the UK reached their highest level ever at £247 000 in August 2013, exceeding the previous peak in January 2008. In the 12 months to August 2013 UK house prices rose by 3.8%. However, many regional variations were recorded with the highest increase in London. The rise of 8.7% in London prices was largely a result of increased purchases from foreign buyers.

The rise in house prices follows a sustained period of low interest rates for borrowers as well as the success of the government's 'Help to Buy' scheme. This scheme enables buyers of new-build homes to borrow up to 95% of the house value. In October 2013, it was extended to include borrowing on all types of properties up to the value of £600 000. Banks are more willing to lend as the government guarantees up to 15% of the house loan as an insurance policy in case of borrowers being unable to repay.

(Source: adapted from 'Home-buying at its highest for five years', Juliet Samuel, The Times, 11 October 2013)

**Extract 2 Supply constraints in house building**

Capacity constraints have affected house building over recent months according to a Bank of England report, providing evidence of growing demand and rising prices in the sector. Skills shortages have appeared after many building workers left the industry during the recession. Delivery time for bricks and other construction materials have also increased, forcing firms to look to imports. Brick-making firms are reluctant to invest in new kilns without the assurance of a continuous supply of reasonably priced energy.

However, the Home Builders Federation pointed out that suppliers have responded to short term pressures through increased training schemes and also gave examples of brick makers re-opening plants.

(Source: adapted from 'House builders provide blot on improved landscape', Patrick Hosking and Kathryn Hopkins, The Times, 24 October, 2013)

**Extract 3 Buildings are key to tackling carbon emissions**

Any serious attempt to tackle climate change must deal with the problem of poorly insulated buildings. More than 40% of carbon emissions in developed countries come from heating, cooling and providing power to homes and offices. Cutting emissions from UK buildings by just 25% would have the same impact as taking every car off the road.

Carbon emissions can be significantly reduced through better insulation, more efficient heating boilers and triple glazing of windows for new build and existing homes. The initial costs of implementing energy efficiency schemes are high. However, reductions in gas and electricity bills mean that energy efficiency work can pay for itself in as little as five years.

(Source: adapted from 'Buildings are key to tackling emissions', David Fickling, Financial Times, 25 November 2009)

(a) With reference to Extract 1, explain **two** likely reasons why UK house prices increased in the 12 months to August 2013.

**(6)**

(b) With reference to Figure 1, explain the likely impact of rising house prices on the share prices of major house builders.

**(4)**

(c) With reference to Extract 2 and your own knowledge, discuss whether the supply of **new** housing is likely to be price elastic or price inelastic.

**(10)**

*(d) With reference to the first paragraph of Extract 1, the data in Figure 2 and your own knowledge, discuss the likely reasons for house price differences between London and **one** other region.

**(14)**

*(e) With reference to Extract 3 and your own knowledge, examine the case for reducing carbon emissions from new-build homes.

**(14)**

(a) With reference to Extract 1, explain **two** likely reasons why UK house prices increased in the 12 months to August 2013.

**(6)**



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(b) With reference to Figure 1, explain the likely impact of rising house prices on the share prices of major house builders.

**(4)**

(c) With reference to Extract 2 and your own knowledge, discuss whether the supply of **new** housing is likely to be price elastic or price inelastic.

**(10)**



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*(d) With reference to the first paragraph of Extract 1, the data in Figure 2 and your own knowledge, discuss the likely reasons for house price differences between London and **one** other region.

**(14)**



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*(e) With reference to Extract 3 and your own knowledge, examine the case for reducing carbon emissions from new-build homes.

**(14)**

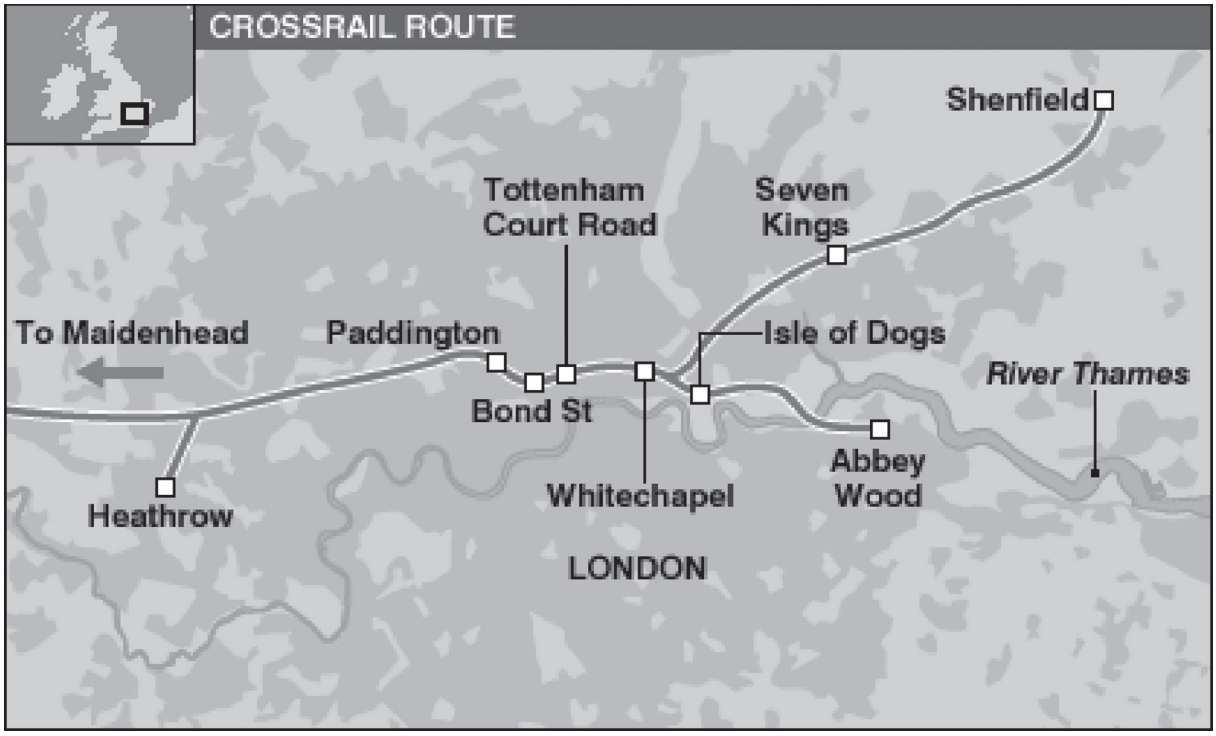
P 4 4 8 8 8 A 0 2 6 4 0

**(Total for Question 9 = 48 marks)**

**If you answer Question 10 put a cross in the box ☒ .**

## 10 The London Crossrail project

**Figure 1 The London Crossrail route**




(Source: Google images)

**Extract 1 London Crossrail is Europe's largest infrastructure project**

A government-funded East-West rail link across London, known as Crossrail, is due to open in 2018. It involves building 73 miles of railway line to link Reading in the west to Shenfield in the east. It includes 38 railway stations and 26 miles of tunnels under London. London's rail capacity is set to increase by 10% and overcrowding on the existing transport routes should reduce.

Crossrail is being built to cope with London's growing population and to support further economic development of the capital city. An estimated 200 million passenger journeys per year will be made on Crossrail. Each train will be 200 metres long and capable of carrying 1 500 passengers. The project has coincided with the tendency for companies to move back into central London, reversing a 20 year trend.

Rail travel times are set to come down, for example, Heathrow Airport to the City of London will fall from 55 minutes to 32 minutes. The project will also bring a further 1.5 million people within a 45 minute commute to the major employment centres in London. There is now a discussion about building Crossrail 2 to improve links between north and south London.

(Source: http://www.crossrail.co.uk/benefits/)



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**Extract 2 Employment at London Crossrail**

Over 9 000 people are directly employed on the project across 40 construction sites. Another 41 000 jobs have been created indirectly outside London, including the supply of thousands of tonnes of steel from Northern England and construction equipment from the Midlands.

However, at the start of construction in 2009, Crossrail required some 1 200 specialist workers with underground tunnelling skills but were only able to recruit 700 and these had an average age of 55 years. In response to the labour shortage, Crossrail set up a £15 million Tunnelling Academy to train the remaining specialist workers required for the project. This may prove useful for possible future transport infrastructure projects such as the controversial High Speed 2 rail line (HS2) between London and the north.

Terry Morgan, the boss of Crossrail, warned that Britain's construction skills base will be put at risk without a steady flow of large-scale infrastructure projects. Government spending on infrastructure projects fell by 50% in the first quarter of 2013, creating uncertainty over future employment for specialist construction workers and investment by firms.

(Source: adapted from 'Crossrail chief warns infrastructure schemes vital to skills base', James Pickford, Financial Times, 24 June 2013)

**Extract 3 London Crossrail is unfair to taxpayers**

Central and local government taxpayers are paying for most of the £14.8 billion cost of the Crossrail project. However, most taxpayers will receive little benefit from the rise in domestic and commercial property values. Only those properties near the stations will experience an increase in value as a result of Crossrail. House prices near the stations have already risen by 20% more than the average, and commercial values along the route are set to rise by at least 10%. The project could lead to an increase in regional inequality.

(Source: adapted from http://www.transport-network.co.uk/Taxpayers-lose-out-on-millions-due-to-Crossrails-crude-funding-structure/9645#.UqOAJxZFAdU)

(a) With reference to the **titles of Extract 1 and Extract 3**, distinguish between positive and normative statements.

**(4)**

(b) With reference to Extract 2, analyse the likely impact of training programmes such as the Tunnelling Academy on the occupational mobility of labour.

**(6)**

(c) With reference to Extract 1, assess the likely impact of the Crossrail project on the geographical mobility of labour.

**(10)**

*(d) 'An estimated 200 million passenger journeys per year will be made on Crossrail' (Extract 1, lines 7 and 8). Discuss the factors which might influence the level of passenger demand for Crossrail services.

**(14)**

*(e) Assess whether large-scale projects, such as Crossrail, might result in government failure.

**(14)**

(a) With reference to the **titles of Extract 1 and Extract 3**, distinguish between positive and normative statements.

**(4)**

(b) With reference to Extract 2, analyse the likely impact of training programmes such as the Tunnelling Academy on the occupational mobility of labour.

**(6)**



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(c) With reference to Extract 1, assess the likely impact of the Crossrail project on the geographical mobility of labour.

**(10)**

*(d) 'An estimated 200 million passenger journeys per year will be made on Crossrail' (Extract 1, lines 7 and 8). Discuss the factors which might influence the level of passenger demand for Crossrail services.

**(14)**


P 4 4 8 8 8 A 0 3 6 4 0

*(e) Assess whether large-scale projects, such as Crossrail, might result in government failure.

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**



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# Mark Scheme (Results)

## Summer 2015

## Pearson Edexcel GCE
## in Economics (6EC01) Paper 01

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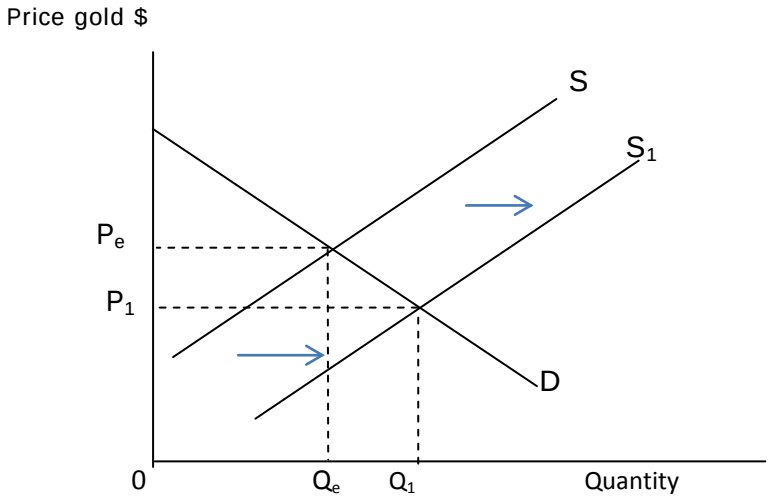
## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

**NB: candidates may achieve up to 3 explanation marks even if incorrect key is selected.**

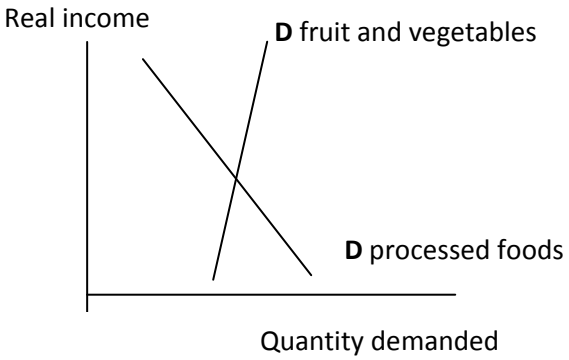
**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key should be explicitly rejected).**

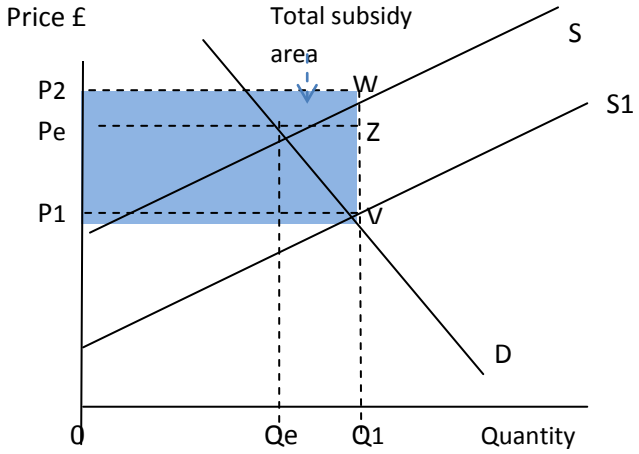
| Question Number | Answer | Mark |
|---|---|---|
| **Q1** | • **Answer C** (**1 mark**)<br><br>• Definition of opportunity cost (the value of the next best alternative foregone). (**1 mark**)<br><br>• Definition of production possibility frontier (maximum output combinations an economy can achieve when all resources are fully / efficiently employed). (**1 mark**)<br><br>• Explicit use of figures: constant opportunity cost of 1 capital good to 1.5 consumer goods (accept variations of this such as 20 capital goods forgoes 30 consumer goods **OR** 1 consumer good forgoes 0.66 capital goods) / Accept reference to the gradient / straight line being constant and so indicating a constant opportunity cost. (**1 mark**)<br>•<br>**NB:** this may be shown by annotation of the diagram<br>**NB:** no marks available for definition of economic growth<br><br>**Rejection marks**<br>➢ Option A is incorrect since the opportunity cost of 90 consumer goods is 60 capital goods. (**1 mark**)<br><br>➢ Option B incorrect as the rate of economic growth will increase since there are more capital goods. NB: Must refer to an increase in capital goods. (**1 mark**)<br><br>➢ Option D incorrect since moving to point Z means there are less consumer goods available for the current period and so living standards will fall. (**1 mark**) | **(4)** |

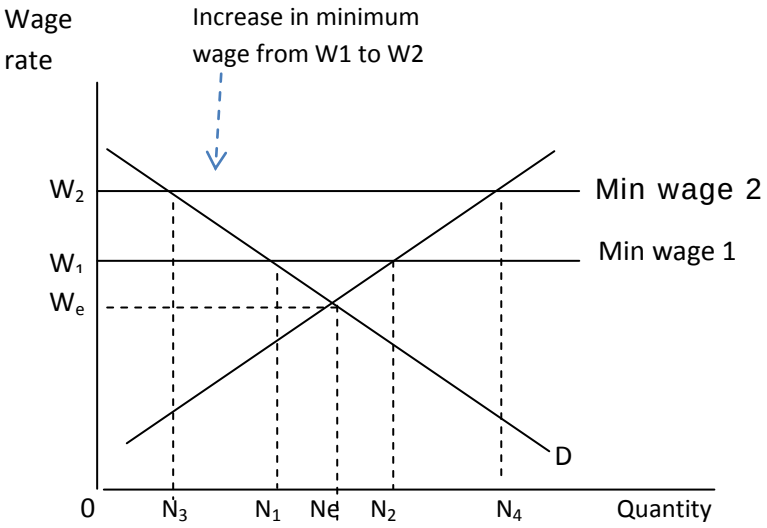
| Question Number | Answer | Mark |
|---|---|---|
| Q2 | • **Answer B** (**1 mark**)<br><br>• Explicit reference to the data depicting the fall in price of gold e.g. $1,730 per ounce to $1,290 per Troy ounce (accept approximate figures) (**1 mark**)<br><br>• Demand and supply diagram depicting an increase in supply / and original and new equilibrium for price and quantity (**1+1 marks**)<br><br>**OR**<br><br>A written explanation that the central banks sale of gold will increase the supply curve and pushing price down / development such as the release of gold reserves has caused excess supply in the market. (**1+1 marks**)<br><br>  <br><br><br>**Rejection marks**<br>• Option A is incorrect since an increase in demand for gold jewellery will increase the demand for gold, so price increases. (**1 mark**)<br>**NB: do not double award for rejection of options A and D**<br><br>• Option C incorrect as increased costs of machinery will increase production costs for extracting gold, so price will rise / supply will shift inwards / left. (**1 mark**)<br><br>• Option D incorrect since speculative buying of gold will increase demand and increase its price. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| Q3 | **Answer C (1 mark)**<br><br>• Definition of producer surplus (the **difference** between the price firms are willing to sell the good for and the market price it is sold at / the area above the supply curve and below the equilibrium price). (**1 mark**)<br><br>• Original producer surplus is P1XK. (**1 mark**)<br><br>• The loss of producer surplus is P1P2YX. (**1 mark**)<br><br>• The original and loss of producer surplus may be shown by annotation of the diagram but they must be labelled correctly. **NB: do not double award here.** (**1+1 marks**)<br><br>**Rejection marks**<br>➢ Option A incorrect as P2JY is the new consumer surplus area. (**1 mark**)<br><br>➢ Option B incorrect as LXP1 is the original area of consumer surplus. (**1 mark**)<br><br>➢ Option D incorrect as 0P2YQ2 is the new area of total revenue or total expenditure. (**1 mark**) | **(4)** |

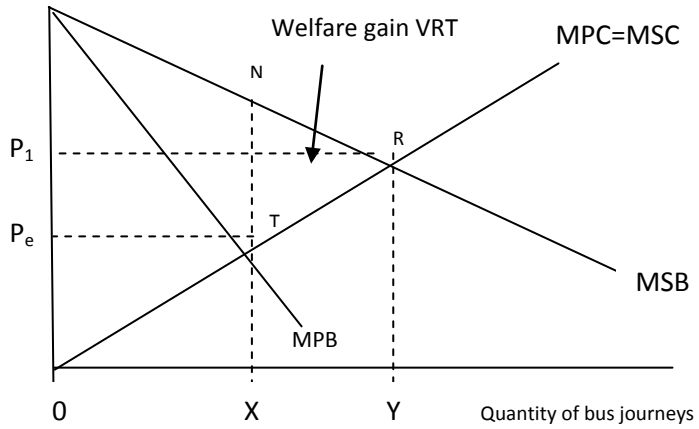
| Question Number | Answer | Mark |
|---|---|---|
| **Q4** | • **Answer A (1 mark**)<br><br>• Definition of price elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in price, or, %ΔQD ÷ %ΔP). (**1 mark**)<br><br>• Correct calculations: 25% ÷ -10% = -2.5 (**1+1 marks**)<br><br>**NB:** If the calculation shows 2.5 rather than -2.5 but the correct option key is chosen, award 1+1 marks. If the incorrect key is chosen then award 1 mark.<br><br>**NB:** if the two percentage change calculations are correct (**25%** and **-10%**) but are placed upside down in the overall formula, award 1 mark.<br><br>**Rejection marks**<br>➢ Options C and /or D incorrect since there is a negative or inverse relationship between price and quantity demand / a positive relationship refers to price elasticity of supply. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| Q5 | • **Answer B (1 mark)**<br><br>• Definition of income elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in income, or, %ΔQD ÷ %ΔY). (**1 mark**)<br><br>• Definition of normal good / has a positive income elasticity of demand **OR** inferior good / has a negative income elasticity of demand (**1 mark**)<br><br>• Application to fruit and vegetables and / or processed foods; this may be in a numerical form (**1 mark**)<br><br>• Diagram depicting fruit and vegetables a normal goods **OR** processed foods as inferior goods (**1 mark**)<br><br>  <br><br><br>**Rejection marks**<br>➢ Option A is incorrect since this refers to cross elasticity of demand or complementary goods / no information provided on price. (**1 mark**)<br><br>➢ Option C incorrect as we do not have data on price of processed foods and fruit and vegetables – this is more related to price elasticity of demand. (**1 mark**)<br>**NB: do not double award reference to price data**<br><br>➢ Option D incorrect as fruit and vegetables have a positive YED and processed foods a negative YED. (**1 mark**)<br>**NB: do not double award here** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| Q6 | • **Answer D** (**1 mark**)<br>• Definition subsidy (government grant to firms to increase supply / lower price). (**1 mark**)<br>• The effect of the subsidy is to act like a decrease in production costs. (**1 mark**)<br>• Annotation of diagram or stating the area of consumer subsidy is PePIVZ and producer subsidy PePZWZ. (**1+1 marks**)<br>• The total subsidy is the unit subsidy P1P2 multiplied by total quantity P1V (**1 mark**).<br>  <br><br>**Rejection marks**<br>➢ Option A incorrect since this is the total area of revenue in market. (0P2WQ1) (**1 mark**)<br>➢ Option B incorrect since this is the area of subsidy for producers (P2WZPe) (**1 mark**) **NB: do not double award**<br>➢ Option C incorrect since this is the area of subsidy for consumers (P1VZPe) (**1 mark**) **NB: do not double award** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| Q7 | • **Answer A** (**1 mark**)<br>• Definition of a minimum wage (the lowest wage that workers can be paid / a wage or price floor for labour). (**1 mark**)<br>• An increase in the minimum wage could cause a decrease in quantity demand for labour / decrease in employment. (**1 mark**)<br>• An increase in NMW will increase incentive to work and raise supply of labour / unemployment. (**1 mark**)<br>• Correctly labelled diagram depicting the original minimum wage (as long as it is clearly labelled as a NMW or $38) / and an increase in the minimum wage for garment workers (**1+1 marks**)<br>**NB:** the original NMW may start at the market equilibrium price.<br>• Accept use of $38 and $100 per month minimum wage if placed correctly on diagram. (**1 mark**)<br>  | |

| | | |
|---|---|---|
| | **Rejection marks**<br>➢ Option B incorrect since the higher wage rate will provide an **incentive** for the supply of labour in the clothing industry to rise. (**1 mark**) **NB: do not double award**<br><br>➢ Option C incorrect since the higher wage rate will make it **more expensive or less affordable** for firms to employ labour in the clothing industry / replace with capital. (**1 mark**)<br><br>➢ Option D incorrect since higher wage rate will increase costs of production for clothing and less employment. (**1 mark**) | |

| Question Number | Answer | Mark |
|---|---|---|
| Q8 | • **Answer C (1 mark)**<br><br>• Definition of market failure: the price mechanism fails to allocate resources efficiently / leads to a misallocation of resources / leads to a net welfare loss). (**1 mark**)<br><br>• Definition of external benefits (benefits which the price mechanism fails to take into account / positive third party effects / benefits external to a market transaction / positive spillover effects from consumption / difference between private benefits and social benefits) (**1 mark**)<br><br>• Application to bus travel: external benefits include a reduction in road congestion / positive effects on environment as it may lead to less consumption of non-renewable resource). (**1 mark**)<br><br>• There may be under-consumption and under-provision of bus travel in an economy since social optimum output position exceeds the market equilibrium output position. (**1 mark**)<br><br>**OR** this may be shown by diagrammatic analysis depicting market quantity **X** and social optimum quantity **Y** / welfare gain or welfare loss or deadweight loss VRT (**1+1 marks**)<br><br>Costs/Benefits<br>  <br><br><br>• Accept supply and demand diagram showing a subsidy that attempts to correct market failure. (**1 mark**) | **(4)** |

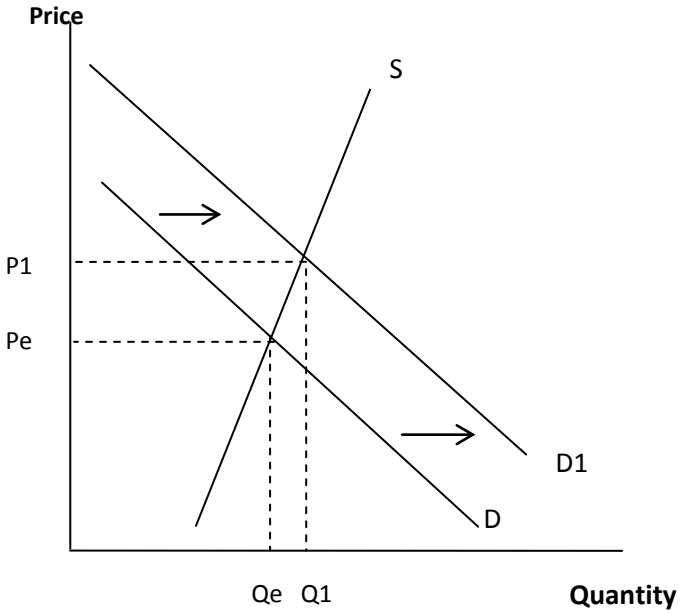
**Rejection marks**

- Option A is incorrect since this is the price mechanism operating efficiently to ensure demand equates with supply / profit motive for rail firms to raise price. (**1 mark**)

- Option B incorrect since government taxes on petrol help to reduce external costs and thus correct market failure associated with motor vehicle travel. (**1 mark**)

- Option D incorrect since loss making firms exiting the market show that the market is operating efficiently – there is a reduced incentive to supply if losses made. (**1 mark**)

| Question Number | Answer | Mark |
|---|---|---|
| 9(a) | **6 KAA marks**<br>• Data reference to the increase in house prices such as 3.8% in the 12 months to August 2013 / average house price now at its highest ever level of £247 000. (**1 mark**)<br>• Identification of two reasons: sustained period of low interest rates / Government Help to buy' scheme or an increase in the availability of mortgages (**1+1 marks**). Also accept other reasons such as rising incomes / rising business confidence as economy recovers / increased purchases by foreign buyers.<br>• Development of two reasons **(2+2 or 1+3 marks**).<br>NB: do not double award for reasons which are the same, for example, more affordable property.<br>➢ Sustained period of low interest rates for borrowers: so monthly repayments are lower / mortgage repayments are more affordable.<br>➢ Government 'Help to buy' scheme: it makes buying a property more affordable so enables people to borrow up to 95% of the value of the property / only need 5% cash deposit so easier to save up this money / banks are more willing to lend as the government guarantees up to 15% of the value of the house loan, so less likely to lose out from borrowers unable to repay.<br>➢ Foreign buyers may purchase to diversify their assets / seen as a safe haven / long term investment.<br>➢ Award for diagram depicting an increase in demand for housing and a rise in price. (**1 mark**) | **(6)** |


Price
S
P1
Pe
D1
D
Qe
Q1
Quantity

| Question Number | Answer | Mark |
|---|---|---|
| 9(b) | **4 KAA marks**<br>• Reference to rising share prices (**1 mark**)<br>• Data reference e.g. all seven house builders experienced an increase in share prices / Persimmon has the highest share price rise / Berkeley Group experienced the lowest increase in share price of 29.6%. (**1 mark**)<br>• Higher revenue or profits or output for house builders. (**1 mark**)<br>• Long term investment in buying house builder shares (**1 mark**)<br>• Further development: for example, builders offer a higher dividend to shareholders / speculative buying of house builder shares / accept derived demand (**1+1 marks**) | **(4)** |

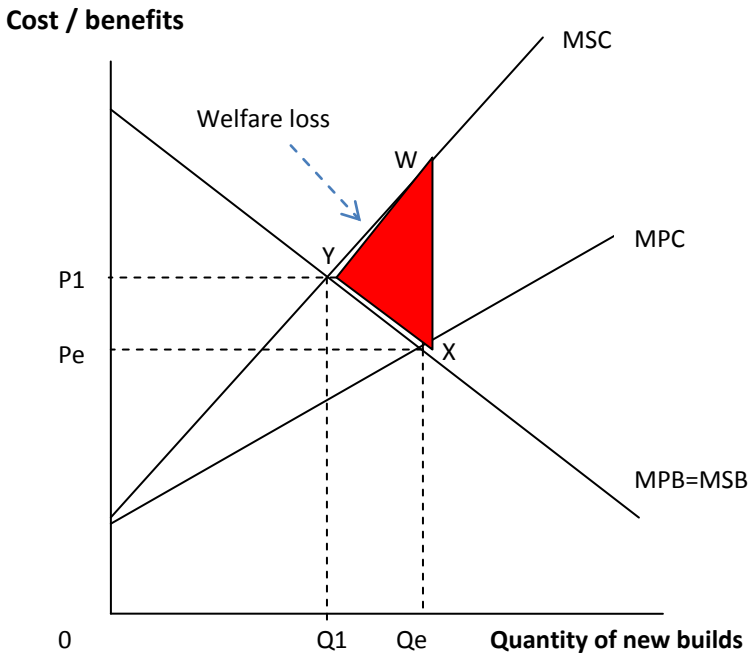
| Question Number | Answer | Mark |
|---|---|---|
| 9(c) | **6 KAA marks**<br>• Definition or formula for price elasticity of supply (the responsiveness of supply of a good due to a change in its price or the %ΔQS ÷ %ΔP). (**1 mark**)<br>• Diagram showing price inelastic supply and / or price elastic supply, OR a written explanation of one of them (this could include the coefficient). (**1 mark**)<br>• At least one factor input is fixed in the short run but all factor inputs become variable in the long run (**1 mark**)<br>• Supply of new housing is likely to be price inelastic due to capacity / supply constraints (**1 mark**) since:<br>➢ Skills shortage in building following many people leaving the industry during the recession / difficult to get the skilled labour to build house e.g. plumbers, bricklayers, electricians, carpenters. (**1+1 marks**)<br>➢ Building materials shortages such as bricks so difficult to get the materials to build housing / further development e.g. shortage of construction equipment or cement or timber. (**1+1 marks**)<br>➢ Time required to build new housing such as many stages in production process / laying bricks tiling, roofing (**1+1 marks**)<br>➢ Securing planning permission / shortage of land to build on / green belt planning laws (**1+1 marks**).<br>**Evaluation (up to 2+2 or 1+3 or 1+1+2 marks)**<br>**Note: candidates can take the view that supply is inelastic or elastic for KAA and the counter-argument would be evaluation.**<br>In the long run, supply is likely to be price elastic since:<br>➢ Home Builders Federation point out that more people being trained / development of this point e.g. quality of trainees as still need experience on the job / plentiful supply of labour as unemployment is around 7% of workforce / discussion of immigration. | **(10)** |

| | | |
|---|---|---|
| | ➢ Home Builders Federation point out that brick making companies are re-opening brick plants / development of this point e.g. materials are being imported to alleviate shortages so they could be price elastic in short run.<br><br>➢ Danger of a property price bubble where house prices could crash in near future / this might make supply inelastic as firms reluctant to take risk of building more housing.<br><br>➢ The 'Help to buy' scheme is due to finish in 2016 and has limited funds available / so house builders might be reluctant to invest heavily into increasing capacity.<br><br>➢ Consideration of stocks of unsold new houses and so supply may be price elastic in short run / especially if recovery is slow.<br><br>➢ Consideration of regional differences in price elasticity of supply of housing.<br><br>➢ Consideration of different types of properties, for examples, flats and terraced housing, mansions, may have different price elasticity's of supply.<br><br>➢ Consideration of low interest rates and availability of credit for house building firms which could make supply price elastic. | |

| Question Number | Answer | Mark |
|---|---|---|
| *9(d) | **8 KAA marks (3+3+2 or 4+4 or 2+2+2+2 marks)**<br>• Data reference on average house prices in London (£437 000) and one other region such as the North East (£149 000). (**1 mark**).<br><br>• Accept use of a relevant demand and supply diagram with explanation. (**1 mark**)<br><br>• Identification of up to four factors (**1+1+1+1 marks**)<br>➢ Extract 1 refers to London house prices rising rapidly due to purchases from foreign buyers.<br><br>➢ Differences in regional average earnings.<br><br>➢ Differences in regional unemployment rates / employment rates / in-migration.<br><br>➢ Differences in availability of land.<br><br>➢ Accept other factors, e.g. differences in wealth / immigration / cultural attractions.<br><br>• Development of up to four factors<br>➢ Investment purposes of wealthy overseas buyers of property (and non-domiciles) in London which is regarded as relatively safe / spread their assets so less risk / immigration reason. **(1+1+1 marks)**<br><br>➢ Higher regional earnings mean people can afford to pay more for housing / so higher demand will push up average price / lower average earnings in some regions – so lower demand will mean lower average house price / housing is a normal good. (**1+1+1 marks**)<br><br>➢ Lower regional unemployment rates may lead to higher regional house prices / due to stronger demand in the housing markets; the opposite occurs in regions with higher unemployment rates. (**1+1+1 marks**)<br><br>➢ Availability of land in some regions is less than others where supply very limited average house prices will be higher / an explanation of green belt restrictions in London and South east. Also accept view of more availability of land in some regions. (**1+1+1 marks**) | **(14)** |

| | | |
|---|---|---|
| | **Evaluation (2+2+2 or 3+3 marks)**<br>• Prioritise between the reasons offered, e.g. differences in the cost of land might be the major cause.<br><br>• Regional average earnings may not account for the differences in house prices. The disparities in regional earnings are significantly less than regional house prices / use figures (e.g. London to North East ratio of average earnings is 1.5 to 1; / but the ratio of average house prices is 2.9 to 1).<br><br>• Unemployment rates do not appear a significant determinant of regional house price differences / London's unemployment rate is above the national average.<br><br>• Time factor – the major house building programme for south-east may reduce regional differences in house prices / ripple effect occurs where house prices will tend to increase outwards from London over time to the rest of the UK.<br><br>• Discussion of magnitude of the house price differentials / could be a combination of factors to justify the disparities.<br><br>• Geographical element could be involved. The further the region is from London the lower average house prices / this suggests access to London is major determinant of regional house price differentials.<br><br>• Discussion of variations in house prices within regions that might be greater than differences between regions.<br><br>• Quality of transport links influence the ability of people to commute to work across regions and impact on house prices.<br><br>• Data issues: more information required for example, regional wealth holdings / household earnings may be more appropriate than individual earnings / intra-regional migration.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>To present an argument and conclude on the basis of that argument.<br>To organise information clearly and coherently.<br>To use economics vocabulary appropriately.<br>To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| *9(e) | **8 KAA marks (2+2+2+2 or 2+2+2+1+1 or 3+3+2)**<br><br>**Case for reducing carbon emissions from new-build homes include:**<br><br>• Data reference: for example more than 40% of carbon emissions in developed world are from buildings / cutting building emissions by 25% has same effect as removing cars from the roads so can make a big contribution to reducing pollution. (**1 mark**)<br><br>• To promote sustainable development or growth in use of renewable energy / improve quality of life and general environment. (**1+1 marks**)<br><br>• To comply with government regulations or meet EU targets / this may reduce government expenditure on issues surrounding climate change in the long term. (**1+1 mark**)<br><br>• To reduce market failure or external costs or benefits / definition of either concept / with suitable examples. (**1+1 marks**)<br><br>Diagram (**up to 2 marks**)<br>➢ Original market and social optimum equilibrium positions correctly labelled. (**1 mark**).<br>➢ Shift of MSC curve downwards or MPC curve upwards. (**1 mark**)<br>➢ Written explanation of diagram e.g. reducing carbon emissions means the social optimum position can be reached or moved towards in the market. (**1 mark**) | **(14)** |




- **Note: Be prepared to award for an alternative approach which offers a positive externality diagram, referring to reduced use of fossil fuels and greater sustainability (up to 3 marks).**

- Lower gas and electricity bills: the extract refers to the initial costs of reducing carbon emissions being paid for within 5 years / with development. (**1+1 marks**)

- Increase in value of property / development of this point e.g. better energy efficiency rating could make it easier to resell property. (**1+1 marks**)

- Employment creation in renewable energy sector / for example, triple glazing of windows, efficient energy boilers or solar heating. (**1+1 marks**)

**Evaluation 6 marks (2+2+2 or 3+3 marks)**

- Initial costs of energy efficiency schemes are high / so many households might not be able to afford to implement / discussion of who pays for energy efficiency schemes for social housing.

- House builders may pass on extra costs to buyers in the form of higher prices / depends on price elasticity of demand / house builders costs may increase and profits fall.

| | | |
|---|---|---|
| | • Energy efficiency schemes may require government subsidies to be effective / implications for government borrowing and taxation.<br><br>• The scheme should be regarded as just one of many schemes required to tackle global warming and its associated problems / prioritisation.<br><br>• Difficult to measure the reduction in carbon emissions and external costs of the scheme / the level of success is difficult to work out / asymmetric information.<br><br>• The scheme is likely to have little impact unless other countries undertake similar measures to reduce carbon emissions for example China.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(a) | **4 KAA marks**<br>• Explanation of positive statement: factual statement / can be tested as true or false / based on scientific or objective approach to the subject. (**1 mark**)<br>• Data reference to the title of Extract 1: a positive statement since possible to test whether London Crossrail is Europe's largest infrastructure project (**1 mark**).<br>• Explanation of normative statement: value judgement / cannot be tested as true or false / based on a non-scientific or subjective approach to the subject. (**1 mark**)<br>**NB do not accept use of term 'opinion'.**<br>• Data reference to title of Extract 2: a normative statement since it refers to the term 'unfair'. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| 10(b) | **6KAA marks**<br>• Definition of occupational mobility of labour (the ability of labour to switch from one occupation / job to another occupation / job in order to take available work). (**1 mark**)<br><br>**NB:** accept correct definition of occupational immobility of labour as an alternative approach.<br><br>• Example of a worker changing occupations, for example, a plumber becoming an electrician. (**1 mark**)<br><br>• Training reduces structural unemployment. (**1 mark**)<br><br>Training programmes are likely to increase the occupational mobility of labour since:<br><br>➢ An increase in skills or qualifications or human capital / so labour become more employable. (**1+1 marks**)<br><br>➢ The programmes can target areas where there are skills gaps / for example, tunnelling, where only 700 workers recruited to fill 1200 jobs in 2009 / many are set to retire in near future as the average age of these workers is 55 years. (**1+1 marks**)<br><br>➢ Reference to other training programmes, for example, the government New Deal for the long term unemployed / analysis of the success of such programmes, for example, reducing unemployment among young people. (**1+1 marks**)<br><br>➢ Training programmes enable workers to take jobs on other infrastructure projects such as HS2. (**1 mark**)<br><br>**Accept discussion of training programmes not being effective in increasing the occupational mobility of labour:**<br><br>➢ Financial costs of training programmes mean private sector firms or workers unable to fund them. (**1 mark**) | **(6)** |

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| | ➢ Quality of training programmes varies / schemes have been criticised for not offering relevant skills. (**1+1 marks**)<br><br>➢ Time lag: it may take several years for workers to be trained in suitable skills such as plumbers and electricians. (**1 mark**)<br><br>➢ Trained workers may emigrate to take employment overseas. (**1 mark**)<br><br>➢ Concern over the specific nature of tunnelling skills which may not be easily transferrable to other occupations. (**1 mark**)<br><br>➢ Concern raised by boss of Crossrail over the availability of future projects as government spending on investment projects fell by 50% in the first Quarter of 2013. (**1 mark**) | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(c) | **6 KAA marks**<br>**Candidates can argue either way: award the most effective explanation up to 6 marks (KAA) and the alternative view up to 4 marks (Evaluation).**<br><br>• Definition of geographical mobility of labour (the ability of labour to move from one area to another area in order to take available work). (**1 mark**)<br><br>**NB:** accept correct definition of geographical immobility of labour as an alternative approach.<br><br>• Example of geographical mobility of labour. (**1 mark**)<br><br>• Data reference: for example, 200 million passenger journeys per year on Crossrail / each train is 200 metres long and can carry 1500 passengers / 73 miles length (**1 mark**)<br><br>Crossrail is likely to increase geographical mobility of labour since:<br>➢ Time factors / development of this. (**1+1 marks**)<br><br>➢ Distance factors / development of this point (**1+1 marks**)<br><br>➢ Capacity factors / development of this point (**1+1 marks**)<br><br>➢ Reduce congestion on other forms of transport / further development such as road network and other rail lines. (**1+1 marks**)<br><br>**Evaluation (up to 2+2 or 1+3 or 1+1+2 marks)**<br>Geographical mobility of labour may not increase by much since:<br><br>➢ London's population is growing / so future demand for transport may exceed supply leading to over-crowding.<br><br>➢ During construction the geographical mobility of labour might be reduced due to closure of rail stations and other delays from the building work. | **(10)** |

| | | |
|---|---|---|
| | ➢ Another 3 years before Crossrail is completed so little impact in short term.<br><br>➢ It is likely to be expensive to travel on Crossrail / to pay for the high cost of building it / so many people may not be able to afford to use it.<br><br>➢ Increased property prices along the route may make it more expensive to live along it.<br><br>➢ It may not improve geographical mobility of labour for other parts of London e.g. north to south as implied by proposals for Crossrail 2 proposals / other regions of UK or overseas not affected as commute is too long.<br><br>➢ Other factors affect geographical mobility of labour, for example, family ties and job market information. | |

| Question Number | Answer | Mark |
|---|---|---|
| *10(d) | **8 KAA marks (3+3+2 or 4+4 or 2+2+2+2 marks)**<br>Demand factors include:<br><br>• Price of Crossrail tickets - might be relatively cheaper or more expensive than other forms of travel / consideration of price elasticity of demand. (**up to 4 marks**)<br><br>• Price or availability of substitutes / private motor vehicles are expensive and problems of parking / problems of congestion and long time period to travel / cycling in London is extremely dangerous / XED .(**up to 4 marks**)<br><br>• Price of complementary goods with suitable development, for example, car parking or bicycle facilities at rail stations / development XED. (**up to 4 marks**)<br><br>• Population growth in London / could be due to continued immigration. (**up to 4 marks**)<br><br>• Extract 1 refers to the trend for companies to move back into London reversing a 20 year trend / increase in investment flows including from overseas. (**up to 4 marks**)<br><br>• Growth in real incomes / development with YED / means more employment opportunities. (**up to 4 marks**)<br><br>• Government economic policies such as low income and corporation taxes / attract labour flows and capital flows e.g. from France. (**up to 4 marks**)<br><br>• Trends in fashion and tastes / London is a global city with various cultural attractions. (**up to 4 marks**)<br><br>• Quality / Convenience or reduction in travelling times / some 38 railway stations / links with hub rail and tube stations e.g. Paddington. (**up to 4 marks**)<br><br>• Marketing of Crossrail / increase in advertising could improve customer knowledge / generate some brand loyalty. (**up to 4 marks**) | **(14)** |

**6 Evaluation marks (2+2+2 or 3+3 or 1+1+1+1+2)**

- Counterarguments to KAA points / qualification of their significance.
- Population growth may slow down especially if tighter immigration controls imposed by government / possible exit from EU.
- Economic development and growth could slow down / may be another recession / which reduces business confidence and investment.
- Price of Crossrail is likely to be very expensive in order to repay the high levels of government expenditure on project.
- Prioritisation of determinants of demand.
- Short run and long run influences.

The quality of written communication will be assessed in this question based on the candidate's ability:

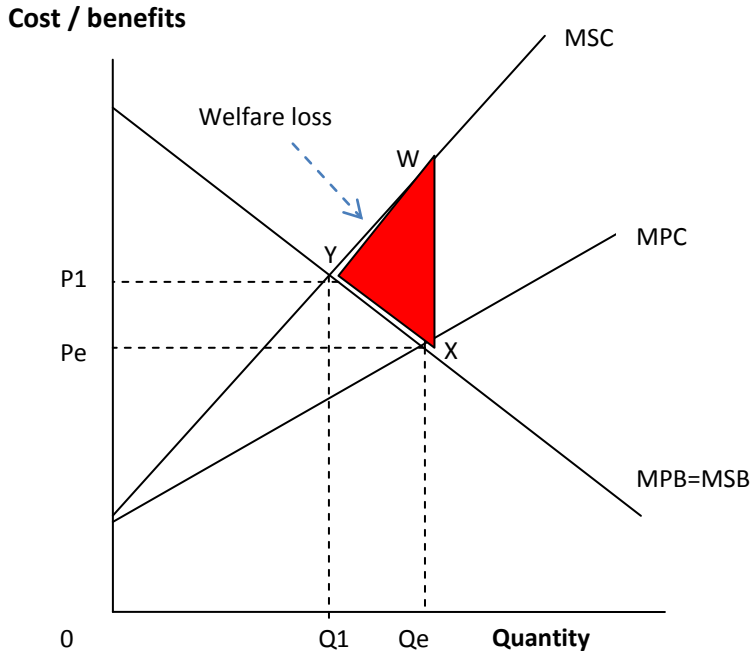
- To present an argument and conclude on the basis of that argument.
- To organise information clearly and coherently.
- To use economics vocabulary appropriately.
- To use grammar, spelling and punctuation appropriately.

| Question Number | Answer | Mark |
|---|---|---|
| *10(e) | **Candidates can argue either way: award the most effective explanation up to 8 marks (KAA) and the alternative view up to 6 marks (Evaluation).**<br><br>**Candidates may refer to other transport projects, for example, HS2 high speed rail link between London and Birmingham or building of a new airport or runway or motorway.**<br><br>• Definition of Government failure (government intervention leads to an inefficient or misallocation of resources / welfare loss). (**1 mark**)<br><br>**Government failure may result from a major infrastructure project since: (up to 2+2+2+2 or 3+3+2 or 4+4 marks)**<br><br>• **Use of taxpayers money:** Extract 3 identifies use of taxpayers' money of £14.8 billion of money from London businesses / so may lead to higher tax bills / more government borrowing / cuts in government expenditure elsewhere / opportunity cost associated with project / unfair for taxpayers who do not use Crossrail.<br><br>• **Government spending on infrastructure projects uncertain:** Extract 2 refers to a 50% cut in government spending on infrastructure projects in the first quarter of 2013 / this creates uncertainty over future employment for specialist workers leading to structural unemployment and loss of skills / firms might reduce investment into workforce and capital.<br><br>• **Impact on property prices:** Extract 3 identifies that domestic and commercial property values along the Crossrail route have and are set to increase. These property owners gain far more than they are set to pay in taxes. This appears unfair for those taxpayers further away from the route / compensation may not be available for some households near to the route.<br><br>• **Negative externalities**: these might arise from major infrastructure projects / impact on property prices very close by / increase in pollution / impact on wildlife / noise and air pollution / increase in congestion in London over the long term. | **(14)** |

**Note: award for negative externality diagram (up to 2 marks)**

Diagram (**up to 2 marks**)

- Original market and social optimum equilibrium quantities and price positions correctly labelled. (**1 mark**).
- Welfare loss area identified (**1 mark**)




- **Increase regional inequality:** the benefits are mainly for London and the south east and so may increase regional inequality / resources could be better to develop alternative infrastructure projects benefitting the whole UK or weaker regions.

- **Accuracy of estimates and forecasts**: construction costs may greatly exceed the original forecast costs / demand for Crossrail services may not reach the estimated number of users / problem estimating costs and benefits over the long term.

- **Best to leave the whole project to the private sector** to see whether viable / private sector managers more efficient than government managers.

**Government failure may not occur since: (up to 2+2+2+2 or 3+3+2 or 4+4 marks)**

- Improved transport infrastructure could lead to more inward investment / job creation rising incomes in long term (accept macro-economic arguments such as use of multiplier effects).

- Commercial property along route (and other properties such as residential) increase in value is a benefit to the owners not a failure of government.

- The project is being run by private sector managers and work done by private sector firms – so not really a government failure / the project may never occur if left to private sector as the risk and time span of benefits is over a very long time period / so government intervention is to correct a market failure.

- Extract 2 indicates that other regions have directly benefited from the Crossrail project in terms of company orders and job creation.

- Accuracy of estimates: always an issue for projects which take a long time to build but benefits include reduction in congestion and faster journey times.

- The contract with builders may mean any cost over-runs is paid by them rather than the government and tax payers.

The quality of written communication will be assessed in this question based on the candidate's ability:

- To present an argument and conclude on the basis of that argument.
- To organise information clearly and coherently.
- To use economics vocabulary appropriately.
- To use grammar, spelling and punctuation appropriately.

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| Surname | Other names |
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| Centre Number | Candidate Number |
|---|---|
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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Tuesday 13 May 2014 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** Opportunity cost arises because

**(1)**

**A** the price mechanism may lead to a misallocation of resources

**B** resources are scarce

**C** the supply of goods and services is infinite

**D** supply may exceed demand

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 1 = 4 marks)**



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**2** The most likely consequence of an increase in the division of labour in the construction of new houses is an increase in

**(1)**

**A** output per unit of labour

**B** the price of houses

**C** the production cost of each house

**D** the range of skills required by each worker

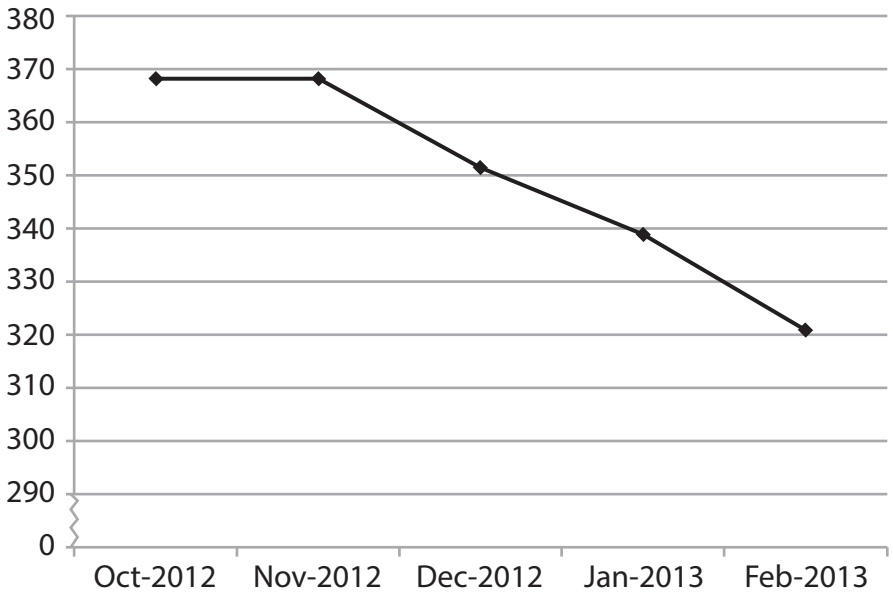
**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 2 = 4 marks)**

**3** The price of black tea, US cents per kilogram




(Source: © IMF)

The graph shows the price of tea between October 2012 and February 2013.
(You may use a demand and supply diagram in your answer.)

A possible cause of this fall in the price of tea is

**(1)**

**A** an increase in the wages of tea growers

**B** an increase in the price of coffee

**C** a larger tea harvest than expected

**D** a decrease in the price of sugar

**Answer** ☐



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**Explanation**

**(3)**

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

**4** A negative cross elasticity of demand may be expected for which of the following pair of goods?

**(1)**

**A** Motor vehicles and rail travel

**B** Bus transport and potatoes

**C** Motor vehicles and petrol

**D** Bus transport and taxi services

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 4 = 4 marks)**



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**5** Estimates of income elasticity of demand for selected food items in Cyprus and the Maldives.

| Product | Cyprus | Maldives |
|---|---|---|
| Cereals e.g. rice | –0.12 | 0.50 |
| Fish | 0.37 | 0.64 |
| Oils and fats | 0.00 | 0.52 |

(Source: http://www.ers.usda.gov/Data/InternationalFoodDemand)

It may be deduced from the data in the table that

**(1)**

**A** the demand for fish is income inelastic in both countries

**B** the demand for oils and fats is perfectly income elastic in Cyprus

**C** cereals are a normal good in Cyprus but an inferior good in the Maldives

**D** the demand for oils and fats is more responsive than the demand for fish to a change in income in the Maldives

**Answer** ☐

**Explanation**

**(3)**

**(Total for Question 5 = 4 marks)**

**6** Market research estimates that a 100% increase in the price of coffee in Uganda leads to a 33% increase in the quantity supplied. This information suggests the supply of coffee in Uganda is

**(1)**

**A** income inelastic

**B** price elastic

**C** unit elastic

**D** price inelastic

**Answer** ☐

**Explanation**

**(3)**

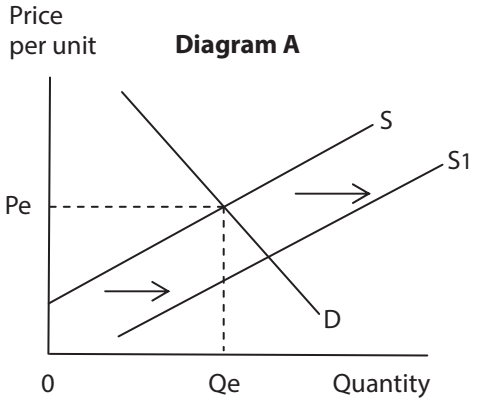
**(Total for Question 6 = 4 marks)**

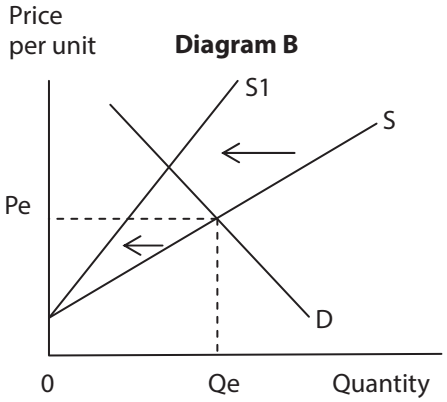


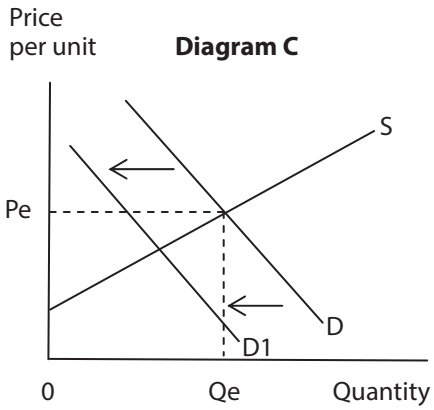
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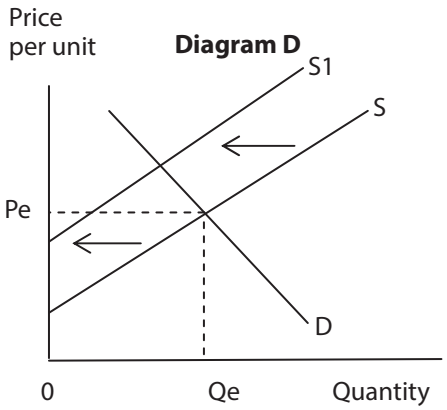
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**Turn over for Question 7**

**7**




In September 2012 the Spanish Government increased the sales tax (VAT) on goods such as clothing to 21%. Which of the diagrams, labelled **A**, **B**, **C** and **D**, best illustrates the effects of the increase in sales tax? (You may annotate the relevant diagram in your answer.)

**Answer**

**(1)**



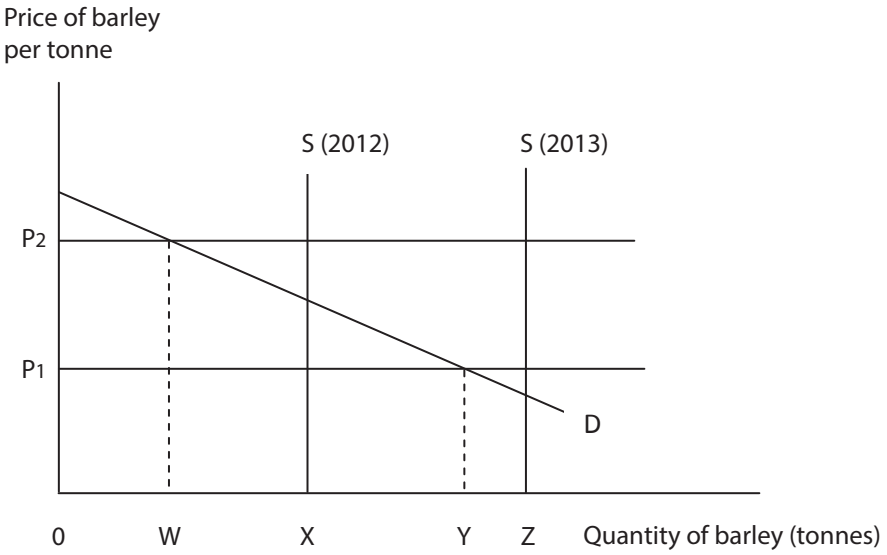
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**Explanation**

**(3)**

**(Total for Question 7 = 4 marks)**

**8**




The diagram shows the operation of a buffer stock scheme in the barley market where a government agency intervenes to ensure the price remains between P1 and P2. (You may annotate the diagram in your answer.)

The 2013 harvest led to

**(1)**

**A** an excess demand for barley

**B** the government agency selling barley from its stockpile

**C** price increasing to $P_2$

**D** the government agency buying barley and adding to its stockpile

**Answer** ☐



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**Explanation**

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

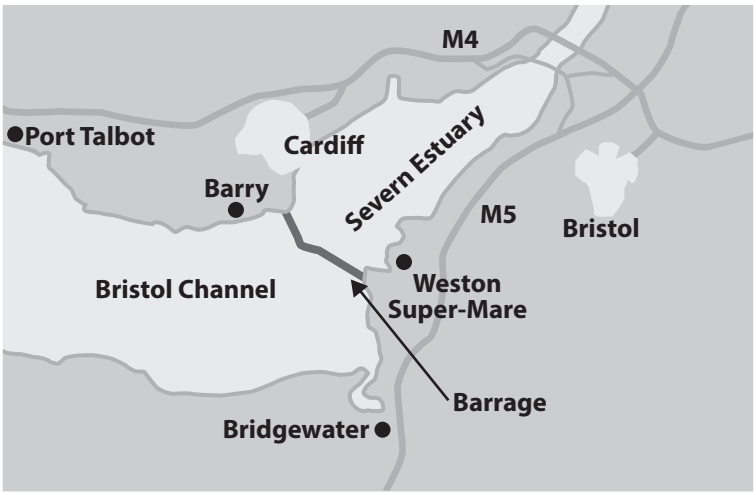
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 26.**

**You should spend 55 minutes on this section.**

**9 Proposals for a tidal barrage in the Severn Estuary**

**Figure 1 The proposed tidal barrage between Cardiff and Weston-Super-Mare**




(Source: © Crown copyright 2002)

**Figure 2 The proposed Severn Barrage**





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**Extract 1 Benefits and costs of the tidal barrage**

Plans for an 11 mile tidal power barrage across the Severn Estuary have been proposed by private consortium Corlan Hafren. The scheme would generate around 5% of the UK's electricity needs and be funded by overseas investors. No UK government subsidy would be involved in funding the huge £34 billion cost of the scheme. However, consumers will be expected to pay higher prices for the electricity generated from this renewable energy source (to cover increased production costs) compared to non-renewable energy supplies such as gas and coal.

The Severn Estuary has the world's second largest tidal range of almost 14 metres. Harnessing this energy would make a significant contribution to the government's target of generating 20% of the nation's energy from renewable sources by 2020. A tidal barrage, once complete, is carbon neutral. It would help diversify the UK's energy supply and operate for at least 120 years. This compares favourably with the lifespan of nuclear power plants (35 years) and wind turbines (25 years). These forms of renewable energy receive substantial government subsidies and planning restrictions are relaxed to promote their development.

More than 30 000 local jobs would be created from the scheme. This includes constructing road and rail links on top of the barrage to improve the transport infrastructure in the region. A factory to build the 200 giant turbines required for the tidal barrage and a deep water dock facility is also planned in Port Talbot.

The tidal barrage would also help reduce flooding along the river Severn floodplain. In 2007 severe flooding in the area led to £3.2 billion of damage.

However, the tidal barrage will have a significant impact on wildlife and their habitats. The Royal Society for the Protection of Birds believes that the barrage would destroy huge areas of estuary marsh and mudflats used by 70 000 birds. It would also block the migration routes of fish including wild salmon. Corlan Hafren intends to reduce the negative effects by building turbines which rotate at slow speed to minimise damage to sea life.

(Source for Figure 2 and Extract 1: Adapted from 'UK Government considering new multi-billion plan for barrage across Severn Estuary, Western Mail, 7th December 2011)

(a) Explain **two** likely reasons why the UK government has a target of 'generating 20% of the nation's energy from renewable sources by 2020' (Extract 1, line 10).

**(6)**

(b) Explain how 'funding the huge £34 billion cost of the scheme' could proceed without a UK government subsidy (Extract 1, lines 4 and 5).

**(4)**

(c) Examine the possible impact on the production possibility frontier for the UK economy if the Severn Estuary tidal barrage is constructed. Illustrate your answer with an appropriate diagram.

**(10)**

*(d) Discuss factors which might influence the supply of labour for constructing the tidal barrage scheme.

**(14)**

*(e) Evaluate **two** measures, other than supporting the Severn Estuary tidal barrage, by which the Government could promote the generation of renewable energy.

**(14)**

(a) Explain **two** likely reasons why the UK government has a target of 'generating 20% of the nation's energy from renewable sources by 2020' (Extract 1, line 10).

**(6)**



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(b) Explain how 'funding the huge £34 billion cost of the scheme' could proceed without a UK government subsidy (Extract 1, lines 4 and 5).

**(4)**

(c) Examine the possible impact on the production possibility frontier for the UK economy if the Severn Estuary tidal barrage is constructed. Illustrate your answer with an appropriate diagram.

**(10)**



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* (d) Discuss factors which might influence the supply of labour for constructing the tidal barrage scheme.

**(14)**



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*(e) Evaluate **two** measures, other than supporting the Severn Estuary tidal barrage, by which the Government could promote the generation of renewable energy.

**(14)**

**(Total for Question 9 = 48 marks)**

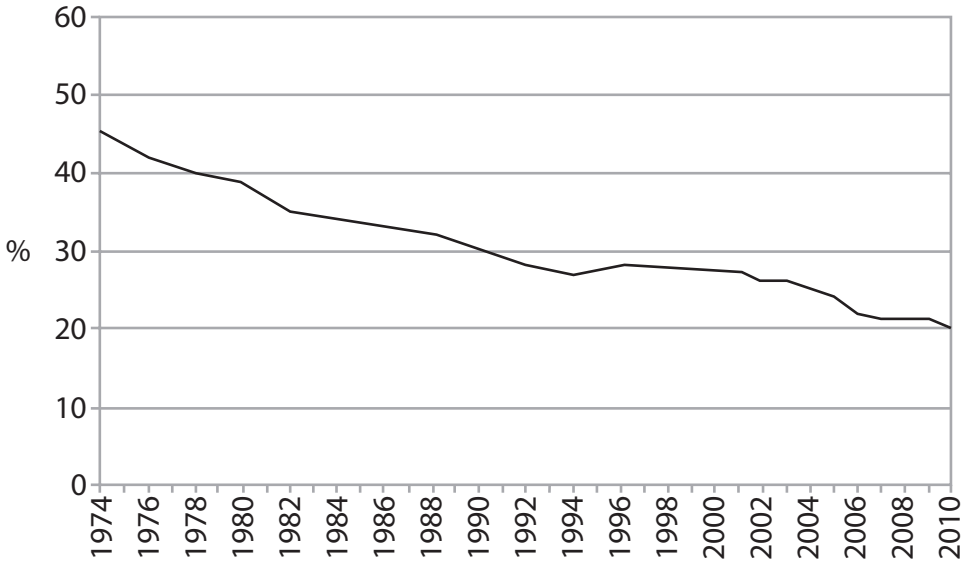


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**If you answer Question 10 put a cross in this box ☒ .**

**10 Tobacco consumption in Britain**

**Figure 1 Percentage of adults in Great Britain who smoke cigarettes, 1974–2010**




(Source: © Crown copyright)

**Figure 2 The estimated costs of tobacco smoking in Britain**

| Type of cost | £ billion per year |
|---|---|
| National Health Service | 2.7 |
| Loss of productivity from smoking breaks at work | 2.9 |
| Staff absence from work owing to tobacco-related illnesses | 2.5 |
| Cleaning up tobacco litter | 0.3 |
| House fires from tobacco smoking | 0.5 |
| Loss of output from early death of smokers | 4.1 |
| Loss of output from early death of passive smokers | 0.7 |
| Total | 13.7 |

(Source: © ASH)



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**Extract 1 The decline of tobacco smoking in Britain**

Tobacco smoking has fallen over the past fifty years following government health campaigns warning people of its dangers and greater regulations on its sale and consumption. Higher taxes on cigarettes have also contributed to the decline in smoking. The tax on tobacco now accounts for 80% of the £7.45 price paid for a premium packet of cigarettes.

The leading anti-smoking pressure group ASH, believes it will take a further fifty years to eliminate smoking in Britain. ASH claims that up to two-thirds of lifelong smokers are eventually killed by their habit.

(Source: © ASH)

**Extract 2 Tobacco taxation**

In the 2012 Budget the Chancellor George Osborne increased the tax on tobacco by 5 percentage points above the rate of inflation (known as the tobacco tax escalator). This added 37 pence to the price of a packet of cigarettes. The government received £12.1 billion in revenue from indirect taxes on tobacco in 2012.

Despite price increases on tobacco contributing to a fall in its demand, total expenditure has risen (including the tax receipts). For example, consumer expenditure on tobacco increased from £15.1 billion in 2010 to £15.3 billion in 2011.

Tobacco consumption among 11–15-year-old children has not changed over the past five years with 5% being regular smokers. Tobacco smoking also remains much higher for low income workers in manual occupations (29%) compared to higher income workers in professional and managerial occupations (13%).

There has also been a significant switch in tobacco sales, from high quality, expensive brands to low quality and cheap cigarettes. The latter now account for 30% of the British market.

(Source: © ASH)

**Extract 3 Tobacco smuggling and government regulations**

Around 20% of all tobacco smoked in the UK is smuggled into the country and the government loses more than £2 billion a year in potential tax revenue. High tobacco taxes are blamed for creating the illegal trade. The trade is dominated by criminal gangs who can import into the country more than 10 million cigarettes in just one lorry container load.

However, some of the highest levels of smuggling were found in Spain and Italy, two countries with the lowest tax rates on tobacco.

There has also been an increase in the manufacture of counterfeit tobacco products. Many counterfeit cigarettes are hard to distinguish from genuine brands and often consist of even more harmful chemical compounds. Government plans to force tobacco companies to use plain packaging may make it easier to produce counterfeit cigarettes.

A government smoking ban imposed on enclosed public spaces since 2007 has coincided with more than 1 500 pubs and bars closing down each year.

(Source: © ASH)

(a) With reference to the information provided, explain **two** possible causes of the decrease in tobacco smoking.

**(4)**

(b) Outline the likely impact on consumer surplus and producer surplus in the tobacco market of a decrease in demand for tobacco. Illustrate your answer with a supply and demand diagram.

**(6)**

(c) Using the information in Extract 2 and your own knowledge, discuss whether the demand for tobacco products is likely to be price inelastic or price elastic.

**(10)**

*(d) With reference to the information provided and your own knowledge, discuss the likely benefits to consumers and the government of a decrease in tobacco smoking.

**(14)**

*(e) With reference to the information provided and your own knowledge, to what extent might regulations on the sale of cigarettes and high taxes on tobacco result in government failure?

**(14)**



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(a) With reference to the information provided, explain **two** possible causes of the decrease in tobacco smoking.

**(4)**

(b) Outline the likely impact on consumer surplus and producer surplus in the tobacco market of a decrease in demand for tobacco. Illustrate your answer with a supply and demand diagram.

**(6)**



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(c) Using the information in Extract 2 and your own knowledge, discuss whether the demand for tobacco products is likely to be price inelastic or price elastic.

**(10)**

*(d) With reference to the information provided and your own knowledge, discuss the likely benefits to consumers and the government of a decrease in tobacco smoking.

**(14)**


P 4 3 3 0 4 A 0 3 4 4 0

*(e) With reference to the information provided and your own knowledge, to what extent might regulations on the sale of cigarettes and high taxes on tobacco result in government failure?

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**



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# Mark Scheme (Results)

## Summer 2014

## Pearson Edexcel GCE
## in Economics (6EC01) Paper 01

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## General Marking Guidance

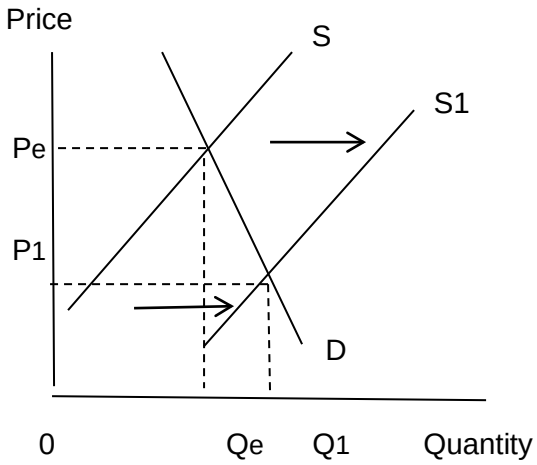
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

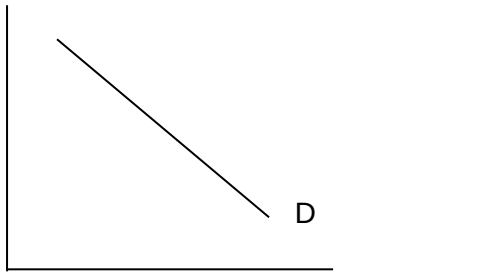
**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

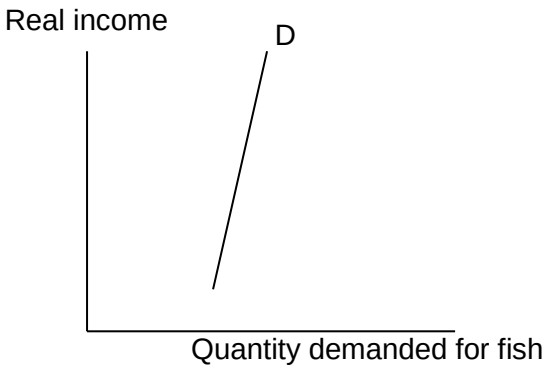
**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| **Q1** | **Correct option B (1 mark)**<br>• Definition of opportunity cost (the value of the next best alternative foregone) (**1 mark**)<br>• Definition of scarcity (resources are limited or finite in supply and so cannot meet all human wants)<br>**NB: need reference to wants or needs here to award** (**1 mark**)<br>• Definition of resources (for example, labour, land, capital and enterprise used in production of goods and services) (**1 mark**)<br><br>**NB: award for a maximum of 2 definition marks.**<br><br>• Example of scarce resources (for example, fossil fuels are finite in supply) (**1 mark**)<br>• Application of opportunity cost (for example, a producer or consumer may have to choose between two different products / government may have to choose between a new hospital or a new school) (this may be shown by diagrammatic analysis: movement along the production possibility frontier / revealing the gain in one good and loss of the other good) (**1+1 marks**)<br><br>**Rejection marks**<br>• Option A incorrect since this is a definition of market failure – not an explanation of why resources are scarce. (**1 mark**)<br><br>• Option C incorrect since resources are finite compared to human wants / or finite resources result in the basic economic problem. (**1 mark**) **NB: do not double award with regards to the definition of scarcity.**<br><br>• Option D incorrect since supply exceeding demand is due to price being too high / the resources used in supply are scarce. (**1 mark**) | **(4)** |

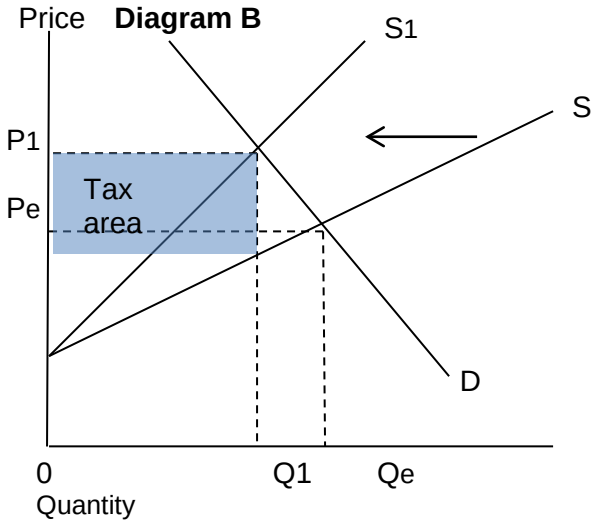
| Question Number | Answer | Mark |
|---|---|---|
| **Q2** | **Correct option A** (**1 mark**)<br>• Definition of division of labour (for example, production of a good is broken down into different tasks and labour allocated to each task). (**1 mark**)<br>• Application to building a house ( for example, painter and decorators, bricklayers, plumbers, electricians, roof tilers)(**1 mark**)<br>• Reason(s) for an increase in output per unit of labour/productivity: workers becoming more skilled in particular tasks through repetition / more efficient use of equipment / less time wasted moving from one job to another different job / less time taken for workers to get trained on a particular job or lower training costs). (**1+1 marks**)<br>• Award a demand and supply diagram depicting an increase in supply and lower price / or a written explanation to this effect. (**1 mark**)<br><br>**Rejection marks**<br>• Option B incorrect since prices are more likely to fall since cost of building each house has fallen. (**1 mark**)<br><br>• Option C incorrect since the cost of producing each house should fall as labour productivity increases. **NB: do not double award if diagram mark already given.** (**1 mark)**<br><br>• Option D incorrect since each worker will concentrate on a narrow range of skills such as a bricklayer, rather than other skills involved with tiling and plumbing (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q3** | **Correct option C** (**1 mark**)<br>• Explicit reference to the price data, for example, price fell from 368 cents to 321 cents per kilo. (**1 mark**)<br>• Diagram depicting an increase in supply / decrease in price (**1+1 marks**) **OR** written explanation to this effect (**1 mark**).<br>  <br><br>**Rejection marks**<br>• Options A incorrect since an increase in wages of tea growers would increase production costs and so lead to a decrease in the supply of tea or raise price. (**1 mark**)<br>• Option B incorrect since tea and coffee are substitutes. An increase in the price of coffee should cause the demand for tea to increase – so raising its price. (**1 mark**)<br>• Option D incorrect since sugar and tea are complementary goods. A decrease in price of sugar is likely to cause an increase in demand for tea, so raising its price / accept idea of little or no effect on the price of tea. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q4** | **Correct answer option C (1 mark)**<br>• Definition of cross elasticity of demand or correct formula (the responsiveness in demand for good B due to a change in price of good A, or, %ΔQD good B ÷ %ΔP good A). (**1 mark**)<br>• Goods which have a negative XED are complementary goods / joint demand. (**1 mark**)<br>• Substitutes have a positive XED. (**1 mark**)<br>• Application: an increase in the price of motor vehicles is likely to cause a decrease in demand for petrol (accept vice-versa) (**1 mark**)<br>• Correct diagram depicting a negative XED. (**1 mark**)<br><br>Price of Motor vehicles<br>  <br><br>Quantity demanded for petrol<br><br>**Rejection marks**<br>• Option A incorrect since motor vehicles and rail travel are **substitutes with a positive XED** or, Option D incorrect since bus transport and taxis are **substitutes with a positive XED**.<br>NB: need both substitutes and positive XED to award (**1 mark**)<br><br>• Option B incorrect since bus transport and potatoes have no relationship between them / have an XED value of zero / are likely to be inferior goods with a negative income elasticity of demand. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q5** | **Correct option A (1 mark)**<br>• Definition of income elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in income, or, %ΔQD ÷ %ΔY). (**1 mark**)<br>• The demand for fish is income inelastic in both countries since their values are between 0 and 1 or less than 1, or, definition of income inelastic demand (the percentage change in demand is less than the percentage change in income) / demand for fish is more inelastic in Cyprus than Maldives. (**1 mark**)<br>• Application: e.g. a 1% rise in income causes a 0.37% rise in demand for fish in Cyprus and a 0.64% fish in demand for fish in the Maldives**.** (**1 mark**)<br>**NB: do not award for referring directly to 0.37 and 0.64.**<br><br>• Diagram depicting a positive income elasticity of demand for fish. (**1 mark**)<br><br>  <br><br><br>**Rejection marks**<br>• Option B incorrect since the income elasticity of demand for oils and fats in Cyprus is perfectly income inelastic, or, a change in income causes no change in demand for oils and fats. (**1 mark**)<br><br>• Option C incorrect since cereals are an inferior good in Cyprus or a normal good in the Maldives **(must use the data).** (**1 mark**)<br><br>• Option D incorrect since the income elasticity of demand for oils and fats is 0.52 which is less than the demand for fish which is 0.64 in the Maldives. (**1 mark**) | **(4)** |

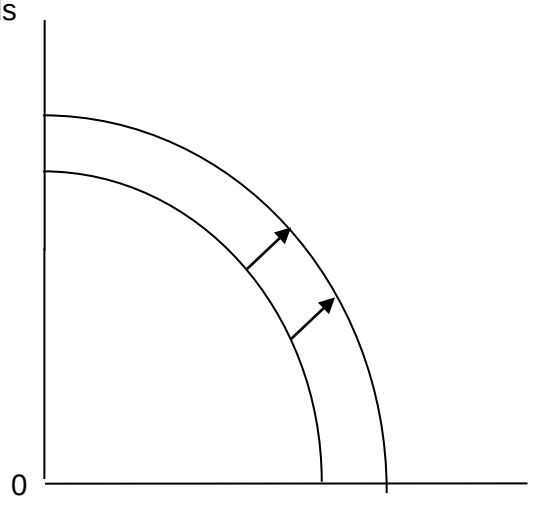
| Question Number | Answer | Mark |
|---|---|---|
| **Q6** | **Correct option D (1 mark)**<br>• Definition or formula for price elasticity of supply (the responsiveness of supply of a good due to a change in its price, or, %ΔQS ÷ &ΔP). (**1 mark**)<br>• Coffee is inelastic since the answer is between 0 and 1 or less than 1 / coffee is inelastic since the percentage change in supply is less than the percentage change in price<br>• Diagram depicting a price inelastic supply curve. (**1 mark**)<br>• Price elasticity of supply of coffee calculation equals 0.33 (**1 mark**)<br>• Explanation of why coffee may be price inelastic supply e.g. long time period to grow or low stock levels. (**1 mark**)<br><br>**Rejection marks**<br>• Option A incorrect since no information on income is provided in the question / rather the information concerns price and supply / the question is not concerned with income elasticity of demand. (**1 mark**)<br><br>• Option B incorrect since price elastic supply would require an answer above 1. (**1 mark**)<br><br>• Option C incorrect since unit price elastic supply means the answer is 1 / where the percentage change in supply is equal to the percentage change in price. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q7** | **Correct option B** (**1 mark**)<br>• Identification that this is an indirect tax / is an ad valorem tax (**1 mark**)<br>• The effect of the tax is to act like an increase in production costs (**1 mark**)<br>• Supply curve pivots inwards / a non-parallel leftward shift in supply curve (**1 mark**)<br>• Annotation of diagram to show an increase in equilibrium price and a fall in output / the tax area. (**1+1 marks**) OR suitable written explanation of supply decreasing and price increasing. (**1 mark**)<br><br>**Diagram B**<br>  <br><br><br>**Rejection marks**<br>• Option A incorrect since an outward shift of the supply curve would be the result of a subsidy. (**1 mark**)<br><br>• Option C incorrect since as a tax imposed on a good adds to the supply price, so shifting the supply curve rather than the demand curve / an increase in income tax would cause the demand curve to shift inwards / other factors which may shift the demand curve inwards. (**1 mark**)<br><br>• Option D incorrect since this is the effect of a specific tax which causes a parallel shift in the supply curve / a specific tax is imposed as a fixed amount per unit of good. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q8** | **Correct option D (1 mark)**<br>• Explanation of buffer stock (for example, an agency buys or adds to its stocks in times of a good harvest **and** sells from its stocks in times of a poor harvest / a scheme to stabilise producer incomes. (**1 mark**)<br>• Identification that without intervention the price will fall below P1 in 2013 (this may be annotated on the diagram). (**1 mark**)<br>• The agency buys YZ. This may be shown by annotation of the diagram but must be labelled or identified in the answer. (**1 mark**)<br>• Identification of the total area spent by agency adding to its stocks (0P1 multiplied by YZ). This may be shown by annotation of the diagram but must be labelled or identified in the answer. (**1 mark**)<br><br>**Rejection marks**<br>• Option A incorrect since there is a good harvest that leads to an excess supply at the lowest target price / the agency would release stock on to the market in times of excess demand. (**1 mark**)<br><br>• Option B incorrect since the agency will buy **YZ** and add to its stockpile / as there is an excess supply / agency will only sell from stockpile when there is a poor harvest. **NB: do not double award if this point already credited.** (**1 mark**)<br><br>• Option C incorrect since for price to increase to P2 there has to be a poor harvest below original output W / there is an excess demand. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **6 KAA marks**<br>• Definition of renewable resources (resources that can be replenished or sustained for future generations) (**1 mark**)<br><br>• Identification of two reasons (**1+1 marks**) and their development (**2+2 or 3+1 marks**).<br>• Reasons include:<br>➢ **To reduce pollution or CO2 emissions**: to meet EU targets (do not award for referring to UK targets as it is in the question) / tidal power is carbon neutral in operation and so environmentally friendly / slows the impact of global warming or climate change / reduce danger of flooding / floods in 2007 led to £3.2 billion of damage / reduce costs of cleaning up after fossil fuels.<br>➢ **To diversify UK energy sources**: the economy becomes less reliant on fossil fuels / less dependent on imports of fossil fuels / long term price of fossil fuels likely to rise as they run out.<br>➢ **To have a sustainable energy source**: tidal power is a constant source of energy / a reliable source of energy / the tidal barrage is expected to last 120 years / it will increase the supply of energy / fossil fuel energy sources are running out.<br>**NB: Accept a mixture of these points.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **4 KAA marks**<br>• Explanation of subsidy (government grant to increase production / reduce production costs). (**1 mark**)<br>• The £34 billion funding of the tidal barrage would come from private investors, for example overseas investors. (**1 mark**)<br>• The costs of the scheme would be passed on to consumers through higher electricity prices. (**1 mark**)<br>• Energy is price inelastic in demand / so total revenue and profits might increase as prices rise. (**1+1 marks**)<br>• Some development offered: the scheme may be profitable over the long time period it operates / low interest rates on savings may make capital projects more attractive / UK government may relax regulations on pricing of electricity. (**1+1+1 marks**)<br>• Award for other possible reasons why project can proceed without funding e.g. tax breaks / local authority support and charity support. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| 9(c) | **6 KAA marks**<br>• Definition of production possibility frontier (e.g. maximum output an economy can achieve when all its resources are fully or efficiently employed). (**1 mark**)<br>• Diagram of a Production possibility frontier depicting an outward shift in the curve / suitable labelling of axes e.g. capital goods versus consumer goods or private goods versus public goods or tidal barrage versus alternatives. (**1+1 marks**)<br><br>• **NB: award a maximum of 4 KAA marks if no appropriate diagram offered**<br><br>• The tidal barrage represents an increase in the capital stock or capital goods or investment / this is likely to increase potential output or economic growth. (**1+1 marks**)<br>• Award for 30 000 jobs created **only** if linked to infrastructure and new factories.<br>• Tidal barrage will provide an energy source to enable future production of goods and services for many years. (**1 mark**)<br>• Tidal barrage may lead to further investment programmes e.g. road and rail links in the region / factory to build turbines and a new dock / multiplier effects. (**1+1 marks**)<br>• The project may attract more domestic or foreign direct investment e.g. funding is likely to be from overseas / this could increase production possibilities further. (**1+1 marks**)<br>• Less flooding risks so production not disrupted as in recent years. (**1 mark**)<br><br>Output Consumer Goods<br>  <br> | **(10)** |

| | | |
|---|---|---|
| | **Evaluation (2+2 or 1+3 or 1+1+2 marks)**<br>• Discussion of impact on fishing and tourist industries and how their output might be affected.<br>• Discussion of magnitude of project; just 5% of UK energy needs so may not have massive impact / discussion of the significance of 30 000 jobs created to the local or national economy.<br>• Accept idea of an opportunity cost to the tidal barrage / this may be referred to in a movement along the PPF curve.<br>• Unemployed resources may be used up and so increasing output closer to its production possibility potential rather than cause a shift the curve outwards / so that it is closer to full employment level of output.<br>• Discussion of time period: it may take many years to build / but the impact is likely to be over 120 years / many of the 30 000 jobs created may be short term.<br>• Discussion of funding: the overseas funding suggests income stream from the project will go abroad / accept macro arguments on impact on trade balance.<br>• Discussion that there might be no change to the production possibility frontier since renewable energy is just replacing non-renewable energy power stations.<br>• Tidal barrage may be unproven technology. | |

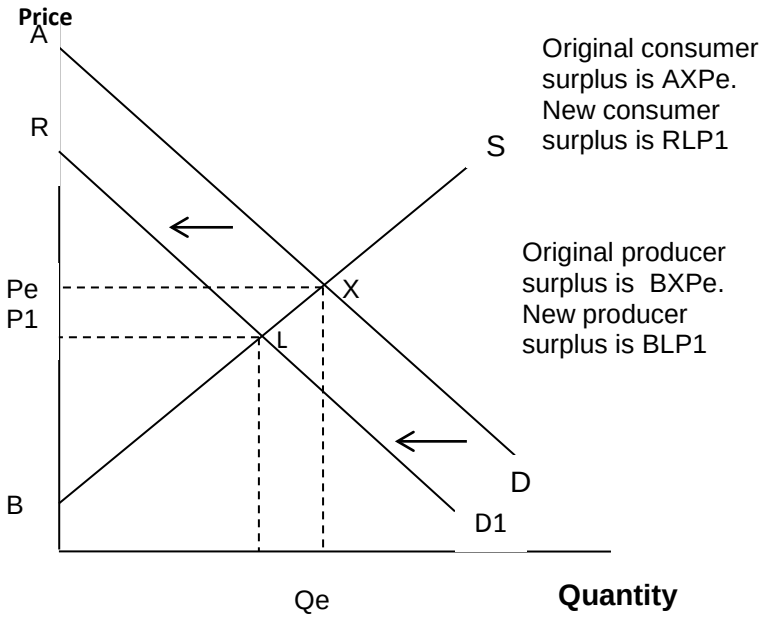
| Question Number | Answer | Mark |
|---|---|---|
| 9(d) | **8 KAA marks (2+2+2+2 or 3+3+2)**<br>Factors influencing the supply of labour include:<br>• Definition of supply of labour (quantity or quality of labour supplied at a given wage rate)<br>• Diagram of either a movement along a supply curve for labour (which must be explained) or a shift in the supply curve for labour.<br>• The wage rate or earnings: as the wage rate rises then so too will the supply of labour / since greater financial incentive to work longer hours.<br>• Net advantages in construction of the tidal barrage: these may include bonuses / possible dangerous working conditions / sick pay and paid holidays / job satisfaction job security.<br>• The level of training, qualifications, skills or work experience required: the high level of qualifications and skills on building turbines may limit the supply of labour.<br>• Income tax or National Insurance Contributions: the lower the rate of income tax then the greater the disposable income / the greater the incentive to work or supply of labour.<br>• Government social security benefits: cuts in the Job seekers' Allowance and Housing Benefits / may increase incentive to work or supply of labour / especially for low skilled areas of construction work.<br>• Reference to the National Minimum Wage: an increase in NMW may raise incentive to work / so more supply of labour<br>• The raising of school leaving age or retirement age: it may increase supply of labour for the project.<br>• Net migration inflows to UK / membership of the Single European Market has increased net migration flow of labour to UK.<br>• Trade Unions may affect rate of pay or other working conditions / e.g. more job security or safety at work.<br>• Accept factors which may affect the regional or local supply of labour e.g. local house rental prices / local facilities such as public transport.<br>• General state of labour market or economy / high unemployment may lead to greater supply of labour for tidal barrage project. Demographic factors e.g. population increase / increase in retirement age. | **(14)** |

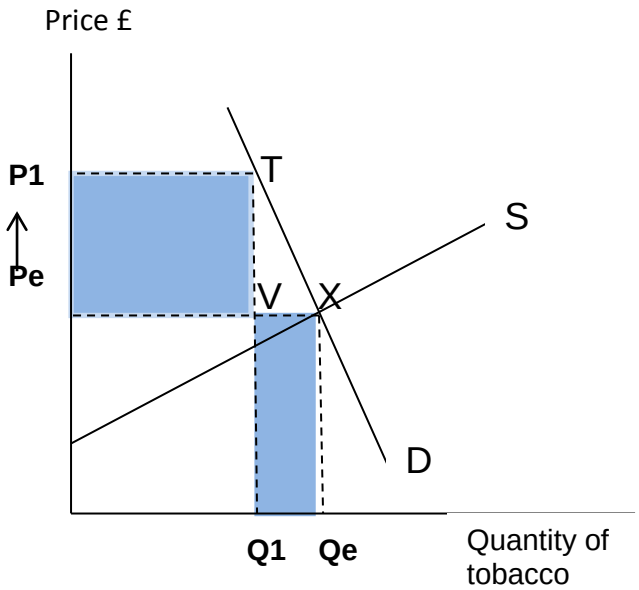
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|---|---|---|
| | **NB: award a maximum of 6 KAA marks if no reference to the tidal barrage scheme. One reference to the barrage is sufficient to award the full KAA marks.**<br>**Evaluation 6 marks (2+2+2 or 3+3 or 4+2 marks)**<br>• Prioritisation of factors e.g. availability and rental price of local housing likely to be very important compared to a change in NMW / geographical mobility of labour.<br>• Discussion of elasticity of the supply of labour.<br>• Many construction workers earning well above NMW so little impact / some labour may work below NMW.<br>• Discussion of type of construction work and variety of skills required: some work is highly skilled and so this may limit the supply of labour / e.g. engineers to build dams / other occupations in building the tidal barrage are less skilled e.g. building labourers.<br>• Supply of labour may increase over time / more knowledge of job vacancies or time to gain skills for the work.<br>• Accept discussion of income and substitution effects / backward sloping supply curve for labour.<br>• Accept discussion of measures to increase the supply of labour e.g. housing subsidies or training courses and other supply side policies.<br><br>**NB: a maximum of 4 marks available for discussion of measures to increase supply of labour.**<br><br>**The quality of written communication will be assessed in this question based on the candidate's ability:**<br>➢ To present an argument and conclude on the basis of that argument.<br>➢ To organise information clearly and coherently.<br>➢ To use economics vocabulary appropriately.<br>➢ To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| 9(e) | **8 KAA marks**<br>A variety of measures can be used which include: **subsidies of renewable energy schemes (other than the tidal barrage), minimum pricing for renewable energy schemes, taxation of non-renewable energy, tradable carbon permits, regulation and deregulation.**<br><br>**Regulations may come in various forms, for example, relaxation of planning laws, carbon-offsetting, renewable energy certificates.**<br><br>NB: accept nuclear power as a renewable energy source.<br><br>**Two measures: (4+4 or 5+3 or 6+2)**<br>• Subsidies for renewable energy schemes / lower production costs / raise supply and reduce price / encourage firms into the market / raise producer surplus or profits / application to specific schemes.<br>➢ Award up to 2 marks for diagram (increase in supply curve / subsidy area).<br><br>• Taxation of non-renewable energy producers / higher production costs / lower supply and raise price / firms may exit market / lower producer surplus or profits / tax revenue can be used to subsidies renewable schemes / application to specific schemes.<br>➢ Award up to 2 marks for diagram (decrease in supply / tax area).<br><br>• Regulations: this may take various forms such as tighter planning controls for non-renewable energy schemes / looser planning controls on renewable energy schemes / these may raise or lower production costs. Regulations could include Renewable energy certificates, carbon offsetting.<br><br>• Tradable pollution permits / cap and trade system / penalises heavy polluters who have to buy extra permits / incentive for firms to reduce pollution and sell spare permits / pollution permits can be reduced over time.<br>➢ Award up to 2 marks for diagram (decrease in supply of permits / identification of higher price).<br><br>• Minimum price schemes for renewable energy / being proposed for nuclear power / ensure long term returns for the investment / impact on price and output. | (14) |

| | | |
|---|---|---|
| | ➢ Award up to 2 marks for diagram (demand and supply diagram / minimum price set above free market price).<br><br>**NB: If just one measure considered cap at 6 KAA marks**<br><br>**NB: If more than two measures discussed, award for the best two responses.**<br><br>**Evaluation 6 marks (2+2+2 or 3+3 marks)**<br>• Tax revenue may not be used for renewable energy / discussion of price elasticity of demand for fossil fuels.<br>• Subsidies have an opportunity cost for government / development of point.<br>• Subsidies may create inefficiencies / dependency of the firms.<br>• Specific issues with renewable energy, for example, reliability of wind power and solar power / external costs of renewable energy such as damage to wildlife.<br>• Problems with tradable pollution permits e.g. over-supply / extension of scheme to airlines.<br>• Renewable energy certificates may increase production costs for firms.<br>• Minimum price will increase consumer energy bills / lead to an increase in fuel poverty.<br>• Discovery of non-renewable resources and their development may reduce costs and increase supply e.g. fracking of gas and oil – so less need for renewable energy.<br>• Issues of magnitude and time period.<br>• Cost of monitoring and enforcing the schemes.<br>• General issues concerning Government failure e.g setting the correct level of tax or subsidy to internalise externality.<br><br>**The quality of written communication will be assessed in this question based on the candidate's ability:**<br>➢ To present an argument and conclude on the basis of that argument.<br>➢ To organise information clearly and coherently.<br>➢ To use economics vocabulary appropriately.<br>➢ To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(a) | **4 KAA marks (2+2 marks)**<br>• Explicit reference to Figure 1 which depicts the decline in tobacco smoking (for example, a decline in adult smokers from around 28 per cent in 1998 to 20 per cent in 2010). (**1 mark**)<br><br>• Identification of two causes of the decline in tobacco smoking (**1+1 marks**)<br>• Development of the two reasons (**1+1 marks**)<br><br>Reasons include:<br>➢ **Government health campaigns:** these increase market knowledge on the harmful effects of smoking / examples include use of television, radio and newspaper campaigns / health awareness campaigns in schools.<br>➢ **Increase in taxes on tobacco:** it is now 80% of the price (do not double award) / this reduces its affordability / link to low income groups or children / example of the tax increase from the 2012 Budget where a 37 pence tax increase was imposed on a packet of cigarettes OR tax on cigarettes increasing at 5 per cent above the rate of inflation / a real increase in tax on cigarettes / cigarette tax escalator set to continue in future years.<br>➢ **Regulations on the sale of tobacco smoking**: Examples include an increase in the age of buying tobacco from 16 years to 18 years / tobacco cannot be on view in shops / plain packaging / health warnings on cigarette packets / ban on tobacco sales from vending machines / tobacco advertising ban.<br>➢ **Regulations on the consumption of tobacco smoking**: Examples include a ban on smoking in enclosed public places and work places such as shops and restaurants / increase in age of buying tobacco from 16 to 18 years.<br><br>**NB: Accept other reasons for the decline in tobacco smoking** (for example, healthier lifestyles, increase in incomes, and development of effective substitutes such as e-cigarettes). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| 10(b) | **6 KAA marks**<br>• Consumer and producer surplus are likely to fall (need to mention that **both** have fallen) (**1 mark**)<br>• Definition of consumer surplus (e.g. the difference between the price consumers are willing to pay for a good and the actual market price OR stating the area below the demand curve and above equilibrium price)) (**1 mark**).<br>• Definition of producer surplus (e.g. the difference between the price producers are willing to supply a good for and the actual market price OR stating the area above the supply curve and below the equilibrium price) (**1 mark**).<br><br>• Diagram (**up to 4 marks**)<br>i. Original areas of consumer and producer surplus (both must be identified) (**1**)<br>ii. An inward shift in the demand curve for tobacco (**1**)<br>iii New consumer area identified / or the change in consumer surplus identified (**1**)<br>iv. New producer surplus area identified / or the change in producer surplus identified (**1**)<br><br>  <br><br><br>• NB: Accept relevant diagram which depicts a decrease in the supply curve for tobacco and the original and new areas of consumer and producer surplus identified (**up to 4 marks**)<br><br>**NB: cap at maximum of 3 marks if no suitable diagram offered** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| 10(c) | **6 KAA marks**<br>• Definition or formula of price elasticity of demand. (**1 mark**)<br>• Explanation of price inelastic demand (the percentage change in demand is less than the percentage change in price) or numerical application: for example, a 10% rise in price of tobacco might cause a 2% fall in demand. (**1 mark**)<br>• Reference to Extract 2: Demand for tobacco smoking is likely to be price inelastic since total expenditure has increased following a price rise / use of data e.g. consumer expenditure on tobacco increased from £15.1 billion to £15.3 billion following price rise (**1 +1marks**)<br>• Diagram depicting a price inelastic demand curve / showing an expenditure or revenue increase from a price rise (**up to 2 marks**)<br>  <br><br>**NB: accept supply curve shifts depicting a tax increase.**<br>• Tobacco smoking is addictive or habit forming / development of this point (e.g. due to nicotine or socialising) (**up to 2 marks**)<br>• Tobacco smoking has no close substitutes / development of this point (e.g. plastic pipes and chewing gum are weak alternatives (**up to 2 marks**)<br>• Tobacco smoking takes up a small percentage of income / development of this point (e.g. still relatively cheap at £7.40 a pack which could last some time) **(up to 2 marks**)<br>• Extract 2 suggests tobacco smoking is more price inelastic in demand for the manual class workers (29% still smoke) / development of this point (e.g. less | **(10)** |

| | | |
|---|---|---|
| | receptive to health warning campaigns or less concerned about the long term implications of smoking).<br>• Extract 2 suggests tobacco smoking is more price inelastic for a minority of teenagers / as the proportion of 11-15 year olds smoking has not changed over the last 5 years / development of this point (e.g. what constitutes a regular smoker or questioning the data since these children will be restricted by income).<br><br>**Evaluation (2+2 or 3+1 or 2+1+1 or 4+0 marks)**<br>• Price elasticity of demand may vary between different types of brands of tobacco / development of this point (e.g. switch to lower quality cheaper cigarettes suggest demand is price elastic for these / comprising some 30% of the market).<br>• Consideration of shifts in the demand curve rather than movement along the demand curve for tobacco / other factors have affected demand than price e.g. health campaigns and change of lifestyle.<br>• Discussion of smoking statistic for teenagers / expect increases in tax to cause reduction in smoking rates as typically they have low incomes.<br>• Price elasticity may vary over time e.g. a large drop in tobacco smoking from 45% to 20% of adult population between 1974 and 2010.<br>• Price elasticity of demand may vary between countries / development with use of an example.<br>• New technology / development of new substitutes such as e-cigarettes affect price elasticity of demand.<br>• Discussion on the reliability of the information provided / development of this point (since it is from the anti-smoking pressure group ASH) / the data might not include influence of smuggling. | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(d) | **8 KAA marks (2+2+2+2 or 3+3+2)**<br>• There might be a reduction in market failure in the tobacco market since the Private costs and external costs associated with tobacco smoking will fall (**1 mark**)<br>• Diagram of social, external and private costs / depicting a decrease in external costs. (**1+1 marks**)<br>**NB: this could also be shown by a relevant social, external and private benefits diagram.**<br><br>• **Consumers benefit**:<br>➢ Better health and longer life expectancy / ASH refers to two-thirds of smokers die from their habit.<br>➢ Less passive smoking or cleaner air / more people may visit restaurants and pubs.<br>➢ Improved NHS as lower waiting times to receive treatment.<br>➢ More income available to spend elsewhere<br>➢ Consumers may benefit from less house fires e.g. £0.5 billion.<br><br>• **Government benefit**:<br>➢ Reduction in government borrowing or an improvement in its finances.<br>➢ National Health Service should benefit from treating fewer smoking related patients the £2.7 billion cost should fall / divert resources to other areas of health care<br>➢ More tax revenue from people in work / possible to raise retirement age.<br>➢ Less spending on disability benefits through smoking related illnesses.<br>➢ Less government expenditure on cleaning up litter.<br><br>**NB: cap at 6 KAA marks if no reference made to both consumers and government.**<br><br>**6 Evaluation marks (2+2+2 or 3+3 or 1+1+1+1+2)**<br>• Difficult to place a monetary value on the benefits of a reduction in smoking / e.g. how to value improved health or life expectancy.<br>• Some consumers actually enjoy tobacco smoking so this benefit may be reduced / undermine individual freedom.<br>• Extract 3 mentions more than 1500 pubs closing down and linked to smoking ban in enclosed public places / loss of direct taxation revenue and possible higher spending on benefits. | **(14)** |

| | | |
|---|---|---|
| | • Government may lose tax revenue over time / it was £12.1 billion from indirect taxes on tobacco in 2012.<br>• Government spending may increase on the ageing population as non-smokers live longer / such as state pensions and NHS costs.<br>• Discussion of time period or magnitude: Figure 1 indicates there is a long term trend of the decline in smoking and ASH indicates it may take a further 50 years to eliminate smoking.<br>• Discussion of prioritisation: the reduction in smoking is not so successful among manual workers / a persistent proportion of 11-15 year olds still smoke.<br>• Questioning the data: accuracy of the estimates on the costs of tobacco smoking to society / tobacco smuggling could exaggerate the fall in tobacco smoking / the benefits from reduction in smoking may be exaggerated.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>➢ To present an argument and conclude on the basis of that argument.<br>➢ To organise information clearly and coherently.<br>➢ To use economics vocabulary appropriately.<br>➢ To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(e) | **8 KAA marks**<br>• Definition of government failure (government intervention leads to a misallocation of resources / leads to a net welfare loss). (**1 mark**)<br>**NB: Be prepared to accept one view as KAA and the other as evaluation**<br><br>**Government failure since:**<br>• High tobacco taxes may have encouraged illegal smuggling of tobacco / as 80 per cent of the price of cigarettes comprises tax or 20 per cent of cigarettes smoked in Britain are illegal / encourages people to break the law. (**1+1 marks**)<br>• Counterfeit) cigarettes may be more harmful than branded cigarettes / some development e.g. plain packaging regulation may it easier to counterfeit cigarettes. (**1+1 marks)**<br>• High tobacco taxes may increase inequality / since a greater proportion of lower income groups smoke (29%) than higher income groups (13%). (**1+1 marks**)<br>• Unintended consequences: Government regulations or high taxes may have contributed to closure of pubs and shops or a decrease in employment / increase in losses or fall in profits. (**1+1 marks**)<br>• Costs of monitoring and enforcing regulations / some development e.g. under-age smoking or funding border customs. (**1+1 marks**)<br>• Accept critical approach to other regulations not mentioned in extracts. (**1+1 marks**)<br><br>**6 Evaluation marks (2+2+2 or 3+3)**<br><br>**Not government failure since:**<br>• Without government intervention there would be a much greater market failure / use of data from Figure 1.<br>• The tobacco tax helps to pay for the costs of smoking or internalise external costs / development of this point e.g. the £12.1 billion tobacco tax revenue covers a large portion of the £13.7 billion estimated total costs of smoking / reduce effects of passive smoking.<br>• Government can reduce asymmetric information or imperfect knowledge / development of this point e.g. public health campaigns so consumers realise the true costs of tobacco smoking / reduce problem of myopia among tobacco smokers.<br>• Government intervention can reduce the chances of addiction to a dangerous substance / development of this point e.g. high tobacco taxes may discourage teenagers from smoking. | **(14)** |

| | | |
|---|---|---|
| | • Government intervention help reduce tobacco smoking among children / development of this point e.g. ban on advertising or selling to under 18 year olds / ban on selling cigarettes in vending machines which children can often use.<br>• High tobacco taxes may not be significant cause of tobacco smuggling / Spain and Italy have much lower tobacco taxes but higher rates of smuggling.<br>• Government intervention can increase the quality of life / raise life expectancy.<br>• Government intervention may increases output of labour at work / higher profits.<br>• Government intervention can reduce pressure on NHS / enable resources to be diverted to treat other illnesses.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>➢ To present an argument and conclude on the basis of that argument.<br>➢ To organise information clearly and coherently.<br>➢ To use economics vocabulary appropriately.<br>➢ To use grammar, spelling and punctuation appropriately. | |

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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Tuesday 13 May 2014 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01R**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

*Turn over* ▶

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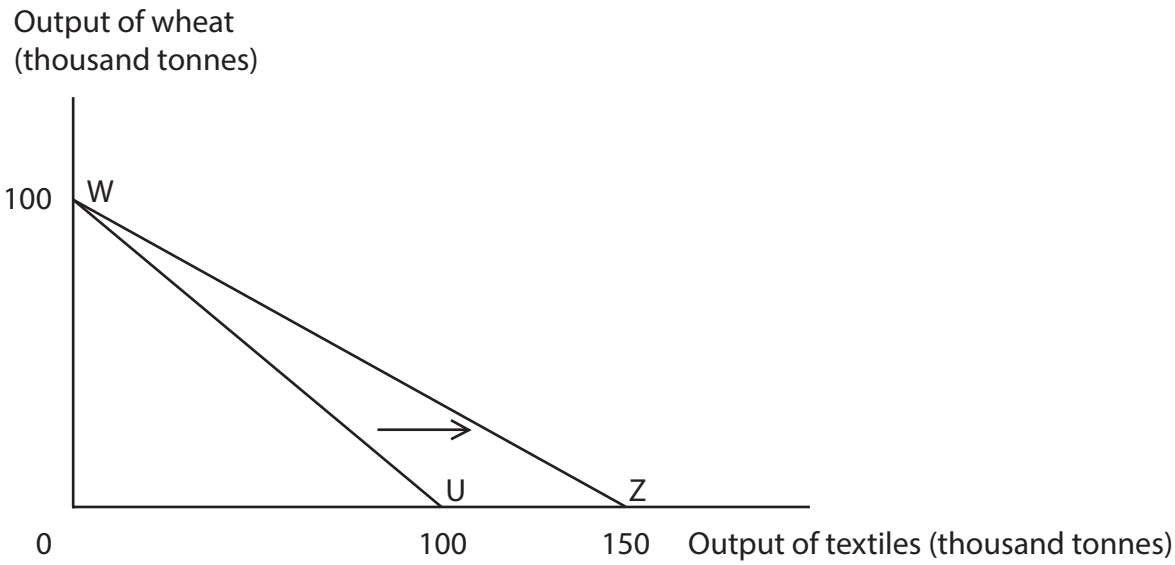
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**Section A**
**Answer ALL the questions in this section.**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram refers to an economy producing two commodities, wheat and textiles. Initially, the economy has production possibilities shown by WU. The production possibilities then move to WZ. Which of the following does this change show?

**(1)**

**A** Increased demand for textiles

**B** A decrease in the production of wheat

**C** Increased efficiency in the production of textiles

**D** A decrease in the opportunity cost of producing wheat

Answer ☐



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Explanation

**(3)**

**(Total for Question 1 = 4 marks)**

**2** In Australia the number of motor vehicles produced on average by each worker per year increased from 10 to 18 between 1986 and 2011.

(Source: adapted from http://www.innovation.gov.au/Industry/Automotive/Statistics/Pages/AutomotiveDataCardTextMarch2013)

The most likely cause of this trend is an increase in the

**(1)**

**A** cost of producing each motor vehicle

**B** level of boredom and staff absenteeism

**C** extent of regulation on motor vehicle emissions

**D** division of labour in motor vehicle manufacturing plants

Answer ☐



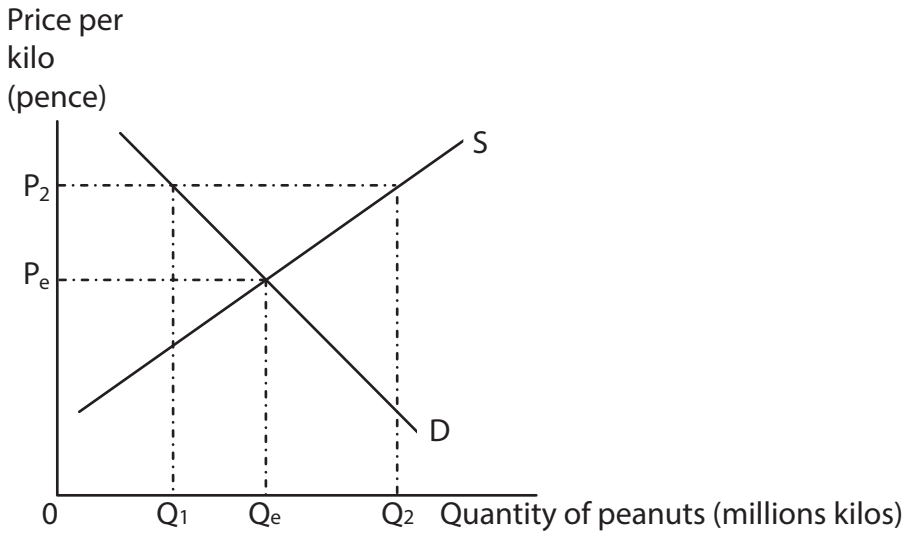
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Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3**




The diagram shows a competitive market for peanuts. Assuming the current price is $P_2$, the most likely outcome is the

**(1)**

**A** price will fall

**B** supply curve will shift to the left

**C** quantity demanded will fall

**D** quantities supplied and demanded will remain unchanged

Answer ☐



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Explanation

**(3)**

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

**4** Which one of the following pairs of products is most likely to have a negative cross price elasticity of demand between them?

**(1)**

**A** Bus travel and private car use

**B** Motor vehicles and petrol

**C** Digital music downloads and music CDs

**D** Tablet computers and laptop computers

Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**



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**5** Estimates of income elasticity of demand for selected items in Cyprus and the Maldives.

| Product | Cyprus | Maldives |
|---|---|---|
| Cereals e.g. rice | – 0.2 | 0.5 |
| Meat | 0.5 | 0.8 |
| Tobacco | 0.6 | 1.0 |

(Source: http://www.ers.usda.gov/Data/InternationalFoodDemand)

NB Figures have been rounded up

It may be deduced from the data in the table that

**(1)**

**A** the demand for tobacco is income inelastic in both countries

**B** a 10% increase in income would cause a less than 10% increase in demand for meat in both countries

**C** cereals are a normal good in Cyprus but an inferior good in the Maldives

**D** the demand for meat is more responsive to changes in income in both countries than the demand for tobacco

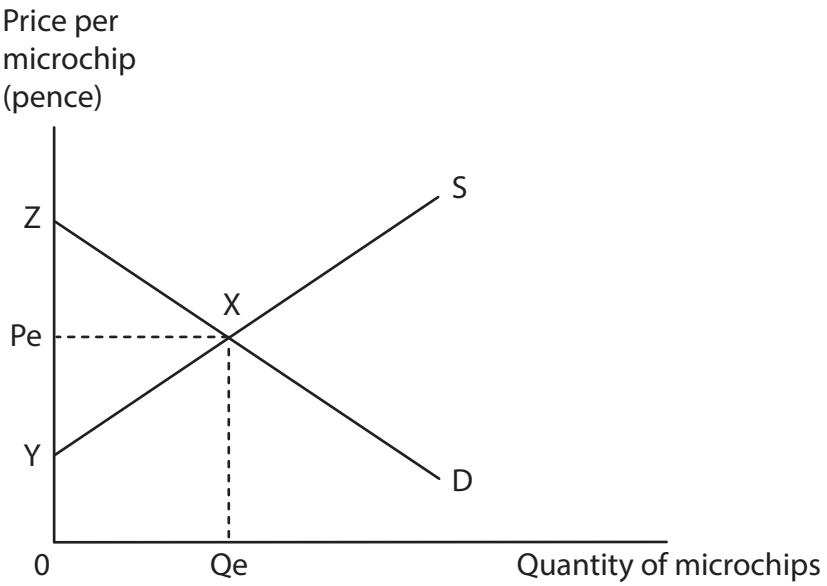
Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**

**6**




The diagram shows the market for microchips where the initial equilibrium price is Pe and quantity Qe. (You may annotate the diagram in your answer.)

A decrease in the production costs of microchips through the development of new technology is most likely to

**(1)**

**A** raise price and decrease producer surplus

**B** maintain the existing price and decrease producer surplus

**C** maintain the existing price and increase consumer surplus

**D** lower price and increase consumer surplus

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**



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**TURN OVER FOR QUESTION 7**

7

**Diagram A**

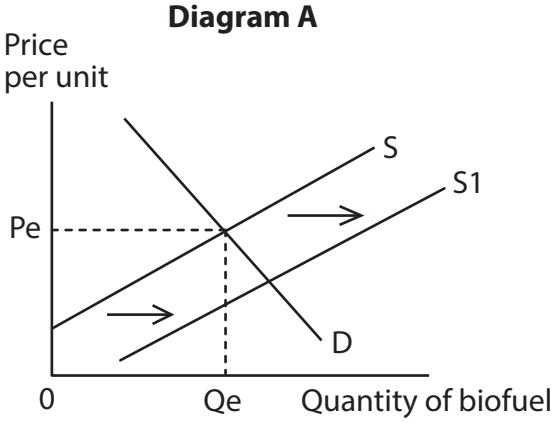



**Diagram B**

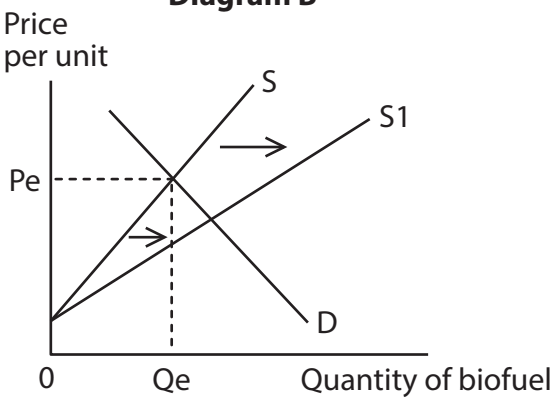



**Diagram C**

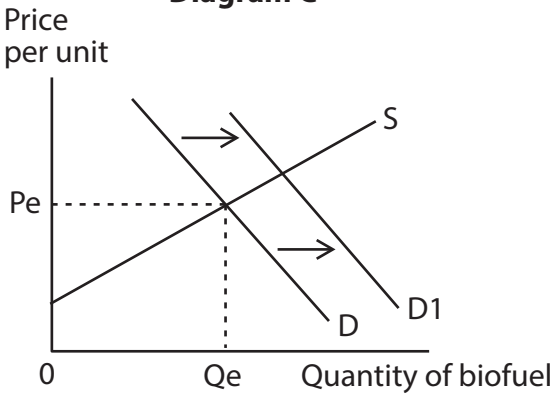
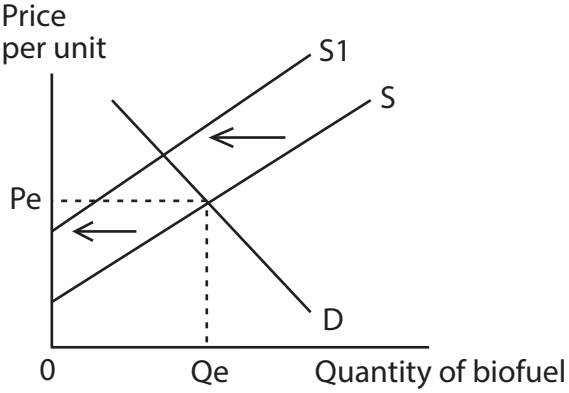



**Diagram D**




In order to reduce carbon emissions the US Government provides a unit subsidy to the producers of liquid biofuel. Which diagram, **A**, **B**, **C** and **D**, best illustrates the effects of such a subsidy per unit of output? (You may annotate the diagram in your answer.)

**(1)**

Answer



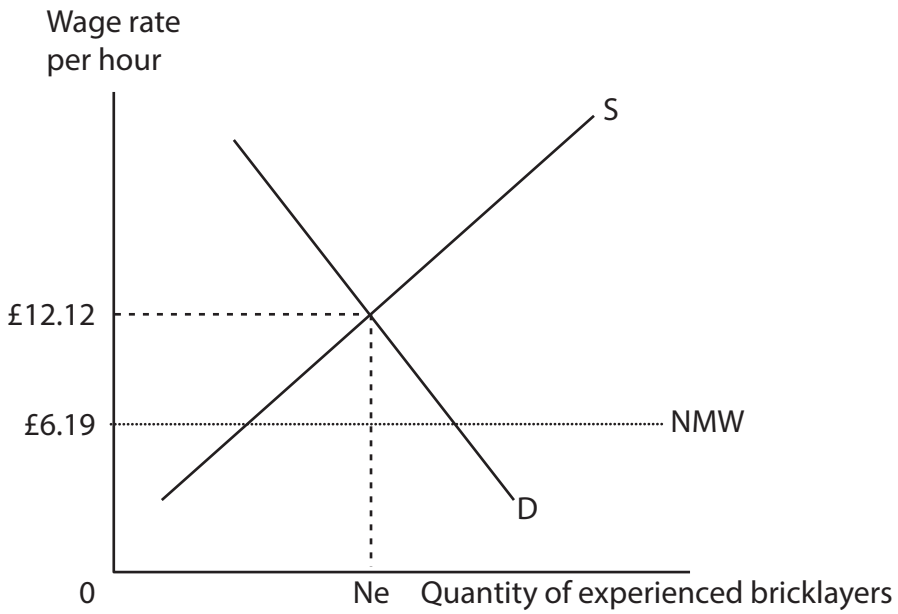
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Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8**




(Source: www.kgbanswers.co.uk/what-is-the-average-day-rate-4-bricklayers-in-south-england/2154854)

The diagram shows the labour market for experienced bricklayers in England where the average hourly rate of pay is £12.12.

In October 2013, the National Minimum Wage (NMW) was increased from £6.19 to £6.31 per hour for adult workers. The most likely effect on the market for experienced bricklayers is

**(1)**

**A** an increase in unemployment

**B** no change in the equilibrium wage and number of bricklayers employed

**C** an outward shift in the supply curve for bricklayers

**D** the shortage of bricklayers to increase

Answer ☐



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Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

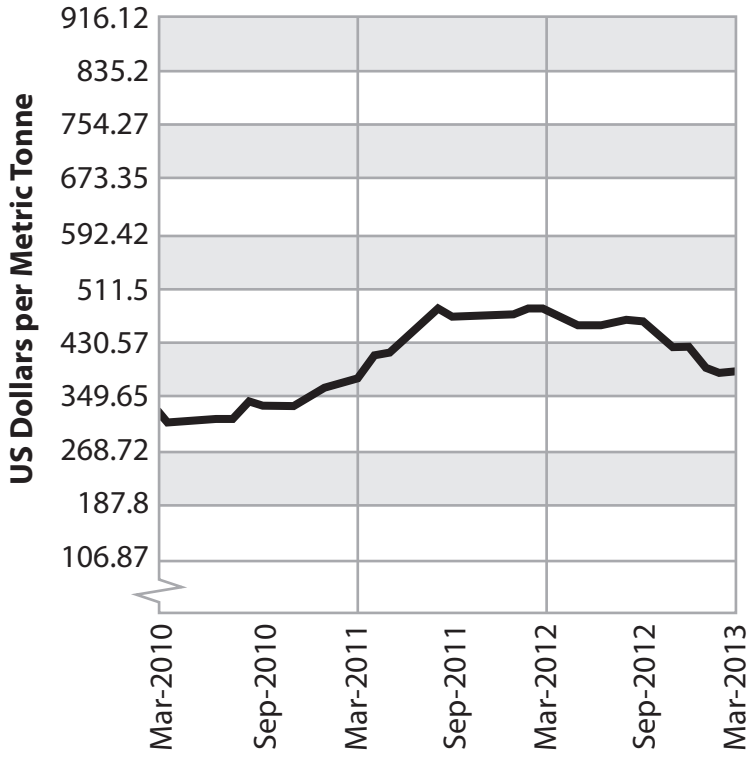
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 30.**

**You should spend 55 minutes on this question.**

**9 Proposals to develop world's largest potash mine in a National Park**

**Figure 1 The price of potash**




(Source: adapted from Rupert Neate, @ Guardian News and Media Ltd, 1 February, 2013)

**Extract 1 The proposed potash mine in North Yorkshire Moors National Park**

Soaring global demand for potash, a powerful fertiliser used in farming, has pushed its price above $400 a tonne. This follows pressure from an increasing global population and the more widespread use of intensive farming methods across many countries including Brazil, India and China.

Recent test drilling in the North Yorkshire Moors National Park, by the company Sirius Minerals, has almost doubled the estimated potash deposits from 1.3 billion to 2.2 billion tonnes. Situated a mile below the surface, it is the world's largest deposit of potash. The company has proposed to build a mine to extract the mineral which took millions of years to form from deposits of an ancient sea. Only one potash mine currently operates in Britain and domestic supply cannot meet demand.

If the mine is developed more than a thousand jobs will be created, many of them highly skilled. Local landowners who own the mineral rights will receive royalty payments in excess of £1 billion (US $1.5 billion) over fifty years. With an estimated production cost of $37 a tonne, the mine is likely to be highly profitable even if the price of potash were to halve from its current level.



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The mine could produce 20 million tonnes of potash a year, most of which would be for export. It could supply all of Britain's potash demand several times over. Britain currently imports potash from Germany and Canada.

**Extract 2 Environmental impact of proposed potash mine**

The Campaign for National Parks said it was very concerned about the negative environmental impact of locating the potash mine inside a National Park. It believes alternative sites are available outside of the park boundaries. Before work on the mine can begin Sirius Minerals needs to gain approval from the North Yorkshire Moors Park Authority.

Research carried out by the North Yorkshire Moors Park Authority claim the mine would damage tourism, leading to a 15% drop in visitor numbers and up to £40 million in lost spending a year.

However, Sirius believe the mine would not adversely affect tourism. Jason Murray, Finance Director for Sirius, believes the high price of potash has made it possible to spend money on reducing the environmental impact of the mine. Most of the operation will be underground, including the transport of the potash through a 28-mile pipeline to a processing plant on the coast. This will greatly reduce the use of lorries to transport the mineral.

(Source: adapted from Rupert Neate, @ Guardian News and Media Ltd, 1 February, 2013)

(a) With reference to Figure 1 and Extract 1, explain why the price of potash increased between March 2010 and March 2012. Use a supply and demand diagram in your answer.

**(4)**

(b) Analyse why the price elasticity of supply for potash is likely to be low in the short run.

**(6)**

(c) Using the information provided and your own knowledge, assess the possible problems of fluctuating prices for producers of potash.

**(10)**

*(d) Using the information provided and your own knowledge, discuss the case for allowing the potash mining project to go ahead in the North Yorkshire Moors National Park.

**(14)**

*(e) Discuss the factors which might influence the supply of labour to the mining industry or another industry of your choice.

**(14)**

(a) With reference to Figure 1 and Extract 1, explain why the price of potash increased between March 2010 and March 2012. Use a supply and demand diagram in your answer.

**(4)**

(b) Analyse why the price elasticity of supply for potash is likely to be low in the short run.

**(6)**



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(c) Using the information provided and your own knowledge, assess the possible problems of fluctuating prices for producers of potash.

**(10)**

*(d) Using the information provided and your own knowledge, discuss the case for allowing the potash mining project to go ahead in the North Yorkshire Moors National Park.

**(14)**

*(e) Discuss the factors which might influence the supply of labour to the mining industry or another industry of your choice.

**(14)**



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**(Total for Question 9 = 48 marks)**



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**TURN OVER FOR QUESTION 10**

**If you answer Question 10 put a cross in this box ☒ .**

**10 Bottled water**

**Figure 1 UK bottled water market**

| Year | Consumption (million litres) | Sales revenue £ million |
|---|---|---|
| 2008 | 1970 | 1360 |
| 2009 | 2010 | 1400 |
| 2010 | 2025 | 1420 |
| 2011 | 2070 | 1490 |
| 2012 | 2135 | 1610 |

(Source: adapted from www.britishsoftdrinks.com/PDF/2013UKsoftdrinksreport)



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**Extract 1 Growth in UK bottled water sales**

The consumption of bottled water has continued to grow at a time of falling demand for other types of soft drink such as fruit juices, smoothies and fizzy colas. The growth in demand for bottled water reflects successful promotions and more people trying to follow healthier lifestyles.

The potential for further growth is very positive: annual bottled water consumption per head in the UK is 34 litres, which is far below the West European average of 119 litres.

The recycling of bottles and cans has increased rapidly over the past decade; many now contain between 25% and 50% recycled material. Of the bottled water consumed in the UK around 73% is bottled in the UK and 15% comes from France.

(Source: adapted from www.britishsoftdrinks.com/PDF/2013UKsoftdrinksreport)

**Extract 2 Environmental damage from bottled water**

Water is a precious resource. Governments should ensure the sustainability of safe water supplies for the benefit of all people and the natural environment.

The use of bottled water is harmful to the environment. Three litres of water are used directly or indirectly in the production of one litre of bottled water. The majority of bottles are made of plastic and end up in landfill sites rather than being recycled. Furthermore, vast amounts of plastic waste never reach the recycling plants and end up in the oceans, killing fish and birds who mistake it for food. It takes up to a thousand years for plastic to decompose and so the problem is set to get worse.

Bottled water is often transported hundreds of miles from its origin to shops and consumers, at considerable carbon cost. By contrast, tap water only takes a little energy to pump along pipelines into homes.

Bottled water is also expensive and consumers can pay anything up to 10 000 times more than if they just drank tap water. Studies have shown that tap water is generally just as clean and healthy as bottled water, if not more so. Furthermore, over half of the bottled water in the UK comes from purified tap water. It is time for the government to intervene by increasing the indirect tax on bottled water.

(Sources: http://www.guardian.co.uk/commentisfree/2007/jul/10/timetocapbottledwater? INTCMP=SRCH and http://www.sierraclub.org/committees/cac/water/bottled_water/bottled_water.pdf)

(a) With reference to Extract 1 and Figure 1, explain the effect on the total revenue of bottled water manufacturers following an increase in demand for bottled water between 2008 and 2012. Use a supply and demand diagram in your answer.

**(6)**

(b) Explain **two** likely reasons why 'the consumption of bottled water has continued to grow at a time of falling demand for other types of soft drinks' (Extract 1, lines 1 and 2).

**(4)**

(c) Assess whether the demand for bottled water is likely to be price elastic or price inelastic.

**(10)**

*(d) With reference to the concept of external costs, discuss the possible economic effects of an increase in the production and consumption of bottled water.

**(14)**

*(e) Evaluate the likely economic effects of an increase in indirect tax on bottled water. Use a supply and demand diagram in your answer.

**(14)**

(a) With reference to Extract 1 and Figure 1, explain the effect on the total revenue of bottled water manufacturers following an increase in demand for bottled water between 2008 and 2012. Use a supply and demand diagram in your answer.

**(6)**

(b) Explain **two** likely reasons why 'the consumption of bottled water has continued to grow at a time of falling demand for other types of soft drinks' (Extract 1, lines 1 and 2).

**(4)**



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(c) Assess whether the demand for bottled water is likely to be price elastic or price inelastic.

**(10)**


P 4 3 5 3 7 A 0 3 6 4 4

*(d) With reference to the concept of external costs, discuss the possible economic effects of an increase in the production and consumption of bottled water.

**(14)**

P 4 3 5 3 7 A 0 3 8 4 4

*(e) Evaluate the likely economic effects of an increase in indirect tax on bottled water.
Use a supply and demand diagram in your answer.

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**

**TOTAL FOR PAPER = 80 MARKS**



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edexcel

# Mark Scheme (Results)

## Summer 2014

## Pearson Edexcel GCE in Economics (6EC01/01R)



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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

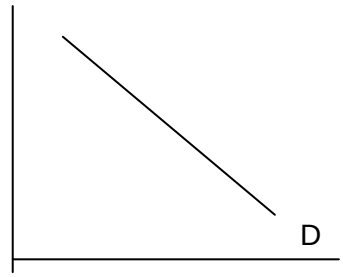
**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

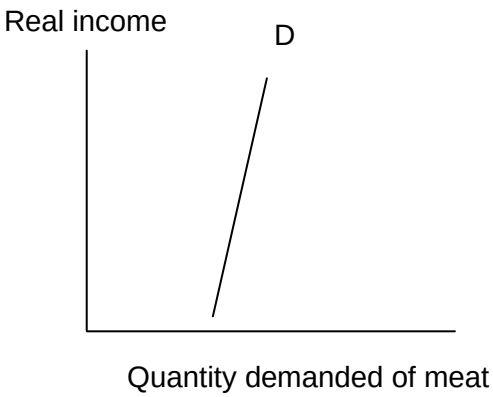
**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

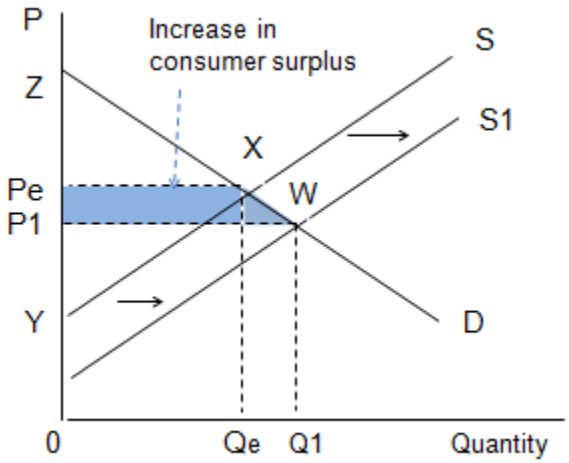
| Question Number | Answer | Mark |
|---|---|---|
| **Q1** | • Correct option **C** (**1 mark**)<br><br>• Definition of production possibility frontier (maximum output combinations an economy can achieve when all resources are fully / efficiently employed). (**1 mark**)<br><br>• Output / output potential has risen (**1 mark**) from 100 000 to 150 000 units**. NB: must refer to 000 here** (**1 mark**)<br><br>• Textile production may have become more efficient due to new technology / improved quality of machinery / increase in quality of labour. (**1+1 marks**).<br><br>**Rejection marks**<br><br>➢ Option A incorrect since the production possibility frontier shows the supply or output potential **NB: do not double award if definition mark already awarded** / a demand and supply diagram is required to show an increase in demand. (**1 mark**)<br><br>➢ Option B incorrect as the potential maximum output of wheat remains at 100 thousand tonnes / we don't know where the economy is on the PPF, so how much wheat is being produced. (**1 mark**)<br><br>➢ Option D incorrect since the opportunity cost of producing wheat has increased ( from 1 textile to 1.5 textiles) (**1 mark**) | **(4)** |

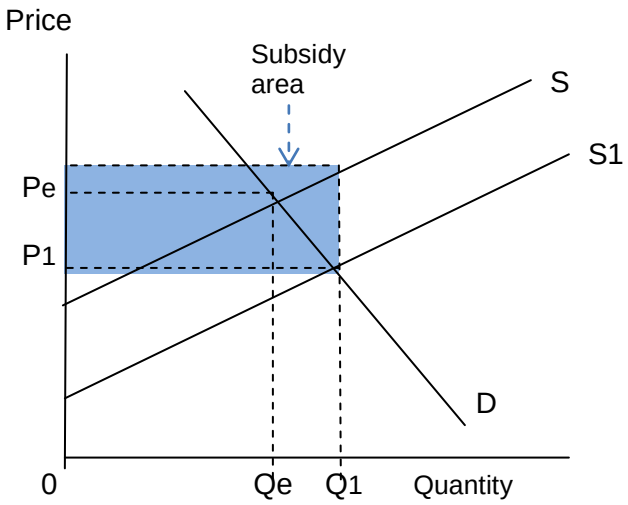
| Question Number | Answer | Mark |
|---|---|---|
| **Q2** | • Correct option **D** (**1 mark**)<br><br>• Definition of division of labour (for example, production of a good is broken down into different tasks and labour allocated to each task / increase in specialisation of labour into particular tasks or goods). (**1 mark**)<br><br>• Application to motor vehicle manufacturing (or example, worker putting in car engine, worker putting in windows, worker putting in car seats, a test driver). (**1 mark**)<br><br>• Reason(s) for an increase in productivity: workers becoming more skilled in particular tasks through repetition / more efficient use of equipment / less time wasted moving from one job to another different job / less time taken for workers to get trained on a particular job or lower training costs / quicker at the job due to repetition). (**1+1 marks**)<br><br>• Award for demand and supply diagram which shows an outward shift of the supply curve and a lower equilibrium price (**1 mark**).<br><br>**Rejection marks**<br><br>➢ Option A incorrect as an increase in cost of producing each vehicle would imply either reduced productivity (production costs increase) or no change in productivity (e.g. raw material costs increase). (**1 mark**)<br><br>➢ Option B incorrect as a decrease in labour productivity is a likely outcome from boredom and monotony. (**1 mark**)<br><br>➢ Option C incorrect since environmental regulations will increase production costs. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q3** | Correct option **A (1 mark)**<br><br>• Identification of an excess supply Q1Q2 / surplus at price P2 (this may be annotated on to the diagram). (**1 mark**)<br><br>• As price falls quantity demanded extends or rises / quantity supplied contracts or falls (this may be shown by annotation of the diagram with arrows) (**1 mark**)<br><br>• The new equilibrium price of Pe is reached. (**1 mark**)<br><br>• Explanation of a competitive market e.g. the use of the price mechanism to allocate resources / use of demand and supply to allocate resources. (**1 mark**).<br><br>**Rejection marks**<br><br>➢ Option B incorrect as a change in conditions of supply will cause it to shift inwards, for example, an increase in costs of production / there will be a contraction in supply as price falls. **NB: do not double award**. (**1 mark**)<br><br>➢ Option C incorrect as quantity demand will only fall if there is an increase in price / there will be an extension in demand as price falls. **NB: do not double award.** (**1 mark**)<br><br>➢ Option D incorrect as quantities demanded and supplied will only remain the same when the market is in equilibrium in the first place. (**1 mark**) | **(4)** |

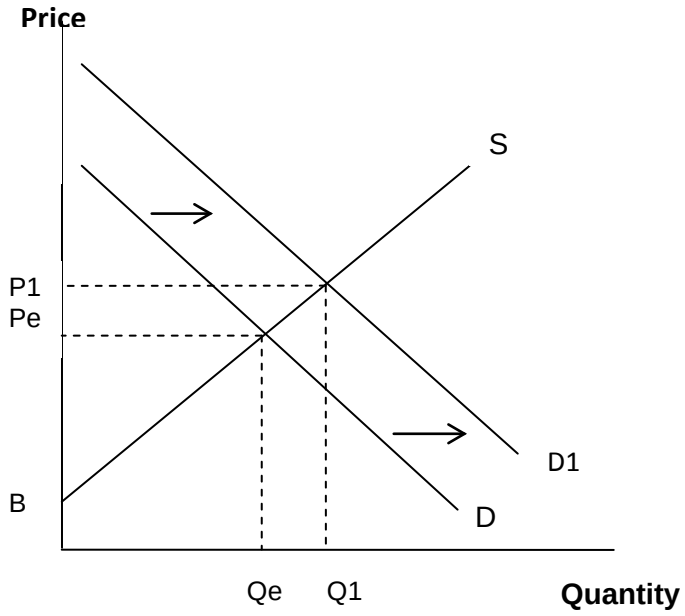
| Question Number | Answer | Mark |
|---|---|---|
| **Q4** | • Correct option **B** (**1 mark**)<br><br>• Definition of cross elasticity of demand or correct formula (the responsiveness in demand for good B due to a change in price of good A, or, %ΔQD good B ÷ %ΔP good A). (**1 mark**)<br><br>• Goods which have a negative XED are complementary goods / joint demand. (**1 mark**)<br><br>• Application: a decrease in the price of motor vehicles is likely to cause an increase in demand for petrol (accept vice-versa) (**1 mark**)<br><br>• Correct diagram depicting a negative XED (motor vehicles and petrol - must be labelled on the axes). (**1 mark**)<br><br>Price of motor vehicles<br>  <br><br>Quantity demanded of petrol<br><br>**Rejection marks**<br><br>➢ Options A, C and D are incorrect since they are substitutes with a positive XED. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q5** | • Correct option **B** (**1 mark**)<br><br>• Definition of income elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in income, or, %ΔQD ÷ %ΔY). (**1 mark**)<br><br>• The demand for meat is income inelastic in both countries since their values are between 0 and 1 or less than 1, **OR**, definition of income inelastic demand (the percentage change in demand is less than the percentage change in income). (**1 mark**)<br><br>• Application: a 10% rise in income causes a 5% rise in demand for meat in Cyprus and an 8% rise in demand for meat in the Maldives. (**1 mark**)<br><br>• Diagram depicting a steep but positive income elasticity of demand for meat. (**1 mark**)<br><br>  <br><br><br>**Rejection marks**<br><br>➢ Option A incorrect since the demand for tobacco is unitary income elastic in the Maldives (**1 mark**)<br><br>➢ Option C incorrect since cereals are an inferior good in Cyprus but a normal good in the Maldives. (**1 mark**)<br><br>➢ Option D incorrect since the income elasticity of demand for meat is nearer to 0 in both countries than the demand for tobacco. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q6** | • Correct option **D** (**1 mark**)<br><br>• Definition consumer surplus (the difference between the price consumers are willing to pay for a good and the actual market price paid / the area above equilibrium price and below the demand curve). (**1 mark**)<br><br>• Annotation of diagram depicting an increase in supply and fall in equilibrium price (**1 mark**)<br><br>• The increase in consumer surplus identified on diagram or explained e.g. PeXWP1 (**1 mark**)<br><br>• Identification of the original (PeXZ) and new consumer surplus areas (P1WZ). **NB: both must be identified**. (**1 mark**)<br><br>  <br><br><br>**Rejection marks**<br><br>➢ Option A incorrect since this requires an increase in production costs and an inward shift of the supply curve to cause consumer surplus to fall (**1 mark**)<br><br>➢ Option B incorrect since the lower production costs should increase producer surplus / this could be annotated on diagram. (**1 mark**)<br><br>➢ Option C incorrect since there is a change in condition of supply and so the supply curve will shift. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **Q7** | • Correct option **A** (**1 mark**)<br><br>• Definition of a subsidy (government grant to firms to increase production and reduce price of a good) (**1 mark**)<br><br>• The effect of the subsidy is to act like a decrease in production costs. (**1 marks**)<br><br>• Also accept explanation of reason for the subsidy, for example, to reduce external costs associated with fossil fuels. (**1 mark**)<br><br>• Annotation of diagram to show a decrease in equilibrium price **and** a rise in output / the subsidy area or incidence of subsidy. (**1+1 marks**)<br><br>  <br><br><br>**Rejection marks**<br><br>➢ Option B incorrect since a unit subsidy leads to a parallel shift / not a pivotal movement in the supply curve. (**1 mark**).<br><br>➢ Option C incorrect since this shows an increase in the demand curve which would raise the price of biofuels in the market / changes in the conditions of demand are required to shift the demand curve, for example, a cut in income tax. (**1 mark**)<br><br>➢ Option D incorrect since this is the effect of a specific tax which causes market price to rise. (**1 mark**) | |

| Question Number | Answer | Mark |
|---|---|---|
| **Q8** | • Correct option **B** (**1 mark**)<br><br>• Definition of National Minimum Wage (for example, a legal floor wage below, which wages cannot fall). (**1 mark**)<br><br>• Wage rate and employment remains the same since the NMW increase is still well below the free market equilibrium wage. (**1 mark**)<br><br>• Annotation of diagram to show the new NMW level above the previous, but still well below the free market wage. (**1 mark**)<br><br>• Wages can be at any level above the NMW since it is not a maximum wage or wage cap (**1 mark**)<br><br>**Rejection marks**<br><br>➢ Option A incorrect since unemployment would only occur if the NMW was increased above the free market wage rate of £12.12 per hour. (**1 mark**)<br><br>➢ Option C incorrect since a shift in the supply curve for labour depends on the conditions of supply to change, for example, an increase in immigration. (**1 mark**)<br><br>➢ Option D incorrect since the market is in equilibrium where the demand for labour equals the supply of labour so no shortage. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| 9(a) | **4 KAA marks**<br>• Data reference to the increase in price between March 2010 and March 2012 (from around $330 to $500). (**1 mark**)<br>• Identification of an increase in demand for potash due to rising population / intensive farming methods. (**1 mark**)<br>• Diagram (**up to 3 marks**)<br>➢ Original demand and supply diagram with equilibrium price (1)<br>➢ Outward shift of demand curve (1)<br>➢ New equilibrium price identified (1)<br>  | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **6 KAA marks**<br><br>• Definition or formula for price elasticity of supply (the responsiveness of supply of a good due to a change in its price or the %ΔQS ÷ %ΔP). (**1 mark**)<br><br>• Explanation of low price elasticity of supply (the percentage change in supply is less than the percentage change in price / PES is less than 1 / supply of potash is price inelastic). (**1 mark**)<br><br>• Diagram depicting price inelastic supply (**1 mark**)<br><br>• In the short run, supply is likely to be price inelastic since:<br>  • Time required to gain planning permission to build potash mine in National park (**1 mark**).<br><br>  • Time required to build mine and put capital inputs in place e.g. underground pipeline to pipeline to Teesside / time taken to refine and process potash in production. (**1+1 marks**)<br><br>  • Time taken to hire skilled labour / or train labour (**1 mark**)<br><br>  • Only one potash mine currently operates in UK / but the shortfall is made up by imports from Germany and Canada. (**1+1 marks**)<br><br>  • Discussion on availability of spare stocks of potash / stocks could be very low if the costs of storage are high / stocks could be high since non-perishable. (**1+1 marks**)<br><br>**NB: do not award for discussion of how PES may become more elastic in long run.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| 9(c) | **6 KAA marks**<br><br>Fluctuating potash prices may lead to:<br><br>• Data reference of fluctuating price of potash. (**1 mark**)<br><br>• Uncertainty about the future **OR** lower business confidence / may lead to less investment. (**1+1 marks**)<br><br>• Unstable revenue or profits for firms / some development e.g. low prices may decrease revenue and profits whereas high prices may increase revenue and profits. (**1+1 marks**)<br><br>NB: Fluctuations in price and revenue may be shown by diagrammatic analysis (**award up to 2 marks**)<br><br>• Possibility of losses when potash prices low / some development e.g. firms exit the market. (**1+1 marks**)<br><br>• Unstable employment / unstable wages for miners. (**1+1 marks**)<br>**NB: Accept overlap between these points**<br><br>**Evaluation 4 marks (2+2 or 1+3 or 1+1+2)**<br><br>• Discussion of long term implications: the price of potash may be unstable / but the data suggests it is increasing over the long term / implications are that profits will continue to increase.<br><br>• The cost per ton is just $37 / so market price can fall substantially before losses made.<br><br>• Discussion of significance of price elasticity of demand e.g. an inelastic demand will raise revenue when prices increase / but reduce revenue when prices decrease<br><br>• Magnitude: discussion of size of price fluctuations through explicit use of information provided / massive changes over a few months could destabilise | **(10)** |

| | | |
|---|---|---|
| | whole market.<br><br>• Possibility of new potash resources being discovered and extracted in other parts of the world / so could mean further price instability in long run.<br>• Discussion of possible impact of changes in demand on price of potash over time e.g. through development of substitutes.<br><br>• Discussion of measures to reduce price fluctuations e.g. buffer stocks or minimum pricing schemes. **(up to 2 marks)** | |

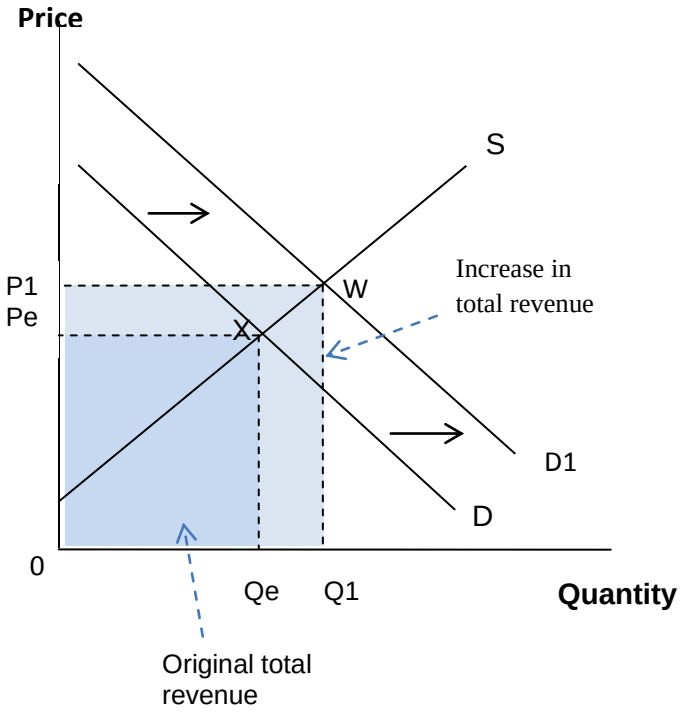
| Question Number | Answer | Mark |
|---|---|---|
| *9(d) | **8 KAA marks (2+2+2+2 or 3+3+2)**<br><br>Case for permitting the potash mine to be built (these points may overlap):<br><br>• More than a thousand jobs created / increase income and expenditure in local communities via multiplier process. (**1+1 marks**)<br><br>• Many local land owners and people from local communities support scheme and set to gain profit / for example, landowners set to gain £1 billion in royalties. (**1+1 marks**)<br><br>• The mine is likely to be highly profitable since the current price per tonne exceeds $400 and the cost per tonne is just $37 / could lead to further investment and development of other businesses e.g. fertilizer plant. (**1+1 marks**)<br><br>• Discussion of the magnitude of mining activity in national park: appears relatively insignificant in area / most of the operations will be underground including pipeline to transport potash to Teesside / avoid road congestion through lorries. (**1+1 marks**)<br><br>• Accept macro argument: improve Britain's balance of payments / as it switches from an importer to an exporter of potash / become self-sufficient in production of important resource. (**1+1 marks**)<br><br>**Evaluation (2+2+2 or 3+3 or 3+2+1 marks)**<br>Limitations / case against the potash mine being built:<br><br>• The mine proposals are located within a national park / could set precedent for more building developments in future / alternative sites are available.<br><br>• Discussion of long term implications: uncertainty of outcome if price of potash falls very low / difficult to discount the costs into a present value over such a long time period.<br><br>• External costs might arise: it may damage tourism to the national park / damage to wildlife / impact on local house prices / difficulty in quantifying the external costs.<br>**NB: External costs may be shown by diagram -** | **(14)** |

| | | |
|---|---|---|
| | **award up to 2 marks.**<br><br>• Employment benefits are quite limited.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br><br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| *9(e) | **8 KAA marks (2+2+2+2 or 3+3+2)**<br><br>**NB: allow application to any industry**<br>• Factors influencing the supply of labour include:<br>• The wage rate or earnings: as the wage rate rises then so too will the supply of labour / since greater financial incentive to work longer hours. (**1+1 marks**)<br>• Net advantages in mining: these may include bonuses / dangerous working conditions and potential for long term illnesses / sick pay and paid holidays / job satisfaction. (**1+1+1 marks**)<br>• The level of training, qualifications, skills or work experience required: varied skills required but some jobs may be highly specialised and limit the supply of labour. (**1+1 marks**)<br>• Size of local workforce: the national park is an area with a small population / the town of Whitby is quite small / depends on geographical mobility of labour. (**1+1+1 marks**)<br>• Income tax or National Insurance Contributions: the lower the rate of income tax then the greater the disposable income / the greater the incentive to work or supply of labour. (**1+1 marks**)<br>• Government social security benefits: cuts in the Job seekers' Allowance and Housing Benefits / may increase incentive to work or supply of labour / especially for low skilled areas of mining work. (**1+1+1 marks**)<br>• Discussion of the National Minimum Wage: an increase in NMW may raise incentive to work / so more supply of labour / many mineworkers earn well above NMW so little impact. (**1+1+1 marks**) | **(14)** |

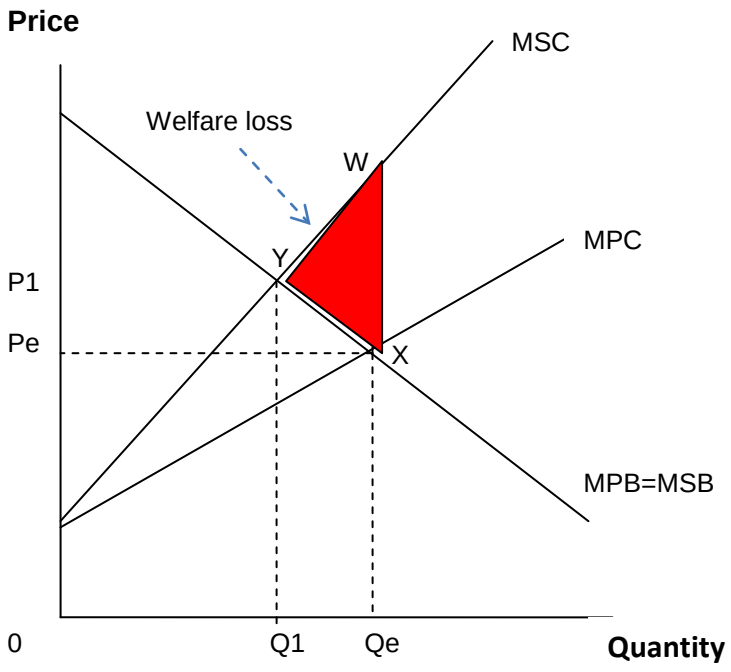
| | | |
|---|---|---|
| | • The raising of school leaving age or retirement age: / may increase supply of labour for the project. (**1+1 marks**)<br><br>• Net migration inflows to UK / the Single European Market have increased net migration flow of labour to UK. (**1+1 marks**)<br><br>• Trade Unions may affect rate of pay or other working conditions / e.g. more job security or safety at work. (**1+1 marks**)<br><br>• Accept factors which may affect the regional or local supply of labour e.g. local house rental prices / local facilities such as public transport. (**1+1 marks**)<br><br>**NB: cap at 6 out of 8 KAA marks if no reference to any industry**<br><br>**Evaluation 6 marks (2+2+2 or 3+3 marks or 3+2+1)**<br>• Prioritisation of factors e.g. availability and rental price of local housing likely to be very important compared to a change in NMW.<br><br>• Discussion of type of mining work and variety of skills required: some work is highly skilled and so this may limit the supply of labour / e.g. engineers to build mine shafts.<br><br>• Supply of labour may increase over time / more knowledge of job vacancies or time to gain skills for the work.<br><br>• Discussion of state of economy: a recession may mean high level of local unemployment / so plentiful supply of labour.<br><br>• Accept discussion of government measures which could change supply of labour e.g. employment legislation, changes to migration laws (**up to 4 marks**).<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br>• To present an argument and conclude on the basis of that argument. | |

| | | |
|---|---|---|
| | • To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

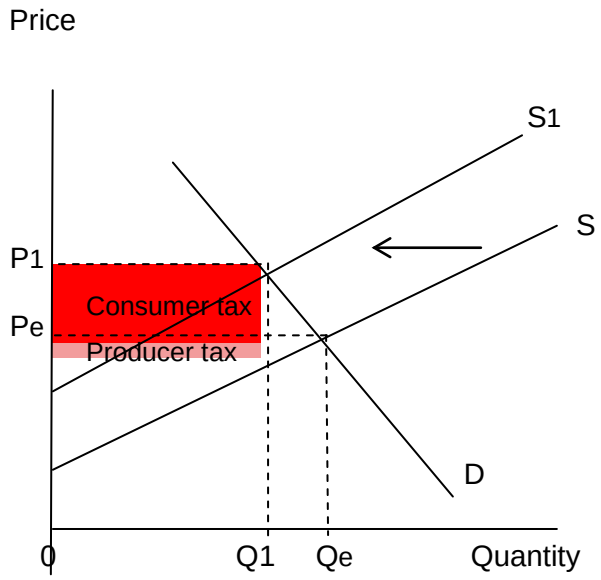
| Question Number | Answer | Mark |
|---|---|---|
| 10(a) | **6 KAA marks**<br><br>• Explicit reference to the data in Figure 1, for example, total revenue increased from £1360 million in 2008 to £1610 million in 2012 / increased by £250 million. (**1 mark**).<br>**NB: data reference must be to total revenue.**<br><br>• Definition of total revenue, for example, the total amount of money received by firms from selling bottled water / it is the average price multiplied by the total quantity (**1 mark**).<br><br>• Diagram (**up to 4 marks**):<br>➢ Original supply and demand diagram with equilibrium price and quantity (1)<br>➢ Increase in demand curve (1)<br>➢ Original total revenue area identified, for example, 0PeXQe (1)<br>➢ New total revenue area identified, for example, 0P1WQ1 (1)<br><br>Also accept the change in total revenue area shown (1+1)<br><br>  <br> | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **4 KAA marks**<br><br>Consumption of bottled water has increased and other soft drinks decreased due to: **(2+2 or 3+1)**<br><br>• Increased health awareness or trend to healthier lifestyle on the benefits of consuming water / rehydration effects can assist recovery or improve mental alertness / increased awareness of the unhealthy effects of consuming other soft drinks such as fizzy colas / could lead to obesity or diabetes or dental decay. **(1+1+1 marks)**<br><br>• Increased promotions of bottled water such as advertising / packaging / shop displays / availability to purchase. **(1+1+1 marks)**<br><br>• Price of fizzy drinks may have increased at a faster rate compared to the price of bottled water / substitutes **(1+1 marks)**<br><br>**NB: if more than two reasons offered, award the best two only.** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| 10(c) | **6 KAA marks and 4 Evaluation marks**<br><br>• Definition of price elasticity of demand (the responsiveness of demand for a good due to a change in its price) or formula (%ΔQD ÷ %ΔP). (**1 mark**)<br><br>• Understanding of price inelastic demand (percentage change in demand is less than percentage change in price or PED is between 0 and 1 (this may be shown by diagram). (**1 mark**)<br><br>**NB: Accept one view on price elasticity of demand as KAA and the other view as Evaluation**<br><br>**Price inelastic in demand:**<br><br>• Promotions such as advertising, celebrity endorsement or branding / has created customer loyalty / real world example from bottled water. (**1+1+1 marks**)<br><br>• Bottled water comprises a small proportion of total income / so a change in price is unlikely to have much effect on demand. (**1+1 marks**)<br><br>• Consideration of water as being a necessity good which is essential for good health / so consumers more likely to still buy bottled water even as price increases. (**1+1 marks**)<br><br>• Consideration of habit forming for some consumers to have bottled water / such as place of work or at a leisure event. (**1+1 marks**)<br>**Price elastic in demand**<br><br>• There are many close substitutes / such as tap water or milk or flavoured drinks / consideration of availability of substitutes (**1+1 marks**).<br><br>• Bottled water is considered as a luxury good by many / not regarded as offering value for money. (**1+1 marks**)<br><br>• Discussion of magnitude of price increases on bottled water and how it might affect price elasticity. (**up to 2 marks**) | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| *10(d) | **8 KAA marks**<br><br>• Definition of external costs: Negative third party effects / costs external to a market transaction or exchange / costs the price mechanism fail to take into account / negative spillover effects / difference between social costs and private costs (**1+1 marks**).<br><br>• Explanation of external costs from consuming bottled water as increase in waste at landfill sites / damage to oceans and fish and bird life. (**1 mark**)<br><br>• Explanation of external costs from producing bottled water as increase in carbon emissions by transporting the good. (**1 mark**)<br><br>• Accept other costs (**1+1 marks**)<br>➢ Using up a non-renewable resource in producing plastic bottles.<br><br>➢ Private costs of bottled water can be 10 0000 times the price of tap water.<br><br>➢ Bottled water appears a waste or misallocation of resources.<br><br>• Diagram (**up to 4 marks**)<br><br>  <br> | (14) |

| | | |
|---|---|---|
| | ➢ Original MPB / MSB and MPC curves (**1**)<br>➢ MSC curve (accept a parallel shift of the MSC curve) (**1**)<br>➢ Identification of market equilibrium and socially efficient quantity (**1**)<br>➢ Identification of triangle of welfare loss (**1**)<br>**6 Evaluation marks (2+2+2 or 3+3 or 1+2+3)**<br><br>• Increase in recycling of plastic and glass bottles has reduced the external costs.<br><br>• There are benefits from bottled water e.g. employment and incomes / price mechanism meeting the demand of consumers / health benefits from consuming it / tax revenue collected improves government finances.<br><br>• Difficulty in quantifying external costs and attaching monetary value.<br><br>• Discussion of measures to reduce external costs (e.g. subsidies / minimum pricing).<br>**NB: do not award for increase in taxes.**<br><br>• Discussion of magnitude of the costs / with development.<br><br>• Prioritising among external costs.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br><br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

| Question Number | Answer | Mark |
|---|---|---|
| *10(e) | **8 KAA marks**<br><br>• Definition of indirect tax (a compulsory charge or levy on the expenditure of a good). (**1 mark**)<br><br>• The tax acts as if there is an increase in costs of production. (**1 mark**)<br><br>• Indirect tax diagram (**up to 4 marks**):<br>➢ Original demand and supply curve with equilibrium price and quantity (**1**)<br>➢ Inward shift of supply curve to S1 with new equilibrium price and quantity (**1**)<br>➢ Tax area identified (**1**)<br>➢ Tax areas for consumers and producers identified (**1**)<br><br>**NB: accept ad valorem tax which shows a pivotal movement of the supply curve.**<br><br>**NB: accept diagram showing the tax being placed on marginal private costs to internalise the external costs.**<br><br>  <br><br><br>• Explanation that the tax causes price to rise and output to fall / employment implications / labour costs. (**1+1 marks**)<br><br>• Explanation of impact on profits or revenue of producers / possible exit from industry. (**1+1 marks**) | **(14)** |

| | | |
|---|---|---|
| | • The tax will reduce consumer surplus or producer surplus / application to diagram. (**1+1 marks**)<br><br>• The tax could internalise the external costs of production / eliminate the triangle of welfare loss and so lead to social optimum equilibrium position / less pollution overall. (**1+1 marks**)<br><br>• The tax will improve government finances / the tax funds could be used to reduce the external costs associated with bottled water. (**1+1 marks)**<br><br>**6 Evaluation marks (2+2+2 or 3+3 or 1+2+3)**<br><br>• Discussion of price elasticity of demand for bottled water / the more price inelastic then the greater the tax revenue and burden on consumers.<br><br>• Discussion of consumers switching to substitutes such as fizzy flavoured drinks / could be more harmful to consumers<br><br>• Discussion on impact on affordability of an essential resource / implications for consumers on low incomes.<br><br>• Discussion of magnitude of tax / with development.<br><br>The quality of written communication will be assessed in this question based on the candidate's ability:<br><br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

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**Edexcel GCE**

| Centre Number | Candidate Number |
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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Monday 13 May 2013 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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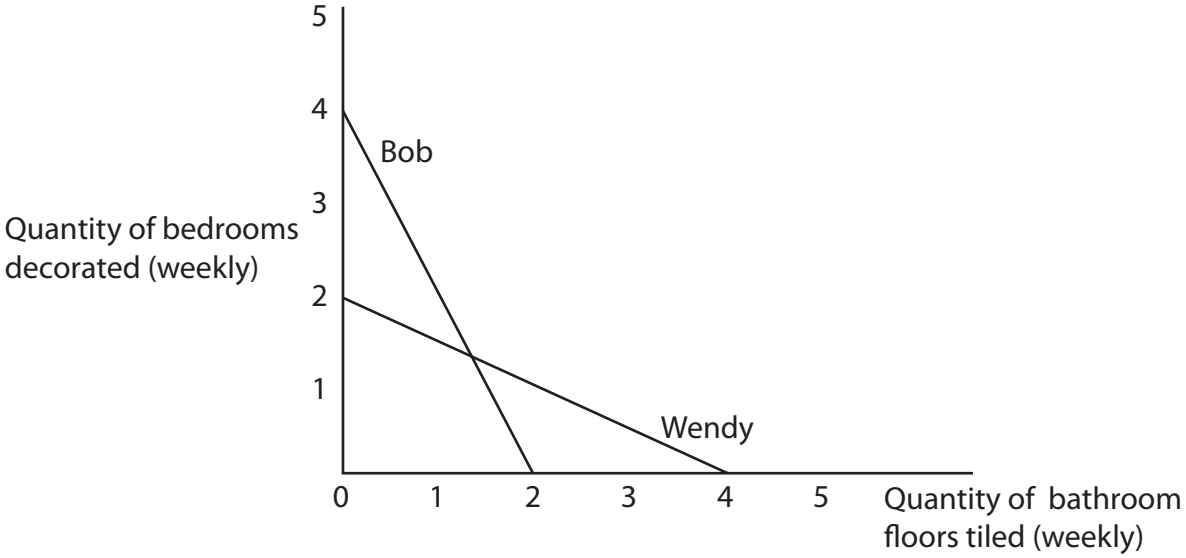
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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram shows the weekly production possibilities of two builders, Bob and Wendy. They **each allocate half** their working time to decorating bedrooms and the **other half** to tiling bathroom floors.

From this information it can be deduced that

**(1)**

**A** the opportunity cost of decorating a bedroom is the same for both builders

**B** Wendy can decorate more bedrooms and tile more bathroom floors than Bob in a week

**C** the opportunity cost of tiling a bathroom floor is lower for Bob than for Wendy

**D** Wendy and Bob could increase their combined total weekly output through specialisation

Answer ☐



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Explanation

**(3)**

**(Total for Question 1 = 4 marks)**

**2** The price of eggs increased by up to 20 pence a dozen in January 2012.

What is the most likely cause of this rise in price?

**(1)**

**A** A scare that eating eggs might be unhealthy

**B** A decrease in the price of feed for hens

**C** A reduction in tax on eggs

**D** New regulations which prevent the intensive farming of egg-laying hens

Answer ☐

Explanation

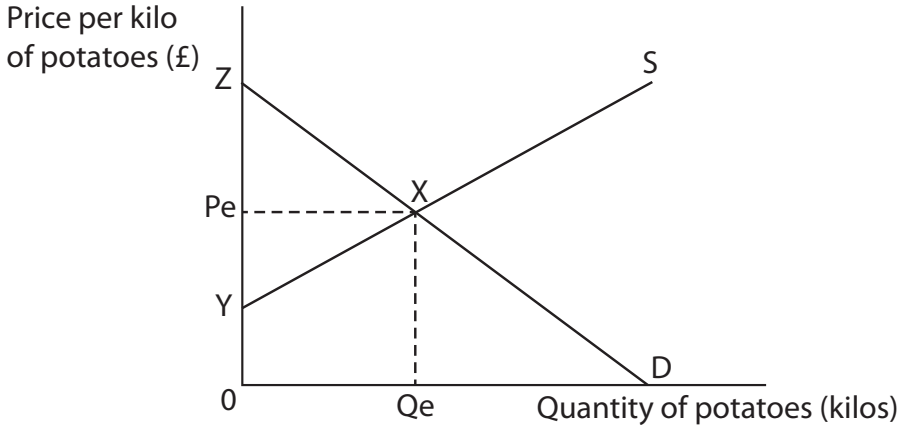
**(3)**

**(Total for Question 2 = 4 marks)**



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**3**




The diagram shows the market for potatoes where the initial equilibrium price is Pe and quantity Qe. Use the diagram in your explanation.

An increase in demand for potatoes is most likely to

**(1)**

**A** maintain price at Pe and decrease producer surplus

**B** raise price and increase producer surplus

**C** maintain price at Pe and increase consumer surplus

**D** raise price and decrease consumer surplus

Answer ☐

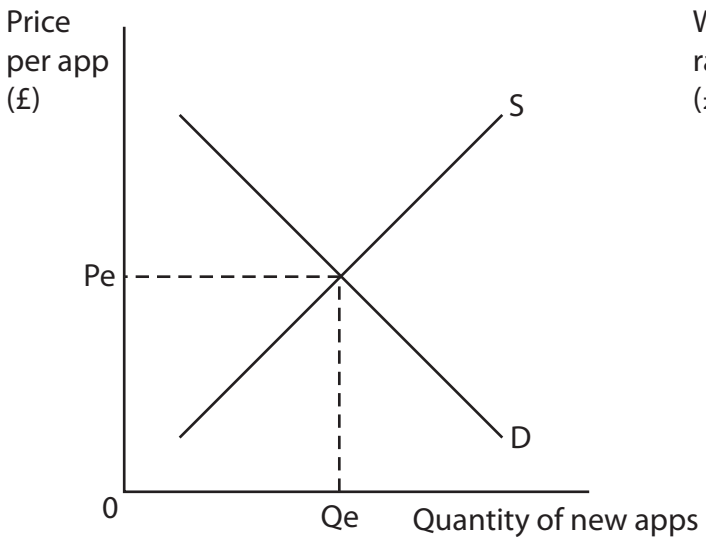
Explanation

**(3)**

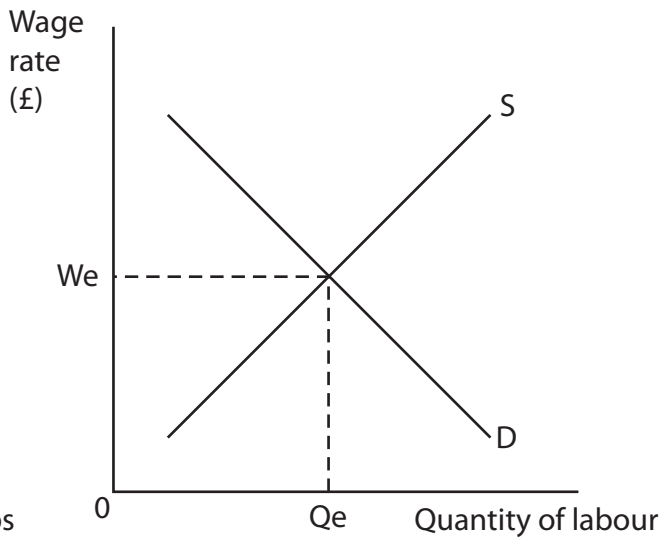
**(Total for Question 3 = 4 marks)**

**4**

Market for new applications (apps)




Labour market for application (app) programmers




The diagrams show the market for new apps (software used on mobile phones and tablet computers) and the labour market for app programmers.

Other things being equal, an increase in the demand for new apps is most likely to

**(1)**

**A** affect the wage rate of app programmers

**B** decrease the demand for app programmers and mobile phones

**C** decrease the supply of app programmers

**D** decrease the total revenue of tablet computer manufacturers

Answer ☐



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Explanation

**(3)**

**(Total for Question 4 = 4 marks)**

**5** Estimates of income elasticity of demand for selected items in Sri Lanka and UK

| Product | Sri Lanka | UK |
|---|---|---|
| Cereals e.g. rice | 0.46 | –0.02 |
| Fish | 0.62 | 0.36 |
| Tobacco | 1.02 | 0.57 |

(Source: © http://www.ers.usda.gov/Data/InternationalFoodDemand/
NB Figures have been rounded up)

It may be deduced from the data in the table that

**(1)**

**A** the demand for tobacco is income inelastic in both countries

**B** the demand for fish is more responsive to changes in income in both countries than the demand for tobacco

**C** cereals are a normal good in Sri Lanka but an inferior good in the UK

**D** a 10% increase in income would cause a more than 10% increase in demand for fish in both countries

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**



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**6** In 2011 the European Commission proposed the removal of all government subsidies to train operating companies. The most likely effect of implementing such a policy would be to

**(1)**

**A** decrease external costs from motoring

**B** increase the price of train services

**C** increase demand for train services

**D** decrease air fares in Europe

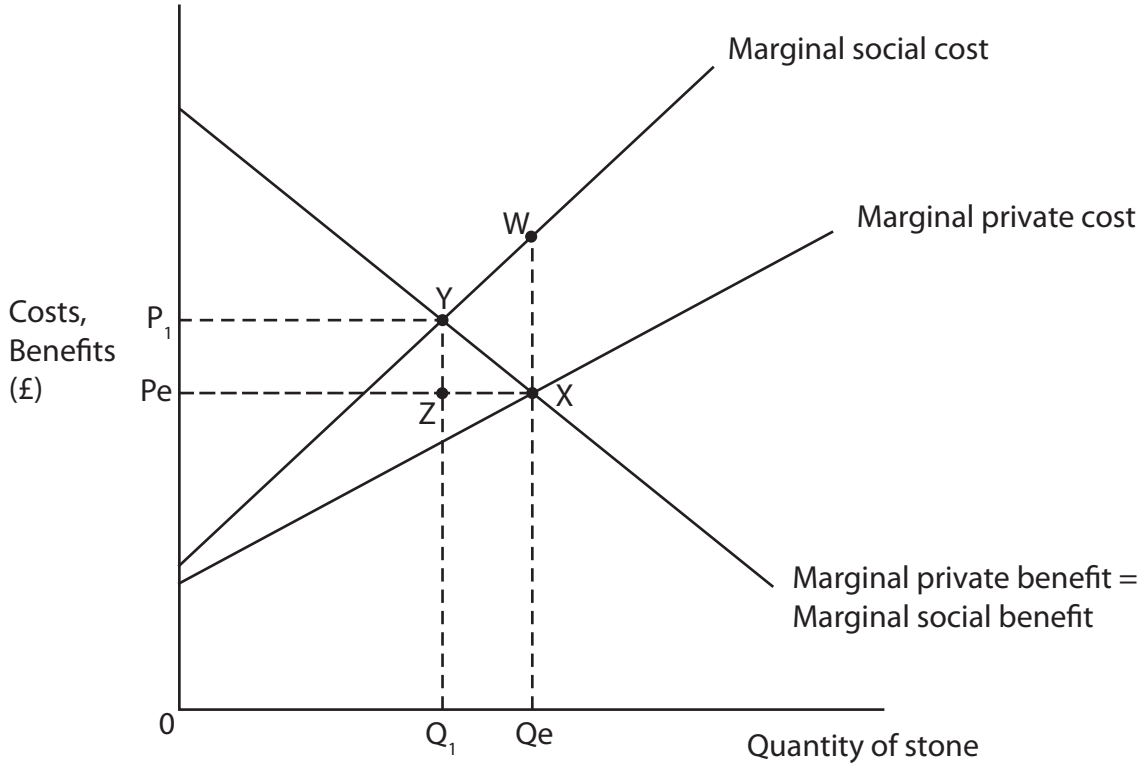
Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7**




The diagram shows the market for the extraction of stone from a quarry. Assume there are no external benefits.

Which of the following is true?

**(1)**

**A** The social optimum quantity exceeds the free market equilibrium quantity

**B** The area of welfare loss at the free market equilibrium is XZY

**C** A decrease in the quantity from Qe towards Q1 will reduce the net welfare loss

**D** At the free market equilibrium quantity, marginal social benefit exceeds marginal social cost

Answer ☐



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Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8** In a free market economy, an example of market failure would occur if

**(1)**

**A** external benefits from education provision are ignored by the price mechanism

**B** firms enter a market in response to an increase in demand

**C** external costs are internalised by the price mechanism

**D** government intervention in healthcare leads to a misallocation of resources

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**



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**Section B: Answer either Question 9 or Question 10.**

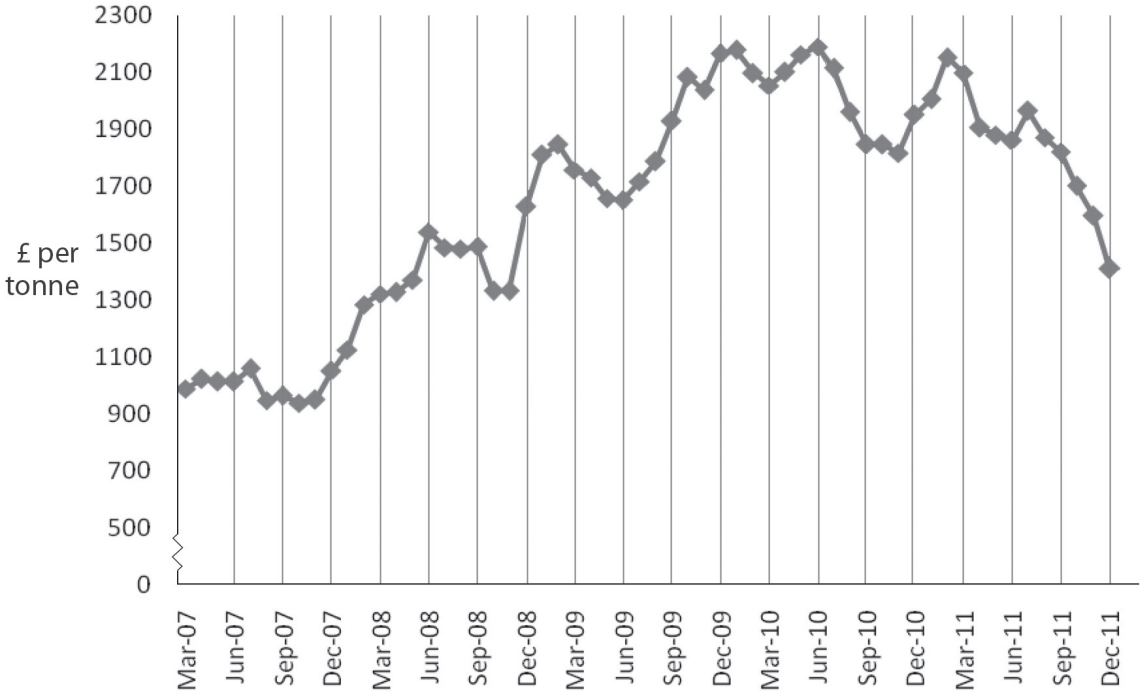
**If you answer Question 9 put a cross in this box** ☒

**Question 10 starts on page 26.**

**You should spend 55 minutes on this question.**

**9 The price of cocoa**

**Figure 1 Cocoa prices, March 2007 – December 2011**




(Source: © U.S. Department of Agriculture)



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**Extract 1 Unstable cocoa prices**

The price of cocoa fell sharply from £2 153 to £1 410 per tonne between February and December 2011. This follows a decrease in consumption from Europe - the world's largest consumer of the commodity - amid fears that it was entering a recession. At the same time there was a very good cocoa harvest in the Ivory Coast, the world's biggest producer, which supplies around 40% of global output.

The supply of cocoa in 2012 is set to exceed demand by a record 400 000 tonnes, adding to producer stockpiles. There are fears that farmers will abandon looking after their cocoa trees, which take five years to grow to maturity, and switch to growing rubber. However, rubber prices have also decreased in recent years.

Cocoa is subject to enormous price fluctuations: in June 2010 its price reached £2 190 a tonne. This was the highest price for 33 years, resulting from a disappointing crop caused by poor weather, ageing trees and a temporary export ban imposed by the newly elected President of the Ivory Coast. Price fluctuations create instability in income, employment and investment among cocoa farmers.

To reduce the damaging effects of fluctuating cocoa prices, the Ivory Coast government has introduced a guaranteed minimum price scheme to support farmers. The success of this scheme will depend partly on the response of international cocoa buyers and whether or not they will seek to purchase from other major producers such as Ghana and Nigeria.

In the long term, as the emerging markets continue to grow, demand for cocoa from China and India is likely to increase. Consumers in these countries are developing a strong taste for chocolate. Cocoa is a key ingredient in making chocolate products such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar. However, it only forms around 6% of the price of a bar of chocolate.

(Source: adapted from 'Euro debt crisis bites into cocoa' by Emiko Terazono, © The Financial Times Ltd, 5th December 2011 and http://www.traidcraft.co.uk)

(a) With reference to the first paragraph of Extract 1, explain the causes of the decrease in cocoa prices between February and December 2011. Illustrate your answer with a supply and demand diagram.

**(6)**

(b) With reference to the information provided and your own knowledge, assess whether the supply of cocoa is likely to be price elastic or price inelastic.

**(6)**

(c) Examine the likely effects of a fall in the price of cocoa on the producers of chocolate products such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar.

**(8)**

*(d) Evaluate the likely consequences of fluctuating prices for cocoa producers.

**(14)**

*(e) Evaluate the likely economic effects of a guaranteed minimum price scheme, such as that introduced by the Ivory Coast for cocoa. Illustrate your answer with a supply and demand diagram.

**(14)**

(a) With reference to the first paragraph of Extract 1, explain the causes of the decrease in cocoa prices between February and December 2011. Illustrate your answer with a supply and demand diagram.

**(6)**



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(b) With reference to the information provided and your own knowledge, assess whether the supply of cocoa is likely to be price elastic or price inelastic.

**(6)**

(c) Examine the likely effects of a fall in the price of cocoa on the producers of chocolate products such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar.

**(8)**



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*(d) Evaluate the likely consequences of fluctuating prices for cocoa producers.

**(14)**

*(e) Evaluate the likely economic effects of a guaranteed minimum price scheme, such as that introduced by the Ivory Coast for cocoa. Illustrate your answer with a supply and demand diagram.

**(14)**



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**(Total for Question 9 = 48 marks)**



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**If you answer Question 10 put a cross in this box** ☒

**10 The proposed expansion of Heathrow Airport**

**Extract 1 Should a third runway be built at Heathrow Airport?**

London Heathrow is the world's third busiest airport and a major hub for the global economy. In 2011 it handled more than 476 000 flights and some 65 million passengers. However, the airport is operating at 99.2% of its capacity, making it vulnerable to any disruption. There is a shortage of runway capacity to meet the forecast increase in passenger demand of 15 million using Heathrow Airport by 2020.

Research by a business consultancy claims that Britain could lose out on an extra 140 000 jobs if capacity at Heathrow is not increased in the medium term. It estimates that £4.5 billion will be lost from Gross Domestic Product because of falling foreign investment, as businesses consider locating elsewhere in Europe, and £1.6 billion lost in trade with emerging markets by 2020.

However, a third runway at Heathrow would lead to a significant increase in external costs from the extra 900 flights per day over London. Expansion at Heathrow might be unnecessary as almost a quarter of flights are to destinations less than 300 miles away and already well served by train. Domestic flights and short flights to Europe could easily be carried out by train, especially with the continued expansion of Eurostar rail services to many more European cities. Substituting these flights for train services would reduce the need for extra capacity at Heathrow and have significant environmental benefits, as train travel creates one tenth of the pollution per passenger compared to air travel.

An alternative might be to develop other airports around London such as Gatwick, Stansted and Luton where significant spare capacity exists. In the long run a new super-sized airport in the Thames estuary might provide the best solution although the financial cost is expected to exceed £50 billion and take at least 15 years to build after planning permission has been received.

(Source: adapted from © Guardian News and Media Ltd, 2012 and © Greenpeace, 10 Reasons to Stop Heathrow Expansion (http://www.greenpeace.org.uk/blog/climate/10-reasons-to-stop-heathrow-expansion))



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**Figure 1: Estimates of price elasticity and income elasticity of demand for UK air travel**

| Air travel | Price elasticity of demand | Income elasticity of demand |
|---|---|---|
| UK business passengers | –0.2 | 1.2 |
| UK leisure passengers | –0.7 | 1.4 |

(Source: © Crown copyright)

**Figure 2: Air Passenger Duty (APD) rate from April 2012**

| Flight distance (miles) | Economy class (tax per passenger) | Other travel classes, e.g. business class (tax per passenger) |
|---|---|---|
| 0–2000 | £13 | £26 |
| 2001–4000 | £65 | £130 |
| 4001–6000 | £81 | £162 |
| Over 6000 | £92 | £184 |

The APD is an indirect tax introduced in 2006 and is charged to airlines carrying passengers from UK airports. Between 2010 and 2011 APD remained the same. In April 2012 the government increased APD by 8%.

(Source: © Crown copyright)

(a) With reference to the information provided and your own knowledge, explain **two** possible reasons for the 'forecast increase in passenger demand of 15 million using Heathrow Airport by 2020' (Extract 1, line 5).

**(6)**

(b) With reference to Figure 1, discuss why business and leisure air travel passengers have different price elasticities of demand.

**(6)**

(c) Using the concept of cross elasticity of demand and referring to the information provided, assess whether train travel is an effective substitute for air travel.

**(8)**

*(d) Using the information provided and your own knowledge, evaluate the case for building a third runway at Heathrow Airport.

**(14)**

*(e) Examine the likely economic effects on air travel of the increase in Air Passenger Duty (APD). Use an appropriate demand and supply diagram in your answer.

**(14)**

(a) With reference to the information provided and your own knowledge, explain **two** possible reasons for the 'forecast increase in passenger demand of 15 million using Heathrow Airport by 2020' (Extract 1, line 5).

**(6)**



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(b) With reference to Figure 1, discuss why business and leisure air travel passengers have different price elasticities of demand.

**(6)**

(c) Using the concept of cross elasticity of demand and referring to the information provided, assess whether train travel is an effective substitute for air travel.

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*(e) Examine the likely economic effects on air travel of the increase in Air Passenger Duty (APD). Use an appropriate demand and supply diagram in your answer.

**(14)**

**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**

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# Mark Scheme (Results)

## Summer 2013

## GCE Economics (6EC01/01)

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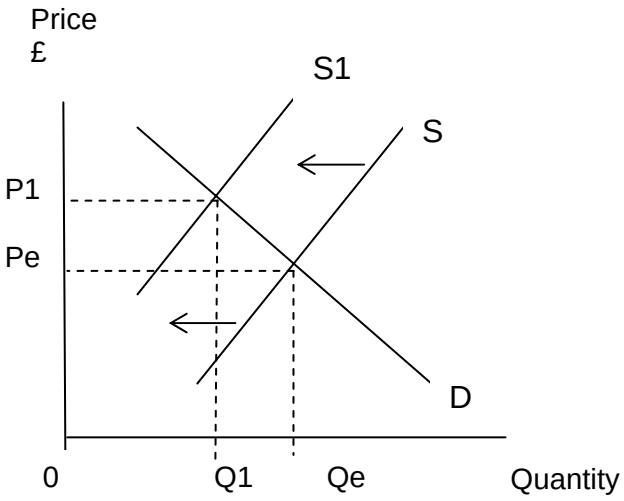
## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | Correct option D (**1 mark**)<br><br>• Definition of specialisation or division of labour (labour allocate all their time in producing just one good or service) (**1 mark**)<br><br>• Definition of production possibility frontier (maximum possible output combinations of two goods or services an economy can achieve when all resources are fully efficiently employed **or,** the maximum output potential for Bob and Wendy) (**1 mark**)<br><br>• Identification that Wendy should produce bathrooms and Bob bedrooms / reason is due to different opportunity cost or efficiency or productivity (**1+1 marks**)<br><br>• Relevant numerical application: for example, Wendy can specialise in tiling bathroom floors and increase output to 4 per week and Bob can specialise in decorating bedrooms and increase output to 4 per week (this may be shown on diagram). (**1 mark**)<br><br>**NB: this may include calculations of opportunity cost.**<br><br>**Rejection marks**<br>• Option A incorrect since opportunity cost is different - with a numerical example e.g. to decorate 1 bedroom Bob has an opportunity cost of 0.5 tiling of a bathroom whereas for Wendy the opportunity cost of decorating 1 bedroom is 2 tiling of a bathroom / opportunity cost differs since they have different gradients on their production possibilities. (**1 mark**)<br><br>• Option B incorrect since Wendy can only decorate 2 bedrooms per week whereas Bob can decorate 4 bedrooms per week. (**1 mark**)<br><br>• Option C incorrect since Bob has a higher opportunity cost of tiling 1 bathroom floor (forgo decorating 2 bedrooms compared to Wendy who forgoes decorating just 0.5 bedrooms). (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | Correct option D (**1 mark**)<br><br>• Regulations increase production costs (**1 mark**)<br><br>• Application: for example, more space needed / larger barns / bigger cages / free range hens (**1 mark**)<br><br>• Written explanation of supply decreasing (**1 mark**) or diagrammatic analysis which shows a decrease in supply / higher price of eggs (**1+1 marks**)<br><br>  <br><br><br>**Rejection marks**<br>• Option A incorrect since a health scare would cause the demand for eggs to decrease and so push price down. (**1 mark**)<br><br>• Option B incorrect since a decrease in the price of feed for hens would reduce production costs, leading to lower prices of eggs (**1 mark**)<br><br>• Option C incorrect since a reduction in tax on eggs will shift supply outwards and so put pressure on price to fall (also accept idea that eggs are not taxed since essential good). (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | Correct option B (**1 mark**)<br><br>• Definition of producer surplus (the difference between the price producers are willing to supply to the market and the actual market price, **OR,** the area between the supply curve and equilibrium price line). (**1 mark**)<br><br>• Identification of original area of producer surplus on diagram or written as PeXY (**1 mark**)<br><br>• Annotation of the diagram to show an increase in the demand curve with a higher price (**1 mark**) and the increase in area of producer surplus or new level of producer surplus.(**1 mark**)<br><br>**Rejection marks**<br>• Options A and C incorrect since an increase in demand will cause an increase in price. (**1 mark**)<br><br>**NB: do not double award if candidate has already gained a mark for showing an increase in price on the diagram.**<br><br>• Option D incorrect as an increase in demand will cause an increase in consumer surplus (this must be shown on diagram) (**1 mark**) | **(4)** |

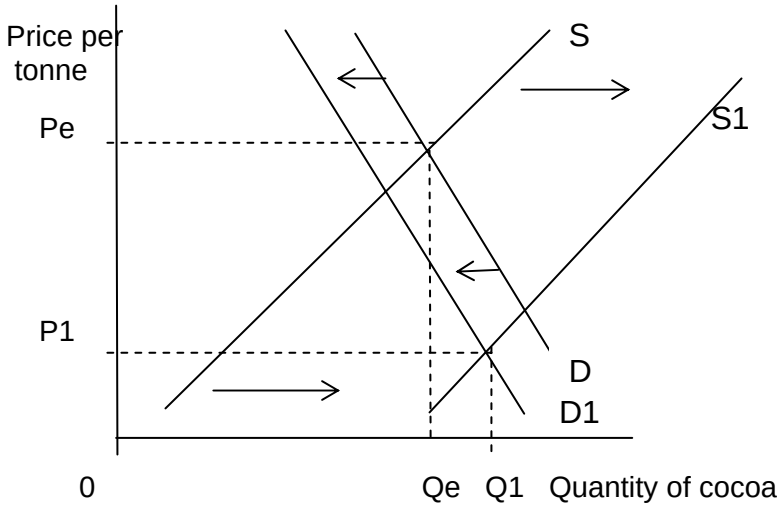
| Question Number | Answer | Mark |
|---|---|---|
| **4** | Correct answer option A (**1 mark**)<br><br>• Written explanation that an increase in demand for new apps causes an increase in wage rates for app programmers(**1 mark**), **OR,** Annotation of diagrams showing an increase in demand for new apps and app programmers / with new equilibrium wage rate identified. (**1+1 marks**)<br><br>• Identification of demand for labour as a derived demand (**1 mark**)<br><br>**Rejection marks**<br>• Option B incorrect since the demand for app programmers will increase in order to meet the increase in demand for new apps. (**1 mark**)<br><br>• Option C incorrect since a decrease in supply of app programmers would be caused by factors such as worse working conditions or longer training periods. (**1 mark**)<br><br>• Option D incorrect since total revenue should increase as the demand for tablets are complementary. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | Correct option C (**1 mark**)<br><br>• Definition of income elasticity of demand (the responsiveness of demand for a good due to a change in income, **OR**, %ΔQD ÷ %ΔY). (**1 mark**)<br><br>• Definition of a normal good (as income increases so the demand for a good increases / it has a positive income elasticity of demand). (**1 mark**)<br><br>• Definition of an inferior good (as income increases the demand for a good decrease / it has a negative income elasticity of demand). (**1 mark**)<br><br>• Use of relevant diagram depicting a normal good or inferior good (**1 mark**)<br><br>**NB: Award a maximum of 2 marks for definitions**<br><br>• Award for data use: for example, Sri Lanka has a positive income elasticity of demand for cereals at 0.46 and so is a normal good, **OR,** UK has a negative income elasticity of demand for cereals at -0.02 and so is an inferior good). (**1 mark**)<br>**NB: This can be shown by annotation of the table**<br><br>**Rejection marks**<br>• Option A incorrect since the income elasticity of demand for tobacco is above 1.0 so must be income elastic in Sri Lanka. (**1 mark**)<br><br>• Option B incorrect since the income elasticity of demand for fish in both countries is closer to 0 than for tobacco – so more income inelastic. (**1 mark**)<br><br>• Option D incorrect since a 10% increase in income would cause a 6.2% increase in demand for fish in Sri Lanka and a 3.6% increase in demand for fish in the UK. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | Correct option B (**1 mark**)<br><br>• Definition of subsidy (government grant to firms to increase production or lower price). (**1 mark**)<br><br>• The subsidy acts to reduce production costs (or the withdrawal of a subsidy increases production costs)(**1 mark**<br><br>• **NB: many candidates might include a reduction of production costs in the definition – the mark is awarded for the reduction in costs and not for the definition of subsidy.**<br><br>• Rail firms have less revenue to fund train services and so cut back on supply (**1 mark**)<br><br>• NB Accept diagrammatic explanation which shows supply curve shifting inwards as subsidy is cut / with equilibrium price increasing. (**1+1 marks**)<br><br>• NB: accept diagram depicting the imposition of a subsidy (**1 mark**)<br><br>**Rejection marks**<br>• Option A incorrect since external costs likely to increase as more people switch to motoring so more air pollution or congestion. (**1 mark**)<br><br>• Option C incorrect since as demand for train services likely to fall due to higher rail fares. (**1 mark**)<br><br>• Option D incorrect since air travel and train services are substitutes so an increase in train fares is likely to cause an increase in demand for air travel which raise air fares. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **7** | Correct option C (**1 mark**)<br><br>• Definition of welfare loss (the excess of social cost over social benefit for a given output). (**1 mark**)<br><br>• Identification or annotation of diagram to show welfare loss of XWY. (**1 mark**)<br><br>• Annotation of diagram to show how a cut in output will reduce the area of welfare loss (**1 mark**)<br><br>• Identification of the free market equilibrium as position X or quantity Qe or as MPC=MPB and the social optimum equilibrium as position Y or quantity Q1 or MSC=MSB. This might be identified on the diagram. (**1 mark**)<br><br>• Definition of external costs: (costs external to an exchange / negative third party effects / costs which the price mechanism ignores / costs outside of the market transaction / the difference between social costs and private costs / negative spillover effects). (**1 mark**)<br><br>• Application to quarrying stone: external costs might include noise pollution from lorries / fall in nearby property prices / air pollution from the dust / damage to wildlife). (**1 mark**)<br><br>**NB: do not award for market failure**<br><br>**Rejection marks**<br>• Option A incorrect since the social optimum equilibrium quantity Q1 is less than the free market equilibrium quantity Qe (must state the actual quantity positions). (**1 mark**). **NB: Do not double award.**<br><br>• Option B incorrect since welfare loss is area XWY. (**1 mark**). **NB: Do not double award.**<br><br>• Option D incorrect since at the free market equilibrium marginal social benefit (X) is less than marginal social costs (W) (must state the actual positions here). (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | Correct option A (**1 mark**)<br><br>• Definition of market failure (the price mechanism allocates resources inefficiently or leads to a net welfare loss). (**1 mark**)<br><br>• Definition of free market economy (resources are allocated by the price mechanism). (**1 mark**)<br><br>• Definition of external benefits (positive third party effects / benefits external to an exchange / positive spillover effects / benefits outside a market transaction / benefits the price mechanism ignores / the difference between social benefits and private benefits). (**1 mark**)<br>**NB: a maximum of 2 marks available for definitions**<br><br>• Application: external benefits from education include a more skilled or productive workforce which could generate greater income / profits / tax revenue / quality of life. (**1 mark**)<br><br>• Accept diagrammatic analysis of external benefits in consumption.(**1 mark**)<br><br>**Rejection marks**<br>• Option B incorrect since firms entering the market in response to an increase in demand indicates that the price mechanism is working by offering greater profit incentives. (**1 mark**)<br><br>• Option C incorrect since internalising external costs mean the social optimum position is reached where MSB=MSC. (**1 mark**)<br><br>• Option D incorrect since government intervention which leads to a misallocation of resources is an example of government failure. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **6 KAA marks**<br>• Explicit data reference to the fall in price of cocoa (£2,153 to £1,410 a tonne / a fall of 35%) (**1 mark**)<br>• Demand has decreased due to the decrease in consumption in Europe or recession. (**1 mark**)<br>• Supply has increased due to very good harvest in Ivory Coast. (**1 mark**)<br>• Diagram (**up to 4 marks**)<br>  <br><br>➢ Original demand and supply curve with equilibrium price identified (**1**)<br>➢ Decrease in demand curve (**1**)<br>➢ Increase in supply curve (**1**)<br>➢ New equilibrium price identified (**1**)<br>**NB: If just one curve shifted - award a maximum of 2 marks for diagram.**<br>**NB: If one curve shifted incorrectly - award a maximum of 2 marks for diagram.**<br>**NB: If no diagram offered – award a maximum of 3 marks.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **4 KAA marks and 2 Evaluation marks**<br><br>• Definition of price elasticity of supply (the responsiveness of supply of a good due to a change in its price, **or,** %ΔQS ÷ %ΔP). (**1 mark**)<br><br>• Understanding of the distinction between inelastic and elastic supply (this may be defined) This could be shown by diagram (depicting price inelastic or price elastic supply curve for cocoa) **(1 mark)**<br><br>**NB: Candidates may argue either way – up to 4 KAA marks for one view and 2 evaluation marks for the other view.**<br><br>**NB: discussion of how price elasticity of supply may vary over time constitutes evaluation (up to 2 marks)**<br><br>Reasons for supply being price inelastic may include **(1 for identification of a point and 1 for development):**<br>➢ Fixed inputs in short run such as available land to plant trees.<br>➢ Takes up to 5 years to grow cocoa / harvest mean supply is inelastic.<br>➢ Fluctuating price of cocoa has discouraged farmers to grow this commodity.<br>➢ Perishability of cocoa – difficult to store. Use of data in an evaluative manner.<br>➢ Magnitude of price change makes it difficult for supply to respond in a proportionate way / use of data required here.<br><br>Reasons for supply being price elastic may include: **(1 for identification of a point and 1 for development):**<br>➢ Extract 1 indicates that falling prices of cocoa are encouraging farmers to switch into rubber production instead / suggest a high degree of factor mobility.<br>➢ Extract 1 indicates a surplus of 400,000 tonnes of cocoa in 2012 / suggesting it can be stored or stockpiled / suddenly released on to market.<br>➢ Application of fertiliser to cocoa trees can increase yields rapidly.<br>➢ Recession – so lots of unused resources are available / spare capacity. | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **6 KAA marks**<br><br>• A decrease in price of cocoa will reduce production costs for companies making chocolate (**1 mark**)<br><br>• Chocolate companies might respond by reducing the price of chocolate bars / increasing supply of chocolate bars (**1+1 marks**)<br><br>• Diagram which shifts the supply curve outwards and reduces price (NB: do not award if diagram refers to cocoa market) (**1 mark**)<br><br>• Increase in producer surplus / profits.(**1+1 marks**)<br><br>• Increase in share price / dividends for chocolate companies. (**1+1 marks**)<br><br>• Increase in employment in chocolate companies. (**1 mark**)<br><br>• Increase funds for investment / for example into new chocolate products / advertising / new machinery (**1+1+1 marks**)<br><br>• Chocolate companies may purchase extra stock of cocoa since it is cheaper and so can use for later (**1 mark)**<br><br>**Evaluation (2 marks or 1+1 marks)**<br>• Extract 1 suggests that cocoa is not that significant as a cost of production since it only forms 6% of the price of a bar of chocolate / so firms may simply keep price of chocolate the same.<br><br>• Other ingredients could more important in affecting the price of chocolate, for example, milk or sugar.<br><br>• Other things may not be equal e.g. there could be an increase in labour costs which offset the decrease in cocoa prices.<br><br>• Discussion of the magnitude and time period of price changes of cocoa / using the data. | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)*** | **8 KAA marks (1+1+1+1+2+2 or 2+2+2+2 or 3+3+2)**<br><br>• Fluctuating prices may be an example of market failure. (**1 mark**)<br><br>Fluctuating cocoa prices may lead to:<br><br>• Uncertainty about the future (**1 mark**)<br><br>• Identification mark from extract: 'instability in income, employment and investment' (**1 mark**)<br><br>Development of this:<br>➢ Low prices may decrease revenue and incomes / high prices may increase revenue and incomes (**1+1 marks**)<br><br>➢ Diagrammatic analysis of unstable price and revenue (linked to effects on producer revenue)(**2 marks**)<br><br>➢ Losses when cocoa prices low / farmers may exit the market / lose land / fall into poverty. (**1+1+1 marks**<br><br>➢ Unstable employment or seasonal unemployment / knock-on effects for local communities. (**1+1 marks**)<br><br>➢ Unstable investment could lead to less improvement in production / e.g. fertilisers and trees, fencing and irrigation (**1+1 marks**)<br><br>➢ Diversification into alternative crops such as rubber production / depends on mobility of factors. (**1+1 marks**)<br><br>**NB: Accept overlap between these points** | **(14)** |

**Evaluation 6 marks (1+1+2+2 or 2+2+2 or 3+3)**

- Discussion of significance of price elasticity of demand for cocoa e.g. if price inelastic / high prices may lead to high revenue and profits for farmers / funds could be used to increase investment.

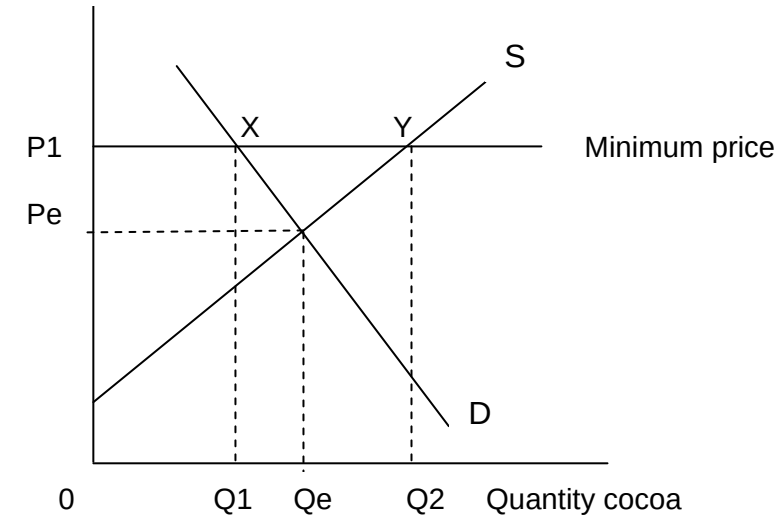
- Discussion of significance of price elasticity of supply of cocoa e.g. inelastic in short run / difficult for cocoa farmers to respond to rising or falling prices.

- Discussion of size of price fluctuations through explicit use of information provided / massive changes over a few months could destabilise whole market.

- Discussion of cyclical pattern of price fluctuations / application to Figure 1.

- Time factor: long term trend in commodity prices is upward due to rapid growth of emerging markets in China and India / changing tastes towards chocolate in these countries / can expect significant profits for cocoa farmers in the long run.

- Government intervention or producers setting up a scheme, for example, explanation of buffer stocks or national minimum price (**up to 2 marks**).

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **8 KAA marks**<br>**NB Accept answers which consider commodities other than cocoa**<br><br>• Definition of a minimum price scheme (a floor price / minimum price below which cocoa cannot fall). (**1 mark**)<br><br>• Diagram and explanation (**up to 4 marks**)<br><br>Price per tonne<br><br>  <br><br><br>➢ Demand and supply curves with original equilibrium price identified. (**1**)<br>➢ Minimum price line drawn in (**Do not accept one drawn below the free market equilibrium price**). (**1**)<br>➢ Identify the excess supply or surplus cocoa as XY or Q1Q2. (**1**)<br>➢ Area of spending by government agency as XYQ2Q1 (**1**)<br>➢ The overall new level of revenue for farmers as 0P1YQ2 (**1**)<br><br>**NB: If no relevant diagram, award maximum of 4 KAA marks.** | **(14)** |

**Economic effects may include:**

- Reduction in price fluctuations / development of this point e.g. more stable income stream for farmers. (**1+1 marks**)
- Increase in revenue and profit for farmers. (**1 marks**)
- Increase government expenditure on purchasing the surplus. (**1 mark**)
- Increase in employment / development of this point e.g. less absolute poverty among farmers. (**1+1 marks**)
- Increase in investment by farmers / development of this point e.g. new fertilisers or planting of more cocoa trees. (**1+1 marks**)
- Lower consumer surplus or higher producer surplus / areas identified on diagram. (**1+1 marks**)
- Impact on consumers e.g. higher prices and affordability of goods. (**1 mark**)
- Increase in production costs for chocolate manufacturers such as Cadbury and Nestle / development of this point e.g. lower profit.(**1+1 marks)**
- Surpluses can be sold overseas to countries where demand is increasing e.g. China and India.(**1+1 marks**)

**NB: accept any relevant macroeconomic argument**

**Evaluation 6 marks (2+2+2 or 3+3 or 1+1+1+1+2)**
The scheme may not be successful since:

- Minimum price scheme may lead to government failure.
- Problem of rising prices – prices can still fluctuate above the minimum price / may harm consumers.
- Problem for Ivory Coast government of purchasing surplus cocoa in the auctions / difficult for a developing country / cost of storage / opportunity cost to government expenditure / example of this.
- Discussion on position of the minimum price in relation to free market price e.g. if below there may be no effect / if significantly above there may be too high a cost to maintain minimum price scheme.

| | | |
|---|---|---|
| | • Discussion of price elasticity of demand or supply of cocoa and how this affects size of surplus / government expenditure on scheme.<br><br>• Consumers may seek alternative supplies of cocoa from other countries e.g. Ghana and Nigeria / issue of 40% of global supply from Ivory Coast / non-compliance.<br><br>• It may reduce competitiveness / reduce efficiency of farmers / less productivity since offered a guaranteed price.<br><br>• Minimum price schemes have tended to fail for other commodities e.g. tin, rubber, coffee and wool / scheme unworkable in long run due to the high cost.<br><br>• Dumping of surpluses abroad could undermine cocoa producers in other countries / discussion of perishability.<br><br>**NB: Do not award for discussion of buffer stock scheme but be prepared to award marks where relevant e.g. the minimum price and purchase of stock.** | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **6 KAA marks**<br><br>• Identification of two reasons. (**1+1 marks**)<br>• Development of the two reasons. (**2+2 or 3+1 marks**)<br>• Award for demand and supply diagram which shows an increase in demand. (**1 mark**)<br><br>**Reasons include:**<br>➢ London Heathrow is major hub for the global economy / increase in trade or globalisation / this might be due to greater investment between countries / more business meetings overseas.<br><br>➢ Increase in population / this may be due to immigration / especially with the expansion of the EU and free movement of labour / job opportunities.<br><br>➢ Increase in real income / so people can afford to travel more / air travel is a normal good / a positive income elasticity of demand and use of Figure 1.<br><br>➢ Fall in price / use of data in figure 1 which shows price elasticity of demand / greater competition between airlines such as EasyJet and Ryanair / increase in number of airlines.<br><br>➢ Change in fashion or taste / globalisation has encouraged people to be more adventurous.<br><br>➢ Advertising / people become more aware of holiday resorts or exotic destinations / this may be through internet or television programmes.<br><br>➢ Award for new runway which will increase capacity and so encourage more customers.<br><br>**NB: do not award for just stating that the airport is already at full capacity.**<br><br>**NB: accept answers which do not refer to the information provided.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **4 KAA marks**<br><br>• Definition or formula of price elasticity of demand (responsiveness of demand for a good due to a change in its price**, or,** %ΔQD ÷ %ΔP) . (**1 mark**)<br><br>• Business travel is more inelastic than leisure travel. (accept leisure travel is more elastic). (**1 mark)**<br><br>• Both business and leisure travel are inelastic. (**1 mark**)<br><br>• Explicit meaning of price inelastic demand (the proportionate change in demand is less than the proportionate change in price **or** use of figures to this effect). (**1 mark**)<br><br>• Diagram(s) depicting demand for business travel as more price inelastic than leisure travel. (**1 mark**)<br><br>• Business travel is more essential than leisure travel / people need to earn a living but do not need to go on holiday / leisure travel is a luxury that can be put off. (**1+1 marks**)<br><br>• Use of substitutes as a determinant of price elasticity of demand / e.g. leisure travel may have more alternatives available. (**1+1 marks**)<br><br>• Proportion of income spent on air travel / e.g. leisure passengers may spend a higher proportion of income compared to business travellers. (**1+1 marks**)<br><br>• Numerical application of the figures (e.g. a 10% rise in price will cause just a 2% fall in demand for business travel / but a 7% fall in demand for leisure travel). (**1+1 marks**) | **(6)** |

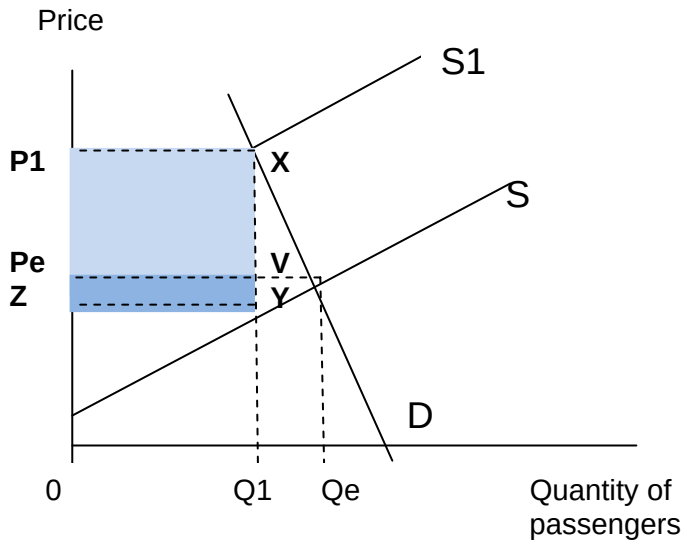
| | | |
|---|---|---|
| | **Evaluation (1+1 or 2 marks)**<br>• Discussion of size of the differences in price elasticity of demand between business and leisure travellers e.g. leisure travellers are three times more responsive to changes in income than business travellers.<br>• Price may be less significant for business travel as companies often pay the air fare / demand more inelastic.<br>• Change in availability of substitutes e.g. more business meetings over the internet so demand for air travel may become more elastic over time.<br>• Recession may make price elasticity of demand for business travel more elastic / firms become more price conscious.<br>• There are considerable variations in price elasticity of demand within either category of travellers e.g. for very wealthy leisure travellers air fare changes have no impact on their demand.<br>• Other things are not equal – other factors might influence the demand for air travel e.g. changing income of travellers or profits of a business. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **6 KAA marks**<br><br>• Definition or formula for cross elasticity of demand (cross elasticity of demand measures the responsiveness of the demand for a good to a change in the price of another good, **or,** %ΔQD good Y ÷ %ΔP good X). (**1 mark**)<br><br>• Substitutes have a positive cross elasticity of demand. (**1 mark**)<br><br>• An increase in price of air travel would cause an increase in demand for train travel (vice-versa). (**1 mark**)<br><br>• Suitable diagram(s) showing positive cross elasticity of demand for air travel and train travel. (**1 mark**)<br><br>• Numerical application: for example, a 10% rise in price of air travel might cause a 5% rise in train travel. (**1 mark**)<br><br>• Reference to Extract 1 which suggests air travel and rail travel are substitutes for relatively short distances with almost a quarter of flights from London Heathrow airport being up to 300 miles / continued expansion of Eurostar rail services to more cities / not much difference in the time taken to travel from one place to another.(**1+1+1 marks**)<br><br>• Reference to idea that complementary goods have a negative cross elasticity of demand (**1 mark**).<br><br>**Evaluation (1+1 or 2 marks)**<br>• Discussion on the relative strengths or weaknesses of the substitutes / it may vary according to individual circumstances.<br><br>• Air travel and train travel are weak substitutes for inter-continental flights or where there are limited rail links / example offered such as travel from UK to USA.<br><br>• Time factor: in the long run XED may change due to the expansion of Eurostar train services / more destinations and faster service across Europe. | **(8)** |

| | | |
|---|---|---|
| | • Air travel and train travel can also be complementary goods / example offered such as people who live in Reading and travel by train from Reading to London Heathrow and then take a flight to Dubai.<br><br>• Discussion on quality of train services: for example reliability / time to travel between selected destinations / reference to expansion of Eurostar services to Spain, Italy, Holland and Germany. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **8 KAA marks (2+2+2+2 or 3+3+2)**<br><br>**NB: accept macroeconomic arguments when relevant for both KAA and evaluation**<br><br>**Case for building third runway at Heathrow airport**<br><br>• The airport is already at 99.2% capacity – it is virtually at full capacity / so it is vulnerable to any disruption such as snow or volcanic ash or strike action / issue of safety with such little spare capacity / problem of airplanes 'stacking' over London waiting to land. (**1+1+1 marks**)<br><br>• Air passenger demand at Heathrow airport is forecast to grow by 15 million by 2020 / needs to expand if it is to remain an important international hub for the global economy / population increase in London / without expansion there is more pressure placed on other airports in London region / Figure 1 shows a high income elasticity of demand for air travel. (**1+1+1 marks**)<br><br>• Research by business consultancy indicates an extra 140,000 jobs could be created by expansion of the airport / development of this point e.g. increases in ground staff, air crew, shops at the airport / multiplier or 'knock-on effects'. (**1+1+1 marks**)<br><br>• £4.5 billion might be lost from GDP due to less investment / development of this point e.g. firms decide to invest in other countries with better airport provision such as France and Holland / who have significant spare capacity. (**1+1+1 marks**)<br><br>• £1.6 billion loss of trade with emerging markets / development of this point e.g. Heathrow needs to accommodate more flights to emerging markets of Brazil, India and China who are growing rapidly. (**1+1 marks**)<br><br>• Accept external benefits argument which might include diagrammatic analysis (**up to 2 marks**)<br><br>• Building an extra runway at Heathrow airport is a lot cheaper than building a new super-sized airport in the Thames estuary at a cost exceeding £50 billion / airlines and passengers have a preference to fly into Heathrow rather than other airports around London. (**1+1 marks**) | **(14)** |

| | | |
|---|---|---|
| | • Increased tax revenue for government e.g. Air Passenger Duties and income tax revenue /so could reduce fiscal deficit. (**1+1 marks**)<br><br>**6 Evaluation marks (2+2+2 or 3+3 or 4+2 or 1+1+2+2)**<br><br>**NB: award a maximum of four different evaluation points:**<br><br>• Significant external costs associated with expansion of Heathrow airport e.g. noise pollution from the flights / air pollution which could harm health of local population / road congestion around airport / visual eyesore / damage to wildlife / displacement of homes to build third runway / public protests / accept external costs diagram. **(NB: only award 1 mark for listing examples of external costs unless developed)**<br><br>• Difficulty of calculating the benefits and costs from the third runway at Heathrow / e.g. long time period of projection / issue of planning enquiries before runway is built.<br><br>• The third runway might be unnecessary since almost a quarter of flights from Heathrow are less than 300 miles and could be better served by train travel / especially with expansion of Eurostar high speed rail network.<br><br>• Discussion of expanding alternative airports around London such as Gatwick, Stansted or Luton e.g. consideration of building a new London airport in Thames estuary / especially as full capacity could be reached in the medium term even with a third runway at Heathrow.<br><br>• Accept discussion of significance of benefits e.g. in terms of jobs created at a time of high unemployment.<br><br>• **Accept** opportunity cost involved for government who might contribute to some of the funding. (**up to 2 marks**) | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **8 KAA marks**<br><br>• Explanation of APD as a specific tax or indirect tax levied on air travel from the UK (or tax on expenditure). (**1 mark**)<br><br>• The tax acts like an increase in production costs (**1 mark**)<br><br>• Effects of the tax – increase price per flight and or reduce quantity of passengers (ceterus paribus) (**1 mark**)<br><br>• **Diagram (up to 4 marks)**<br><br>  <br><br><br>➢ Original demand & supply curves & equilibrium, position (**1**)<br>➢ New supply curve shifted inwards (**1**)<br>➢ Unit tax identified as vertical difference e.g. XY (**1**)<br>➢ Tax area XYZP1 (**1**)<br>➢ Distinguish between consumer tax area XVPeP1 and Producer tax area VYZPe (**1+1**)<br><br>**NB: Accept pivotal shift in the supply curve inwards.**<br><br>**NB: accept a negative externality diagram where a tax has been imposed.**<br><br>**NB: award a maximum of 4 out of 8 KAA marks if no relevant diagram offered.** | **(14)** |

| | | |
|---|---|---|
| | • The APD could reduce the number of air flights and so help cut external costs or internalise external costs / such as air and noise pollution. (**1+1 marks**)<br><br>• The APD could reduce profits or revenue of airlines / employment implications / investment implications. (**1+1 marks**)<br><br>• Reduce consumer or producer surplus / shown on diagram. (**1+1 marks**)<br><br>• Raise extra tax revenue that can be used to develop air travel infrastructure / with example. (**1+1 marks**)<br><br>• Increase in demand for substitute modes of travel such as rail and sea ferries but this must be linked back to air travel. (**1 mark**)<br><br>• Reduce international competitiveness of air travel industry in UK / loss of hub business to other airports(**1+1 marks**)<br><br>**6 Evaluation marks (2+2+2 or 3+3)**<br>• Discussion of magnitude of the increase in APD: 8% over 2 years is just in line with inflation / no increase in real terms, or, increase in real terms over one year / use of data from Figure 2 – a relatively small tax of £13 per passenger for flights up to 2000 miles / more significant for long haul flights exceeding 4000 miles.<br><br>• Discussion on income level of passengers: not much impact for First class or Business class passengers compared to economy passengers.<br><br>• Discussion of price elasticity of demand for flights:<br>If inelastic then little impact on number of passengers / if elastic then might lead to big reduction in number of passenger flights / diagrammatic analysis.<br><br>• Discussion of APD as a proportion of total cost of flight or the price for passengers / airlines might absorb extra tax in production costs and so not pass on to consumers.<br><br>• Discussion of possible changes to other air travel costs / for example, fuel and labour costs may decrease. | |

| | | |
|---|---|---|
| | • Short-run versus long run implications: it depends on whether or not the increase in APD is part of a long term process of tax increases on flights.<br><br>• Air travel still treated leniently compared to other goods and services / since no VAT or fuel duties applied. | |

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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Tuesday 15 January 2013 – Afternoon
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** **Statement 1:** In the UK, a 50% tax rate applies on taxable earnings over £150 000 a year.

**Statement 2:** The 50% tax rate is unfair to high income earners since it reduces their living standards.

Which of the following best describes the two statements above?

**(1)**

**A** Statement 1 is normative and statement 2 is positive

**B** Both statements are positive

**C** Statement 1 is positive and statement 2 is normative

**D** Both statements are normative

Answer ☐

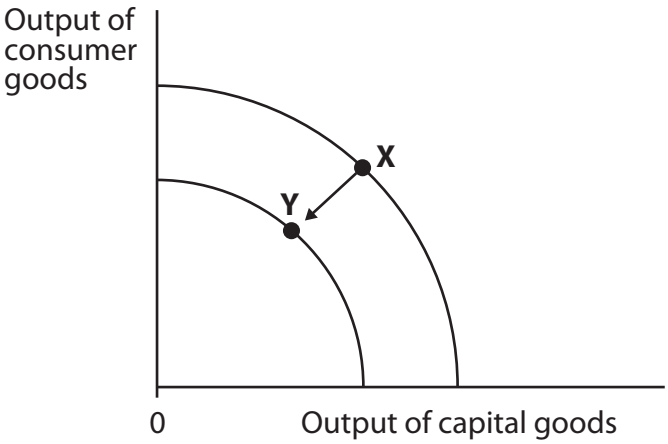
Explanation

**(3)**

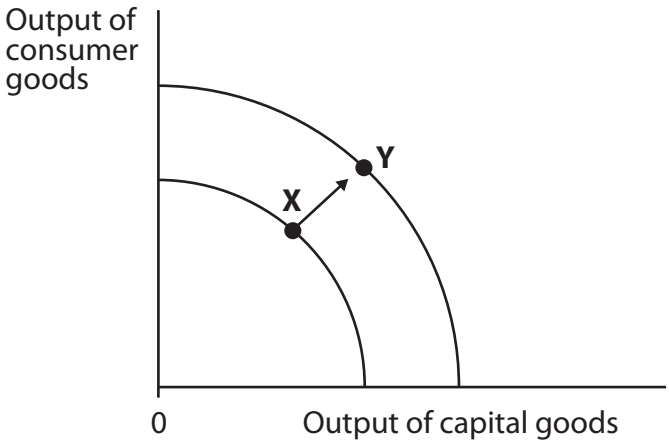
**(Total for Question 1 = 4 marks)**

**2**

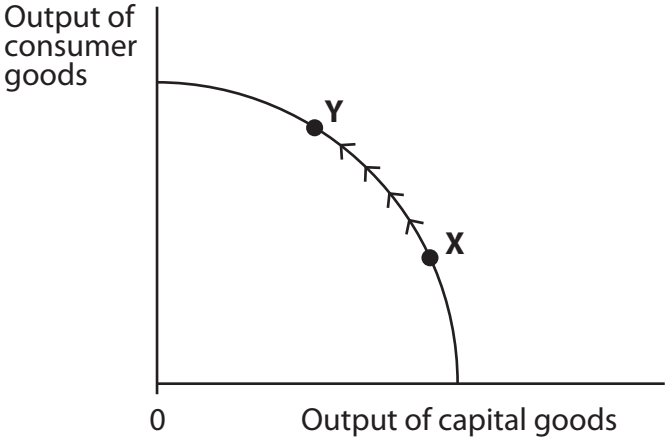
**Option A**



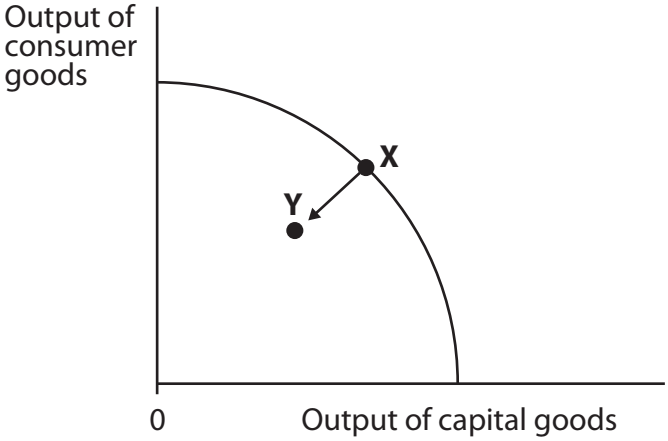

**Option B**




**Option C**




**Option D**




The diagrams show movements from position X to Y on production possibility frontiers. In which of the above diagrams does the movement from X to Y illustrate economic growth?

**(1)**

Answer



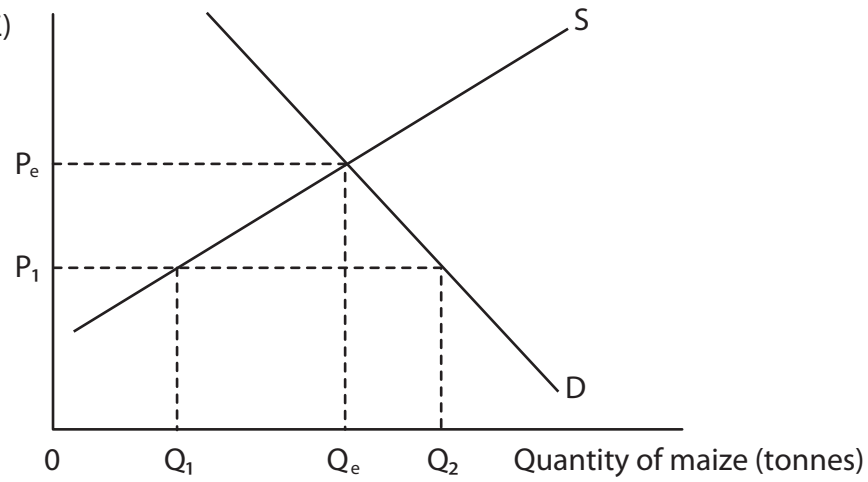
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Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3** Price per tonne (£)




The diagram shows a competitive market for maize. Assuming the current price is $P_1$, the mostly likely outcome is

**(1)**

**A** quantity supplied will fall

**B** demand curve will shift to the left

**C** price will rise

**D** quantities supplied and demanded will remain unchanged

Answer ☐

Explanation

**(3)**

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



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**4**

**UK elasticities of demand for air travel (2011 estimates)**

| | |
|---|---|
| Price elasticity of demand | –0.6 |
| Income elasticity of demand | +1.3 |

(Source: © Crown Copyright)

It may be deduced from the data in the table that

**(1)**

**A** air travel is a normal good and demand for it is price inelastic

**B** a decrease in the price of air travel will increase total revenue

**C** air travel is an inferior good and demand for it is price elastic

**D** an increase in income will cause the price of air travel to fall

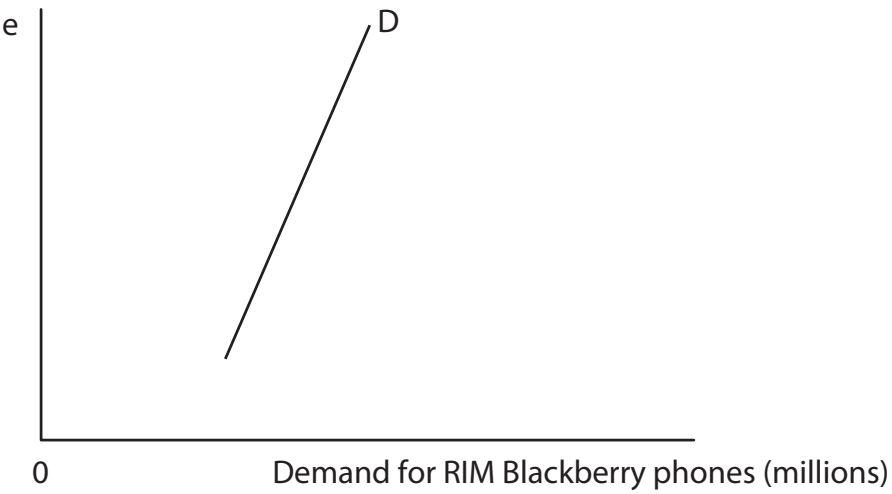
Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**

**5**




The diagram shows the relationship between the **price** of the Apple iPhone and the **demand** for the RIM Blackberry phone. It can be deduced from the diagram that these two goods

**(1)**

**A** are price elastic in demand

**B** have a negative cross elasticity of demand

**C** have a zero cross elasticity of demand

**D** are substitutes for each other

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**



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**6** With reference to the reason provided, which of the following is most likely to have a high price elasticity of supply?

**(1)**

**A** IT Technicians, because there is a high demand for their services

**B** New houses, because they take a long time to build

**C** Wheat, because large stockpiles are available

**D** Organic vegetables, because they have close substitutes

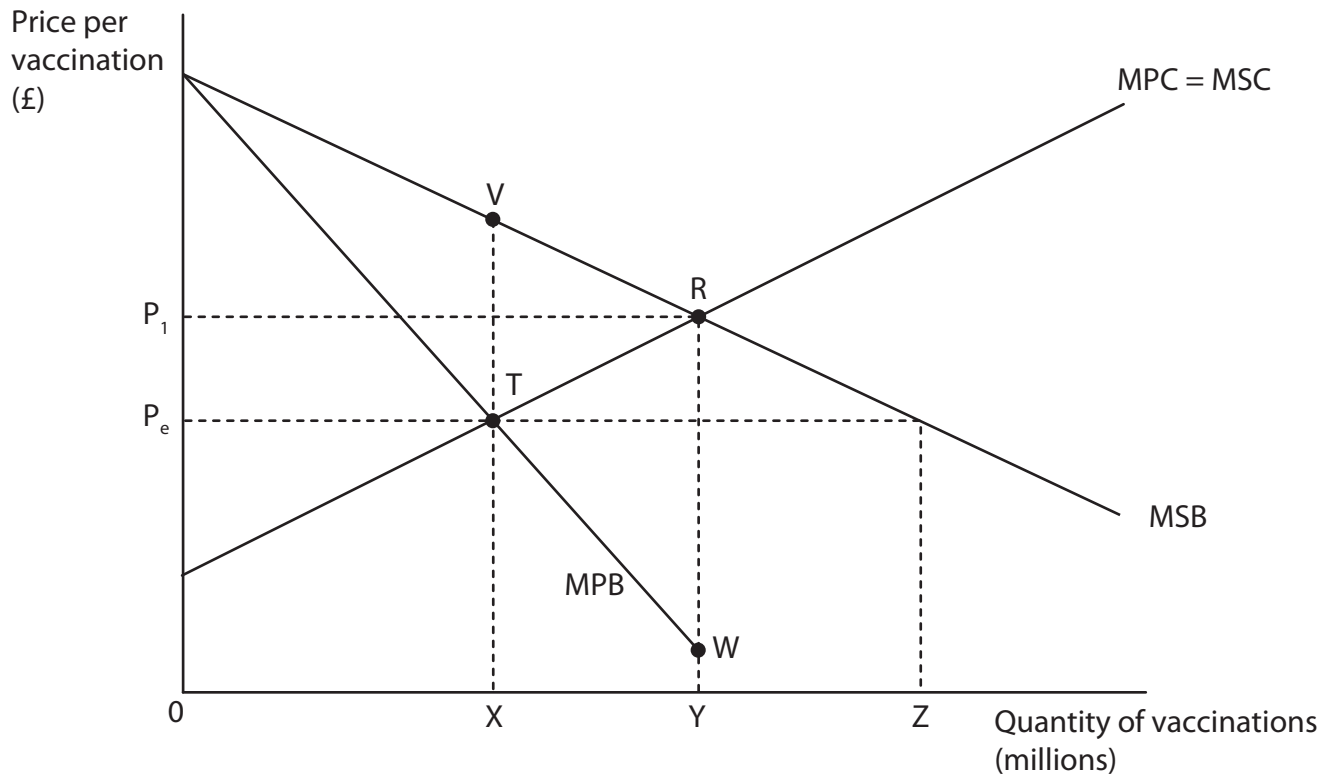
Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7** **Market for vaccinations**




The diagram shows a free market for vaccinations in which the current equilibrium level of output is X and price $P_e$. At this level of output there is

**(1)**

**A** an external cost

**B** market failure

**C** an excess supply

**D** government failure

Answer



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Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8** The operation of a buffer stock scheme for wheat means that

**(1)**

**A** stocks are released onto the market when there is a surplus of wheat

**B** the price of wheat cannot rise above the minimum price set

**C** stock levels are increased following a shortage of wheat

**D** stocks are used to reduce price fluctuations of wheat

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**



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**Section B: Answer either Question 9 or Question 10.**

**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 26.**

**You should spend 55 minutes on this section.**

## 9 North Atlantic fishing



### Extract 1 EU and mackerel fish quotas

North Atlantic fish stocks are collapsing through mismanagement by governments. A breakdown in the agreement over the size of fish catches between the European Union (EU), Norway, Iceland and the Faroe Islands means the last great stock of mackerel is under threat. The quantity of mackerel caught has risen by almost 50% this year and is now well beyond the level required to remain a sustainable resource. If mackerel disappear, so do the many links in the food chain which depend on them. The fish catches need to be small enough to maintain breeding stocks for future generations.

Global warming has caused mackerel to migrate further north to the seas around Iceland and the Faroe Islands and these two countries are massively exceeding the agreed fish catches, known as quotas. Both of these non-EU countries are catching over 150 000 tonnes of mackerel this year – over-fishing in excess of their agreed limit of 100 000 tonnes – whilst the EU countries have maintained their fish catches. More than a third of the mackerel caught by Icelandic fishing boats is fed to animals and farmed fish or turned into fertiliser. It is an astonishing waste. Other fish stocks in Iceland's waters such as whiting and herring have been wiped out.

To make matters worse, the EU fish quota system means that over 30% of fish catches are thrown back into the sea. Fishing boats are not allowed to land or sell more than their allowances, otherwise they risk severe fines.

(Source: adapted from George Monbiot, © Guardian News and Media Ltd, 8th August 2011)



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**Extract 2 Protecting fish stocks**

A Royal Commission on Environmental Pollution recommended that the UK government prevents all fishing in 30% of the UK's coastal waters. Fish could then reproduce safely, greatly increasing the size of stocks. However, fish swim where they want – they do not remain in any one country's coastal waters.

Another way to protect the fish stocks is for the UK government to subsidise the development of fish farms, which currently account for a third of all fish directly consumed. Many believe this has relieved pressure from wild fish stocks as well as creating thousands of jobs in remote communities.

Fish farming does have its critics. For example, disease spreads rapidly in overpopulated fish farms and the local wild fish population can be contaminated. Furthermore, when large numbers escape from the farms, this affects the overall gene pool.

(Source: adapted from George Monbiot, © Guardian News and Media Ltd, 8th August 2011)

(a) With reference to Extract 1, outline the meaning of the term *sustainable resource* (line 5).

**(4)**

(b) Using the information provided in Extract 1 and your own knowledge, explain **two** possible causes of the decrease in fish stocks over recent years.

**(6)**

*(c) Examine the likely external costs from over-fishing of mackerel. Use an appropriate diagram in your answer.

**(14)**

(d) With reference to Extract 2, discuss the likely economic impact if the UK government prevents fishing in 30% of the UK's coastal waters.

**(10)**

*(e) Evaluate the use of government subsidies to fish farms. Use an appropriate diagram in your answer.

**(14)**

(a) With reference to Extract 1, outline the meaning of the term *sustainable resource* (line 5).

**(4)**



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(b) Using the information provided in Extract 1 and your own knowledge, explain **two** possible causes of the decrease in fish stocks over recent years.

**(6)**

*(c) Examine the likely external costs from over-fishing of mackerel. Use an appropriate diagram in your answer.

**(14)**



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(d) With reference to Extract 2, discuss the likely economic impact if the UK government prevents fishing in 30% of the UK's coastal waters.

**(10)**

*(e) Evaluate the use of government subsidies to fish farms. Use an appropriate diagram in your answer.

**(14)**

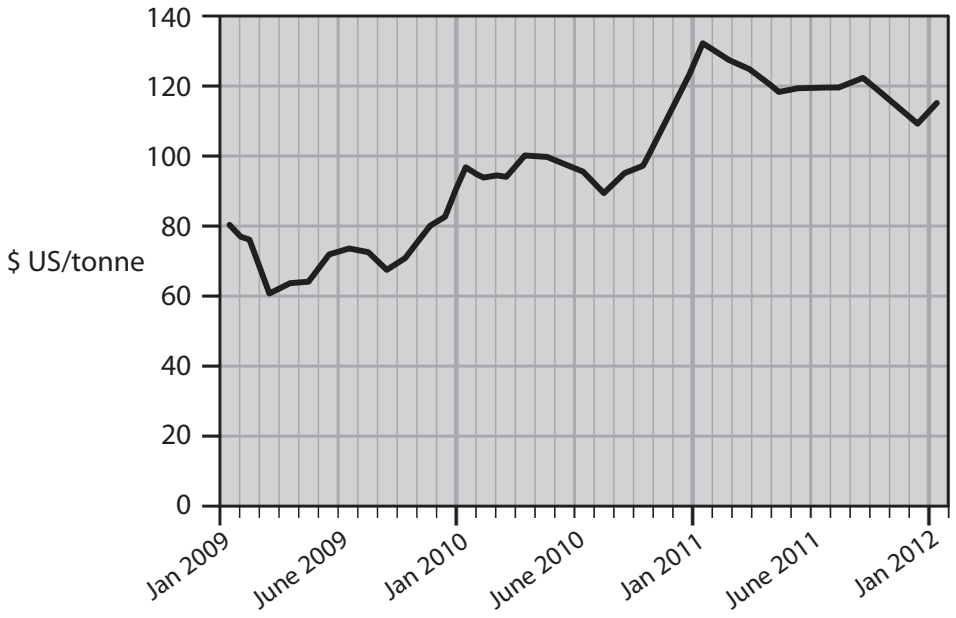

P 4 1 6 4 0 A 0 2 4 3 6

**(Total for Question 9 = 48 marks)**

**If you answer Question 10 put a cross in this box ☒ .**

## 10 The price of coal

**Figure 1: The rising price of Australian coal**




(Source: © Worldbank.org)

**Extract 1 Floods hit Australian supply of coal**

Severe floods have damaged many of Australia's coal mines and railway lines, dramatically reducing the production and transportation of coal and increasing its price by up to 35% per tonne from November 2010 to January 2011. A vast area has been affected by the floods and the cost of pumping out the water and repairing the mines could run into hundreds of millions of dollars. The floods have also led to an increase in speculative buying of coal by stock market traders anticipating shortages.

Despite the higher price of coal and reduced output, the revenues of the big Australian coal producers have remained the same.

The increase in coal prices is expected to put pressure on electricity prices over the coming months. The UK generates about one quarter of its electricity by burning coal, much of which is imported from overseas, including Australia.

(Source: adapted from © Times Newspapers Limited, 5th January 2011)



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**Extract 2 Carbon emissions trading scheme in Australia**

Around 500 of Australia's biggest polluting companies will be forced into an emissions trading scheme in 2015, similar to that operating in the European Union. The Australian Government intends to achieve a 5% cut in carbon emissions by 2020.

Although Australia accounts for just 1.5% of global greenhouse gas emissions, its heavy reliance on coal fired power stations makes it one of the world's biggest carbon polluters per head of population. It is also the world's biggest exporter of coal.

Initially, the companies in the scheme will receive 94.5% of their carbon permits for free, and then obtain government subsidies to purchase the other 5.5% of permits, so that no additional costs to the firms arise. Gradually over time, these subsidies will be removed. Emissions trading schemes have also attracted interest from China and South Korea.

However, the scheme is a blow to the Australian mining industry which faces carbon costs of at least 25 billion Australian dollars by 2020. According to Anglo American Corporation, some 40 000 jobs are directly at risk and a further 100 000 indirectly. It also believes some mining investment projects will be cancelled, adding further to structural unemployment. Government training programmes and relocation subsidies may be required to improve the mobility of labour.

(Source: adapted from © *The Financial Times*, 10th July 2011 and 8th November 2011)

(a) With reference to Figure 1 and the first paragraph in Extract 1, outline the causes of the increase in Australian coal prices in January 2011. Illustrate your answer with a demand and supply diagram.

**(6)**

(b) What does the evidence in the second paragraph of Extract 1 suggest about the price elasticity of demand for Australian coal? Explain your answer.

**(4)**

(c) Examine the likely economic effects of an increase in Australian coal prices on UK electricity prices.

**(10)**

*(d) With reference to Extract 2 and your own knowledge, assess the benefits of a system of tradable pollution permits for reducing carbon emissions.

**(14)**

*(e) Discuss **two** possible government measures to **improve** the mobility of labour in the coal mining industry.

**(14)**



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(a) With reference to Figure 1 and the first paragraph in Extract 1, outline the causes of the increase in Australian coal prices in January 2011. Illustrate your answer with a demand and supply diagram.

**(6)**



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(b) What does the evidence in the second paragraph of Extract 1 suggest about the price elasticity of demand for Australian coal? Explain your answer.

**(4)**

(c) Examine the likely economic effects of an increase in Australian coal prices on UK electricity prices.

**(10)**

*(d) With reference to Extract 2 and your own knowledge, assess the benefits of a system of tradable pollution permits for reducing carbon emissions.

**(14)**

P 4 1 6 4 0 A 0 3 2 3 6

*(e) Discuss **two** possible government measures to **improve** the mobility of labour in the coal mining industry.

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**

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# Mark Scheme (Results)

## January 2013

## GCE Economics (6EC01/01)

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

**Supported multiple choice**

**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is clearly rejected).**

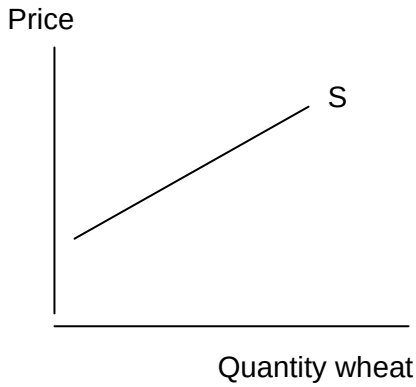
| Question Number | Answer | Mark |
|---|---|---|
| **1** | **Answer C (1 mark)**<br><br>• Definition of a positive statement: (one that is based on fact / it can be tested as true or false / a scientific approach to economics / objective approach). (**1 mark**)<br><br>• Definition of a normative statement: (one that is based on value judgement / it cannot be tested as true or false / a non-scientific approach to economics / subjective approach). (**1 mark**)<br><br>**NB: Do not award for defining a normative statement as an opinion.**<br><br>• Application to statement 1: (it is positive since it can be tested or checked with her Majesty's Revenue and Customs to see if income earners above £150,000 pay a tax rate of 50 per cent.). (**1 mark**)<br><br>• Application to statement 2: (it is normative since people may disagree with the 50 per cent tax rate being unfair / use of the word '**unfair'** means it is a value judgement.). (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | **Answer B (1 mark)**<br><br>• Definition of production possibility frontier (maximum output for an economy when all its resources are fully and efficiently employed). (**1 mark**)<br><br>• Definition or explanation of economic growth (an increase in real GDP / an increase in the productive potential for an economy / increase in productive capacity / an outward shift in the PPF curve). (**1 mark**)<br><br>• Application to diagram B: (it is possible to produce more capital and more consumer goods when the curve shifts outwards). (**1 mark**)<br><br>• Identification of any one cause of an outward shift in the production possibility frontier: (increase in immigration / quality of labour / capital stock / technology / discovery of new resources). (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A incorrect since this shows a decrease in productive potential / could due to a natural disaster or war / negative economic growth. (**1 mark**)<br>➢ Option C incorrect since this shows a movement along the production possibility frontier so demonstrating opportunity cost. (**1 mark**)<br>➢ Option D incorrect since this shows an increase in unemployment output of resources.(**1 mark**) | **(4)** |

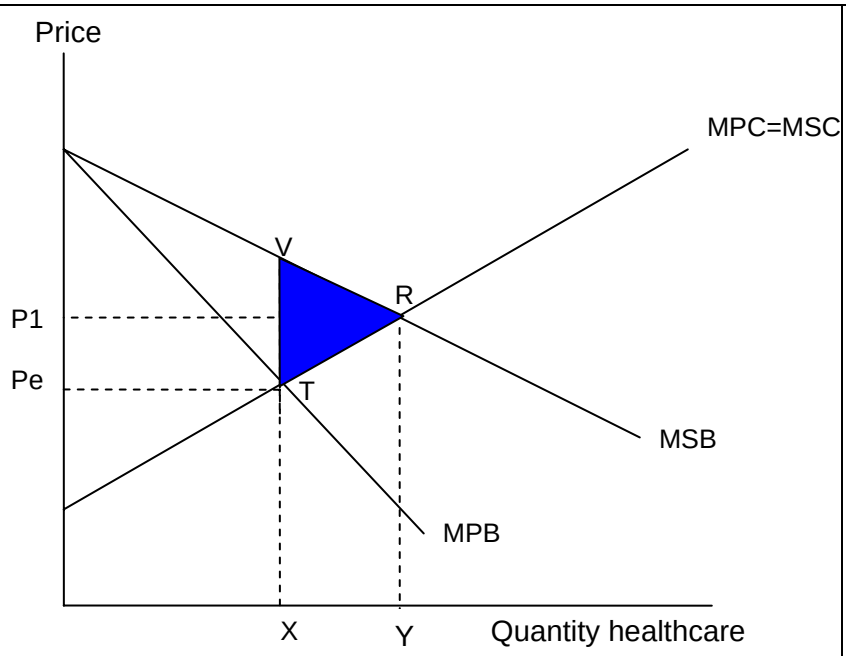
| Question Number | Answer | Mark |
|---|---|---|
| **3** | **Answer C (1 mark)**<br><br>• Identification of an excess demand / shortage at price P1 / this may be shown on the diagram as Q1Q2. (**1 mark**)<br><br>• Identification of the final market equilibrium price at Pe / price rises to where demand equals supply. (**1 mark**)<br><br>• As price rises quantity demanded contracts or falls. (**1 mark**)<br><br>• As price rises the quantity supplied extends or rises. (**1 mark**)<br><br>• The firm has a profit incentive to raise supply as price rises / a signalling device to firms to raise supply. (**1 mark**)<br><br>• Explanation of price mechanism (e.g. the use of demand and supply to allocate resources) / used to ration out a good. (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A incorrect as quantity supplied will only fall if there is an excess supply / surplus. (**1 mark**)<br>➢ Option B incorrect as a shift to the left of the demand curve will reduce price/ demand will shift inwards due to other factors such as a decrease in income. (**1 mark**)<br>➢ Option D incorrect as price and quantity will only remain the same when the market is in equilibrium in the first place. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **4** | **Answer A (1 mark)**<br><br>• Definition or formula of price elasticity of demand (the responsiveness of demand for a good due to a change in its price or %ΔQD ÷ %ΔP). (**1 mark**)<br><br>• Definition or formula of income elasticity of demand (the responsiveness of demand for a good due to a change in real income or %ΔQD ÷ %ΔY). (**1 mark**)<br><br>**NB: a maximum of 2 definition marks available.**<br><br>• Application to the data: demand for air travel is price inelastic since -0.6 is between 0 and -1.0 (also accept less than 1). (**1 mark**)<br><br>• Application: demand for air travel is a **normal good** since it has a positive income elasticity of demand / +1.3 is greater than 0 / as income rises so demand rises / this may be shown by diagram. (**1 mark**)<br><br>**Rejection marks**<br>➢ Option B incorrect since total revenue will decrease if price falls since demand is price inelastic. (**1 mark**)<br><br>➢ Option C incorrect since an inferior good has a negative income elasticity of demand and / demand is price inelastic since it is less than -1.0 (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | **Answer D (1 mark)**<br><br>• Definition or formula of cross elasticity of demand (the responsiveness in demand for one good due to a change in price of another good, or, %ΔQD good B ÷ %ΔP good A). (**1 mark**)<br><br>• The goods have a positive cross elasticity of demand / positive gradient (since substitutes). (**1 mark**)<br><br>• Application: a rise in price of the Apple iPhone causes a rise in demand for RIM Blackberry phones / a fall in price of Apple iPhone causes a fall in demand for RIM Blackberry. (**1 mark**)<br><br>• Annotation of diagram depicting a change in price of the iPhone and the change in demand for the Blackberry. (**1 mark**)<br><br>• Complementary goods have a negative cross elasticity of demand (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A incorrect since graph refers to cross elasticity of demand not price elasticity of demand. (**1 mark**)<br>➢ Option B incorrect since it is complementary goods that have a negative cross elasticity of demand / negative gradient / inverse relationship / as price of one good rises then demand for the other good falls.<br>**NB: Do not double award** (**1 mark**)<br>➢ Option C incorrect since a zero cross elasticity of demand means there is no relationship between Apple iPhone and the Blackberry / there would be a vertical line in the diagram. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | **Answer C (1 mark)**<br><br>• Definition or formula of price elasticity of supply (the responsiveness of supply due to a change in price of a good, or, %ΔQS ÷ %ΔP). (**1 mark**)<br><br>• Definition of price elastic supply (the percentage change in supply exceeds the percentage change in price of a good) / also accept PES is greater than 1. (**1 mark**)<br><br>• Diagram depicting price elastic supply of wheat. (**1 mark**)<br><br>  <br><br><br>• Application: stockpiles of wheat can be quickly released on to the market when required as price rises / taken off the market when required as price falls. (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A incorrect since demand is not relevant to elasticity of supply **(1 mark)**<br>➢ Option B incorrect since supply of new housing will be inelastic as it takes a long time to build. **(1 mark)**<br>➢ Option D incorrect since organic vegetables are highly perishable / the availability of substitutes determine price elasticity of demand. **(1 mark)** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **7** | **Answer B (1 mark)**<br><br>• Definition of market failure: the price mechanism fails to allocate resources efficiently / operation of market forces lead to a net welfare loss. (**1 mark**)<br><br>• The market fails since external benefits are ignored by the price mechanism **or** definition of external benefits (benefits external to an exchange / benefits outside of a market transaction / positive third party effects / difference between social and private benefits / positive spillover effects). (**1 mark**)<br><br>**NB: Do not award for definition of a free market economy.**<br><br>• There is market failure at output level **X,** since MSB exceed MSC. (**1 mark**)<br><br>• There is under-consumption of quantity XY / identification of market equilibrium of X (T) **and** social optimum at Y (R). NB: This may be shown on the diagram. (**1 mark**)<br><br>• Application: consumption of vaccinations leads to healthier population as less spread of disease / more productive workforce / more profits for employers / lower production costs as less absenteeism for employers. (**1 mark**)<br><br>• Identification of triangle of welfare gain (or loss) as VRT (accept deadweight loss or DWL). This may be annotated on to the diagram. (**1 mark**) | **(4)** |



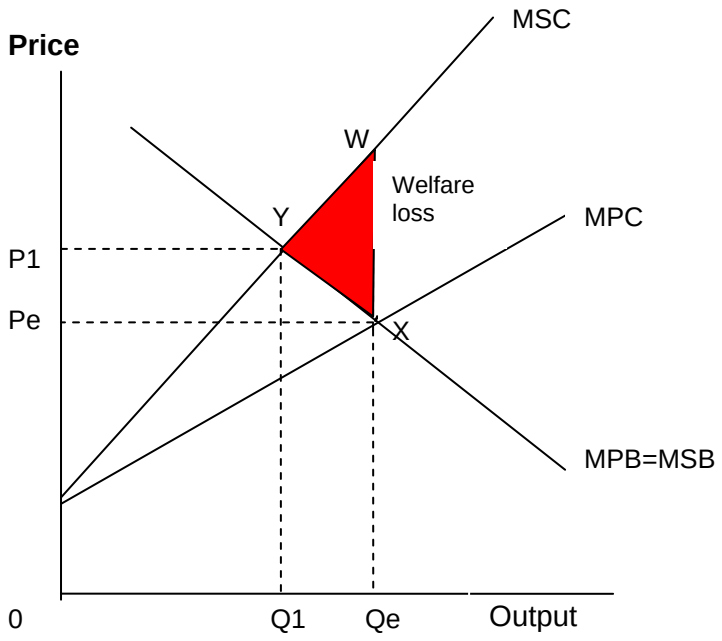

**Rejection marks**

- Option A incorrect since the diagram reveals that there are no external costs since MPC=MSC. (**1 mark**)
- Option C incorrect since excess supply occurs when quantity supplied exceeds demand – this is not the case here since the market is in equilibrium at price Pe. (**1 mark**)
- Option D incorrect since it is a market failure and requires government intervention to ensure more consumption / production of vaccinations (**1 mark**).

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **Answer D (1 mark)**<br><br>• Identify how the scheme operates, that is, an agency intervenes to buy and sell stocks. (**1 mark**)<br><br>• Application and analysis: Stocks are added to or purchased with a good harvest. (**1 mark**)<br><br>• Application and analysis: stocks released or sold on to the market in times of a poor harvest. (**1 marks**)<br><br>• **NB: Award a maximum of 2 marks for any of the above three points.**<br><br>• A scheme which sets a ceiling or maximum price **and** a floor or minimum price. (**1 mark**)<br><br>• The purpose of buffer stock scheme: (**other than reference to reduce price fluctuations**) for example, increase farm incomes / guarantee supplies for consumers. (**1 mark**)<br><br>• **Diagrammatic analysis of buffer stock scheme award up to 3 explanation marks.**<br>➢ Identify minimum and maximum price.<br>➢ Identify quantity released when a poor harvest.<br>➢ Identify quantity purchased when a good harvest.<br><br>**Rejection marks**<br>➢ Option A incorrect since stocks are purchased when there is a good harvest to prevent price of wheat from falling below target. (**1 mark**)<br>➢ Option B incorrect since the price of wheat is not permitted to fall below the minimum price. (**1 mark**)<br>➢ Option C incorrect since a shortage of wheat means stock levels will be reduced when there is a shortage of wheat to ensure price remains below the maximum price permitted. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | • Explanation of a sustainable resource in terms of something that is being used or consumed or produced / at a rate that will ensure it is available for future generations / it may not run out it is renewable. (**1+1 marks**).<br><br>• Identification of a resource as a factor of production used to produce goods and services (**1 mark**).<br><br>**NB Award a maximum of 2 marks for knowledge**<br><br>• **Application:** it appears that fishing is not sustainable / fish may not be available for future generations / the consumption of fish appears to exceed its reproduction / Iceland and the Faroe Islands catching 150,000 tonnes compared to their quota of 100,000 tonnes / 50% extra catch above quota / danger of extinction (**1+1 or 2 marks**).<br><br>**NB: No marks available for using examples of a sustainable / non-sustainable resource other than fish.** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | • **Identification** of two causes of falling fish stocks (**1+1 marks**) and their explanation (**2+2 or 3+1 marks**).<br><br>• **Causes include:**<br><br>➢ Mismanagement of fish stocks by government: Breakdown in agreed fish catches as Iceland and Faroe islands exceed their limits / catching 150,000 tonnes of mackerel instead of 100,000 tonnes.<br><br>➢ Over-fishing / so fish cannot be reproduce at the same rate / increase in fishing boats / more sophisticated technology for catching fish / size of nets / weak monitoring of fish catches.<br><br>➢ Global warming / more fish migrate northwards into their waters and get over-fished by non-EU countries / explicit data use e.g. fish catches exceed agreed 100,000 tonnes / fish cannot adapt fast enough and so supply falls.<br><br>➢ Mismanagement of fish stocks through quota system: EU fishing boats must throw away dead fish if they catch more than their limit / some 30 per cent of fish caught is thrown back / quotas set are too large in the first place.<br><br>➢ Increase in pollution of the seas: damage to breeding grounds / weak monitoring of pollution emissions into sea / disease spread by fish escaping from fish farms / damage to gene pool from escaped fish. NB: accept this point as candidate 'own knowledge'.<br><br>➢ Increase in demand for fish: due to other uses of fish such as fertiliser and animal feed.<br><br>➢ Other demand factors e.g. rising population / rising incomes / change in tastes / rising price of substitutes.<br><br>**NB: Award diagrammatic analysis depicting an increase in demand and /or a decrease in supply (1+1 marks).** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA = 8 marks**<br>• Definition of external costs: cost external to an exchange / negative third party effect / spillover from production / cost which the price mechanism fails to take into account or is outside the market transaction / social cost minus private cost. (**1+1marks**)<br><br>• Application of external costs to fishing: Negative impact on other fish in the food chain / prevent future generations benefiting from consuming fish / pollution from fishing boats / accept loss of employment in related industries such as food processing and canning / negative multiplier effects / impact on government finances. (**up to 2+2 or 1+1+2 marks**)<br><br>**Diagram** depicting external costs in production (**up to 4 marks**):<br>➢ MB or MPB and MPC curves (**1**)<br>➢ MSC curve (**1**)<br>➢ Identification of social optimum and market determined equilibrium positions (could be mentioned in the explanation) (**1**)<br>➢ A labelled welfare loss triangle (shaded area) where marginal social costs exceed marginal social benefits for given output slice (**1**)<br><br>  <br><br>**NB: If no appropriate diagram then award a maximum of 4 marks for KAA** | **(14)** |

**Evaluation (2+2+2 marks or 3+3 marks)**

- Time factor: in the short run there will be significant catches of fish which could lower price and benefit consumers / but in the long run as fish become more scarce then price will rise dramatically / loss of benefits from future healthy diet.

- Difficult to quantify and attach a monetary value to the external costs from over-fishing / it relates to future generations / uncertainty over level of fish stocks.

- Figures may be incorrect and fish stocks could yet be sustainable / the article could be biased and simply scare mongering.

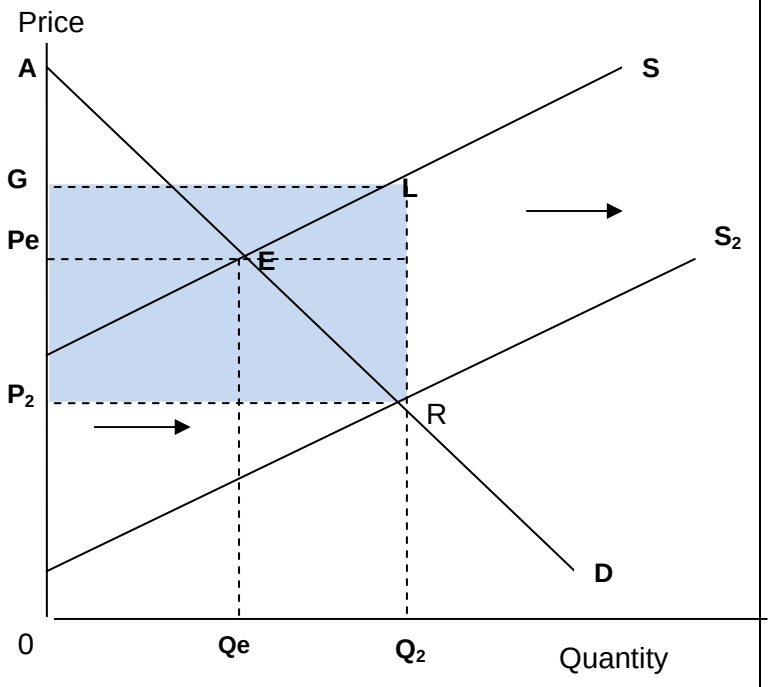
- Magnitude / use of data to show a significant increase in fishing above quota.

**NB: Do not award for comments concerning government solutions to over-fishing.**

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Definition of external costs with examples |
| Level 2 | 5-8 | Application of external costs with relevant diagram |
| Level 3 | 9-10 | Up to one evaluation point |
| Level 4 | 11-12 | Up to two evaluation points |
| Level 5 | 13-14 | Up to three evaluation points |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)*** | **KAA = 6 marks**<br><br>**Candidates may consider the positive and negative impact of the fishing ban in 30% of UK coastal waters.**<br><br>**The development of one point of view constitutes KAA and the alternative view is considered as evaluation.**<br><br>**Award the highest scoring case as KAA marks.**<br><br>**Negative impact (2+2+2 or 3+3 or 1+2+3 marks)**<br>➢ An immediate reduction in the quantity of fish caught in UK coastal waters or a decrease in supply of fish / an increase in the price of fish / lower consumer surplus / accept a diagram depicting a decrease in supply and higher price.<br><br>➢ Impact on households: fish may become a luxury good and difficult for low income households to afford / switch to substitutes.<br><br>➢ Loss of employment on fishing boats / canning industry / industries servicing the boats or making nets.<br><br>➢ Localised nature of the fishing industry means possibility of high unemployment in fishing ports / negative multiplier effects.<br><br>➢ Consideration of geographical and / or occupational immobility of labour.<br><br>➢ Impact on government finances: loss of tax revenue / higher benefits expenditure.<br><br>➢ It may lead to an increase in imported fish from other fishing vessels / increase pressure on fish stocks outside of fish exclusion zones.<br><br>➢ The no-fishing zones may be ineffective since: fish could move outside the protected areas / the extract refers to mackerel migrating northwards away from UK territorial waters. | **(10)** |

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|---|---|---|
| | ➢ Cost of monitoring and enforcing fishing exclusion zones / possibility of illegal fishing / hidden markets.<br><br>➢ Danger of conflict with other nations excluded from fishing in these areas / possibility of retaliation by other governments setting up fish exclusion zones.<br><br>**Positive impact (2+2 or 1+3 marks)**<br>➢ Producer income might increase if fish is price inelastic in demand.<br><br>➢ Improve the marine environment / benefits to other marine life and tourism.<br><br>➢ Increase in demand for farmed fish / price rise / producer incentives to set up more fish farms.<br><br>➢ Increase in demand for substitutes such as meat / raising revenue and profits.<br><br>➢ In the long run it may lead to greater quantity of fish stocks / ensure fish stocks are sustainable for future generations / lower prices. **NB: some candidates will develop their whole answer based on these lines and should be credited.**<br><br>**NB: Evaluation marks can also be awarded for evaluation of any of the positive or negative points.**<br><br>**NB: Accept macroeconomic arguments.** | |

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **KAA = 8 marks**<br><br>**Candidates may consider the positive and negative effects of government subsidies to fish farms. The development of one point of view constitutes KAA and the alternative view is considered as evaluation.**<br><br>**8 KAA marks**<br>• Definition of subsidy (government grant to increase production or lower price of a good). (**1 mark**)<br><br>• The subsidy acts to help reduce production costs. (**1 mark**)<br><br>• Diagram of subsidies to fish farms (**up to 3 marks**).<br>➢ Shift the supply curve to the right (increase) (1)<br>➢ New equilibrium price and quantity (1)<br>➢ Area of subsidy identified ($GLRP_2$) (1)<br><br>  <br><br><br>**NB: If no suitable diagram provided, award a maximum of 4 KAA marks. However, remove cap if candidate shows original demand and supply curves.** | **(14)** |

**Positive effects: (2+2+2 or 3+3 or 4+2 marks**)

- Farmed fish is a substitute to wild fish / farmed fish account for a third of fish consumed so appears to be an effective alternative / consumers may deliberately switch from buying wild fish to farmed fish to protect stocks.
- Subsidised farmed fish is cheaper than wild fish / so consumers may choose cheaper option.
- Farmed fish increase overall supply of fish / so taking pressure off wild fish stocks.
- Job creation in remote communities / reduce income inequality between coastal and urban areas.
- Positive impact on consumer surplus / producer surplus.

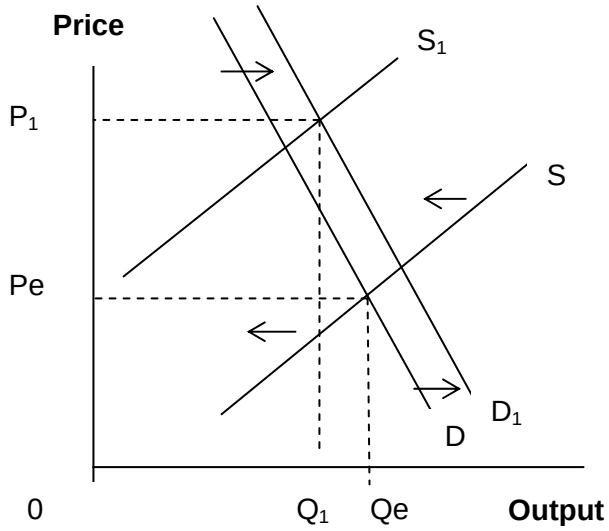
**Evaluation (2+2+2 or 3+3 marks)**
**Negative effects:**

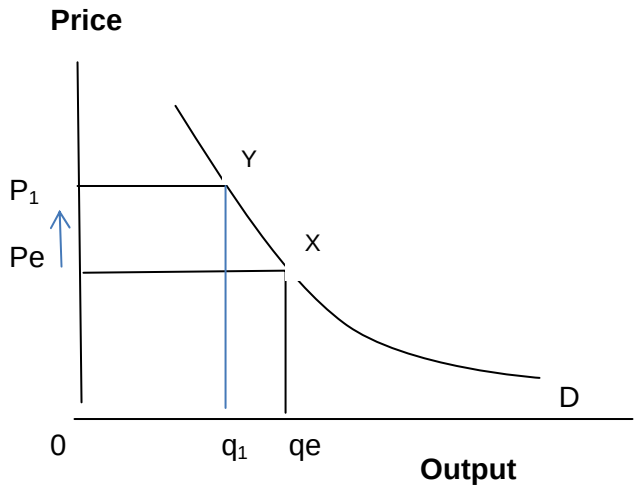
- Wild fish are fed to farmed fish / so fish farms could increase the pressure on wild fish populations (possible evaluation point: can this be determined from the evidence).
- Fish farms prone to disease due to high density / could contaminate wild fish populations and so reduce overall wild fish stocks.
- Danger of farmed fish escaping from nets / so create competition for food in wild population / damage gene pool of wild fish population so this may decrease.
- Opportunity cost of government spending on fish farms / funds could be better spent for protecting wild fish populations e.g. monitoring of commercial fishing boats or

protecting 'no-take' areas.

- Discussion of magnitude of subsidies to fish farms / at a time of cuts in government budgets.
- Fish farmers may become dependent on the subsidies which leads to inefficiency / bankruptcy.
- Discussion of health implications of farmed fish.
- Discussion of price elasticity of demand / to show effect of subsidy on price and output.

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Definition of subsidy and description of its effects on price and output. |
| Level 2 | 5-8 | Explanation of how fish farm subsidy might protect wild fish stocks. |
| Level 3 | 9-10 | Up to one evaluation point for one limitation. |
| Level 4 | 10-12 | Up to two evaluation points for two limitations. |
| Level 5 | 12-14 | Up to three evaluation points three limitations. |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **KAA = 6 marks**<br>**Diagram showing a decrease in supply and increase in demand** (**up to 4 marks**)<br>➢ Original demand and supply curves with price equilibrium (1)<br>➢ A decrease (inward shift )in supply curve (1)<br>➢ An increase (outward shift) in demand curve (1)<br>➢ New price equilibrium (1)<br>  <br><br>• Decrease in supply due to flooding / an increase in production costs. (**1 mark**)<br>• Increase in demand due to speculative buying. (**1 mark**)<br>• Reference to price of coal rising by 35 per cent / data reference from Figure 1 e.g. price of coal risen to $135 per ton. (**1 mark**)<br>**Note: if just one curve shifted, award a maximum of 2 marks for the diagram** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA = 4 marks**<br>• Definition or formula of price elasticity of demand (the responsiveness of demand due to a change in price **or** PED = %ΔQD ÷ %ΔP). (**1 mark**)<br>• PED appears to be unitary (unit) elastic **OR**, PED has a value of -1 (accept 1). (**1 mark**)<br>• This is because total revenue is expected to remain the same. (**1 mark**)<br>**NB: Do not award for a response which states '*total revenue remains the same*' unless this is linked to unit elasticity.**<br>• Explanation of unitary (or unit) PED (the percentage change in demand is the same as the percentage change in price). (**1 mark**)<br>• Diagram showing a rise in price and total revenue area remaining the same (0PeXQe = 0P1YQ1). (**2 marks**)<br>  | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **KAA = 6 marks**<br>**NB: Accept evaluation points as higher order economic analysis in marking.**<br><br>• Electricity prices may increase / this may be shown in a diagram depicting a decrease in supply (**1+1 marks**).<br>• Electricity prices may increase due to an increase in production costs. (**1 mark)**<br>• The rise in price leads to a decrease in consumer surplus. (**1 mark**)<br><br>• Relevant use of data i.e. a quarter of UK electricity comes from burning coal / increase in price of Australian coal by 35%. (**1 mark**)<br><br>**Evaluation / Higher order economic analysis**<br>➢ Electricity prices may not increase as UK firms choose absorb the higher production costs / to remain competitive / accept lower profits / we do not know how much of the imported coal comes from Australia. (**1+1+1+1 marks**)<br><br>➢ Discussion on price elasticity of demand for electricity. It is likely to be quite inelastic / this suggests electricity firms can pass the extra costs on to consumers quite easily with little effect. (**1+1 marks**)<br><br>➢ Discussion on magnitude of increase in price of coal which seems significant as 35 per cent rise over past two months.<br><br>➢ Discussion on the costs of coal as a percentage of total production costs in generating electricity / or ability of firms to cut costs elsewhere.<br><br>➢ Discussion of time period under consideration: Figure 1 shows a fall in coal prices over recent months / discussion of the trend in coal prices.<br><br>➢ Higher electricity prices may encourage use of substitute energy sources by electricity firms e.g. alternative sources of energy. | **(10)** |

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| | ➢ Possible regulation of price of electricity may limit ability of generation firms passing on costs to consumers.<br><br>➢ Different prices may be applied to different groups of customers e.g. firms and households. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **KAA = 8 marks**<br>**Understanding / considering the benefits of tradable pollution permits include :**<br><br>• Definition or understanding of tradable pollution permits (a limit placed on firms carbon emissions through issue of permits / permits can be purchased and sold / fines if firms exceed limit without buying permits) (**1+1 marks**).<br><br>• Data reference: e.g. Australian government intends to reduce carbon emissions by 5% by 2020 / Australia accounts for 1.5% of greenhouse gas emissions (**1 mark**)<br><br>**Benefits of tradable pollution permits to reduce pollution** (**2+2+2+2 or 3+3+2 marks**):<br><br>**NB: Do not award for discussion of benefits in reducing air pollution and impact of global warming. The focus has to be on the merits and demerits of the system of tradable permits.**<br><br>• A market created for buying and selling carbon permits / use of price mechanism to internalise external costs / the best way to reduce carbon emissions.<br><br>• This may be shown through a relevant externality diagram / where external costs are internalised through trade in carbon permits / some development e.g. reduce welfare loss or identify revenue from sale of carbon permit (**1+1+1 marks**).<br><br>• Use of demand and supply diagram / depicting a decrease in supply of permits and its subsequent increase in price of permits (**1+1 marks**) | **(14)** |

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| | • Australia is one of the world's largest carbon polluters per head of population / so the scheme is justified to help reduce global emissions.<br><br>• The Australian emissions trading scheme is similar to the EU and so could help create a global scheme / especially as China and South Korea show interest in setting up one.<br><br>• Government can raise funds by selling some pollution permits / revenue can be used to reduce effects of pollution / subsidise cleaner technology / compensate victims.<br><br>• Firms have an incentive to invest in clean technology / then sell excess permits to other firms / or bank surplus permits for future years.<br><br>• The heavy polluting firms are disadvantaged by experiencing higher production costs from buying extra permits/ whereas the cleaner firms are at an advantage with relatively lower production costs from selling surplus permits.<br><br>• Data bias could exist as Anglo American Corporation may be exaggerating the unemployment effects of an emissions trading scheme.<br><br>**Evaluation = 6 marks**<br>**Consideration of the limitations of tradable pollution permits for reducing pollution or their disadvantages** (**2+2+2 or 3+3 marks**):<br><br>➢ Extract 2 suggests huge increase in costs for mining industry of A$25 billion by 2020 / many jobs directly and indirectly at risk / development of this point e.g. related industries such as mining tools industry or manufacturing industry.<br><br>➢ Extract 2 indicates that Australia only accounts for 1.5 per cent of global carbon emissions / not much point setting up the scheme compared to the cost for mining companies.<br><br>➢ Extract 2 suggests a decrease in mining investment projects / development of this point e.g. reduce Australia's ability to meet future energy needs. | |

- Little incentive for firms to reduce pollution since / 94.5 per cent of permits issued for free and so government failure / heavy polluters can purchase surplus permits from other firms rather than invest in expensive clean technology.
- Disputes arise over allocation of permits / possible barriers to entry.
- A cost to the government of monitoring and enforcing carbon pollution emissions rules.
- The valuation of pollution permits may be too risky to leave to the market.
- Problem that most countries in the world are not part of an emissions trading scheme especially US (apart from California).
- Other schemes might be more effective in reducing carbon emissions e.g. carbon offsetting or renewable energy certificates.

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Definition of emissions trading scheme and description of how it works. |
| Level 2 | 5-8 | Two or more advantages of the emissions trading scheme. |
| Level 3 | 9-10 | Up to one evaluation point for one limitation of scheme. |
| Level 4 | 10-12 | Up to two evaluation points for two limitations of scheme. |
| Level 5 | 12-14 | Up to three evaluation points for three or more limitations of scheme. |
| | | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **KAA = 8 marks**<br>**NB: Accept reference to coal mining in different countries**<br><br>Definition of immobility or mobility of labour – referring to occupational and geographical.<br><br>Occupational mobility refers to the ability of labour to move from one occupation to another (**1 mark**).<br><br>Geographical mobility refers to the ability of labour to move from one area to another to take available work (**1 mark**).<br><br>• Award for data reference e.g. up to 140 000 jobs at risk in Australia **(1 mark).**<br><br>• Identification of two measures, for example government training schemes and relocation subsidies (**1+1 marks**).<br><br>• Development of the two measures **(3+3 or 4+2 marks**).<br>➢ Training schemes: mining skills highly specialised so occupational mobility is low /workers may acquire new skills / increase human capital / train for work in occupations where shortages exist / example of other occupations.<br><br>➢ Relocation subsidies: workers might be given help with house removal costs / contributions to mortgage or rental costs / accommodation available to immediately move into.<br><br>NB: Accept demand and supply diagram depicting a subsidy (**2 marks**).<br><br>**NB: Accept other measures to reduce immobility of labour, for example, improving labour market information and building affordable homes.**<br><br>**Evaluation (2+2+2 or 3+3 marks)**<br>➢ Discussion of financial costs to the government / magnitude of government funds available for training programmes or relocation subsidies (for example, regional house price differences may be enormous and so relocation may involve significant funding). | **(14)** |

- Magnitude of training or relocation subsidies required since just 40,000 jobs directly at risk / discussion of significance for the economy.
- Time period required to retrain labour/ especially higher order skills / older workers may find it harder to pick up new skills.
- Quality of training schemes may vary / the wages of other jobs may be much lower than for mining so little incentive to retrain.
- Fraudulent use of training funds / with some development of this point.
- Lack of alternative jobs available / especially as pollution permits scheme is relevant across the whole of Australia and so affects all mining activities / fears of a global recession mean firms reluctant to take on extra staff.
- Workers may be unwilling to move due to family ties / children at school.
- Imperfect market knowledge on job vacancies elsewhere.
- Anglo American Corporation might be wrong concerning fear over job losses / the continued growth of China means demand for Australian raw materials will continue to rise / so issue of reducing labour immobility in mining is irrelevant.

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Understanding of immobility of labour and identification of two measures to reduce it. |
| Level 2 | 5-8 | Explanation of two measures to reduce immobility of labour. |
| Level 3 | 9-10 | Up to one evaluation point |
| Level 4 | 10-12 | Up to two evaluation points. |
| Level 5 | 12-14 | Up to three evaluation points. |

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**Edexcel GCE**

| Centre Number | Candidate Number |
|---|---|
| | |

# Economics

## Advanced Subsidiary

## Unit 1: Competitive Markets: How they work and why they fail

Friday 18 May 2012 – Afternoon
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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1/1/1/1/1

P 4 0 3 3 1 A 0 1 3 6

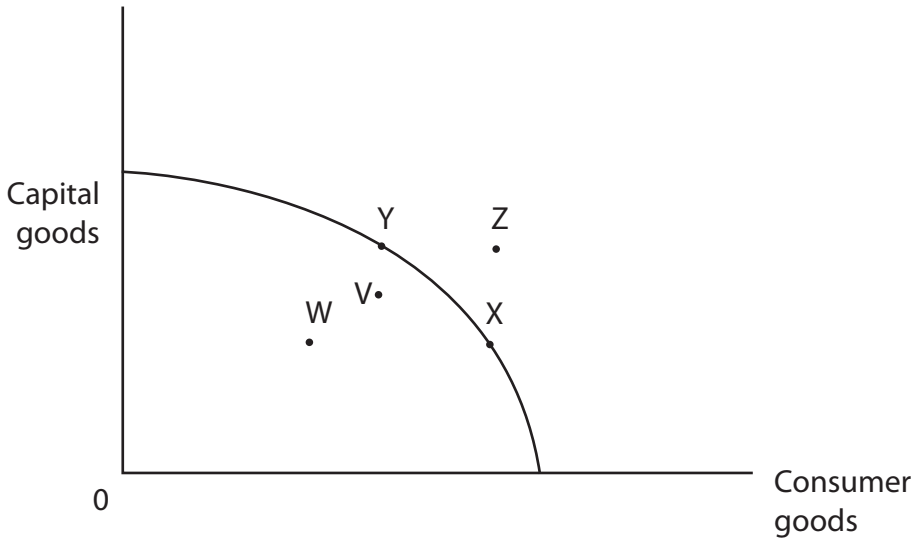
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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram shows a production possibility frontier for an economy. Which of the following changes shows a reduction in unemployed resources?

**(1)**

**A** W to V.

**B** X to Z.

**C** Y to X.

**D** An outward shift of the whole production possibility frontier.

Answer ☐

Explanation

**(3)**



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.....

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.....

**(Total for Question 1 = 4 marks)**

**2** In November 2010 the UK government increased the tax for passengers flying by aircraft (Air Passenger Duty). The tax increased from £40 to £60 per passenger flying economy class from the UK to the US.

One effect of this tax is to:

**(1)**

**A** increase the consumer surplus for air passengers.

**B** decrease the tax revenue collected if demand for flights is price inelastic.

**C** increase the producer surplus for airlines if supply of flights is price elastic.

**D** increase the price of air flights.

Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**



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**3** One function of the price mechanism is to:

**(1)**

**A** eliminate shortages of a good by allowing its price to fall.

**B** act as a signal to firms when making production decisions.

**C** eliminate surpluses of a good by allowing its price to rise.

**D** encourage government intervention to reduce inequality.

Answer ☐

Explanation

**(3)**

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

**4** In 2011 the UK Government introduced a unit subsidy of £5000 for new electric powered cars such as the Nissan Leaf and Mitsubishi i-MiEV. The most likely effect is to increase:

**(1)**

**A** the demand for petrol powered cars.

**B** carbon emissions from non-electric powered cars.

**C** the demand for bus transport.

**D** the supply of electric powered cars.

Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**



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**5** The table shows the demand and supply schedules for packets of shortbread biscuits.

You may use the last column for your workings.

| Price per packet | Quantity of packets demanded per month (000) | Quantity of packets supplied per month (000) | New quantity supplied per month (000) |
|---|---|---|---|
| £2.00 | 200 | 160 | |
| £2.10 | 180 | 180 | |
| £2.20 | 160 | 200 | |
| £2.30 | 140 | 220 | |

As a result of an increase in the baking costs for producing packets of shortbread biscuits, supply decreases by 40 000 packets at all prices. The new equilibrium price is:

**(1)**

**A** £2.00

**B** £2.10

**C** £2.20

**D** £2.30

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**

**6** Market failure arises in a free market economy when:

**(1)**

**A** prices fall in response to an excess supply.

**B** public goods are under-provided.

**C** firms exit a market.

**D** government intervention leads to a misallocation of resources.

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**



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**7** Which of the following is **most** likely to increase the **geographical** mobility of labour in the UK?

**(1)**

**A** An increase in the average age of the workforce.

**B** An increase in rail and bus fares.

**C** A decrease in regional house price differentials.

**D** A decrease in the proportion of skilled workers in the labour force.

Answer ☐

Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8** In 2010 the UK Government expressed concern that many workers had **not** made adequate pension contributions to fund their retirement. A possible explanation for this under funding of pensions is:

**(1)**

**A** pensions are a public good.

**B** there is no opportunity cost to making pension contributions.

**C** workers have imperfect information.

**D** tax incentives for making pension contributions have increased.

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**



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**Section B: Answer either Question 9 or Question 10.**

**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 24.**

**You should spend 55 minutes on this question.**

## 9 UK Higher Education tuition fees

**Figure 1: Estimated repayment of tuition fees by graduate workers**

| Gross annual income | Monthly repayment |
|---|---|
| Under £21 000 | 0 |
| £25 000 | £ 30 |
| £30 000 | £ 68 |
| £40 000 | £143 |
| £50 000 | £218 |
| £60 000 | £293 |

(Source: Browne report: Review of Higher Education Funding and Student Finance, 2010
© Crown Copyright)

**Figure 2: UK University applications 2005-2011**

| Year | Number of student applications to higher education | Percentage change over previous year |
|---|---|---|
| 2005 | 522 155 | ----- |
| 2006 | 506 304 | −3.0* |
| 2007 | 534 495 | 5.6 |
| 2008 | 588 689 | 10.1 |
| 2009 | 639 860 | 8.7 |
| 2010 | 697 351 | 9.0 |
| 2011 | 729 376 (forecast) | 4.6 |

*Note: between 2005 and 2006 tuition fees increased from £1 175 to £3 000 per annum

(Source: UCAS Analysis and Research - http://www.ucas.com/about_us/stat_services/stats_online/data_tables/datasummary)

**Extract 1 University tuition fees increase up to a maximum of £9,000 a year**

Universities minister David Willetts announced an increase in tuition fees from £3,290 to a maximum of £9,000 a year in England by 2012. Three quarters of English universities intend to set the maximum tuition fees of £9,000, and 95% plan to charge more than £7,000. This will help to balance out an 80% cut in government funding to university undergraduate courses.

Increasing the contribution made by graduates strengthens the link between what the student gains from education and what they pay back. It encourages universities to compete for students who will now directly fund the courses. Universities may be forced to improve teaching standards and become more efficient. Students should still gain financially: the return on a degree has been estimated at an additional £160,000 over a working lifetime compared to a non-graduate with A Levels. However, graduate unemployment reached a 17 year high at 8.9% in 2010.

Many students will take out student loans to pay their fees and living expenses. These loans will only be repaid once graduates' income rises above £21,000 a year, at a rate of 9% of their income above this level. For students from low-income families, there are grants of up to £3,250 per year, and bursaries from universities will also be available.

A world class university education system is vital for attracting investment and increasing labour productivity, ensuring long term wealth and prosperity. It also generates earnings from large numbers of overseas students.

(Source: Adapted from 'University tuition fee limit rises to £9 000', by Hazel Barker, Sky News online, 3rd November 2010 © 2011 BskyB and Jeevan Vasagar, Guardian, 22nd November 2010 © Guardian News & Media Ltd 2010)

**Extract 2 Higher university fees are unfair to students from low-income families**

Research conducted in 2010 by the University of Leicester indicated that students from low-income families are more likely to be put off from applying to higher education than better-off students. The research involving 730 A Level students found that an increase in tuition fees from £3,290 to £7,000 would reduce the number of applications from low-income households by 14% compared to a reduction of 9% for better-off households.

The research also revealed a differing impact on the types of institutions and courses. Applications to the most prestigious universities would not be affected but the new universities would suffer a significant fall in applications. Furthermore, applications for Medicine and Law would hardly be affected but there would be a big fall in numbers applying for Arts and Humanities courses. The tuition fees increase could lead to a reduction in the number of universities and range of courses on offer. There are fears that some 36 000 university places could be lost in 2012.

However, most A Level students still intend to apply to university, suggesting a genuine appreciation of the benefits from a higher education degree.

(Source: © University of Leicester 20 September 2010)



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(a) With reference **to the titles** of Extract 1 and Extract 2, distinguish between positive and normative statements.

**(4)**

(b) With reference to the information provided and your own knowledge, explain the opportunity cost of higher education to students.

**(6)**

*(c) Evaluate the likely private benefits and external benefits of university education. Illustrate your answer with an appropriate diagram.

**(14)**

(d) With reference to Extract 2 and using price elasticity of demand calculations, assess the likely impact on *student applications* of an increase in tuition fees from £3,290 to £7,000.

**(10)**

*(e) Discuss the possible economic effects of an increase in university tuition fees on the market for higher education.

**(14)**

(a) With reference **to the titles** of Extract 1 and Extract 2, distinguish between positive and normative statements.

**(4)**



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(b) With reference to the information provided and your own knowledge, explain the opportunity cost of higher education to students.

**(6)**

*(c) Evaluate the likely private benefits and external benefits of university education. Illustrate your answer with an appropriate diagram.

**(14)**



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(d) With reference to Extract 2 and using price elasticity of demand calculations, assess the likely impact on *student applications* of an increase in tuition fees from £3,290 to £7,000.

**(10)**

*(e) Discuss the possible economic effects of an increase in university tuition fees on the market for higher education.

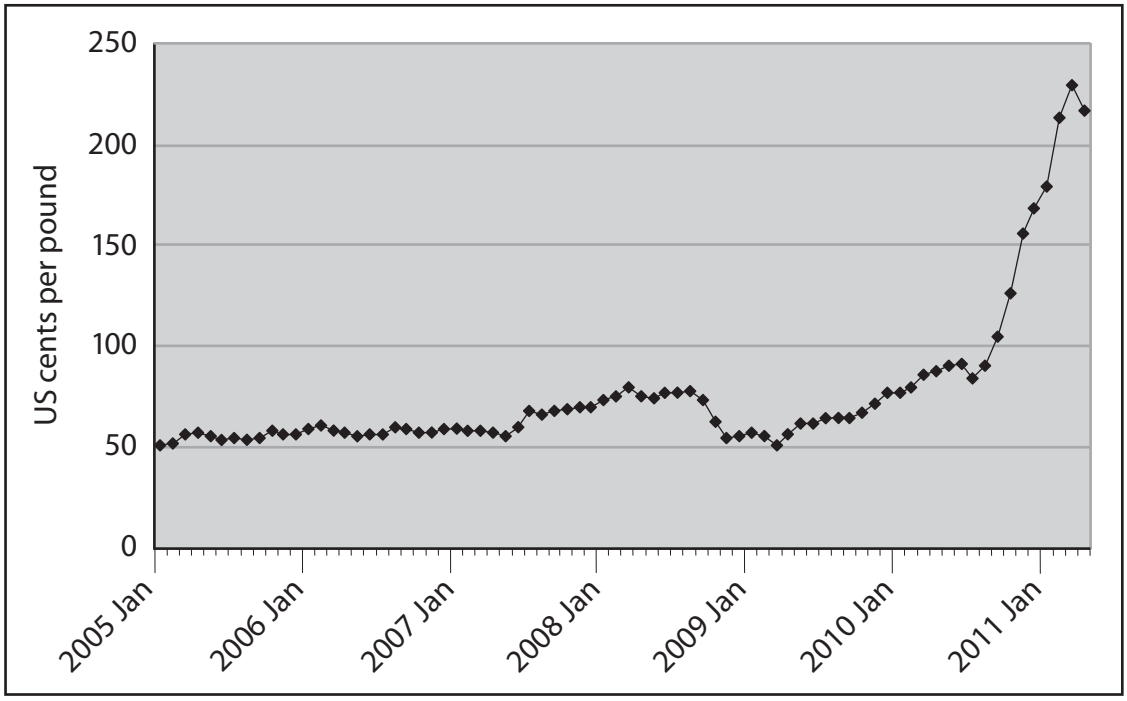
**(14)**

**(Total for Question 9 = 48 marks)**

**If you answer Question 10 put a cross in this box ☒ .**

**10 The price of cotton**

**Figure 1: Cotton prices 2005-2011** (US cents per pound in weight)




(Source: World Economic Outlook Database © 2011 International Monetary Fund)

**Extract 1 Rising cotton prices**

The price of cotton more than doubled in 2010 after crops in China and Pakistan were hit by floods. This was made worse by the Indian Government's ban on cotton exports. World supply of cotton fell from 107 million bales in 2009 to 101 million bales in 2010. A bale of cotton weighs 500 pounds and can make 1200 t-shirts. Stocks of cotton are at their lowest level for five years. At the same time, speculators have bought up large quantities of cotton in the hope of making profits.

Farmers have responded to rising prices by devoting more land to cotton. In the right conditions, cotton crops take 100 days to reach maturity. World supply is forecast to increase to 117 million bales in 2011.

Cotton is the most important textile for making clothing. However, demand for synthetic materials is increasing as manufacturers look for alternatives.

(Source: adapted from 'Cotton price rise will hit clothing warns Next', James Hall, The Telegraph, 4th November 2010 © Copyright Telegraph Media Group Limited 2010)



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**Extract 2 The impact of rising cotton prices on clothing retail stores**

Lord Wolfson, chief executive of retail clothing store Next, warned that the soaring price of cotton could lead to clothing prices rising by almost 10% in 2011. The retailer, which has more than 500 stores and 2.6 million online and catalogue shoppers, blamed 'what appears to be a speculative bubble' for the expected price rises.

Lord Wolfson stated that 'we have not seen clothing prices rise for nearly twenty years, so it's going to be very difficult to know how consumers will respond to a price increase'. Other stores such as Debenhams and Marks & Spencer also predicted higher clothing prices in 2011. Previously, prices had been kept down by firms relocating production facilities to Asia.

Next's share price in November 2010 was more than 20% higher than in November 2009. This reflected a successful diversification into home furnishings such as cushions, curtains and furniture. However, analyst Katharine Wynne, at Investec, cut her full-year profit forecasts for Next from £560m to £542m and cancelled her 'buy' recommendation on the retailer's shares.

(Source: adapted from 'Next forecasts 10% rise in clothes prices', Julia Finch, The Guardian, 4th November 2010 © Guardian News & Media Ltd 2010)

**Extract 3 Genetically modified (GM) cotton farming in India**

The use of genetically modified cotton seed is widespread in India. It is used to prevent disease, increase crop yields and used to kill the pink bollworm, a mite which eats cotton seed. However, in 2009, scientists found that the bollworm had developed resistance to the modified version of the seed.

Consequently, the anticipated increase in crop yields has not materialised. However, the costs to farmers of buying and using GM seeds have increased – they require more fertiliser and twice as much water compared to traditional seeds. Farmers are not allowed to harvest seeds for the next crop but are forced to buy fresh supplies from Monsanto, the producer of this GM seed. There is now a genuine fear of a lack of bio-diversity resulting from the use of GM crops.

(Source: adapted from 'Monsanto and Indian Farmer suicides', by Ralph Stone, © The Berkley Daily Planet, 6th December 2010.)

(a) With reference to Figure 1 and Extract 1, outline why the price of cotton more than doubled in 2010. Use a demand and supply diagram in your answer.

**(6)**

(b) Referring to cross elasticity of demand, explain the likely relationship between the price of cotton and the demand for synthetic materials used in making clothing (Extract 1, lines 10–11).

**(4)**

(c) With reference to Extract 1, discuss the factors that are likely to influence the price elasticity of supply of cotton.

**(10)**

*(d) With reference to Extract 2, evaluate the likely effects of the increase in the price of cotton on retail clothing firms such as Next.

**(14)**

*(e) With reference to the concepts of private costs and external costs, assess the possible economic effects of 'the use of genetically modified cotton seed' (Extract 3, line 1) Use an appropriate diagram in your answer.

**(14)**



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(a) With reference to Figure 1 and Extract 1, outline why the price of cotton more than doubled in 2010. Use a demand and supply diagram in your answer.

**(6)**

(b) Referring to cross elasticity of demand, explain the likely relationship between the price of cotton and the demand for synthetic materials used in making clothing (Extract 1, lines 10–11).

**(4)**



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(c) With reference to Extract 1, discuss the factors that are likely to influence the price elasticity of supply of cotton.

**(10)**

*(d) With reference to Extract 2, evaluate the likely effects of the increase in the price of cotton on retail clothing firms such as Next.

**(14)**

*(e) With reference to the concepts of private costs and external costs, assess the possible economic effects of 'the use of genetically modified cotton seed' (Extract 3, line 1) Use an appropriate diagram in your answer.

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**

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# Mark Scheme (Results)

## Summer 2012

## GCE Economics (6EC01)
## Paper 01

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## General Marking Guidance

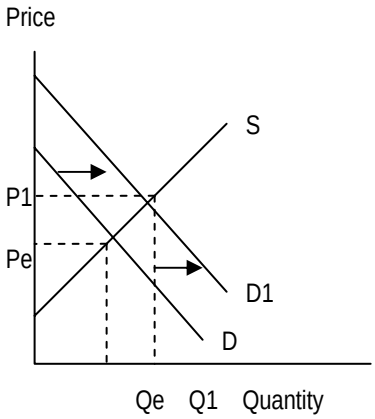
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

**NB: candidates may achieve up to 3 explanation marks even if the incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is identified).**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | • **A (1 mark)**<br>• Definition of production possibility frontier (maximum output potential for an economy when all its resources are fully / efficiently employed) (**1 mark**).<br>• W to V shows actual output increasing so unemployed resources falling or unemployment falling / annotation of diagram to show rise in output (**1 mark**).<br>• W to V shows the output gap falling / reduction in spare capacity / economy moving closer to the full employment level of output / annotation of diagram to show a decrease in output gap (**1 mark**).<br>• W to V shows a more efficient use of resources (**1 mark**).<br>• Accept numerical application (**1 mark**).<br>**Rejection marks**<br>• Option B incorrect since position Z is unobtainable.<br>• Option C incorrect since economy already at full employment level.<br>• Option D incorrect since an outward shift in the frontier shows an increase in output potential. | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | • **D (1 mark)**<br>• Air passenger duty is an indirect tax or specific tax or expenditure tax / set as a fixed amount per unit of good (**1 mark**).<br>• The tax has the effect of increasing production costs (**1 mark**).<br>• Reason for the tax increase: an environmental tax to reduce carbon emissions from air travel / to reduce negative externalities (**1 mark**).<br>• Diagrammatic analysis or written explanation: **parallel** shift of supply curve inwards / tax area or incidence identified / original price and new price identified on the diagram (**1+1 marks**).<br>• **Rejection marks**<br>• Option A incorrect as the tax increase will reduce consumer surplus (need to show by diagram or define consumer surplus – only award the definition when used for rejection of A) (**1 mark**).<br>• Option B incorrect as tax revenue will increase if demand is price inelastic (need to show by diagram or explain meaning of inelastic in terms of causing a proportionate smaller fall in demand) (**1 mark**).<br>• Option C incorrect as producer surplus will decrease as the government takes some of the producer surplus as tax revenue / need to show by diagram or define producer surplus – only award the definition when used for rejection of C (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | • **B (1 mark)**<br>• Definition of price mechanism (the interaction of supply and demand to allocate resources) (**1 mark**).<br>• Written explanation of the price mechanism functioning e.g. an increase in demand will raise price and so give a signal to firms to raise the output of a good / a decrease in demand will reduce price and so signal to firms to reduce output / incentive or profits effects (**1+1+1 marks**).<br>• Diagrammatic explanation showing a rise in demand leading to a higher price and more output **or** a fall in demand leading to la lower price and less output **(1+1 marks).**<br>  <br><br>• Accept rationing function e.g. the price mechanism allocates goods to those consumers willing to pay the highest price (**1 mark**)<br>**Rejection marks**<br>• Option A incorrect since a shortage can be eliminated by allowing price to rise so demand contracts or falls back / price would only fall if there was an excess supply. (**1 mark**).<br>• Option C incorrect since a surplus is eliminated by price falling so demand extends or rises / price would only rise if there was an excess demand (**1 mark**).<br>• Option D incorrect since government intervention is to correct market failure or the failure of the price mechanism concerning issues of income distribution (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **4** | • **D** (**1 mark**)<br>• Definition of subsidy (government grant to increase production / reduce price of a good) (**1 mark**).<br>• The subsidy acts to reduce production costs (**1 mark**).<br>• Diagram showing subsidy: increase in supply / original and new equilibrium price identified / subsidy area or unit subsidy identified (**1+1 marks**).<br>• The subsidy will encourage people to buy electric powered cars which are more environmentally friendly (**1 mark**).<br>**Rejection marks**<br>• Option A or C incorrect as petrol powered cars / bus travel are substitutes (**1 mark**).<br>• Option B incorrect since demand for electric cars will rise due the subsidy causing a fall in price (**1 mark**) | **(4)** |

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>5</td><td>
<ul>
<li>C (1 mark)</li>
<li>Explanation of equilibrium price (a price where the quantity demand equals the quantity supply) (1 mark).</li>
<li>Identification of original equilibrium price as £2.10 / diagram depicting equilibrium price £2.10 (1 mark).</li>
<li>Diagram showing original supply and demand curves and shifts the supply curve inwards (1 mark).</li>
<li>Completion of new supply schedule in table (2 marks).</li>
</ul>
NB: Award 1 mark for identifying just 160 on the table or in written explanation
<table>
<tr><th>Price per packet</th><th>Quantity demand (000)</th><th>Quantity supply (000)</th><th>New supply (000)</th></tr>
<tr><td>£2.00</td><td>200</td><td>160</td><td>120</td></tr>
<tr><td>£2.10</td><td>180</td><td>180</td><td>140</td></tr>
<tr><td>£2.20</td><td>160</td><td>200</td><td>160</td></tr>
<tr><td>£2.30</td><td>140</td><td>220</td><td>180</td></tr>
</table>
Rejection marks
<ul>
<li>Option B incorrect as this is the original equilibrium price (1 mark). NB: do not double award.</li>
<li>Option A incorrect since the increase in production cost will lead to firms passing on costs to consumers via an increase in price (1 mark).</li>
<li>Option D incorrect as the supply is 40 000 more than the demand. (1 mark)</li>
</ul>
</td><td>(4)</td></tr>
</table>

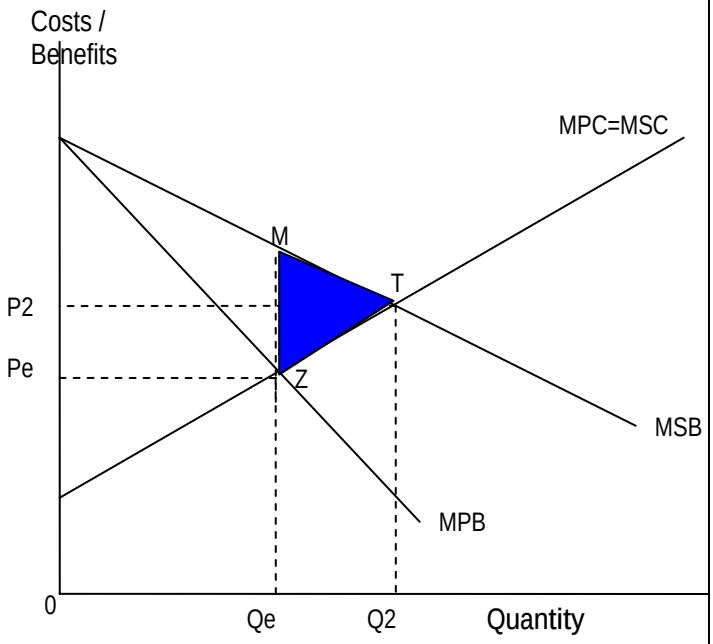
| Question Number | Answer | Mark |
|---|---|---|
| **6** | • **B (1 mark)**<br>• Definition of public goods (non-rivalry and non-excludability or non-rejectable) (**1 mark**).<br>• Definition of market failure (price mechanism / market fails to allocate resources efficiently or leads to a net welfare loss) (**1 mark**).<br>• Definition of a free market economy (the price mechanism is used to allocate resources) (**1 mark**).<br>**NB: just a maximum of 2 definition marks available**<br>• Public goods are under-provided due to the free rider problem / where it is possible for people to consume a good without paying for it once it is provided / inability of firms to collect revenue from consumers / Examples: defence, street lighting, lighthouses, flood defence schemes. (**1+1 marks**).<br>**Rejection marks**<br>• Option A incorrect since prices falling mean the market is working to eliminate the surplus. (**1 mark**).<br>• Option C incorrect since firms will exit the market when lack of profits or losses made – a reflection of the market in operation as resources could be put to better use (**1 mark**).<br>• Option D incorrect since this is government failure / there is no government intervention in a free market economy (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **7** | • **C (1 mark)**<br>• Definition of geographical mobility of labour (the ability of labour to take available work in different areas/regions) (**1 mark**).<br>**NB: accept definitions of geographical immobility of labour as long as it is made explicit.**<br>• A decrease in regional house price differences means that many workers find it easier to **afford** or purchase property in different areas they move to (**1 mark**).<br>• Application e.g. workers from the north find it easier to move to London **or** workers from the countryside can move to towns and cities (**1 mark**).<br>• Accept numerical example of house price differentials / differentials falling (**1 mark**).<br>**Rejection marks**<br>• Option A incorrect since increase in average age of workforce typically leads to older workers being settled in location – so reduces mobility of labour (**1 mark**).<br>• Option B incorrect since a significant increase in rail and bus fares makes it more expensive to travel to and from work. (**1 mark**).<br>• Option D incorrect since a decrease in skilled workers will decrease occupational mobility of labour (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | • **C (1 mark)**<br>• Explanation of imperfect market information (people lack knowledge to make informed choices) (**1 mark**).<br>**NB: accept an accurate definition of asymmetric information as an alternative definition mark.**<br>• Understanding of a pension (e.g. contributions that workers make from their income which they can use on retirement) (**1 mark**).<br>• Application: workers may be unaware that their state pension might be insufficient to live off / the long time period from working to retirement may lead to people to not make adequate provision (**1+1**).<br>• Definition of market failure (the price mechanism / market fails to allocate resources efficiently or leads to a net welfare loss) (**1 mark**).<br>• Also award for idea: workers may rely on other sources of income / wealth (for example, downsizing their home / sale of second home / shares and bonds) (**1 mark**).<br>**NB: a definition of public goods is not accepted unless used in the context of rejecting option A.**<br>**Rejection marks**<br>• Option A incorrect since pensions are excludable or rivalrous or rejectable in consumption so not public goods (**1 mark**).<br>• Option B incorrect since there is an opportunity cost to making pension contributions in terms of forgoing current spending (**1 mark**).<br>• Option D incorrect since tax incentives on pensions would lead to increased amount of pension contributions (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **KAA = 4 marks**<br>• Explanation of positive statement (**1 mark**): Factual statement / can be tested as true or false / based on scientific or objective approach to the subject.<br>• Application: title of extract 1 is positive since possible to test whether the tuition fees will increase / up to £9000 (**1 mark**).<br>• Explanation of normative statement (**1 mark**): Value judgement / cannot be tested as true or false / based on a non-scientific or subjective approach to the subject.<br>**NB do not accept use of term 'opinion'.**<br>• Application: title of extract 2 is normative since the term 'unfair' is a value judgement (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **KAA = 6 marks**<br>• Definition of opportunity cost (value of next best alternative foregone) (**1 mark**).<br>• A general comment that fees have increased and so leading to an increase in opportunity cost (**1 mark**).<br>• Data reference: tuition fees are now £9000 a year / increased from £3,290 to possibly £7000 or £9,000 a year / monthly repayments e.g. £30 to £293 (**1+1 marks**).<br>• Examples of opportunity cost include what they could use the fees for: for example, motor vehicle / holiday / clothing / loss of savings (**1+1 marks**).<br>• Example of opportunity cost include alternative use of the interest payments of the student loan (**1 mark**).<br>• Examples of opportunity cost in terms of what they could use their time for: loss of potential earnings from work / loss of time to travel and see the world / loss of social time **(1+1 marks).**<br>• Accept related comments for example, students from low income families may have lower opportunity cost / since receive grants up to £3,250 per year (**1+1 marks**).<br>• Diagram showing opportunity cost by use of a production possibility frontier (budget line) where there is a movement along it / opportunity cost identified /with relevant axes such as tuition fees and an alternative use of the money (**1+1 marks**).<br>• Accept comment that opportunity cost may be low since not many jobs available (**1 mark).**<br>**NB: award a maximum of 5 marks if no reference to the information provided.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)*** | **KAA = 8 marks**<br>• Definition of private benefit (**1+1 marks**): benefit internal to an exchange / benefit the price mechanism takes into account / benefit from the market transaction / benefit to first and second party / benefit direct to consumer or producer from economic activity.<br>• Definition of external benefit (**1+1 marks**): benefit external to an exchange / benefit the price mechanism ignores / benefit outside of the market transaction / positive third party effect / indirect benefit to consumer of producer from an economic activity.<br>  <br>Diagram (up to 4 marks)<br>➢ MPB and MPC curves (this can also be MPB and MSC curves) (**1 mark**)<br>➢ MSB curve (accept parallel shifts in the MSB curve) (**1 mark**)<br>➢ Identification of market equilibrium (Qe) and social efficient equilibrium (Q2) (**1 mark**).<br>➢ Triangle of welfare gain (accept welfare loss)(**1 mark**).<br>• Explanation of private benefits (**1+1 or 2** | |

| | | |
|---|---|---|
| | **marks**): these include the extra £160,000 of average higher earnings for a graduate over working life / private benefit of more status or perks from job / more knowledge / more revenue for universities / raise occupational mobility to individual.<br><br>• Explanation of external benefits (**1+1 or 2 marks**): these include additional revenue or profits to firms / additional productivity to the economy / attraction of foreign investment / increased international competitiveness / increased tax revenue for government / lower unemployment / raise occupational mobility (NB occupational could be both a private and external benefit).<br><br>**NB: these benefits must be clearly identified as either private benefits or external benefits**<br><br>**NB: If no suitable diagram award a maximum of 4 KAA marks**<br><br>**Evaluation (3+3 or 2+2+2 marks)**<br><br>Private benefits<br><br>➢ Uncertainty of the value of private benefits: No guarantee that an individual graduate will earn £160,000 more over working life / many may work part-time or earn below £21,000 and so avoid repayments.<br><br>➢ Uncertainty of value of private benefits since: graduate unemployment remains high / 8.9%.<br><br>➢ The type of course studied for and the institution studied at might affect earnings / quality of education to the individual.<br><br>➢ Time lag between university study and the reward of increased earnings.<br><br>➢ The estimated additional earnings of £160,000 has to be compared with financial costs of tuition fees of £9,000 per year / plus interest charges / plus living expenses / also the loss of potential income from work over the three or more years of taking degree.<br><br>External benefits<br><br>➢ Uncertainty of the value of external benefits: Difficult to quantify and attach a monetary value to university education / quality of education | |

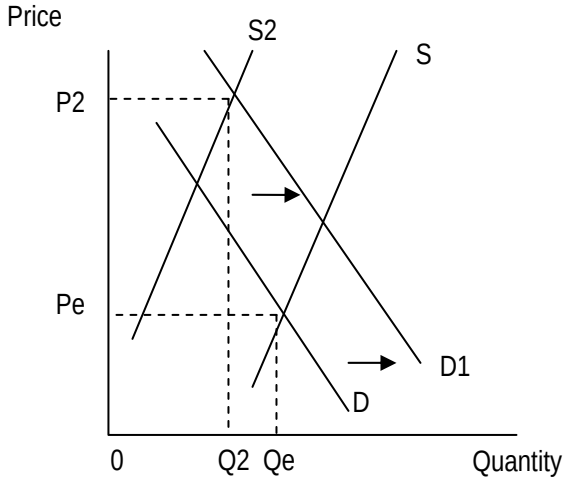
| | | |
|---|---|---|
| | may vary.<br>➢ Value of external benefits to firms may be exaggerated – still need to train new staff.<br>➢ Problem of other countries spending higher percentage of GDP on university education – so external benefits to UK may be limited if quality of university education lags behind.<br>➢ A brain drain as some graduates move abroad to work. | **(14)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)** | **KAA = 6 marks**<br>• Definition or formula for price elasticity of demand **(1 mark).**<br>• Identification that the rise in tuition fees is likely to reduce the number of applications **(1 mark).**<br>• Demand is price inelastic for all students (could be shown by diagram) / use of Extract 2: for example, most A' Level students still intend to apply to university (line 15). **(1+1 marks).**<br>• Reference to the information in Extract 2: demand is relatively more inelastic for students from better-off households than low income households ***/*** data use (9% forecast fall as opposed to a 14% forecast fall) **(1+1 marks).**<br><br>**Accept the following combinations to gain 2+2 marks**<br>• Calculations of price elasticity of demand:<br>➢ Low income students: -14% ÷ 3710 / 3290 × 100<br>(**2 marks**)<br>➢ Better-off students: -9% ÷ 3710 / 3290 × 100<br>(**2 marks**)<br>Also if part of the method is correct 7000 – 3290 ÷ 3290 then award up to **1 mark**.<br>• Accept correct calculations:<br>Low income students: price elasticity of demand is -0.12 (**2 marks)**<br>NB: accept answers near this calculation such as -0.13 or -0.11. **Accept answer without the minus sign.**<br>Better off students: price elasticity of demand is **-**0.07 (**2 marks**)<br>NB: accept answers near this calculation such as -0.06 or -0.08. **Accept answer without** | |

| | | |
|---|---|---|
| | **the minus sign.**<br><br>**Evaluation (2+2 marks)**<br>• Reliability of the research: small scale study of 730 students / students' not stating truth or changing mind.<br>• Impact on student applications vary between universities / the prestigious universities may have no decrease in demand but the new universities face a bigger decrease in demand.<br>• Impact on applications vary between courses / Medicine and Law may have no decrease in demand but Arts and Humanities face a large decrease in demand.<br>• Tuition fees are increasing up to £9,000 for many universities - so could be even bigger impact on number of applications.<br>• There are government grants of £3250 per year and university bursaries for low income students.<br>• Discussion of availability of substitutes / study at overseas universities or training courses.<br>• Discussion of the effects of the previous large increase in tuition fees shown in Figure 2 / in 2006 a 3% fall in applications / but there is a long term upward trend. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **KAA = 8 marks (2+2+2+2) and evaluation 6 marks (2+2+2 or 3+3):**<br><br>**NB: discussion of both positive and negative effects of the increase in tuition fees represents an argument and so one side may be regarded as KAA and the other evaluation.**<br><br>**Consideration of possible effects on different groups:**<br><br>**Students / parents**<br><br>• Higher opportunity cost / higher financial costs / reference to loan repayment costs in Figure 1 / higher student debt.<br><br>• A decrease in number of young people going to university.<br><br>• Hardship for students from low income households / some development.<br><br>• Greater value placed by students on university education / reduction in student drop-out rates.<br><br>• Switch to vocational courses and fewer arts and humanities based courses / 36 000 cut in university places by 2012.<br><br>• Students may consider local university so as to reduce accommodation costs / option of studying overseas.<br><br>**Universities**<br><br>• A possibility of increased revenues and income / consideration of price elasticity of demand:<br><br>• increased funds for investment into new buildings<br><br>• increased funds for research / maintain world class status<br><br>• increased funds for staff salaries<br><br>• increase provision of variety of courses<br><br>• improve quality of teaching / smaller teacher-student ratios<br><br>• employment implications | |

| | | |
|---|---|---|
| | • more independence from government.<br><br>**Government**<br>• Reduction of government funding for universities / could reduce budget deficit (**1 mark**).<br><br>**Evaluation may include (2+2+2 or 3+3)**<br>• **Increased role for market forces:** development of the idea that market forces have a greater influence in higher education and there is less role for the government / there is a danger of market failure due to under-consumption.<br>• **Students**: Students from low income backgrounds get financial support so may not be discouraged from going to university.<br>• **Students**: Figure 2 reveals significant increase in university applications even when tuition fees more than doubled in 2005-06 / so long term trend of increase in student applications / data reference.<br>• **Universities:** Extract 1 refers to 80% cut in government funding of university courses so no extra funds available for some universities / danger that some universities close down / Extract 2 suggests a 36 000 fall in number of university places in 2012 / a fall in range of courses offered / mergers between universities.<br>• **Government**: It may take time before government finances improve since time lag before graduates repay loans / some graduates may evade repaying loans / some graduates are out of work so do not repay loans / significant amount of funds raised as many people graduate each year. | **(14)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **KAA (6 marks)**<br>• Explicit reference to Figure 1 on the rise in price of cotton in 2010 e.g. a rise from around 70 US cents to 160 US cents per pound (accept price rises of up to $240 cents) (**1 mark**).<br>• A decrease in supply e.g. flooding in China and Pakistan / Indian Government export ban (**1 mark**).<br>• An increase in demand due to speculative buying (**1 mark**).<br>NB: award **1 mark** for further development of either a supply or demand factor e.g. discussion of supply being highly price inelastic, so speculative demand will have a bigger impact upon price.<br>• Diagram (**up to 4 marks**)<br>  <br><br>➢ Original demand and supply diagram with equilibrium price (**1 mark**)<br>➢ An increase in the demand curve (**1 mark**)<br>➢ A decrease in the supply curve (**1 mark**)<br>➢ The new equilibrium price (**1 mark**)<br>**NB: 4 marks can only be awarded if both demand and supply are correctly shifted.**<br>**NB: Award a maximum of 3 marks if no diagram.**<br>**NB: Award a maximum of 5 marks if just one curve is shifted.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA (4 marks)**<br>• Definition or formula for cross elasticity of demand (the responsiveness in demand for one good due to a change in price of another good or %ΔQD good x ÷ %ΔP good y) (**1 mark**).<br>• Application: a rise in price of cotton has caused an increase in demand for synthetic materials / diagram depicting this relationship (**1 mark**).<br>• Cotton and synthetic materials are substitutes or in competitive demand (**1 mark**).<br>• They have a positive cross elasticity of demand (**1 mark**).<br>• Accept diagrammatic explanation (**1 mark**).<br>• Accept accurate numerical example (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **KAA (up to 6 marks)**<br>• Definition or formula of price elasticity of supply (the responsiveness of supply due to a change in price or %ΔQS ÷ %ΔP) (**1 mark**).<br>• Diagram distinguishing between inelastic and elastic supply **or** a clear written understanding of the difference between price inelastic and price elastic supply (**1 mark**).<br>Factors which affect the price elasticity of supply of cotton include:<br>• Time period / it appears to be price inelastic in supply within 100 days which is the growing period / but more elastic after this period (**1+1 marks**).<br>• Spare capacity in the industry or resources in economy / Extract 1 refers to farmers devoting more land to grow cotton which implies spare capacity **(1+1 marks).**<br>• Indian Government ban on cotton exports / might contribute to overall inelastic supply for rest of world (**1+1 marks**).<br>• Ease of entry and exit to the market for farmers / development e.g. problems of raising finance **(1+1 marks).**<br>• Distinction between short run (at least one input fixed) and long run (all inputs variable) / application to type of inputs **(1+1 marks).**<br>**Evaluation: (2+2 marks or 3+1 marks)**<br>• Evaluative use of the data: cotton may be less price inelastic in supply in long run since although price more than doubles, output is set to increase from 101m bales to 117m bales between 2010 and 2011.<br>• Discussion of level of stocks: Extract 1 refers to stocks of cotton at their lowest level for five years supply is inelastic / perishability of cotton stocks. | |

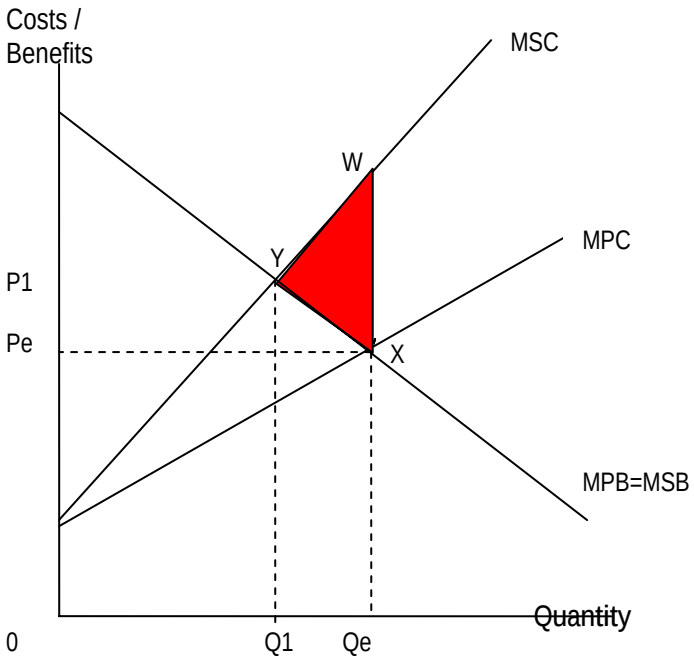
| | | |
|---|---|---|
| | • Cotton is dependent on the climate and so no guarantee that supply will be elastic in the long run / problem of flooding might occur next year.<br>• Discussion of the traders who purchased cotton who may release stocks on to the market as price rises.<br>• Discussion of GM cotton seed / e.g. it could makes supply more elastic if it reduces growing period or makes the crop more resistant to change in climate / impact of new technology over time.<br>• Discussion on whether the Indian Government might lift export ban on cotton as prices soar.<br>• Price fluctuations of cotton may discourage farmers from investing to raise supply in long run even as prices rise. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **KAA (Up to 8 marks)**<br>• Increase in production costs / retail stores are likely to increase the price of clothing (**1+1 marks**)<br>• Diagrammatic analysis depicting supply curve shifting inwards / depicting an increase in price of clothing (**diagram or explanation of diagram must refer to clothing market**) (**1+1 marks**).<br>• Decrease in profits / Investec analysts forecast fall from £560m to £542m / it may lead to a decrease in share price of retail stores - Investec do not recommend buying / fall in dividend payments / fall in producer surplus (**1+1+1 marks**).<br>• Fall in number of stores / fall in employment / fall in investment into clothing retail stores (**1+1+1 marks**)<br>• Retail firms might try and cut costs e.g. focus more on online sales and catalogue shopping / relocate stores to parts of town where rents are cheaper / staff wage freeze / switch to cheaper synthetic materials / reduce quality (**1+1+1 marks**).<br>• Consideration of further diversification e.g. home furnishings / might explain why Next shares rose by 20% over the year (**1+1 marks**).<br>**Evaluation (2+2+2 or 3+3 marks)**<br>• Discussion of time; Lord Wolfson refers to cotton price bubble – so it might fall back / Figure 1 refers to the forecast increase in cotton supply to 117m bales for 2011.<br>• Discussion of magnitude of cotton price rise (more than 100%) and impact on clothing prices (up to 10%).<br>• Discussion of the proportion of cotton costs out of total costs for clothing.<br>• Discussion of price elasticity of demand: clothing prices have hardly increased for nearly 20 years so there might be some scope to raise price and still keep consumer demand / impact on total revenue.<br>• Discount clothing firms such as Primark may gain or lose customers from high-end retailers such as Next and Marks & Spencer. | **(14)** |

| | | |
|---|---|---|
| | • Not much scope to source cheaper suppliers from far East as clothes retailers already use them.<br>• Other factors may come into play e.g. the recession or rising population or increase in marketing may impact on clothing market. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **KAA (Up to 8 marks)**<br>• Definition of private costs: costs internal to an exchange or a transaction / costs which the price mechanism take into account / costs to the consumer or producer directly for a good or service / financial cost or monetary cost to consumers or producer (**1+1 marks**).<br>• Explanation of private costs in growing cotton e.g. fertilizer cost / increased water cost / one other cost such as wages, raw materials, rent and purchase of machinery (**1+1 marks**).<br>• Definition of external costs: costs external to an exchange or transaction / costs which the price mechanism fail to take into account / negative third party effects / difference between social costs and private costs (**1+1 marks**)<br>• Explanation of an external cost in growing cotton e.g. reduction in bio-diversity / health risks associated with GM crops / environmental backlash / pollution from increased use of fertilisers (**1+1 marks**).<br>**NB: general comments on pollution are not sufficient for awarding marks**<br>**NB: these costs must be clearly identified as either private costs or external costs** | |

- Diagram up to **4 marks:**




  - Original MB and MPC curves (**1 mark**)
  - MSC curve (accept a parallel shift of the MSC curve) (**1 mark**)
  - Identification of market equilibrium and socially efficient quantity (**1 mark**)
  - Identification of triangle of welfare loss (accept welfare gain) (**1 mark**)

**(14)**

- Consideration of market failure since there is a welfare loss triangle indicating that social costs exceed social benefits for the marginal output QeQ1 - over production and under-pricing (**1 mark**).

**NB: If no suitable diagram then award a maximum of 4 KAA marks.**

**Evaluation (2+2+2 or 3+3 marks)**

- Discussion of magnitude of GM farming: the extract refers to widespread use in India / reference to yields falling (output per acre) / depends upon whether GM farming is widespread in other major cotton producing countries such as US and China.

| | | |
|---|---|---|
| | • Discussion of possible long term implications: there may be a loss of bio-diversity and so difficult to combat diseases such as the bollworm mite.<br><br>• Discussion of difficulty in measuring and attaching a monetary value to external costs / issue of imperfect market knowledge and that GM farming is an unknown risk.<br><br>• Discussion of possible benefits from GM farming: need to consider all the evidence – crops which might grow despite climate change / increased supply and lower prices / greater consumer surplus / higher living standards for farmers in the developing world. | |

**Unit 1: Assessment Objectives June 2012**

| Question | Knowledge | Application | Analysis | Evaluation | Total |
|---|---|---|---|---|---|
| **Section A** | | | | | |
| **Q1** | 2 | 1 | 1 | | **4** |
| **Q2** | 2 | 1 | 1 | | **4** |
| **Q3** | 1 | 2 | 1 | | **4** |
| **Q4** | 1 | 2 | 1 | | **4** |
| **Q5** | 2 | 1 | 1 | | **4** |
| **Q6** | 2 | 1 | 1 | | **4** |
| **Q7** | 1 | 2 | 1 | | **4** |
| **Q8** | 1 | 2 | 1 | | **4** |
| **Total** | **12** | **12** | **8** | | **32** |
| **Section B** | | | | | |
| **Q9(a)** | 2 | 2 | | | **4** |
| **Q9 (b)** | 2 | 4 | | | **6** |
| **Q9 (c)** | 2 | 2 | 4 | 6 | **14** |
| **Q9 (d)** | 2 | 2 | 2 | 4 | **10** |
| **Q9 (e)** | 4 | 2 | 2 | 6 | **14** |
| **Total** | **12** | **12** | **8** | **16** | **48** |
| **Q10 (a)** | 2 | 4 | | | **6** |
| **Q10 (b)** | 2 | 2 | | | **4** |
| **Q10 (c)** | 2 | 2 | 2 | 4 | **10** |
| **Q10 (d)** | 4 | 2 | 2 | 6 | **14** |
| **Q10 (e)** | 2 | 2 | 4 | 6 | **14** |
| **Total** | **12** | **12** | **8** | **16** | **48** |
| | | | | | |
| **Grand Total A+B** | **24** | **24** | **16** | **16** | **80** |

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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Thursday 12 January 2012 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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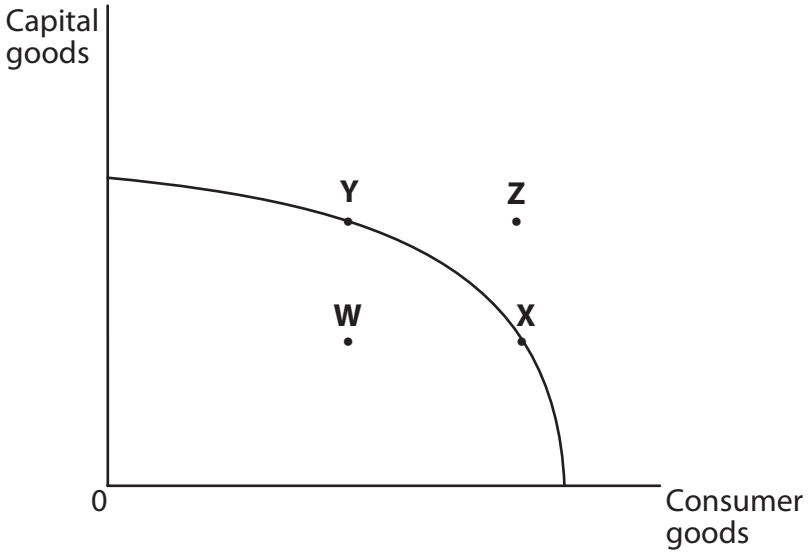
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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1**




The diagram shows a production possibility frontier for an economy. Which of the following is true?

**(1)**

**A** There is full employment of resources at W.

**B** Economic growth is likely to be higher at X than Y.

**C** Z is currently unattainable.

**D** There is a constant rate of opportunity cost between X and Y.

Answer ☐



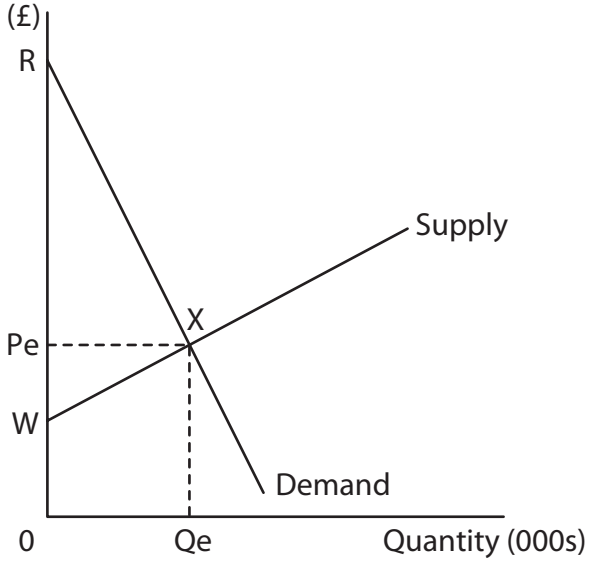
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Explanation

**(3)**

**(Total for Question 1 = 4 marks)**

**2** Price per pair of sports shoes (£)




The diagram shows the market for sports shoes. Which of the following is true?

**(1)**

**A** The supply of sports shoes is price inelastic.

**B** The area of consumer surplus is greater than the area of producer surplus.

**C** There is constant price elasticity of demand along the length of the demand curve.

**D** There is an inverse relationship between the price and quantity supplied of sports shoes.

Answer ☐



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Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3** The table below shows UK estimates of the percentage changes in price and quantity demanded for fresh fruit and fresh vegetables between 2007 and 2008. You may use the last column for your workings.

| Type of food | Price change (%) | Quantity demanded (%) | |
|---|---|---|---|
| Fresh fruit | 7.0 | –7.7 | |
| Fresh vegetables | 8.0 | –9.6 | |

(Source: © Crown Copyright 2008)

Other things being equal the data in the table suggest that:

**(1)**

**A** Demand is more price elastic for fresh vegetables than fresh fruit.

**B** Total revenue has increased for producers of both fresh fruit and fresh vegetables.

**C** Demand is price inelastic for both fresh fruit and fresh vegetables.

**D** There is a negative income elasticity of demand for fresh fruit and fresh vegetables.

Answer ☐

Explanation

**(3)**

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



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**4** The table below shows UK average weekly income and selected transport statistics 2002–2008.

| **Year** | **2002** | **2008** |
|---|---|---|
| Average gross weekly household income (in real terms at 2002 prices) | £552 | £604 |
| *Billion passenger kilometres travelled by:* | | |
| Cars and taxis | 393 | 402 |
| Buses and coaches | 5.2 | 5.2 |
| Bicycles | 4.4 | 4.7 |
| Rail | 48 | 61 |

(Source: © Crown Copyright, adapted from Figures 8.3 and 17.3 in the Annual Abstract of Statistics and Social Trends 2010)

The data in the table suggest that over the period

**(1)**

**A** The income elasticity of demand for bus and coach travel is equal to 1.0.

**B** The income elasticity of demand for travel by bicycle is negative.

**C** The price elasticity of demand for rail travel is positive.

**D** The income elasticity of demand for travel by cars and taxis is positive.

Answer ☐



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Explanation

**(3)**

**(Total for Question 4 = 4 marks)**

**5** In 2010 the Scottish Government proposed a legal minimum price per unit of alcoholic drink. Other things being equal, a minimum price set above the market equilibrium price is likely to cause

**(1)**

**A** an excess supply

**B** a fall in price

**C** an increase in consumption

**D** no effect in the market

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**



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**6** A free market economy fails to allocate resources efficiently to the production of public goods because

**(1)**

**A** No opportunity cost is involved in the provision of public goods.

**B** Providing public goods can result in a free rider problem.

**C** Public goods can only be provided by the private sector.

**D** The prices of public goods may be set at too high a level.

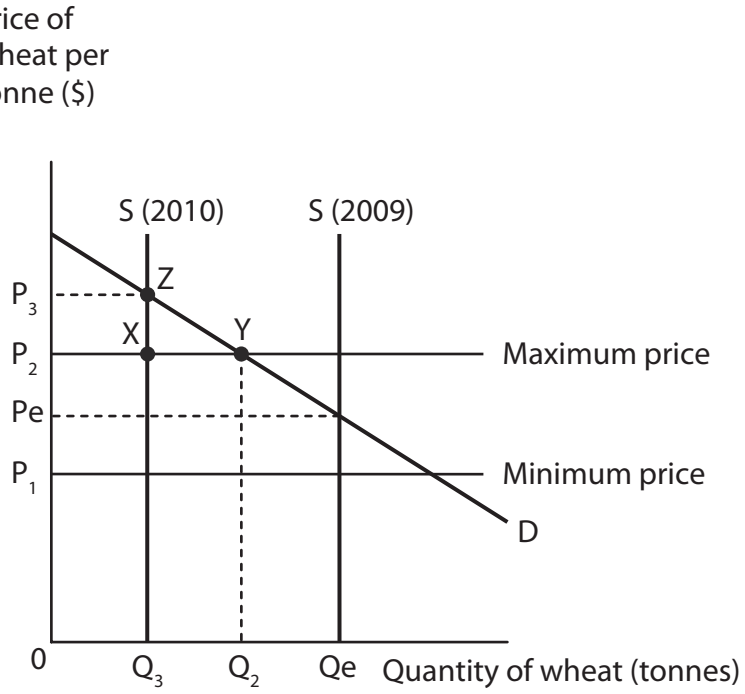
Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7**




The diagram shows the operation of a buffer stock scheme in the wheat market where a government agency intervenes to ensure the price remains between $P_1$ and $P_2$. The 2010 harvest led to

**(1)**

**A** An excess supply of wheat

**B** The government agency buying wheat and adding to its stockpile

**C** Price decreasing to $P_1$

**D** The government agency selling wheat from its stockpile

Answer ☐



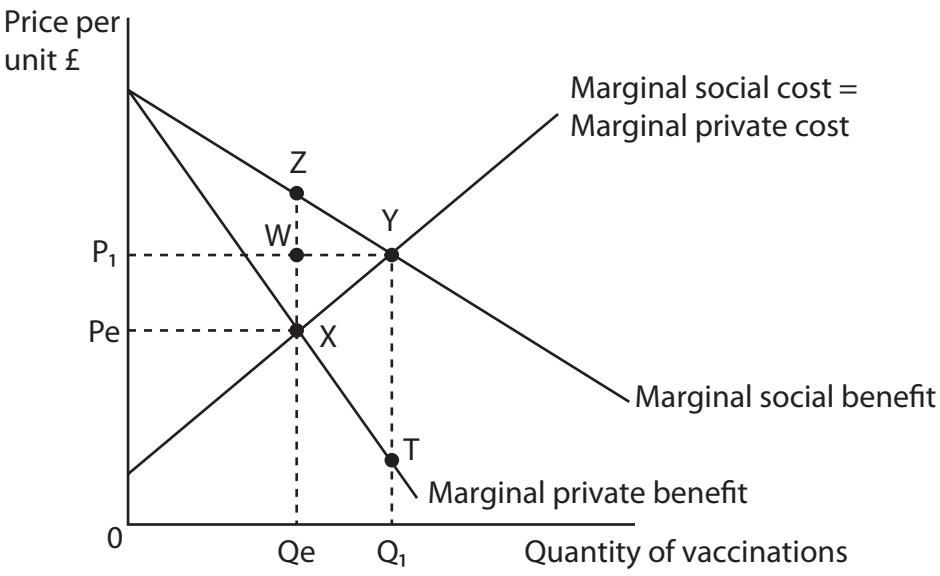
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Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8**




The diagram shows the market for vaccinations. Assume there are no external costs. Which of the following is true?

**(1)**

**A** The free market equilibrium quantity exceeds the social optimum quantity.

**B** The area of welfare loss is XTYZ.

**C** An increase in quantity from the free market equilibrium will lead to a net welfare gain.

**D** At the free market equilibrium quantity, marginal social cost exceeds marginal social benefit.

Answer ☐



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Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

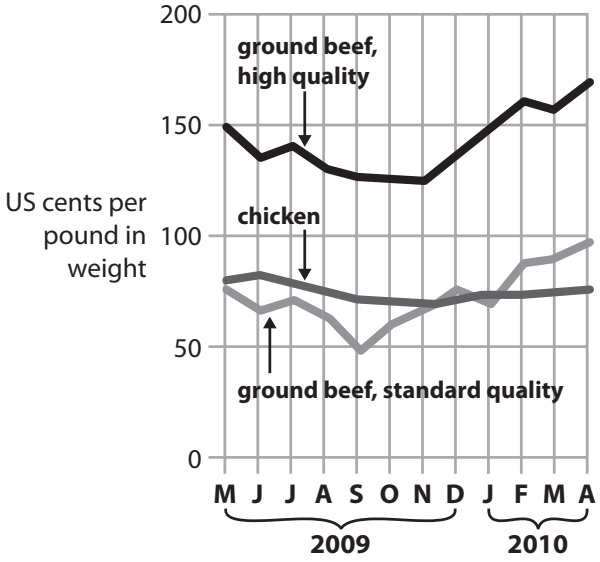
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 28.**

**You should spend 55 minutes on this section.**

## 9 The price of beef

**Figure 1 The price of beef and chicken for fast food restaurants 2009 – 2010**




### Extract 1 Rising price of beef

It is **not** a happy time in American fast food restaurants. Rising beef prices have reduced profit margins at the McDonalds, Burger King and Wendy chains. They have found it difficult to pass on higher beef prices to their customers through the sale of burgers such as the 'Big Mac' and 'Whopper'. Instead, the fast food restaurants have responded by promoting sales of chicken burgers and fish fillets.

Beef prices have risen due to higher costs for cattle feed and severe drought conditions in Australia and New Zealand (the main suppliers of beef for American fast food restaurants).

However, there is some good news. The fast food restaurants have benefited from the recession as consumers made savings by switching from eating at expensive restaurants to cheaper burger bars.

(Source: © *The Times* 'Increase in meat prices has burger lovers asking: where's the beef?', Alexandra Frean, 24th May 2010)



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**Extract 2 Cattle farms damaging the rainforest**

Deforestation in Brazil releases an estimated 400 million tonnes of carbon dioxide into the atmosphere every year, making the country one of the biggest emitters of the gas in the world. An average of 7,330 square miles of rainforest has been lost each year since 1995. The destruction of rainforest has accelerated over the past few years due to soaring beef and soya prices. Farmers are burning more rainforest to turn land into cattle ranches and into fields for growing crops.

However, the President of Brazil announced plans to reduce deforestation by subsidising sustainable development projects. These include replanting trees and creating eco-friendly tourism as alternative means of providing employment and income for local communities. The amount of funds made available has not been revealed.

The proposals also include an increase in the policing of forested areas and severe penalties for those breaking the law through illegal logging and farming.

(Source: © Guardian News & Media Ltd 2008, adapted from 'Brazil sets target to slow Amazon deforestation', by David Ljunggren)

(a) With reference to Figure 1 and the second paragraph of Extract 1, explain the causes of the increase in price of beef. Use a supply and demand diagram in your answer.

**(6)**

(b) Using cross elasticity of demand, discuss the likely relationship between the price of beef and the demand for chicken and fish.

**(6)**

(c) Assess whether beef and beef burgers are likely to be normal goods or inferior goods.

**(8)**

*(d) Using the concepts of external costs and market failure, examine the possible economic effects of farmers 'burning more rainforest to turn land into cattle ranches and into fields for growing crops'. (Extract 2, lines 5–6). Use an appropriate diagram in your answer.

**(14)**

*(e) Discuss the possible economic effects of the government providing subsidies to support sustainable development projects such as those referred to in Extract 2.

**(14)**

(a) With reference to Figure 1 and the second paragraph of Extract 1, explain the causes of the increase in price of beef. Use a supply and demand diagram in your answer.

**(6)**



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(b) Using cross elasticity of demand, discuss the likely relationship between the price of beef and the demand for chicken and fish.

**(6)**

(c) Assess whether beef and beef burgers are likely to be normal goods or inferior goods.

**(8)**



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*(d) Using the concepts of external costs and market failure, examine the possible economic effects of farmers 'burning more rainforest to turn land into cattle ranches and into fields for growing crops'. (Extract 2, lines 5–6). Use an appropriate diagram in your answer.

**(14)**


P 4 0 0 9 1 A 0 2 2 4 0

*(e) Discuss the possible economic effects of the government providing subsidies to support sustainable development projects such as those referred to in Extract 2.

**(14)**



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**(Total for Question 9 = 48 marks)**



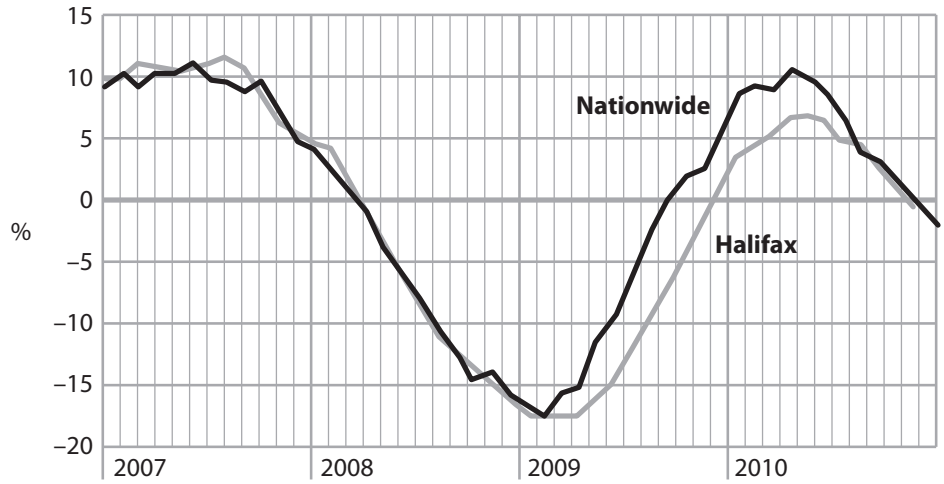
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**If you answer Question 10 put a cross in this box ☒ .**

## 10 Difficult times for house builders and first time buyers

### Figure 1 UK house prices, year on year % change




(Source: © Halifax & © Nationwide Building Society)

### Figure 2 Share prices of the seven largest UK house builders, percentage change

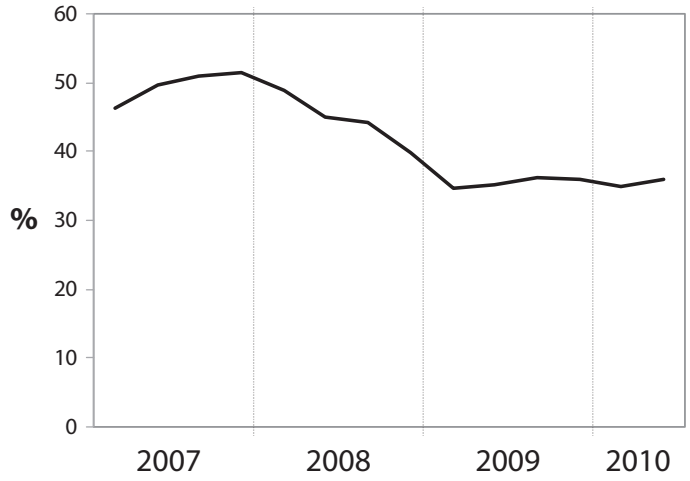
| Company | % change (Jan 1st–Nov 5th 2010) |
|---|---|
| Berkeley Group | +2.9 |
| Redrow | −16.2 |
| Bovis Homes Group | −18.8 |
| Persimmon | −23.0 |
| Bellway | −31.7 |
| Barratt Developments | −32.9 |
| Taylor Wimpey | −32.9 |

(Source: Investing 5th November 2010
http://www.fool.co.uk/news/investing/2010/11/05/a-harsh-winter-for-housebuilders.aspx)



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**Figure 3 Affordability of UK property for first-time buyers**
**Mortgage payments as a % of average take home pay for first-time buyers**




(Source: © Nationwide Building Society)

**Extract 1 Falling house prices**

There are fears of a housing market crash following the largest ever recorded monthly fall in house prices in September 2010. According to Halifax Bank, over £6000 (3.6%) was wiped off the average house price.

More than £1 billion has been knocked off the stock market value of Britain's seven leading house building firms between January and November 2010, over a period when share prices generally have increased by nearly 20%. The fall in house prices has caused the supply of new housing to fall sharply. Builders' profits and employment have suffered.

Howard Archer, Chief economist at Global Insight, believes house prices will continue to fall by 10% in 2011. He added that a combination of factors was affecting house prices, including: high (and rising) unemployment, limited wage growth, deteriorating consumer confidence and difficulties in getting a mortgage.

(Source: © Guardian News & Media Ltd 2010)


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**Extract 2 First-time buyers**

The number of new mortgages (loans which enable people to buy a property) dropped in September to its lowest level for more than a decade. Despite falling house prices, there are immense challenges for first-time buyers to get on to the property ladder. Lenders have increased the cash deposit required to gain a mortgage and refused to pass on interest rate cuts to this group of buyers due to the risk involved. The outlook is further worsened by rising unemployment and soaring student debt. A 30% cut in government subsidies for new-build affordable homes was also announced in the government spending review.

However, Figure 3 shows that housing has become more affordable for first-time buyers over recent years if they can provide a cash deposit. The alternative is to rent property. The Royal Institution of Chartered Surveyors report an increase in demand for rental properties and in rents charged over the latter part of 2010.

(Source: © Guardian News & Media Ltd 2010 adapted from 'Clouds over the housing market create a perfect storm for first-time buyers', by Simon Bowers)

(a) With reference to the last paragraph of Extract 1, explain why house prices fell in September 2010. Illustrate your answer with a supply and demand diagram.

**(6)**

(b) With reference to Extract 1 and Figure 2, assess the likely impact of falling house prices on house-building firms.

**(8)**

(c) Discuss whether the supply of **new** housing is likely to be price elastic or price inelastic.

**(6)**

*(d) To what extent might falling house prices help 'first-time buyers to get on to the property ladder' (*Extract 2, lines 3 and 4*)?

**(14)**

*(e) Discuss the likely economic effects of 'a 30% cut in government subsidies for new-build affordable homes' (Extract 2, line 7). Use an appropriate diagram in your answer.

**(14)**



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(a) With reference to the last paragraph of Extract 1, explain why house prices fell in September 2010. Illustrate your answer with a supply and demand diagram.

**(6)**

(b) With reference to Extract 1 and Figure 2, assess the likely impact of falling house prices on house-building firms.

**(8)**



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(c) Discuss whether the supply of **new** housing is likely to be price elastic or price inelastic.

**(6)**

*(d) To what extent might falling house prices help 'first-time buyers to get on to the property ladder' (*Extract 2, lines 3 and 4*)?

**(14)**



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P 4 0 0 9 1 A 0 3 6 4 0

*(e) Discuss the likely economic effects of 'a 30% cut in government subsidies for new-build affordable homes' (Extract 2, line 7). Use an appropriate diagram in your answer.

**(14)**

P 4 0 0 9 1 A 0 3 8 4 0

**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**
**TOTAL FOR PAPER = 80 MARKS**



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# Mark Scheme (Results)

## January 2012

## GCE Economics (6EC01)
## Paper 01

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

**NB candidates may achieve up to 3 explanation marks even if incorrect option key is selected.**

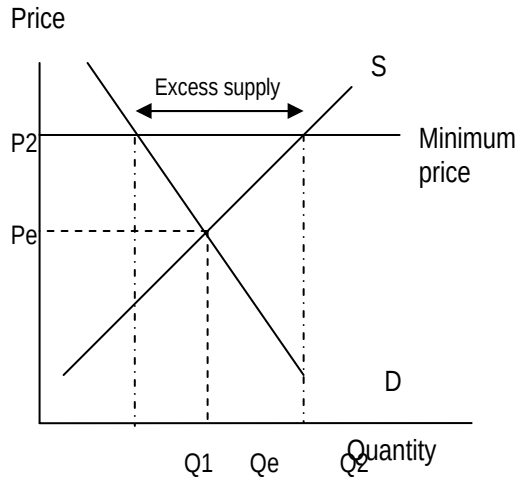
**NB candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key should be explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | **C (1 mark)**<br><br>• Definition of production possibility frontier (PPF) (the maximum output combinations of two goods an economy can achieve when all its resources are fully / efficiently employed). (**1 mark**)<br><br>• Position Z currently unobtainable since it is beyond the production possibility frontier / only positions on or within the frontier can be achieved / economic growth is required. (**1 mark**)<br>**Note: this may be annotated on to the diagram by an outward shift of the PPF.**<br><br>• Position Z can be achieved with more resources / new technology and this will take time. (**1 mark**).<br><br>Note: No marks are available for definition of opportunity cost as this is not relevant to the question.<br><br>**Rejection marks**<br>• Option A incorrect since position W has unemployed resources / there is an inefficient allocation resources / it is not on the production possibility frontier / it is possible to increase output of both goods. (**1 mark**).<br><br>• Option B incorrect since relatively fewer capital goods at position X compared to Y. capital goods are a major determinant of economic growth. (**1 mark**).<br><br>• Option D incorrect since the production possibility frontier is curved – not constant **or** opportunity cost is increasing due to the curve. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | **B (1 mark)**<br><br>• Definition of consumer surplus (the difference between the price one is prepared to pay and the actual market price **or** the area below the demand curve and above the equilibrium price line). (**1 mark**).<br><br>• Definition of producer surplus (the difference between the price a firm is willing to sell a good for and the actual market price **or** the area above the supply curve and below the equilibrium price) (**1 mark**).<br><br>• Consumer surplus is RXPe and producer surplus is WXPe **or** annotation of diagram **showing both areas**.(**1 mark**).<br><br>• Supply is relatively price elastic compared to demand so producer surplus is lower (**1 mark**).<br><br>**Rejection marks**<br>• Option A incorrect since supply is price elastic since the curve comes from the vertical (price) axis. (**1 mark**)<br><br>• Option C incorrect since elasticity of demand varies along its length / from highly price elastic at the top left through to very price inelastic at bottom right of demand curve. (**1 mark**).<br><br>• Option D incorrect since there is a direct relationship between price and quantity supply - as price rises so will supply rise / the gradient is positive. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | **A (1 mark)**<br><br>• Definition or formula of price elasticity of demand (PED): (the responsiveness or sensitivity of demand for a good due to a change in its price) or (%Δ QD ÷ %Δ P)<br><br>• **OR** definition of price elastic demand (the percentage change in demand exceeds the percentage change in price) depicting an elastic demand curve and showing how an increase in price will reduce total revenue. (**1 mark**).<br><br>• Correct answer for PED of fresh fruit -1.1 (**1 mark**)<br><br>• Correct answer for PED of fresh vegetables -1.2 (**1mark**)<br><br>• The greater the numerical value of PED, the more price elastic is the demand. (**1 mark**).<br><br>**Note: accept answers without the minus sign.**<br><br>**Note: award no mark for the method in this question.**<br><br>**Rejection marks**<br>• Option B incorrect since demand for fruit and vegetables are price elastic – so an increase in price will reduce total revenue. (**1 mark**).<br><br>• Option C is incorrect since demand for fruit and vegetable is price elastic since the percentage change in demand exceeds the percentage change in price (**1 mark**).<br><br>• Option D incorrect since we do not have information on the responsiveness of demand for fresh fruit and vegetables to a change in income. (**1 mark**) | **(4)** |

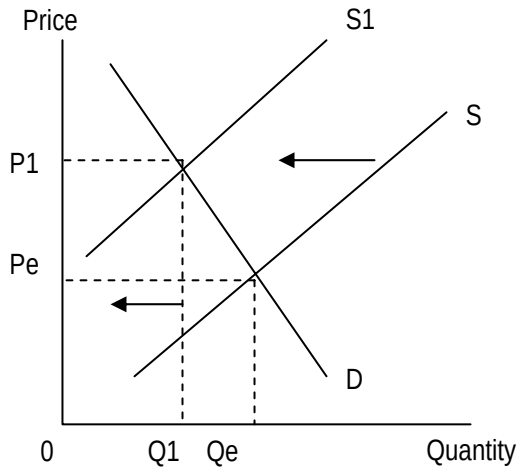
| Question Number | Answer | Mark |
|---|---|---|
| **4** | **D** (**1 mark**)<br><br>• Definition or formula for income elasticity of demand (YED): (The responsiveness or sensitivity of demand for a good due to a change in income) or (%Δ QD ÷ %Δ Y). (**1 mark**).<br><br>• Cars and taxis are a normal good / since when income rose so did demand for cars and taxis (this could be shown by diagram) (**1+1 marks**).<br><br>• Explicit use of data on cars and taxis, for example, weekly real household income has risen from £552 to £604 and demand for cars and taxis has risen from 393 to 402 billion passenger kilometres (**1 mark**).<br><br>• **NB: award 2 marks for correct calculation of income elasticity of demand: 2.29% ÷ 9.4% = 0.24) (Note: accept 0.2)**<br><br>**Rejection marks**<br>• Option A incorrect since buses and coaches had an income elasticity of demand of 0. (**1 mark**).<br><br>• Option B incorrect since bicycles had a positive income elasticity of demand, shown by demand rising as income rises. (**1 mark**).<br><br>• Option C incorrect since the data only shows how demand responds to changes in income; there is no information on the price elasticity of demand for rail travel. (**1 mark**). | **(4)** |

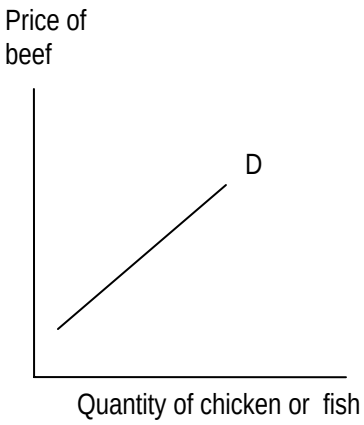
| Question Number | Answer | Mark |
|---|---|---|
| **5** | **A (1 mark)**<br><br>• Reward a comment on government intervention to correct a market failure (**1 mark**).<br><br>• Definition of minimum price (the lowest price a good is allowed to be sold for **or** it is a floor price) (**1 mark**).<br><br>• Explanation of excess supply (surplus): where the quantity supplied exceeds the quantity demanded (**1 mark**).<br><br>• Written explanation of the process of excess supply: as price rises then supply extends or rises / demand contracts (falls) or consumption falls (**1+1 marks**).<br><br>**OR** diagram depicting the minimum price above the free market price / showing excess supply (Q1 - Q2) (**2 marks**).<br><br>  <br><br><br>**Note: no marks available for a response stating that the excess supply is purchased by government.**<br><br>**Note: no marks available for a diagram depicting just a demand and supply curve without the minimum price.**<br><br>**Rejection marks**<br>• Option B is incorrect since the minimum price is set above the market price and so price will have to rise. (**1 mark**)<br><br>• Option C is incorrect since a rise in price will lead to a contraction in demand – (not enough to just reverse key with 'a decrease in consumption'. (**1 mark**)<br><br>• Option D is incorrect since only if a minimum price is set below the market price will there be no effect in the market. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | **B (1 mark)**<br><br>• Definition of public goods (non-rivalry and non-excludability) Also accept non-rejectable as one of these characteristics. **(1 mark).**<br><br>• Definition of a free market economy (the price mechanism is used to allocate resources) (**1 mark**).<br><br>• Explanation of free rider problem: it is possible for people to consume a good without paying for it once it is provided / so little incentive for producers to provide sufficient quantities or there is under-provision (**1+1 marks**).<br><br>• Example of a public good, for example, defence, street lighting, lighthouses, flood defence schemes. (**1 mark**).<br><br>**Rejection marks**<br>• Option A incorrect since the resources used to produce public goods could have been used to produce other goods. (**1 mark**).<br><br>• Option C incorrect since there is little incentive for private enterprise to provide public goods due to the difficulty in making consumers pay – so the government often finances them (accept provides them). (**1 mark**).<br><br>**Note:** do not double award if already credited in the explanation.<br><br>• Option D incorrect since people can consume public goods without paying for them so 'price' is irrelevant here. (**1 mark**). | **(4)** |

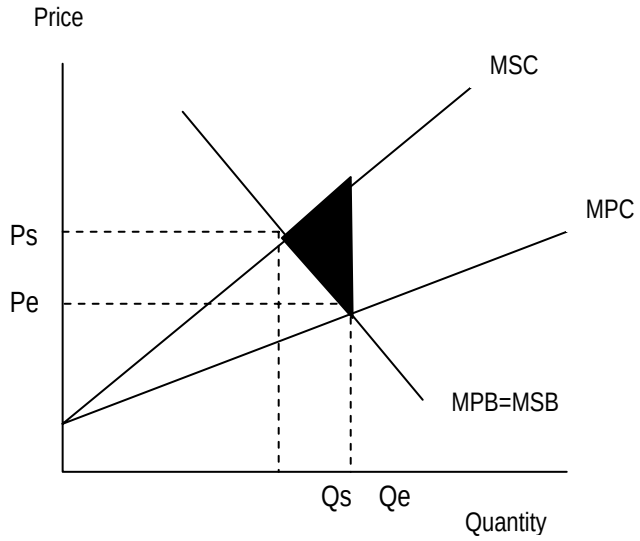
| Question Number | Answer | Mark |
|---|---|---|
| **7** | **D (1 mark)**<br><br>• Understanding or explanation of buffer stock scheme (for example: agency sells from buffer stock in times of poor harvest and buys or adds to it in times of good harvest. (**1 mark**).<br><br>**Note this explanation must consider both the buying and selling function of the buffer stock to secure a mark).**<br><br>• Identification that in 2010 there is a bad harvest / or supply has decreased (**1 mark**).<br><br>• Without intervention the price would rise to P3 or point Z (**1 mark**)<br><br>• Government agency sells Q3-Q2 or XY of wheat from its stockpile to establish a price of P2 (this may be shown by annotation of the diagram) (**1 mark**).<br><br>• Government agency revenue from the sale is Q3Q2XY (this may be shown by annotation of diagram but needs to be labelled or referred to in answer) (**1 mark**).<br><br>**Rejection marks**<br>• Option A incorrect since there is a poor harvest that could lead to an excess demand for wheat (**1 mark**).<br><br>• Option B incorrect since the agency will sell Q2Q3XY from its stockpile – not buy. (**1 mark**)<br>Note: do not double award if already credited in the explanation.<br><br>• Option C incorrect since price would increase to P3 in a free market **or** to a maximum of P2 under the buffer stock scheme. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **C (1 mark)**<br><br>• Definition of welfare gain (the excess of social benefit over social cost for a given quantity) (**1 mark**).<br><br>• Identification or annotation of diagram to identify welfare gain as area XZY (accept welfare loss) (**1 mark**).<br><br>• Identification of the free market equilibrium as point X or quantity Qe and the social optimum as point Y or quantity Q1 (**1 mark**).<br><br>• Definition of external benefits: (positive third party effects / benefits external to an exchange/ benefits the price mechanism ignores / benefits outside the market transaction / difference between social benefits and private benefits / positive spillover effects) (**1 mark**).<br><br>• Application to vaccinations: welfare gain or external benefits include a reduction in the spread of diseases since more people vaccinated. (**1 mark**).<br><br>**Rejection marks**<br>• Option A incorrect since the social optimum quantity is Q1 or Y which is greater than the free market quantity Qe or X. (**1 mark**)<br>**Note:** do not double award if already credited in the explanation<br><br>• Option B incorrect since welfare gain is area XZY<br>**Note:** do not double award if this area has already been credited in the explanation) (**1 mark**).<br><br>• Option D incorrect since marginal social cost (X or Pe ) is less than marginal social benefit (Z ) (must state the letters) (**1 mark**). | **(4)** |

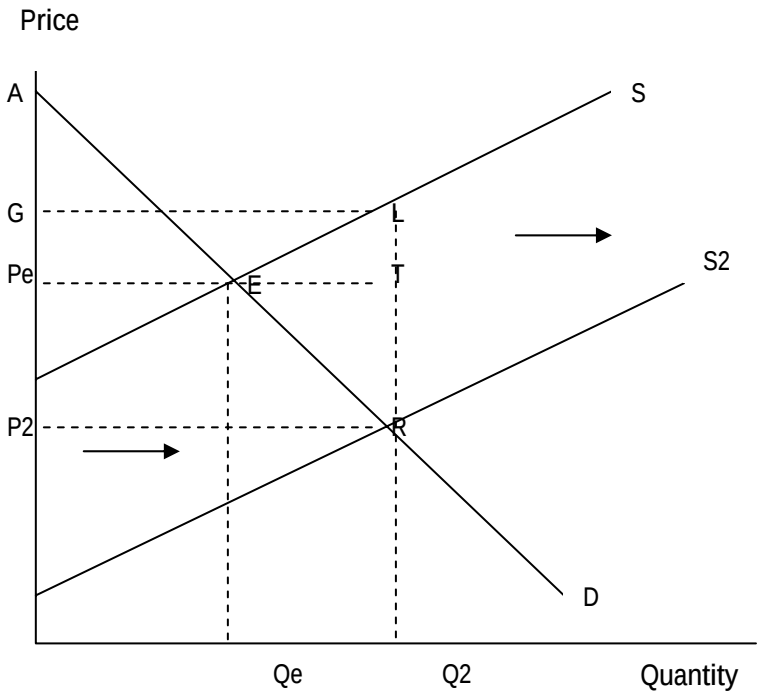
| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | • Explicit reference to Figure 1 to show price increase of beef e.g. from 125 cents to 170 cents or a 45 cents rise **or** from 50 cents to 100 cents (Accept approximate figures here). These figures may be stated on the diagram. (**1 mark**)<br><br>• Increase in price of beef caused by:<br>➢ Rise in price of cattle feed (**1 mark**)<br>➢ Drought in Australia and New Zealand (**1 mark**)<br><br>**Note:** award for development of either of these points e.g. an increase in production costs. (**1 mark**)<br><br>• Diagram (up to 3 marks)<br><br>  <br><br><br>➢ Original demand and supply diagram (must include equilibrium price) (**1 mark**)<br>➢ A decrease in supply curve (accept a double inward shift of the supply curve) (**1 mark**)<br>➢ The original and new equilibrium price (**1 mark**)<br><br>**NB: Award a maximum of 4 marks if no diagram.**<br><br>**NB: Award a maximum of 5 marks if incorrect diagram depicting a shift in demand as well as supply.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **KAA = 4 marks**<br>• Definition or formula for cross elasticity of demand (XED): (The responsiveness in demand for good B due to a change in price of good A) or (%Δ QD good B ÷ %Δ P good A). (**1 mark**).<br>• Reference to the goods being substitutes or in competitive demand (**1 mark**).<br>• Reference to the goods having a positive cross elasticity of demand (**1 mark**).<br>• Application: e.g. the rise in price of beef is likely to cause an increase in demand for chicken or fish (**1 mark**).<br>• Numerical example of substitutes (**1 mark**).<br>• Correctly labelled diagram depicting price of beef / demand for chicken or fish. This may be shown in two separate diagrams (**1 mark**).<br>  <br><br>**Evaluation (2 marks or 1+1 marks)**<br>➢ Discussion of how close beef and chicken & fish are as substitutes / beef is a red meat whereas chicken is a white meat / people may eat fish but not beef / weak substitutes.<br>➢ Figure 1 shows stable chicken prices, suggesting no change in demand – so evaluative use of the data.<br>➢ Once the sauces put on then not much difference in a beef burger and chicken burger at fast food restaurants.<br>➢ Big distinction at high quality restaurants.<br>➢ Other factors may affect the relationship e.g. health warnings on salmonella in chicken.<br>➢ The demand for beef may be price inelastic so weak substitutes. | **(6)** |

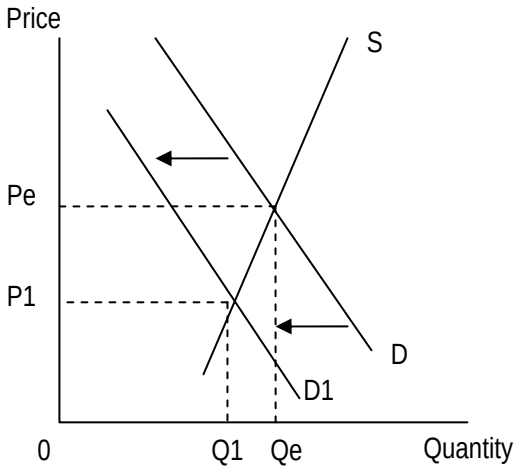
| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA = 6 marks**<br>• Definition or formula for income elasticity of demand (YED): (The responsiveness or sensitivity of demand for a good due to a change in income) or (%Δ QD ÷ %Δ Y). (**1 mark**).<br><br>• Reference to Extract 1 which suggests beef burgers might be inferior goods (e.g.) fast food restaurants have benefited from recession as consumers switch to burger places (**2 marks**).<br>**NB: this point could be considered as KAA or evaluation.**<br><br>• Explanation of inferior good (as income rises the demand for a good falls) (**1 mark**).<br><br>• Inferior goods have a negative YED (**1 mark**).<br><br>• Explanation of normal good (as income rises so too will demand for a good) (**1 mark**).<br><br>• Normal goods have a positive YED (**1 mark**).<br><br>• Numerical example of either normal or inferior good (**1 mark**).<br><br>• Correctly labelled diagram depicting a normal good **or** inferior good (**1 mark**).<br><br>**Evaluation (2 marks)**<br>➢ Discussion of different types of beef such as high quality beef – some parts are very expensive and so are normal goods; some beef burgers may be considered as inferior goods. Figure 1 refers to 'high quality beef' and 'standard quality beef'.<br><br>➢ Discussion of differences in income elasticity of demand e.g. due to different income levels of consumers / consumers in developed and developing countries.<br><br>➢ For some consumers this is irrelevant as they do not eat beef e.g. vegetarians. | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)*** | **KAA = 8 marks**<br>• Definition of external cost: (cost external to an exchange / negative third party effect / spillover from production or consumption / cost which the price mechanism fails to take into account / difference between private costs and social costs) (**1+1 marks**).<br><br>• Examples of external costs associated with destroying rainforest to convert to cattle ranching and crop growing. e.g. increase in carbon dioxide emissions or global warming / effects in terms of crop failure / rising sea levels / wildlife destruction / damage to tourism (**up to 3 marks for a well developed point or 1+1+1 marks**).<br><br>• Definition of market failure: (the price mechanism fails to allocate resources efficiently / price mechanism leads to a misallocation of resources) (**1 mark**).<br><br>• Market failure is due to over-production and under-pricing / social costs exceeding social benefits at output Qe, **or,** market failure occurs since marginal social costs exceed marginal social benefits at output Qe (**1+1 marks**).<br><br>Diagram (up to 4 marks)<br>  <br><br>➢ MPC and MB curves (**1 mark**).<br>➢ MSC curve (accept a parallel MSC line here) (**1 mark**)<br>➢ Social optimum and market equilibrium positions labelled or explained in text (**1 mark**).<br>➢ Welfare loss area shaded in (black triangle above) and named (**1 mark**). | **(14)** |

| | | |
|---|---|---|
| | **NB: Award maximum of 6 KAA marks if no relevant diagram offered.**<br><br>**Evaluation: (2+2+2 or 3+3 marks)**<br>➢ Magnitude of destruction: – seems huge as extract 2 refers to 7,330 square miles of forest lost each year / 400 million tonnes of carbon dioxide into the atmosphere.<br><br>➢ Discussion of the difficulty in quantifying and attaching a monetary value on external costs.<br><br>➢ Time period: in the short run there may be little impact but more serious in the long run / destruction has been going on for many years and problem seems to be accelerating / a tipping point may come in terms of irreversible climate change.<br><br>➢ Discussion of possible benefits e.g. employment and income for local communities / increase availability of food / reduction in beef and other commodity prices / reduction in poverty and hunger.<br><br>➢ Government might be forced to take action, for example, subsidies to create sustainable development or an increase in policing to protect rainforest / but problems with these such as opportunity cost of the subsidies and difficulty in protecting such a vast area of land. | |

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **KAA = 8 marks**<br><br>• Definition or understanding of sustainable development (development which enables future generations to access resources for further development) (**1 mark**)<br><br>• Definition of government subsidy (grant to increase production or reduce price) (**1 mark**)<br><br>• A subsidy has the effect of reducing production costs (**1 mark**)<br><br>Diagram of subsidy (**up to 3 marks**) **or** written explanation that supply increases resulting in a an increase in production and this lowers price (**1+1 marks**).<br><br>  <br><br><br>➢ Increase in supply curve to S2 (**1 mark**)<br>➢ Original and new equilibrium price (**1 mark**)<br>➢ Subsidy area identified (GLRP2) (**1 mark**)<br><br>• Benefit to local communities e.g. increase in employment and income / replanting forest and tourism is labour intensive / positive multiplier effects (**1+1 marks**).<br><br>• Benefits to local communities e.g. maintain way of life / | **(14)** |

| | | |
|---|---|---|
| | secure lifestyle or forest for future generations (**1+1 marks**).<br><br>• Benefit to environment: reduction in deforestation and thus carbon emissions / so less external costs. (**1+1 marks**).<br><br>• Increase in consumer surplus and / or producer surplus (**1 mark**)<br><br>• Accept macro arguments e.g. improve Balance of Payments on current account due to attracting more overseas visitors / increase foreign investment (**1+1 marks**).<br><br>**Evaluation (2+2+2 or 3+3 or 2+2+1+1 marks)**<br>➢ Extract 2 mentions that the amount of funds available for sustainable development projects has yet to be announced by the government – it may be a very small amount and so little beneficial impact for protecting rainforest and so reducing global warming.<br><br>➢ Brazilian government might be able to obtain some funding of the project from overseas e.g. European Commission / World Bank, / International Monetary Fund. Protecting the rainforest could become part of the carbon trading scheme.<br><br>➢ Opportunity cost to government / higher taxes or borrowing or less spending elsewhere / affordability of scheme in time of slow global economic recovery.<br><br>➢ Discussion of the difficulty in quantifying and attaching a monetary value on the externality.<br><br>➢ There may be significant corruption which undermines the effectiveness of government subsidies to support sustainable development.<br><br>➢ Time period issue: the subsidies may be required for a very long time – raises issue of affordability.<br><br>➢ There may be a decrease in supply of beef and other crops, leading to higher prices / job losses and lower income / poverty and hunger.<br><br>➢ Government subsidies may lead to inefficiency and create a dependency culture.<br><br>➢ Discussion of price elasticity of demand of the sustainable development projects. | |

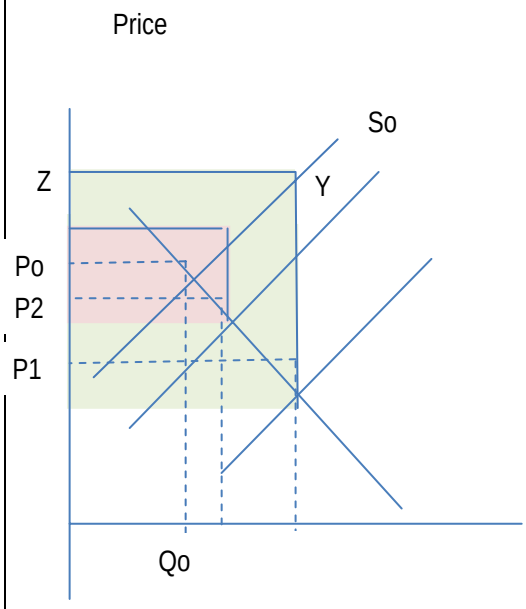
| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | Explicit reference to Extract 1 to show September price decrease of housing e.g. £6000 or 3.6% / accept a fall of 10% in 2011.<br>Note the figures may be shown on the diagram (**1 mark**)<br><br>• **Identification** of causes of decrease in house prices:<br>High and rising unemployment / limited wage growth / deteriorating consumer confidence / difficulties in getting a mortgage (award any two points **1+1 marks**)<br><br>• Development of either or both points (**up to 2 marks**)<br><br>Diagram (**up to 3 marks**)<br>  <br><br><br>➢ Original demand and supply diagram (**1 mark**)<br>➢ A decrease in demand curve to D1 (accept a double inward shift of the demand curve) (**1 mark**)<br>➢ The original and new equilibrium price (**1 mark**)<br><br>**NB: Award a maximum of 4 marks if no diagram.**<br><br>**NB: Award a maximum of 5 marks if incorrect diagram depicting a shift in supply as well as demand.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA (6 marks)**<br>Extract 1 and / or Figure 2 data reference (**1+1 marks**) for example:<br>➢ Share prices have fallen in 6 of the 7 companies.<br>➢ Barratt developments and Taylor Wimpey have recorded biggest fall in share price at 32.9%<br>➢ House building companies have lost more than £1 billion in share value.<br>➢ Builders' profits and employment has suffered.<br><br>➢ Development of point(s) for example, lower supply of new houses / lower employment as labour is a derived demand / less funds available for investment / possible losses and exit from industry / difficulty raising finance / lower dividends or no dividends available for shareholders / merger activity.<br>(**2+2 or 3+1 or 1+1+1+1 marks**)<br><br>**Evaluation (2 marks)**<br>➢ Discussion of magnitude of the fall in house prices (3.6% in just one month) and so major impact on house builders.<br><br>➢ Discussion of possible reasons for marked difference in performance of house builder shares – e.g. comparing Berkeley with Taylor Wimpey.<br><br>➢ Companies might use previous profits to continue in business despite making current losses.<br><br>➢ Firms may cut production costs such as wages / increase efficiency.<br><br>➢ Time period – house prices expected to continue to fall in 2011 and so damaging the revenue and profits of the house builders. | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **NB: Candidates may develop either point of view on elasticity of supply; be prepared to accept one view as KAA (4 marks) and the other view as evaluation (2 marks).**<br><br>**KAA (up to 4 marks)**<br>Definition or formula of price elasticity of supply (**1 mark**).<br><br>Supply of housing tends to be inelastic in the short run but more elastic in the long run (this may be shown by a diagram – but do not double award) (**1 mark**)<br><br>**Supply may be inelastic since:**<br>➢ some inputs fixed in the short run / examples such as building development land (**1+1 marks**).<br><br>➢ limited availability of land to build on / time taken to gain planning permission. (**1+1 marks**)<br><br>➢ different stages in building a house (**1 mark**).<br><br>➢ shortages of skilled labour / examples include plumbers and bricklayers (**1+1 marks**).<br><br>**Evaluation (2 marks)**<br><br>**Supply may be more elastic in the long run since:**<br>➢ Extract 1 refers to the sharp fall in supply of new housing due to the fall in house prices / this suggests supply is price elastic in relation to a price fall.<br><br>➢ It might be easy for building firms to lay off workers as many are self-employed / on short term contracts.<br><br>➢ Spare capacity exists in the building industry / unemployed workers so supply is price elastic.<br><br>➢ Discussion of the number of building firms in the industry / ease of entry and exit.<br><br>➢ More land allocated to build on / training of skilled labour for building industry.<br><br>➢ Changes in planning regulations / make it easier to build housing. | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **NB: If candidates refer to both points view then accept one side as KAA and the other as evaluation.**<br><br>**Note KAA = 8 marks and Evaluation 6 marks**<br><br>**Falling house prices may not help first-time buyers to purchase property since (2+2+2+2 or 3+3+2 marks):**<br><br>• Higher cash deposit required / so need more time to save up the funds / the cash deposits involved are huge e.g. 40% of property value.<br><br>• Lenders have not passed on interest rate cuts to first-time buyers / so monthly repayments are high / interest rates set to increase in future as economy recovers.<br><br>• Rising unemployment / mean banks might be reluctant to offer mortgages to new borrowers / increased risk of default.<br><br>• High student debts / mean first-time buyers have less funds each month to pay for mortgage / student loans set to increase in the future.<br><br>• Low business confidence / so banks extremely cautious over mortgage lending / Extract 1 mentions mortgage approvals at their lowest for more than a decade.<br><br>• House prices predicted to fall by 10% in 2011 / so banks reluctant to offer mortgage on an asset falling in value.<br><br>• Extract 2 refers to 30% cut in government subsidies to new-build homes / these are typically the type of homes which first-time buyers might seek.<br><br>• The RIC indicates that there has been an increase in demand for rental property and rents / suggesting that people are forced to look to the rental property market / a substitute to private ownership.<br><br>• Problem of falling house prices mean that first-time buyers might delay purchase / concern over negative equity / existing house owners reluctant to sell.<br><br>• Less house put up for sale as vendors reluctant to sell when house prices are falling. | **(14)** |

| | | |
|---|---|---|
| | **Falling house prices may help first-time buyers to purchase property since: (up to 2+2+2 or 3+3 marks)**<br><br>• As house prices fall it becomes more affordable to get on property ladder / plus some development.<br><br>• A lower mortgage is required as house prices fall / cash deposit will automatically rise as percentage of house price.<br><br>• House prices expected to fall by 10% in 2011 (some £16,000) / if the trend continues then property becomes more affordable in long run.<br><br>• More likely to help those first-time buyers who are able to receive parental financial support / through payment of cash deposit or guarantee of loan.<br><br>• Figure 3 shows that monthly mortgage payments as a percentage of average take home pay for first time buyers has decreased from around 50% in 2007 to 35% in 2010.<br><br>• Interest rates likely to remain low in foreseeable future / so more affordable monthly repayments.<br><br>• First-time buyers more likely to look for flats or studio apartments which are more affordable than houses.<br><br>• Recent government initiatives to help first-time buyers.<br><br>• Discussion on the price elasticity of demand for housing among first-time buyers / if inelastic then little impact. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **KAA (Up to 8 marks)**<br><br>• Definition of subsidy (government grant to increase production / lower price) (**1 mark**).<br><br>• Reduction in the subsidy has the effect of increasing production costs (**1 mark**).<br><br>Diagram **(up to 4 marks)**<br><br>➢ Original demand and supply curve before any subsidy (So) (**1 mark**)<br>➢ The supply curve with the full subsidy (S1) (**1 mark**)<br>➢ The new supply curve after a cut in the subsidy (S2) (**1 mark**)<br>➢ Any correct area of subsidy identified or shaded in e.g. (XYZP1) (**1 mark**)<br><br>  <br><br><br>**NB: If no diagram provided then award a maximum of 6 KAA marks from the 8 available.**<br><br>• It becomes harder for first-time buyers to get on property ladder / with development (**1+1 marks**).<br><br>• The supply or quantity of affordable housing will be reduced / with development e.g. impact on low income families or inequality (**1+1 marks**).<br><br>• It may reduce the consumer surplus or producer surplus / with development (**1+1 marks**).<br><br>• Government finances may not improve if it is forced to | **(14)** |

| | | |
|---|---|---|
| | spend more on housing benefits / Job Seeker's Allowance as builders become unemployed.<br><br>• It may lead to a decrease in economic activity in the house building sector / such as falling employment or wages or profits and revenue. (**1+1 marks**).<br><br>• It may increase demand for substitute accommodation / such as council or private rented properties (**1+1 marks**).<br><br>• It may reduce the geographical mobility of labour / especially for areas where property prices are very high (**1+1 marks**).<br><br>**Evaluation (2+2+2 or 3+3 marks)**<br>➢ Discussion of magnitude of the cut – 30% reduction (but 70% of funding for affordable new builds still exist. It also depends upon the size of government subsidy here in relation to overall new build housing market.<br><br>➢ Discussion of the time period in which the spending cut occurs – it may be prolonged over several years given the state of government finances.<br><br>➢ Private sector firms or charities may be able to fill the gap left by government funding cuts to new build housing.<br><br>➢ Some homeowners may benefit due to possibility of house prices rising / wealth effect.<br><br>➢ Opportunity cost: it may improve government finances / reduce budget deficit or national debt / provides funds for other uses e.g. healthcare.<br><br>➢ Substitute accommodation e.g. council housing is simply not available in the quantities needed. Private rental housing is too expensive.<br><br>➢ Discussion of cross elasticity of demand between private new builds and rental property.<br><br>➢ Discussion on economic efficiency among building firms as they become less reliant upon government subsidies. | |

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Centre Number | Candidate Number

# Edexcel GCE

# Economics

## Advanced Subsidiary
## Unit 1: Markets: How they work and why they fail

Friday 20 May 2011 – Morning
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** **Statement 1:** In the March 2010 Budget the Chancellor of the Exchequer announced a tax increase on a packet of cigarettes of 2 per cent above the rate of inflation for each year between 2011 and 2014.

**Statement 2:** Tax now forms more than 75% of the price of a packet of cigarettes.

Which of the following best describes the two statements above?

**(1)**

**A** Statement 1 is positive and statement 2 is normative

**B** Both statements are positive

**C** Statement 1 is normative and statement 2 is positive

**D** Both statements are normative.

Answer ☐

Explanation

**(3)**

**(Total for Question 1 = 4 marks)**



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**2** One function of the price mechanism is to:

**(1)**

**A** Encourage businesses to exit a market as price of the goods produced increases

**B** Eliminate a surplus of a good by allowing the market price to fall

**C** Encourage government intervention to set production targets

**D** Maintain price stability.

Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3** Estimates of UK income and price elasticity of demand for milk and cheese

| Dairy product | Income elasticity of demand | Price elasticity of demand |
|---|---|---|
| Milk | 0.05 | -0.36 |
| Cheese | 0.23 | -0.35 |

Source: https://statistics.defra.gov.uk/esg/publications/nfs/2000/Section6.pdf

From the information in the table it can be deduced that milk and cheese:

**(1)**

**A** Are inferior goods with a price inelastic demand

**B** Have a positive cross elasticity of demand

**C** Are inferior goods with a price elastic demand

**D** Are normal goods with a price inelastic demand.

Answer ☐

Explanation

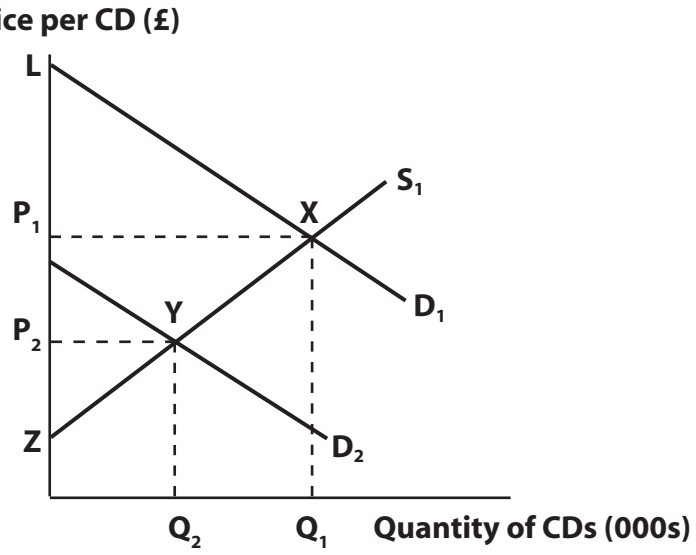
**(3)**

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



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**4** Music CD market




The diagram shows the market for music CDs. A decrease in demand from $D_1$ to $D_2$ will cause a loss of producer surplus equal to the area:

**(1)**

**A** $P_1XL$

**B** $P_1XZ$

**C** $P_2YZ$

**D** $P_1XYP_2$.

Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**



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**5** One disadvantage a sandwich making firm may experience from the division of labour on its production line is an increase in:

**(1)**

**A** The range of workers' skills

**B** Training costs per worker

**C** Staff turnover

**D** Productivity.

Answer ☐

Explanation

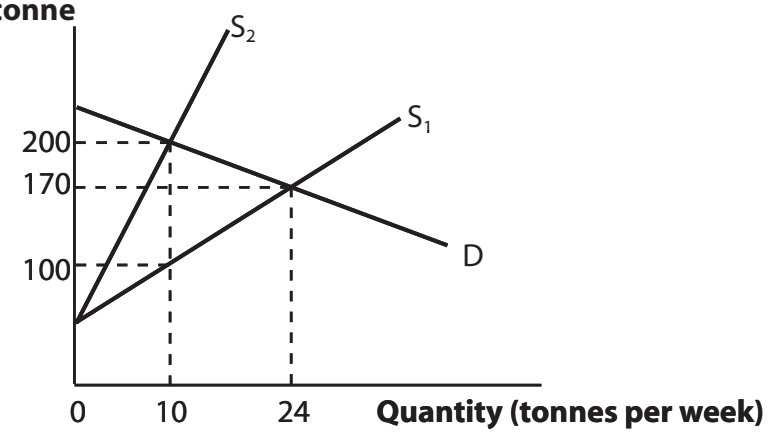
**(3)**

**(Total for Question 5 = 4 marks)**



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**6** **Price (£) per tonne**




The diagram shows how a tax imposed on a product causes its supply curve to move from $S_1$ to $S_2$.

Which of the following best describes the market situation shown?

**(1)**

**A** It is an *ad valorem* tax and its incidence falls mainly on producers

**B** It is a specific tax and its incidence falls mainly on consumers

**C** It is an *ad valorem* tax and its incidence mainly falls on consumers

**D** It is a specific tax and its incidence falls mainly on producers.

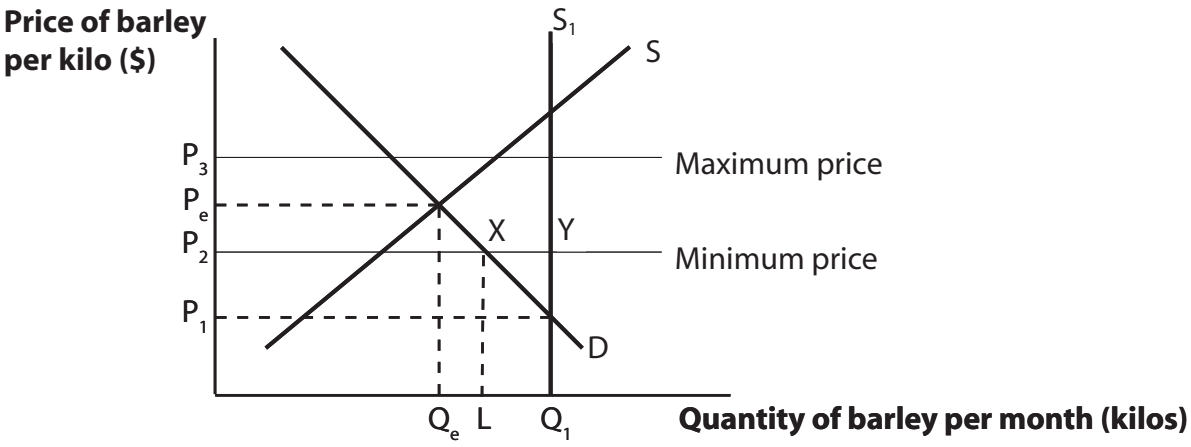
Answer ☐

Explanation

**(3)**

**Total for Question 6 = 4 marks)**

**7** The market for barley




The diagram shows the operation of a buffer stock scheme in the barley market where a government agency intervenes to ensure the price remains between $P_2$ and $P_3$. A harvest of $S_1$ for a given year will cause:

**(1)**

**A** An excess demand for barley

**B** The government agency to buy barley and add to its stockpile

**C** Price to increase to $P_3$

**D** The government agency to sell barley from its stockpile.

Answer ☐

Explanation

**(3)**

**(Total for Question 7 = 4 marks)**



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**8** Which of the following is most likely to increase the **occupational** mobility of labour?

**(1)**

**A** An increase in the provision of public goods

**B** An increase in the Stamp duty on buying a property

**C** Training programmes for the unemployed

**D** Relocation subsidies to workers.

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A: 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 26.**

**You should spend 55 minutes on this section.**

## 9 The National Health Service

### Extract 1 NHS funding

The National Health Service (NHS) is the largest employer in Europe with more than 1.3 million staff. It treats over 1 million patients every 36 hours. Between 1997 and 2008 government spending on the NHS increased in real terms from £58.5 billion to £115 billion and accounted for 8.3 per cent of GDP. Spending is planned to increase further to £127 billion by 2011. This reflects growing demand and cost pressures on the health care budget, following an ageing population, advances in medical care and rising staff costs. Staff wages now account for 40 per cent of the NHS budget.

However, the huge increases in NHS funding are set to come to an end after 2011 as government spending must be reduced following the impact of the recession. The government has identified ways to increase NHS efficiency by driving down the prices for goods and services it buys, reducing staff sickness, cutting its investment in computer software, improving the use of its buildings and lowering its energy consumption.

Some progress has already been made as the average length of inpatient stay in hospital has fallen from 8.8 days to 6.3 days between 1997 and 2008.

Source: adapted from: www.kingsFund.org.uk

### Extract 2 The growth in NHS management

The number of NHS managers in England rose by nearly 12 per cent in 2009 – more than five times the rate at which qualified nurses were recruited, leading to concerns that cash is being diverted from direct patient care.

Dr Keith Brent, Chairman of the British Medical Association's Consultants Committee, said that "many of the additional managerial staff have been employed to help the NHS deal with the increasing bureaucracy and fragmentation that have accompanied greater competition, with little or no evidence of benefit to patients."

Source: adapted from 'NHS management increasing five times faster than number of nurses', Randeep Ramesh, *The Guardian*, 25th March 2010.



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**Figure 1 NHS hospital beds 1997–2008**

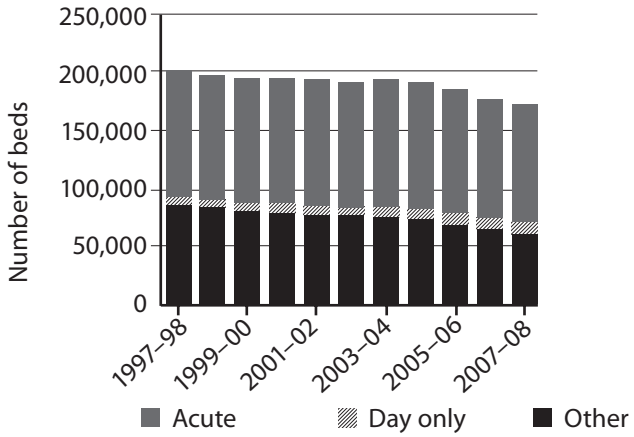
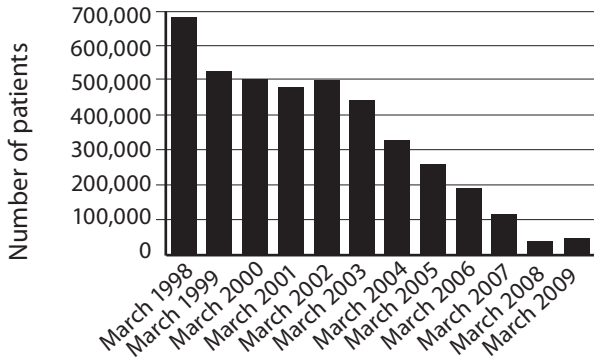
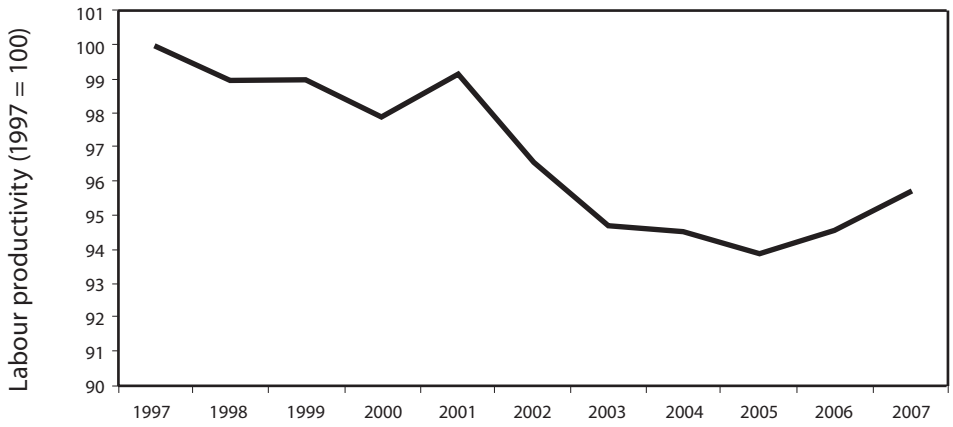



**Figure 2 NHS: number of patients waiting for over 13 weeks for inpatient admission 1998–2009**




Source: Figures 1 and 2: www.statistics.gov.uk/hub/health-social-care/health-care-system/hospitals-and-health-care-facilities/index.html

**Figure 3 Productivity in the NHS 1997–2007**




Source: www.statistics.gov.uk/articles/nojournal/TotalPublicServiceFinalv5.pdf

(a) Using examples, explain the significance of opportunity cost to the increase in government spending on the NHS referred to in Extract 1.

**(4)**

(b) Explain **two** possible causes of the 'growing demand and cost pressures on the health care budget' *(Extract 1 , lines 5–6 )*.

**(6)**

(c) Examine the possible impact on the production possibility frontier for the economy of the increase in government spending on the NHS referred to in Extract 1. Illustrate your answer with an appropriate diagram.

**(10)**

*(d) Apart from a shift in the production possibility frontier, assess the private and external benefits arising from the consumption of health care. Illustrate your answer with an appropriate diagram.

**(14)**

*(e) To what extent does the information provided suggest evidence of government failure?

**(14)**



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(a) Using examples, explain the significance of opportunity cost to the increase in government spending on the NHS referred to in Extract 1.

**(4)**

(b) Explain **two** possible causes of the 'growing demand and cost pressures on the health care budget' *(Extract 1, lines 5–6)*.

**(6)**



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**Question 9 continues on the next page.**

(c) Examine the possible impact on the production possibility frontier for the economy of the increase in government spending on the NHS referred to in Extract 1. Illustrate your answer with an appropriate diagram.

**(10)**



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*(d) Apart from a shift in the production possibility frontier, assess the private and external benefits arising from the consumption of health care. Illustrate your answer with an appropriate diagram.

**(14)**



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**Question 9 continues on the next page.**

*(e) To what extent does the information provided suggest evidence of government failure?

**(14)**



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**(Total for Question 9 = 48 marks)**



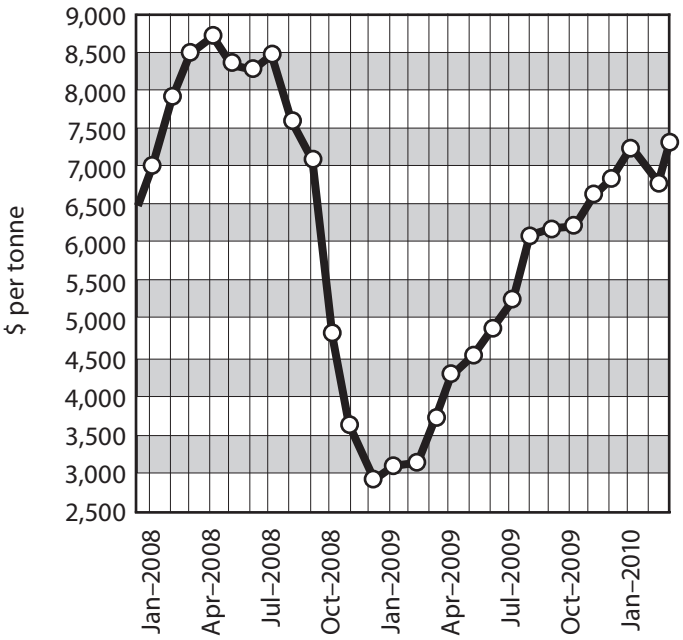
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**If you answer question 10 put a cross in this box ☒ .**

## 10 The market for copper

**Figure 1 Copper prices, January 2008–March 2010**




Source: www.lme.com/copper_charts.asp

### Extract 1 Unstable copper prices

The price of copper has been highly unstable over the past year. It collapsed from a record level of $8,940 in April 2008 to $2,871 per tonne by December of that year. The steep drop in price followed lower global economic growth, especially from China. The decrease in demand was most noticeable in the motor vehicle and construction sectors which use vast amounts of the metal. Its impact was to reduce profits and share prices of major copper mining companies such as Chile's Antofagasta.

However, by March 2010, copper prices recovered to almost $7,500 per tonne. This followed disruption to supply in several major copper mines in Chile due to a severe earthquake and a series of strikes by miners, demanding a 7.5% pay rise. The global economy has also recovered from the recession and China is expected to achieve an economic growth rate of 9.5% in 2010. The dramatic fluctuations in copper prices have led some analysts to propose a guaranteed minimum price scheme.

Source: Adapted from 'Miners dragged lower as price of copper tumbles', Peter Stiff, *The Times*, 19th December 2009.



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**Extract 2 Proposals for a major copper mine in Bristol Bay, Alaska**

Rising copper prices has made it profitable to open new mines. The mining companies Northern Dynasty and Anglo-American Corporation have jointly proposed creating North America's largest open pit mine at Pebble Mill in Bristol Bay, Alaska. It would be 3.2 kilometres long and 610 metres deep. It would also involve building the largest dam in the world to hold back the vast amount of toxic waste created in the mining process. The dam, made of earth rather than concrete, would be 220 metres high and 7 kilometres long. It takes a thousand tonnes of copper ore to produce just one tonne of copper metal.

However, Bristol Bay is home to the world's most productive wild salmon fishery and there is concern that pollution from the mines would destroy the $400 million a year fishing and canning industries, as well as having a negative impact on tourism. The area already has a history of earthquakes and severe flooding which increase the chances of pollution from the mining project. The local native communities strongly oppose the scheme and the planning enquiry is expected to take several years.

Source: Adapted from Pebble mine – Bristol Bay Alaska
www.renewableresourcescoalition.org/project_outline.htm
www.ourbristolbay.com/commerical-fisheries.html

(a) With reference to the first paragraph of Extract 1, explain the cause of the decrease in copper prices between April and December 2008. Illustrate your answer with a supply and demand diagram.

**(4)**

(b) With reference to Extract 1, explain whether you think copper is a normal or an inferior good.

**(6)**

(c) With reference to the information provided and your own knowledge, assess whether the supply of copper is likely to be price elastic or price inelastic.

**(10)**

*(d) Evaluate the likely economic effects of a guaranteed minimum price scheme to reduce fluctuations in the price of copper. Illustrate your answer with a supply and demand diagram.

**(14)**

*(e) Using the concept of external costs, assess the possible economic effects of building the Pebble Mill copper mine in Alaska, referred to in Extract 2. Use an appropriate diagram in your answer.

**(14)**



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(a) With reference to the first paragraph of Extract 1, explain the cause of the decrease in copper prices between April and December 2008. Illustrate your answer with a supply and demand diagram.

**(4)**



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(b) With reference to Extract 1, explain whether you think copper is a normal or an inferior good.

**(6)**



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(c) With reference to the information provided and your own knowledge, assess whether the supply of copper is likely to be price elastic or price inelastic.

**(10)**



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*(d) Evaluate the likely economic effects of a guaranteed minimum price scheme to reduce fluctuations in the price of copper. Illustrate your answer with a supply and demand diagram.

**(14)**



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**Question 10 continues on the next page.**

*(e) Using the concept of external costs, assess the possible economic effects of building the Pebble Mill copper mine in Alaska, referred to in Extract 2. Use an appropriate diagram in your answer.

**(14)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B: 48 MARKS**
**TOTAL FOR PAPER: 80 MARKS**



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# Mark Scheme (Results)

## June 2011

## GCE Economics
## (6EC01) Paper 01


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You can also telephone 0844 372 2187 to speak to a member of our subject advisor team.

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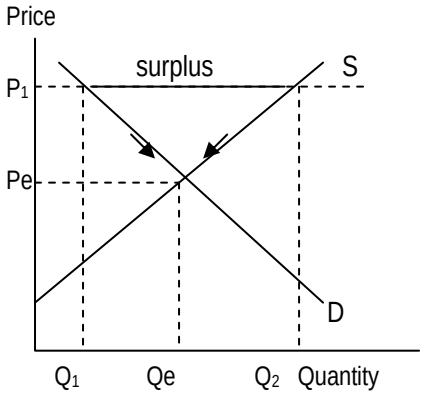
**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | **Answer B**<br><br>• Definition and development of a positive statement: (one that is based on fact / it can be tested as true or false / a scientific approach to economics / objective approach) (**1 mark**).<br><br>• Definition of a normative statement (one that is based on value judgement / it cannot be tested as true or false / a non-scientific approach to economics / subjective approach) (**1 mark**).<br><br>• Application (explicit data reference): statement 1 is positive since it can be tested to see whether tax on cigarettes will rise by 2% above inflation. (**1 mark**)<br><br>• Application (explicit data reference): statement 2 is positive since it can be tested to see whether tax forms more than 75% of the price of cigarettes. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | **Answer B**<br><br>• Definition or explanation of price mechanism (interaction of demand and supply to allocate resources / use of price changes to allocate resources / how changes in demand or supply will alter price to a new equilibrium / or development of the functions of the price mechanism) (**1 mark**).<br><br>• Explanation of a surplus (the quantity supply exceeds the quantity demand at the current price / excess supply of a good) (**1 mark**).<br><br>• Application: as price falls demand extends (accept increase) and supply contracts (accept decrease) until the market equilibrium is reached (**1 mark**).<br><br>• Also award for diagrammatic analysis (identify the surplus / show movement towards price equilibrium) (**1+1 marks)** | |


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| | | |
|---|---|---|
| |  <br>**Rejection marks**<br>➢ Option 'A' is incorrect since an increase in price will provide a profit incentive to enter the industry / raise supply.<br>➢ Option 'C' is incorrect since government intervention is associated with correcting market failure or a planned economy.<br>➢ Option 'D' is incorrect since maintaining price stability means the price mechanism cannot function to indicate changes in consumer demand or producer supply. | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | **Answer D**<br>• Definition of price elasticity of demand or formula (the responsiveness of demand for a good due to a change in its price or %ΔD ÷ %ΔP) (**1 mark**).<br>• Definition of income elasticity of demand or formula (the responsiveness of demand for a good due to a change in income or %ΔD ÷ %ΔY) (**1 mark**)<br>• Milk and cheese are normal goods since they have a positive income elasticity of demand (**1 mark**).<br>• Milk and cheese are price inelastic in demand since they have values below -1.0 / explanation of inelastic demand in terms of the percentage change in demand being less than the percentage change in price. (**1 mark)**<br>**Rejection marks**<br>➢ Option 'A' or 'C' is incorrect since milk and cheese have a positive income elasticity of demand / do not have a negative income elasticity of demand. (**1 mark**).<br>➢ Option B is incorrect since milk and cheese are not substitutes / there is no data on actual demand levels for either good. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **4** | **Answer D**<br>• Definition of producer surplus (the difference between the price firms are willing to sell a good for and the actual market price or the area above the supply curve and below the price line) (**1 mark**)<br><br>• Original producer surplus is $P_1XZ$ (**1 mark**)<br>• New producer surplus is $P_2YZ$ (**1 mark**)<br><br>(the original and new producer surplus may be annotated on the diagram)<br><br>• P1XL being consumer surplus (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A is incorrect since this is consumer surplus. (**1 mark**)<br><br>➢ Option B is incorrect since this is the original producer surplus. (**1 mark**)<br><br>➢ Option C is incorrect since this is the new level of producer surplus. (**1 mark**)<br><br>NB: Do not double award marks in this question. | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | **Answer C**<br>• Definition / explanation of division of labour (production broken down into different tasks and labour allocated to each task). (**1 mark**)<br><br>• Application to sandwich production line e.g. cutting bread, spreading butter and packing sandwiches. (**1 mark**)<br><br>• Identification of boredom or monotony of a job (**1 mark**)<br><br>• Increase in recruitment costs / 'total' training costs since increased staff turnover (**1 mark**)<br><br>**Rejection marks**<br>➢ Option A is incorrect since division of labour reduces range of workers' skills to specific tasks. (**1 mark**)<br>➢ Option B is incorrect since training costs per worker falls as just doing specific tasks (**1 mark**)<br>➢ Option D is incorrect as higher output per head is an advantage of division of labour / means more profits could be made for producer. (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | **Answer A**<br><br>• Definition of an ad valorem tax (tax set as a percentage of the price of a good). (**1 mark**)<br><br>• It is an ad valorem tax since there is a pivotal shift in the supply curve. (**1 mark**)<br><br>• Producers pay most of the tax since demand is price elastic. (**1 mark**)<br><br>• Producers pay £70 per unit or 10×£70 = £700 (**1 mark**)<br><br>• Consumers pay £30 per unit or 10×£30 = £300 (**1 mark**)<br><br>➢ (These may be shown by annotation of diagram of producer and consumer tax but do not double award). (**1+1 marks**)<br><br>**Rejection marks**<br>➢ Option B / D incorrect since a specific tax would cause a parallel shift in the supply curve (**1 mark**)<br><br>➢ Option C incorrect as tax incidence falls mainly on producers as shown by diagram (need annotation here) / or use of figures (**1 mark**) | **(4)** |

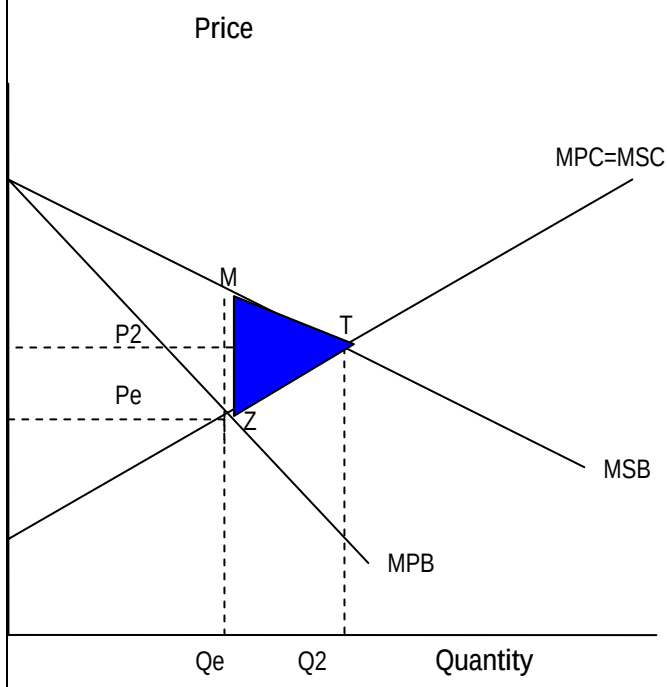
| Question Number | Answer | Mark |
|---|---|---|
| **7** | **Answer B**<br><br>• Definition / explanation of a buffer stock scheme (agency intervention to buy or sell a commodity to reduce price fluctuations) (**1 mark**).<br><br>• Without government intervention the market price would fall to 0P1 / or a surplus would cause price to fall below P2. (**1 mark**)<br><br>• Government agency purchases $L_1Q_1$ or XY of barley (**1 mark**)<br><br>• Total government agency spending is $LQ_1YX$ (this may be shown by annotation of diagram and stated as such) (**1 mark**)<br><br>**Rejection marks**<br>➢ Option 'A' is incorrect since there would be an excess supply XY at minimum price $P_2$ (**1 mark**).<br><br>➢ Option 'C' is incorrect since in a free market the price would fall to $P_1$ or to $P_2$ with agency intervention. (**1 mark**).<br><br>➢ Option 'D' is incorrect since the agency would only sell from its stockpile if there was a poor harvest. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **Answer C**<br><br>• Definition / understanding of occupational mobility of labour (the ability of labour to change occupations to take available work (accept to change from one job to another job). Also accept definition / understanding of immobility of labour. (**1 mark**)<br><br>• Some unemployed may lack relevant skills / qualifications / work experience to take available work / identification of structural unemployment. (**1 mark**)<br><br>• Application to real world example e.g. an unemployed motor vehicle worker may lack skills to become a web designer. (**1 mark**)<br><br>• Training programmes help increase the skills / qualifications / work experience for the unemployed to gain work in different occupations (**1 mark**).<br><br>**Rejection marks**<br>➢ Option A is incorrect as once public goods are provided it is free for all to use / examples of public goods such as street lighting and how this has nothing to do with increasing occupational mobility of labour. (**1 mark**).<br><br>➢ Option B incorrect since an increase in tax on buying property will impact / reduce the geographical mobility of labour. (**1 mark**)<br><br>➢ Option D incorrect since relocation subsidies will impact / increase the geographical mobility of labour. (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **KAA = 4 marks**<br>• Definition of opportunity cost (value of next best alternative foregone) (**1 mark**)<br>• Reference to the increase in spending on NHS (£58.5 billion to £115 billion or £127 billion over the period or 96/97 per cent increase) (**1 mark**).<br>• Examples of opportunity cost: (**1+1 marks or 2 marks**).<br>➢ Lower taxes / which could increase incentive to work.<br>➢ More funds available for education or other areas of government spending / so improving quality of education.<br>➢ Less government borrowing / so placing less debt on to future generations or paying lower debt interest.<br>➢ Discussion of spending in different areas of the NHS. e.g. more funds for managers and less on patient care.<br>• Production possibility frontier diagram depicting opportunity cost by movement along the curve/relevant axes e.g. healthcare spending versus other areas of government spending (**1+1 marks**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **KAA = 6 marks**<br><br>Identification of **two** causes (**1+1 marks**) and their development (**2+2 marks or 3+1 marks**)<br><br>Extract 1 offers three causes:<br><br>➢ Ageing population: means more people living into retirement and so greater chance of requiring NHS services / such as nursing homes or treatment for cancer or Alzheimer's disease.<br>➢ Improved medical treatment: new treatments for illness cost a lot of money / such as better equipment (scanners) or drugs for HIV/AIDS.<br>➢ Increasing staff costs / now 40% of NHS budget / reflects the increase in employment in the organisation which is biggest employer in Europe.<br>➢ Increases in NHS funding coming to an end as government spending has to be reduced / general budget pressures of the government.<br><br>**Note: Accept other causes of increase demand such as rising population, greater public expectations of healthcare treatment, increase in costs of drugs, changing social habits such as obesity and alcohol consumption.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA 6 marks**<br>• Definition of production possibility frontier (the maximum output potential for an economy when all its resources are fully / efficiently employed) **(1 mark)**<br><br>• Diagram depicting an outward shift in the Production possibility frontier (**Up to 3 marks**)<br>➢ Original PPF (**1**)<br>➢ Outward shift of PPF or movement along PPF (**1**)<br>➢ Labelling of PPF (Some appropriate labelling of axes e.g capital versus consumer goods or private versus public sector; accept health care versus non health care) (**1**)<br><br>**NB: Cap diagram at 2 marks if the PPF is not shifted out.**<br><br>• The increase in healthcare provision will lead to a healthier / more productive workforce / especially as it is free at point of consumption so all can use / less absenteeism from work / longer working life /more advanced technology(**1+1+1 up to 3 marks**)<br><br>**NB: if no diagram offered award a maximum of 4 KAA marks.**<br><br>**Evaluation (2+2 marks or 3+1 marks)**<br><br>• Discussion of magnitude of the increase in government spending/data reference to healthcare as % of GDP.<br>• Discussion of staff wages accounting for 40% of NHS budget so perhaps not much impact on PPF.<br>• Discussion of spending on elderly patients or red tape which may not increase the PPF.<br>• Discussion on how much spending on capital such as new buildings and machinery.<br>• Figure 3 shows that productivity has fallen in the NHS so perhaps less impact on the PPF.<br>• Short run and long run implications. It may take a long time for health care spending to impact on PPF/also there are budget cuts from 2011.<br>• Discussion of whether government spending may have to fall elsewhere (opportunity cost) e.g. education and so PPF may not increase. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)*** | **KAA 8 marks available**<br>• Definition of private benefits (**1+1 marks**)<br>➢ Benefit internal to an exchange / first or second party effect / internal to the production or consumption of a good / benefit included within the price mechanism / social benefit minus external benefit / revenue received by producer / satisfaction received by consumer.<br><br>• Definition of external benefits **(1+1 marks)**<br>o Benefit external to an exchange / positive third party effect / spillover from production or consumption / benefit which the price mechanism fails to take into account / benefit outside of a transaction / social benefit minus private benefit.<br><br>Diagram (**Up to 4 marks**)<br>• MPB and MC curves (**1**)<br>• MSB curve (**1**)<br>• Identification of market equilibrium and social optimum output or price (could be mentioned in the text) (**1**)<br>NB: merely stating under-consumption is not sufficient.<br>• Triangle of welfare gain (accept welfare loss)(**1**)<br><br>**Note: accept a parallel outward shift of the MSB curve**<br><br>  <br><br><br>• Explanation of private benefits (**Up to 3 marks**): improved health to those directly treated / increased life expectancy / increased income from employment. Also accept benefits direct to the NHS such as employment, revenue and trading surpluses. | |

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| | • Explanation of external benefits (**Up to 3 marks**): healthier workforce for employers / so greater productivity / less absenteeism / more profits / increase in tax revenues / increase in inward investment / reduction in spread of contagious diseases.<br><br>**NB: Benefits must be explicitly identified as private or external benefits. Otherwise award no marks for this explanation.**<br><br>**NB: if no diagram then award a maximum of 6 marks for KAA**<br><br>**Evaluation: (2+2+2 marks or 3+3 marks)**<br><br>➢ Discussion of magnitude of private benefits: Extract 1 refers to more than 1 million people being treated every 36 hours. This must have a dramatic impact on the health of the population.<br><br>➢ Short-run and long run effects: since 1997 the costs of providing healthcare free at point of consumption has increased dramatically.<br><br>➢ Prioritise between private and external benefits.<br><br>➢ Discussion of whether the benefits outweigh the costs of funding the NHS. Inefficient use of resources.<br><br>➢ Difficult to quantify / attach a monetary value on external or private benefits / possibility of over-provision or under-provision of healthcare funds (asymmetric information).<br><br>➢ There may be significant costs associated with extra funding of healthcare (opportunity cost) / higher taxes / more government borrowing / less funds for other areas of expenditure.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br><br>• To present an argument and conclude on the basis of that argument.<br>• To Organize information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(14)** |

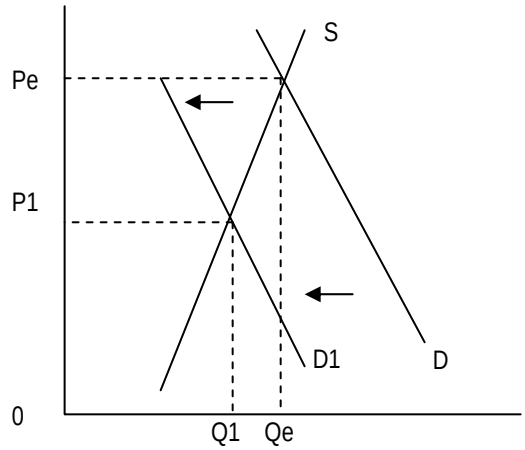
| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Definition of private and external benefits. |
| Level 2 | 5-8 | Application of private and external benefits to healthcare. |
| Level 3 | 9-10 | Application of private and external benefits to healthcare with diagram. |
| Level 4 | 11-12 | Up to one evaluation point. |
| Level 5 | 13-14 | Two or more evaluation points. |

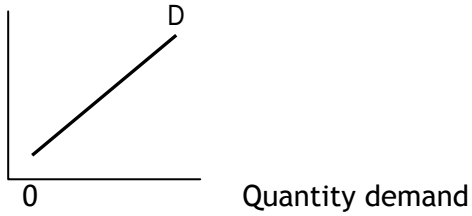
| Question Number | Answer | Mark |
|---|---|---|
| **9(e)*** | **KAA 8 marks (2+2+2+2 marks or 3+3+2 marks)**<br><br>**Candidates may argue either way. The development of one point of view constitutes KAA. The alternative view is considered as evaluation**<br><br>Definition / understanding of government failure (Government intervention leads to a net welfare loss / inefficient allocation of resources / intervenes to correct market failure but makes it worse) (**1 mark**).<br><br>**Government failure may have occurred since**:<br><br>➢ Extract 2 refers to the faster increase in NHS managerial staff over nurses and doctors / adding to bureaucracy / use of figures.<br><br>➢ Extract 2 refers to the introduction of competition in the NHS may have added to bureaucracy and fragmentation according to Dr Brent of BMA.<br><br>➢ Figure 1 refers to the reduction in number of hospital beds suggests possible reduction provision of service / use of figures.<br><br>➢ Figure 3 refers to the decrease in productivity for NHS workers between 1997 and 2007 / use of figures.<br><br>➢ Extract 1 refers to current inefficiencies in the NHS – the government should have taken action earlier to reduce them (cost of purchasing goods and services, staff sickness, IT programme, use of buildings).<br><br>➢ There may be government failure since the extra resources used in healthcare could have been allocated to other areas (opportunity cost).<br><br>**Evaluation (2+2+2 marks or 3+3 marks)**<br><br>**Government failure may not have occurred since:**<br><br>➢ Figure 2 shows hospital waiting times in excess of 13 weeks have fallen / use of figures.<br><br>➢ More managers may be required to improve the allocation of funds and health provision since a huge operation / reference to the massive NHS budget of £127 billion in 2011.<br><br>➢ The quality of healthcare may have improved – it is difficult to measure this against productivity shown in | |

| | | |
|---|---|---|
| | Figure 3.<br><br>➢ Extract 1 refers to faster treatment of patients in hospital as revealed by the fall in the average length of stay in hospital / from 8.8 to 6.3 days.<br><br>➢ The health reforms are to do with opening up to competition – more of a market failure rather than government failure.<br><br>➢ Extract 1 shows the government has identified ways to increase NHS efficiency (cost of purchasing goods and services, staff sickness, IT programme, use of buildings).<br><br>➢ Figure 3 shows rising productivity between 2005 and 2007 / use of figures.<br><br>➢ Discussion of data accuracy as huge sums of money involved so hard to tell if there has been government failure.<br><br>➢ Other things are not equal / other factors may have affected the general health of the population e.g. decrease in smoking or increase in alcohol consumption.<br><br>➢ Discussion of short run and long run effects e.g. only time will tell if there is government failure from the health reforms. | **(14)** |

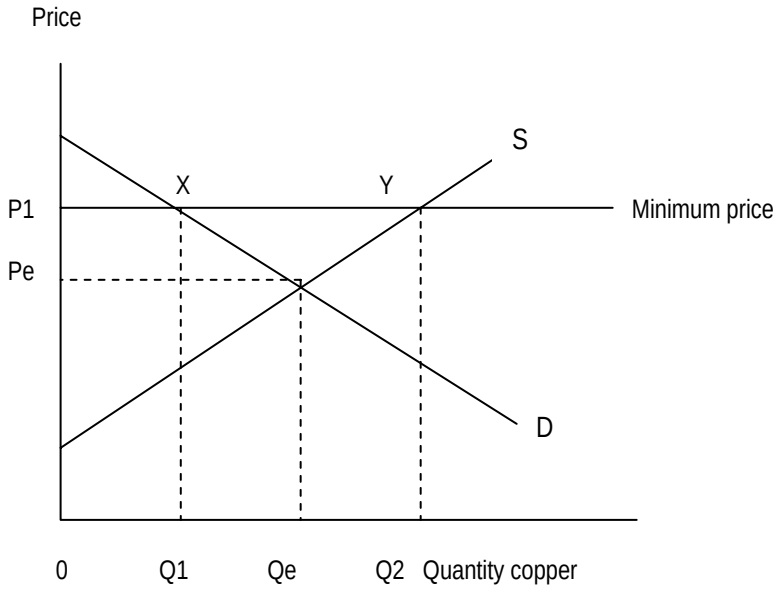
| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-2 | Definition of government failure and basic reference to information. |
| Level 2 | 3-6 | Use of information to present one view on government failure. |
| Level 3 | 7-10 | Extensive use of information to present one view on government failure and one evaluation comment. |
| Level 4 | 11-14 | Extensive use of information to present one view on government failure and two or more evaluation comments. |


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| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | Correct diagram (**3 marks**)<br>  <br><br>➢ Original demand and supply, depicting equilibrium price (1)<br>➢ A decrease in the demand curve (1)<br>➢ Decrease in equilibrium price (1)<br><br>**NB: If supply curve is also shifted as well as the demand curve, then award a maximum of 2 marks for the diagram.**<br><br>Reasons for fall in price of copper: lower global economic growth / falling demand from China / decrease in demand for motor vehicles and construction sectors (**1 mark**).<br><br>Reference to price fall from $8,940 to just $2,871 between April 2008 and December 2009 or a 68% reduction. (**1 mark**) | **(4)** |

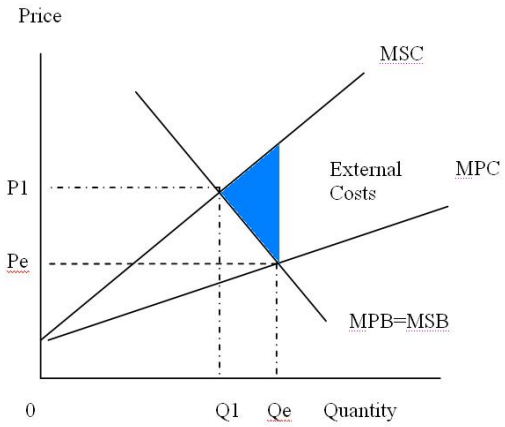
| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA = 6 marks**<br><br>• Definition of income elasticity of demand. (**1 mark**)<br><br>• Explanation of a normal good (as income increases so will demand increase or vice versa). (**1 mark**)<br><br>• Copper is a normal good since it has a positive income elasticity of demand (**1 mark**).<br><br>• Explanation of an inferior good (as income increase then demand will decrease)(**1 mark**).<br><br>• An inferior good has a negative income elasticity of demand (**1 mark**)<br><br>• Data reference (the recession led to a decrease in demand for copper) (**Up to 2 marks**)<br><br>• Diagram depicting demand for copper as a normal good (**1 mark**)<br><br>Level of income<br>  <br><br><br>• Accept higher order analysis e.g. 'ceteris paribus' may not hold, so other factors have affected the demand for copper (**1 mark**)<br><br>**NB: Accept plausible case for stating copper is an inferior good (Lower global economic growth implies incomes rising at a slower rate but demand is falling – referred to in first paragraph of Extract 1) (Up to 2 marks).**<br><br>**NB: Cap at 4 marks if no reference to information in Extract 1** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **KAA = 6 marks**<br><br>• Definition or formula of price elasticity of supply (the responsiveness of supply due to a change in price or %ΔS ÷ %ΔP) (**1 mark**).<br><br>• Understanding of inelastic or elastic supply (this may be implicit or defined) (**1 mark**).<br><br>• Diagram depicting a price inelastic or price elastic supply curve correctly stated (**1 mark**)<br><br>**Reasons for supply being price inelastic include (2+2+2 marks):**<br>➢ Extract 2 indicates lengthy planning enquiry to develop new mine at Pebble Mill / danger of protests from local communities.<br><br>➢ Many fixed inputs in short run such as building roads / rail lines or dams or construction of open cast mine.<br><br>➢ Time taken to train local workforce in mining.<br><br>➢ Full capacity / no spare stocks of copper.<br><br>**Reasons for supply being price elastic include**:<br>➢ All inputs become variable in long run / understanding of long run.<br><br>➢ Huge scale of operations suggests a lot of copper can be produced / spare capacity.<br><br>➢ New firms may enter industry attracted by high prices / firms exit as prices collapse.<br><br>**Evaluation (2+2 marks)**<br>• Use of data in an evaluative manner e.g. magnitude of price changes make it difficult for supply to respond proportionately in the same manner.<br><br>• Existing stockpiles could be released on to market – so supply could be elastic in short run / non-perishable commodity so easy to store.<br><br>• Finite amount of copper available in world – so ultimately highly price inelastic in supply.<br><br>• Recycling schemes could make supply more elastic as high prices make such schemes profitable.<br><br>• Economy is coming out of recession so plenty of spare capacity and factor inputs available – so make supply elastic. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)*** | **KAA = 8 marks**<br>• Definition of a minimum pricing scheme (a floor price / a minimum price set by an agency (**1 mark**)<br><br>• The scheme requires government agency / producer organisation to set minimum price and purchase surpluses at this price (**1 mark**)<br><br>• Diagram / explanation (**Up to 4 marks**)<br><br>➢ Demand and supply curves with equilibrium price (1).<br>➢ Minimum price line (can be below equilibrium) (1).<br>➢ Identifying excess supply or surplus (1).<br>➢ Area of spending by agency (1).<br><br>  <br><br><br>• Economic effects may include: increase in quantity supply and decrease in quantity demand / increase revenues and profits / increase in employment / increase in investment / increase production costs for firms that use copper e.g. builders and car manufacturers / reduce consumer surplus / increase producer surplus.<br>. (**1+1+1+1 or 2+2 marks**)<br><br>**NB: If no diagram award a maximum of 4 marks for KAA**<br>**Evaluation (2+2+2 or 3+3 marks)**<br><br>**The scheme is unlikely to be successful since**<br>➢ Problem of rising prices - mean price fluctuations can still occur above the minimum price.<br><br>➢ Problem of purchasing the surplus copper output / will run into huge sums of money / opportunity cost.<br><br>➢ It requires all the major copper producers to participate in the scheme to be successful /danger of secondary markets developing.<br><br>➢ Problem of deciding on the price to set the minimum price – if below | |


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| | | |
|---|---|---|
| | market equilibrium price then it has no impact / if too high then it causes problems of excess production.<br><br>➢ Discussion of price elasticity of demand and price elasticity of supply which determine the size of surplus and expenditure on scheme.<br><br>➢ Cost of storage / non-perishable commodity.<br><br>➢ It may reduce competitiveness / efficiency of firms since guaranteed price.<br><br>**NB: Do not award for discussion of a buffer stock scheme but be prepared to award marks where relevant e.g. the minimum price and purchase of stock.** | **(14)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)*** | **KAA = 8 marks**<br>• Definition of external costs: cost external to an exchange / negative third party effect / spillover from production or consumption / cost which the price mechanism fails to take into account / cost outside of a transaction / social cost minus private cost equals external cost (**1+1 marks**).<br><br>• Application of external costs to copper mining: damage to tourism, fishing and canning industries of $400 million / noise and visual pollution / loss of employment in these industries and negative multiplier effects / falling property prices / impact on government finances / impact on health of native communities / impact on Balance of trade (**Up to 2+2 marks**).<br><br>**NB: if the term 'external costs' is not mentioned then cap at 1 mark.**<br><br>• Diagram depicting external costs in production (**Up to 4 marks**):<br><br>➢ MB and MPC curves (1)<br>➢ MSC curve (1)<br>➢ Identification of social optimum and market determined equilibrium positions (could be mentioned in the text) (1)<br>NB: merely identifying over-production is not sufficient.<br><br>➢ Welfare loss triangle (shaded area) where marginal social costs exceed marginal social benefits for given output slice (1).<br><br>  <br><br><br>**NB: If no diagram award a maximum of cap at 4 marks for KAA.** | |

| | | |
|---|---|---|
| | **Evaluation (2+2+2 marks or 3+3 marks)**<br><br>• Significance of external costs: the market equilibrium output will exceed the social optimum output / copper is over-produced and over-consumed / market price differs from social optimum price (**1+1 marks**).<br><br>• Magnitude/ time factor: $400 million per annum fishing industry could be destroyed permanently (**1+1 marks**).<br><br>• Prioritise among the external costs.<br><br>• Discussion of short run and long run effects e.g. initial construction may cause greatest amount of external costs.<br><br>• Difficult to quantify and attach monetary value to external costs.<br><br>• The external costs could be reduced through government intervention e.g. regulation / taxation. Also the mining companies could take measures to reduce environmental damage / compensate victims.<br><br>• External costs could be mitigated by the benefits associated with copper mine (1 + 1 + 1 marks)<br><br>➢ A new source of income and employment in the area – some 1,000 jobs directly created.<br>➢ Export earnings from copper could improve Balance of trade.<br>➢ Help diversify the Alaskan economy.<br>➢ Tax revenue collected from the mining companies can improve local infrastructure.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(14)** |

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-2 | Definition of external costs |
| Level 2 | 3-4 | Application of external costs to copper mining. |
| Level 3 | 5-8 | Diagrammatic analysis of social and market equilibrium positions |
| Level 4 | 9-10 | One evaluation point developed. |
| Level 5 | 11-14 | Two or more evaluation points developed. |

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Centre Number | Candidate Number

# Edexcel GCE

# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Wednesday 12 January 2011 – Afternoon
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** Statement 1: Bonuses to financial sector workers in the City of London exceeded £13 billion in 2009.

Statement 2: A 50% tax on bonuses above £25,000 is fair.

Which of the following best describes the two statements above?

**(1)**

**A** Statement 1 is normative and statement 2 is positive.

**B** Both statements are normative.

**C** Statement 1 is positive and statement 2 is normative.

**D** Both statements are positive.

Answer ☐

Explanation

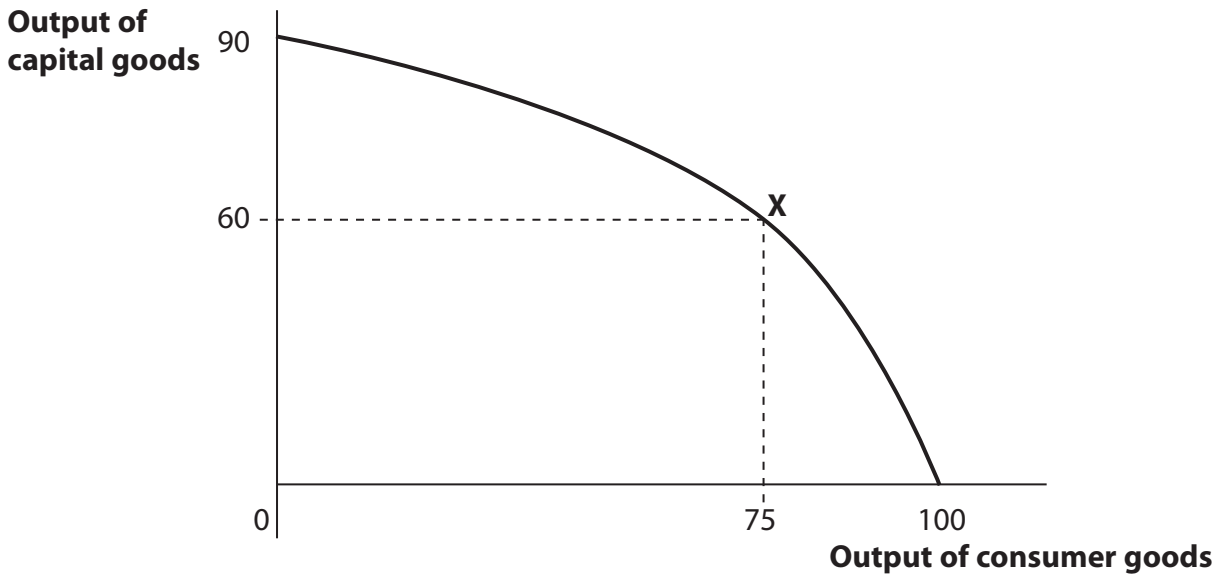
**(3)**

**(Total for Question 1 = 4 marks)**



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**2**




The diagram shows a production possibility frontier for an economy operating at point X. The opportunity cost of producing 75 units of consumer goods is:

**(1)**

**A** 25 units of consumer goods

**B** 30 units of capital goods

**C** 60 units of capital goods

**D** 75 units of consumer goods.

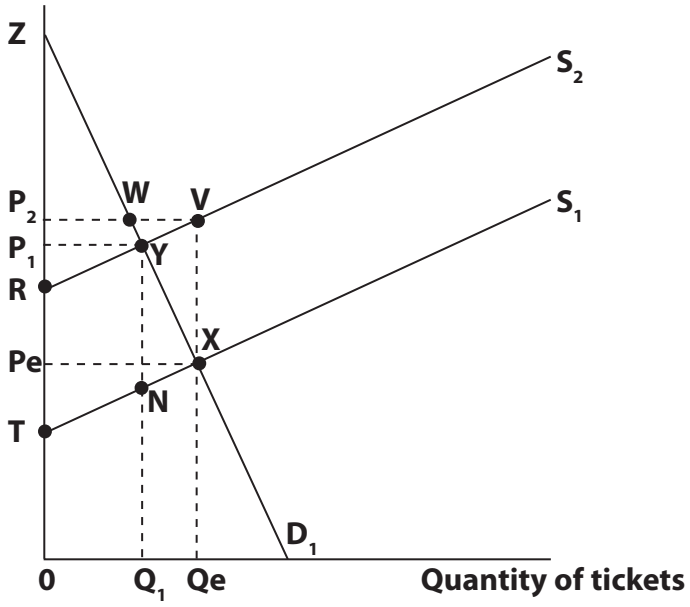
Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3**




The diagram shows the impact of a specific tax placed on air travel. Which of the following is correct?

**(1)**

**A** The total tax revenue is $PeP_1YX$

**B** Producer surplus increases

**C** The price of air tickets rises from Pe to $P_2$

**D** Consumer surplus decreases

Answer ☐

Explanation

**(3)**

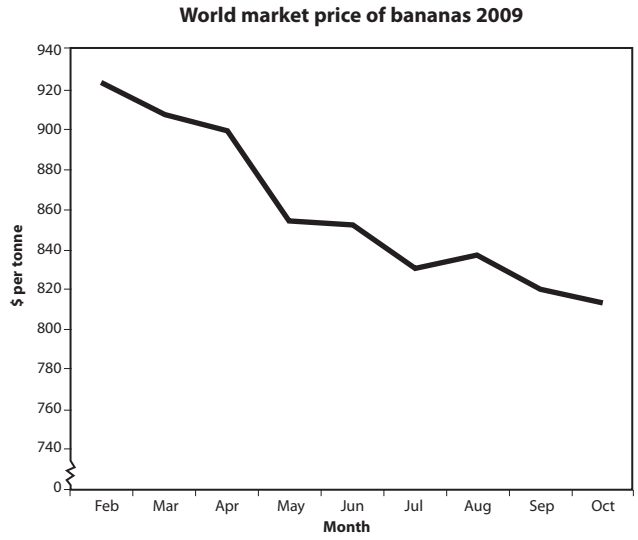
**(Total for Question 3 = 4 marks)**



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**4**




(Source: www.indexmundi.com)

From the graph it can be deduced over the period that

**(1)**

**A** the monthly total revenue for banana producers would have increased if demand was price inelastic

**B** there is an excess demand for bananas

**C** the monthly total revenue for banana producers would have decreased if demand was price inelastic

**D** the trend in banana prices will encourage producers to increase output.

Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**

**5** Jackie's income decreases from £2 000 to £1 800 per month. As a result, the number of times Jackie goes to the cinema decreases from twice to once per month. Her income elasticity of demand for cinema visits is:

**(1)**

**A** –0.5

**B** 0.5

**C** –5.0

**D** 5.0

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**



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M 3 7 9 5 9 A 0 6 3 6

**6** Which of the following pairs of goods is likely to have a positive cross price elasticity of demand between them?

**(1)**

**A** Computer games consoles and computer games

**B** Lamb and wool

**C** Rail travel and private car use

**D** Bus travel and orange juice.

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7** Which of the following methods of government intervention could help correct market failure?

**(1)**

**A** State provision of healthcare

**B** Taxation of goods which yield high external benefits

**C** Abolition of the tradable pollution permit scheme

**D** Provision of subsidies to goods which yield high external costs.

Answer ☐

Explanation

**(3)**

**(Total for Question 7 = 4 marks)**



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M 3 7 9 5 9 A 0 8 3 6

**8** Which of the following is most likely to **reduce** the geographical mobility of labour?

**(1)**

**A** An improvement in the skill level of the workforce

**B** A shortage of affordable housing across the UK

**C** Relocation grants for key workers

**D** A reduction in petrol prices.

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A: 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

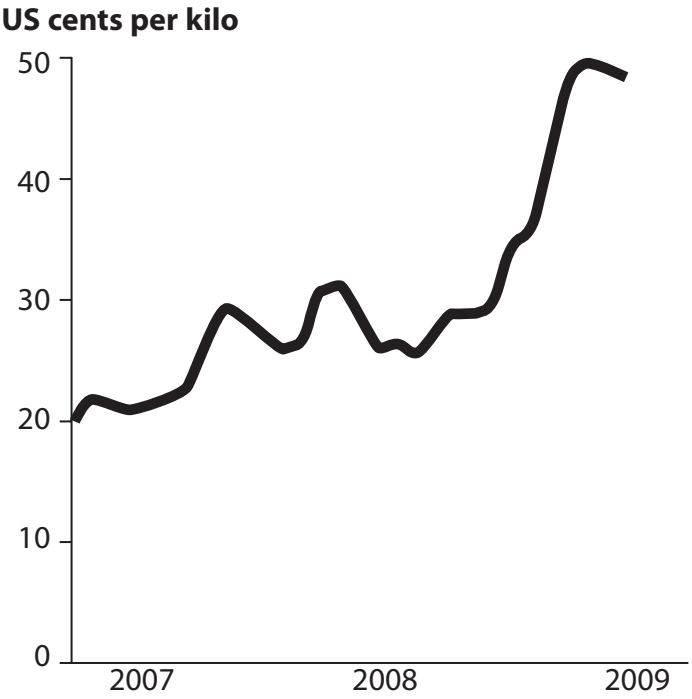
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 22.**

**You should spend 55 minutes on this section.**

## 9 The Price of Sugar

**Figure 1: World price of sugar**




(Source: www.mongabay.com/images/commodities/charts/sugar.html )

### Extract 1 Soaring price of sugar

Sugar prices around the world more than doubled over the last few years, reaching 50.8 US cents per kilo in 2009, a 28-year high.

Sugar production in Brazil, the world's largest producer, has been hit by heavy rain. Brazil is also diverting part of its sugar cane crop to making ethanol fuel for use by motor vehicles.

Speculative demand has also forced up sugar prices. Eugene Weinberg, an analyst at Commerzbank, pointed out that cash-rich speculators have purchased sugar stocks in anticipation of its price rising to even higher levels next year.

For much of the last decade, sugar has not been a very profitable crop compared to other types of farming. Recent high prices cannot result in an immediate increase in sugar production, as it may take up to two years for supply to respond. Destroying rainforests as a means to increase sugar production has a negative environmental and social impact.

(Source: adapted from 'Food groups say US is running out of sugar', by Alexandra Frean, *The Times*, 13th August, 2009 and 'Chasing a sugar rush: global deficit drives price rises', by Sean O'Grady, *The Independent*, 11th August, 2009.)



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**Extract 2 US faces sugar shortage**

America's obesity problems may soon shrink amid fears that the makers of treats, such as Oreo cookies, Krispy Kreme doughnuts and Hershey bars, could run out of sugar. Leading food companies, including Kraft, Mars and Hershey, have warned the government that there may be a serious sugar shortage unless it allows more imports of the commodity into the country. The food companies blame the shortage on the government's policy of restricting imports of sugar in order to protect the incomes of US sugar farmers in the Midwest.

Rising sugar prices have affected the production costs of chocolate and other confectionery companies. However, there are many other costs to consider. At Mars, for example, sugar is third on its list of ingredient costs behind cocoa and milk. Moreover, the price of milk has been falling over recent years, helping to offset the increase in sugar costs.

Chocolate and other confectionery companies have experienced increased sales during the recession as people attempt to cheer themselves up by consuming more sugary treats.

(Source: adapted from 'Food groups say US is running out of sugar', by Alexandra Frean, *The Times*, 13th August, 2009 and 'Chasing a sugar rush: global deficit drives price rises', by Sean O'Grady, *The Independent*, 11th August, 2009.)

(a) With reference to Extract 1, explain why the price elasticity of supply of sugar is likely to change over time.

**(4)**

(b) With reference to Figure 1 and Extract 1, explain why the price of sugar 'more than doubled over the last few years'. Use a supply and demand diagram in your answer.

**(6)**

(c) With reference to the last paragraph in Extract 2 and your own knowledge, discuss whether chocolate and other confectionery are likely to be normal or inferior goods.

**(10)**

*(d) With reference to Extract 2, evaluate the likely effects of the increase in the price of sugar on the producers of chocolates and other confectionery. Illustrate your answer with a supply and demand diagram.

**(14)**

*(e) To what extent is market failure likely to result from the consumption **and** production of sugar?

**(14)**

(a) With reference to Extract 1, explain why the price elasticity of supply of sugar is likely to change over time.

**(4)**



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(b) With reference to Figure 1 and Extract 1, explain why the price of sugar 'more than doubled over the last few years'. Use a supply and demand diagram in your answer.

**(6)**

(c) With reference to the last paragraph in Extract 2 and your own knowledge, discuss whether chocolate and other confectionery are likely to be normal or inferior goods.

**(10)**



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*(d) With reference to Extract 2, evaluate the likely effects of the increase in the price of sugar on the producers of chocolates and other confectionery. Illustrate your answer with a supply and demand diagram.

**(14)**



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M 3 7 9 5 9 A 0 1 8 3 6

*(e) To what extent is market failure likely to result from the consumption **and** production of sugar?

**(14)**

M 3 7 9 5 9 A 0 2 0 3 6

**(Total for Question 9 = 48 marks)**



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**If you answer Question 10 put a cross in this box ☒.**

## 10 The National Minimum Wage

### Extract 1 A modest rise in the National Minimum Wage

The government announced today that the National Minimum Wage (NMW) will rise by 7p, or 1.2%, to £5.80 an hour, in October 2009. This rate applies to workers aged 22 and over. The rate for 18 to 21 year olds will rise from £4.77 to £4.83, while for those aged 16 and 17, the statutory rate will go up to £3.57 an hour from £3.53.

Brendan Barber, the Trade Union Council General Secretary, welcomed the rise in the NMW, especially at a time of increasing food and fuel prices which tend to hit the low paid hard. It is a positive step in reducing poverty. He believes employers could absorb the higher wage costs and reported that employment in low paid industries was holding up well.

However, Charles Cotton, of the Chartered Institute of Personnel and Development, said: "We are concerned that this decision will increase job losses in low-paid sectors. Our greatest concern at the moment is for younger workers and job-seekers."

(Source: Source: 'Miniumum wage to rise', by Kathryn Hopkins, *The Guardian*, 12th May 2009.)

### Extract 2 Evidence from the National Hairdressers' Federation (an employers' organisation) to the Low Pay Commission

There are over 26,000 hairdressing salons in the UK. In 2008, employment rose in the industry by more than 5,000 to reach a total of 126,000. Hairdressing is labour intensive and around 89% of the workforce is female. Some 27% of employees are paid at the NMW. Many hairdressing employees specialise in services including cutting, styling, straightening, colouring and beauty treatments.

The National Hairdressers' Federation report that hairdressing salons have few options if faced with higher wages because customers are reluctant to pay more for haircuts in a depressed economic climate. It believes any increase in the NMW would lead to job losses, causing a decline in long-term employment opportunities in the industry. However, many staff are trainees, so the NMW does not apply to them.

Most new recruits to hairdressing are female and aged 16 to 19 years. However, the number of workers in this age group is decreasing in the UK labour market as many now stay in full-time education. Low pay, a long training period and the uncertainty of customer tips have also limited the supply of labour to the industry.

A considerable amount of informal work is undertaken in hairdressing. There are concerns that an increase in the NMW, which might lead to an increase in salon prices, would result in a growth in tax-evading activities in the industry, such as unrecorded cash payments.

(Source: Adapted from 'National Minimum Wage; report to the Low Pay Commission 2009'.)


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(a) Explain **one** reason why the government intervenes in labour markets by imposing a National Minimum Wage.

**(4)**

(b) With reference to the last paragraph of Extract 2, analyse why government failure might result from an increase in the National Minimum Wage.

**(6)**

(c) Assess the likely benefits of division of labour to hairdressing salons.

**(10)**

*(d) With reference to Extract 2, to what extent might an increase in the National Minimum Wage lead to job losses in hairdressing? Illustrate your answer with an appropriate labour market diagram.

**(14)**

*(e) Apart from the National Minimum Wage, discuss the factors which might influence the supply of labour to hairdressing **or** to another occupation of your choice.

**(14)**

(a) Explain **one** reason why the government intervenes in labour markets by imposing a National Minimum Wage.

**(4)**



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(b) With reference to the last paragraph of Extract 2, analyse why government failure might result from an increase in the National Minimum Wage.

**(6)**

(c) Assess the likely benefits of division of labour to hairdressing salons.

**(10)**



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*(d) With reference to Extract 2, to what extent might an increase in the National Minimum Wage lead to job losses in hairdressing? Illustrate your answer with an appropriate labour market diagram.

**(14)**



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M 3 7 9 5 9 A 0 3 0 3 6

*(e) Apart from the National Minimum Wage, discuss the factors which might influence the supply of labour to hairdressing **or** to another occupation of your choice.

**(14)**

M 3 7 9 5 9 A 0 3 2 3 6

**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B: 48 MARKS**
**TOTAL FOR PAPER: 80 MARKS**



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# Mark Scheme (Results)
# January 2011

GCE

## GCE Economics (6EC01/01)
## Paper 01

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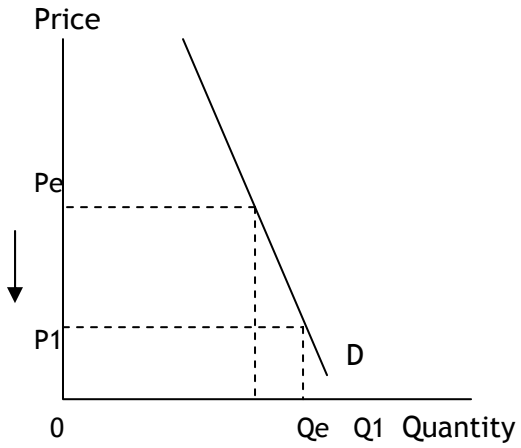
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**NB candidates may achieve up to 3 explanation marks even if incorrect option is selected.**
**NB candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | • **Answer C**<br><br>• Definition of a positive statement is required (one that is based on fact / it can be tested as true or false / a scientific approach to economics / objective statement) (**1 mark**).<br><br>• Definition of a normative statement (one that is based on value judgement / it cannot be tested as true or false / a non-scientific approach to economics / subjective statement) (**1 mark**).<br><br>**NB Do not accept 'opinion' as an explanation of a normative statement**<br><br>• Application: statement 1 is positive since it can be tested to see whether financial sector workers did receive more than £13 billion in bonuses. (**1 mark**).<br><br>• Application: statement 2 is normative since it contains the word 'fair' (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | • **Answer B**<br><br>• Definition of production possibility frontier (the maximum output combinations of two goods an economy can achieve when all its resources a re fully / efficiently employed) (**1 mark**).<br><br>• Definition of opportunity cost (the value of the next best alternative foregone) (**1 mark**).<br><br>• Application to data e.g. by producing no consumer goods output of capital goods rises by 30 to make a total of 90 **(1 mark)** / 90 – 60 = 30 capital goods This may be annotated on the diagram (**1 mark)**.<br>**NB Be prepared to award up to 2 marks for a well developed explanation.**<br><br>**Rejection marks include**<br>➢ Option 'A' is incorrect as this is the additional consumer goods that can be produced if there are no capital goods. (**1 mark)**<br><br>➢ Option 'C' is incorrect since 60 units of capital goods can be attained at the same time as 75 units of consumer goods. (**1 mark)** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | • **Answer D**<br><br>• Definition of consumer surplus (the difference between the price a consumer is prepared to pay for a good and the market price; also accept the area above the equilibrium price and below the demand curve) (**1 mark**).<br><br>• Definition of specific tax (a fixed charge imposed per a unit of good / a tax placed on the expenditure on a good / a compulsory levy on suppliers) **(1 mark)**<br><br>• Original consumer surplus is ZXPe / annotation of diagram (**1 mark**).<br><br>• New consumer surplus is ZYP1 / annotation of diagram (**1 mark**).<br><br>• Consumer surplus falls by PeP1YX / annotation of diagram **(1 mark)**<br><br>**Rejection marks include**<br>➢ Option A is incorrect since P1Y times YN is total tax revenue (**1 mark**).<br><br>➢ Option B is incorrect since producer surplus decreases from PeXT to P1YR (**1 mark**).<br><br>➢ Option C is incorrect since the price of air tickets rise from Pe to P1 (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **4** | • **Answer C**<br><br>• Definition or formula of price elasticity of demand (responsiveness of demand due to a change in price or %ΔD ÷ %ΔP) **OR** definition of price inelastic demand (the proportionate fall in price is greater than the proportionate rise in quantity demanded) (**1 mark)**<br><br>• Explanation of the link between a fall in price, inelastic demand and a fall in total revenue. (**1 mark)**<br><br>• Definition of total revenue (price times quantity demanded or the total revenue received from selling a given quantity of output) (**1 mark**)<br><br>• Accept a numerical example e.g. a 10% price fall when price elastic of demand is -0.5 will cause total revenue to fall (**1 mark)**<br><br>• Diagrammatic analysis showing total revenue falling as price falls (**up to 2 marks**)<br><br>➢ Original revenue area and demand curve appears price inelastic(1)<br>➢ New and smaller revenue area (1)<br><br>  <br><br><br>**Rejection marks include**<br>➢ Option A is incorrect since falling prices will reduce the incentives for banana growers to produce since less profit / revenue (**1 mark**)<br>➢ Option B is incorrect since an excess demand for bananas would lead to an increase in price (**1 mark**) | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | • **Answer D**<br><br>• Definition or formula of income elasticity of demand (responsiveness of demand due to a change in income; %ΔD ÷ %ΔY) (**1 mark**).<br>• Workings: Income decreases by 10% (**1 mark**)<br>• Workings: Demand decreases by 50% (**1 mark**) (**OR** -50%÷ -10% = 5 **2 marks**)<br>• Demand is income elastic or a normal good (**1 mark)**<br><br>**Rejection marks include**<br>➢ Option A and C are incorrect since these are inferior goods | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | • **Answer C**<br><br>• Definition or formula for cross elasticity of demand (responsiveness of demand for one good due to a change in price of another good; %ΔD good y ÷ %ΔP good x) (**1 mark**)<br><br>• The goods are substitutes / competitive demand (**1 mark**)<br><br>• Application: a rise in price of rail travel will lead to an increase in demand for private motoring and vice-versa (accept a rise in price of one good causes an increase in demand for the other) (**1 mark**)<br><br>• Diagrammatic analysis showing rail travel and private motoring (**1 mark**)<br><br>• Complementary goods (joint demand) have a negative cross elasticity of demand **(1 mark)** . (This may be used as a rejection mark for option A)<br><br>**Rejection marks include**<br><br>➢ Option B incorrect since lamb and wool are in joint supply (**1 mark**)<br><br>➢ Option D incorrect since oranges and bus travel are not related (**1 mark**) | **(4)** |

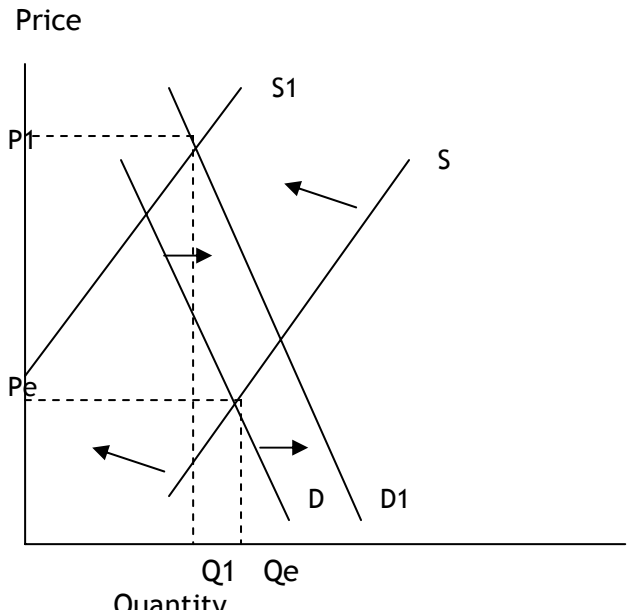
| Question Number | Answer | Mark |
|---|---|---|
| **7** | **Answer A**<br><br>• Definition of market failure (the price mechanism leads to a net welfare loss / inefficient allocation of resources) (**1 mark**).<br><br>• Explanation of type of market failure e.g. : external benefits may be ignored by the price mechanism / this could lead to under provision or under consumption of health care / relevant example such as reduced time off work or a reduction in the spread of diseases (**1+ 1 + 1 marks)**<br><br>• A diagrammatic analysis showing external benefits (**1 mark)**<br><br>• Explanation of type of market failure e.g. imperfect market knowledge or asymmetric information / many people do not realise the importance of making provisions for healthcare for when they may become ill (**1 +1 marks**).<br><br>• Explanation of type of market failure e.g. inequality of income so some people lack of income to afford private healthcare / government intervention in the form of taxation of incomes to help fund healthcare so it is free at point of consumption (**1 + 1 marks**).<br><br>**Rejection marks include**<br>➢ Option B is incorrect since the government should subsidise a good which yields external benefits as there is under-consumption / under-provision (**1 mark**).<br><br>➢ Option C is incorrect since abolition of tradable permits will increase pollution (**1 mark**).<br><br>➢ Option D is incorrect since the government should tax goods which yield high external costs as there is over-consumption / over-provision (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **Answer B**<br>• Definition or understanding of the geographical mobility of labour or immobility of labour (the ability of labour to move from one region / area to another to take available work). (**1 mark**).<br><br>• Definition of affordability (ratio of house prices to earnings / income) (**1 mark)**<br><br>• It is harder for labour to move into a region with higher average house prices / due to more expensive to buy or rent or difficulty in obtaining a mortgage (**1 + 1 marks**).<br><br>• Application e.g.: south-east and London house prices far more expensive than rest of UK so harder for labour to move into the region (**1 mark**).<br><br>• Accept an outline of other causes of geographical immobility of labour e.g. family ties, removal costs and imperfect job market knowledge (**1 mark)**<br><br>**Rejection marks include**<br>➢ Option A is incorrect as training and qualifications affect the occupational mobility of labour (**1 mark**).<br><br>➢ Option C is incorrect since relocation grants will make it easier for labour to move to other regions **(1 mark)**.<br><br>➢ Option D is incorrect since a reduction in petrol prices will lower transport costs in getting to and from work **(1 mark)**. | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **KAA = 4 marks**<br>• Definition or formula of price elasticity of supply (the responsiveness of supply of a good due to a change in its price or, %ΔQS ÷ %ΔP) (**1 mark**).<br><br>• Supply appears to be price inelastic in the short run / the extract refers to up to 2 years for supply to respond to changes in price of sugar (**1+1 marks**).<br><br>• Supply may become relatively price elastic in the long run as farmers have more time grow sugar / New entrants attracted by higher prices / destroy rainforest to grow sugar (**1 mark**). | |

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| | • Reference to stock piles affecting elasticity either in short run or long run (**1 mark).**<br><br>• Diagram showing how price elasticity of supply might change over time (**1 mark**).<br><br>• Understanding that in the short run at least one factor input is fixed in quantity whereas in the long run all factor inputs are variable (**1 mark**). | **(4)** |

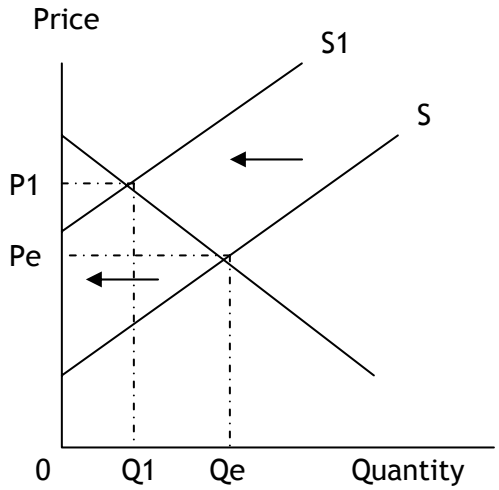
| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **KAA = 6 marks**<br><br>• Data reference e.g. price of sugar has increased to 50 cents (**1 mark)**<br><br>• An increase in demand due to speculation / speculative buying of sugar: (**1 mark**).<br><br>• A decrease in supply due to excess rain or poor weather in Brazil or supply of sugar cane being diverted to production of ethanol (**1 mark**).<br><br>• Reference to supply or demand being inelastic and so causing a significant rise in price **(1 mark)**<br><br>• Diagrammatic analysis which shows:<br>➢ an increase in the demand curve (**1 mark**).<br>➢ a decrease in the supply curve (**1 mark**).<br>➢ original equilibrium price (**1 mark**).<br>➢ new final equilibrium price (**1 mark**). | **(6)** |

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| |  <br>**NB If just one curved shifted award a maximum of 2 marks for the diagram.**<br><br>**NB If no diagram provided award a maximum of 3 marks for the question.** | |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA = 6 marks**<br>• Definition of income elasticity of demand or formula (**1 mark**).<br><br>• Definition / outline of a normal good (as income increases so does demand increase or as income decreases so does demand decrease) (**1 mark**).<br><br>• Normal goods have a positive income elasticity of demand (**1 mark**).<br><br>• Definition / outline of inferior good (as income increases demand decreases or as income decreases demand increases) (**1 mark**).<br><br>• Inferior goods have a negative income elasticity of demand (**1 mark**).<br><br>• Numerical example of either a normal or inferior good (**1** | |

| | | |
|---|---|---|
| | **mark)**<br><br>• Other examples of either inferior goods / normal goods (**1 mark)**<br><br>• Reference to last paragraph in Extract 2: the recession means falling income / but sales of chocolate have increase so it appears to be an inferior good (**1 mark**).<br><br>• Diagram depicting chocolate an inferior or normal good **(1 mark)**<br><br>**Evaluation (2+2 marks or 3+1 marks or 4 marks)**<br><br>➢ The reason why chocolate and sweets might be regarded as inferior goods in a recession is because they are relatively cheaper than other leisure based products such as holidays or entertainment.<br><br>➢ Chocolate and sweets are not inferior goods when (real) incomes increase. They are more like luxury goods as non-essential.<br><br>➢ All other things may not be equal ( not ceteris paribus) since other factors may have caused the increase in sales of chocolate such as consumer preferences/need for comfort eating / price of chocolate may have fallen.<br><br>➢ Discussion on the type of chocolate and sweets – there are various cheap brands (for example, low cocoa percentage mass produced bars) and also very expensive brands (for example, hand-made chocolate). The latter are likely to be luxury goods with a high positive income elasticity of demand.<br><br>➢ Data incomplete on different types of chocolate and other factors that might determine the demand for chocolate. | **(10)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(d)** | **KAA = 8 marks**<br>• The increase in price of sugar will increase production costs for companies making chocolate and sweets (**1 mark**).<br><br>• It is likely that price will increase and output decrease for chocolate and sweets (**1+1 marks**).<br><br>• In addition, further marks can also be achieved through use of a diagram:<br><br>➢ A decrease in the supply curve (**1 mark**)<br>➢ New higher equilibrium price (**1 mark)**.<br>➢ Original revenue and new revenue identified (or change in total revenue) (**1+1 marks)**<br><br>**NB if no diagram, award a maximum of 6 KAA marks** | |




- Profits may fall / firms may go bankrupt / job losses (**1+1+1 marks**)
- Firms may seek to cut production costs e.g. by mergers or sourcing cheaper materials (**1+1 marks**).
- Fall in producer surplus (**1 mark**).

**Evaluation: (3+3 or 2+2+2 marks)**

- Discussion of magnitude of the price increase: Extract 1 refers to the raw sugar price increasing by 80% in 2009 / so one might expect a significant impact for chocolate and sweet manufacturers.

- Discussion on sugar cost as a proportion of total costs for chocolate and sweet manufacturers. Extract 2 indicates that sugar is only the third most expensive ingredient behind cocoa and milk for Mars / suggests that the rise in sugar prices will not impact much for chocolate and sweet manufacturers. (Accept argument that the third most expensive ingredient is significant)

- Discussion on other input costs apart from ingredients, for example, labour, capital (machinery & factory), transport, packaging and advertising. It suggests relatively limited impact of the increase in sugar prices.

- Price of milk falls so offsetting rising sugar cost / discussion of the significance.

- Discussion of price elasticity of demand for chocolate and sweets. If price inelastic demand then chocolate and sweet manufacturers can easily pass on the extra costs to their customers through higher prices.

- Extract 2 the demand for chocolate has increased and so enabling firms to pass on additional costs to consumers through higher prices.

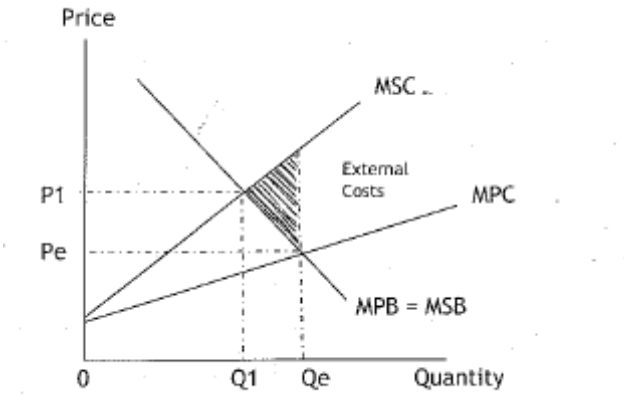
- Discussion of time period / fluctuations in sugar prices. It might be that sugar prices will fall back in the future so little long term impact.

**(14)**

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| | **Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br><br>• To present an argument and conclude on the basis of that argument.<br>• To Organize information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-2 | Identification of higher price and lower output. |
| Level 2 | 3-8 | Explanation of impact on profits, employment, costs of production, producer surplus, diagram. |
| Level 3 | 9-11 | One evaluation point. |
| Level 4 | 12-14 | Two or three evaluation points. |

| Question Number | Answer | Mark |
|---|---|---|
| **9(e)** | **KAA = 8 marks**<br><br>• Definition / understanding of market failure (the price mechanism leads to an inefficient allocation of resources / net welfare loss) (**1 mark**).<br><br>• Explanation of type of market failure, e.g. external costs imperfect knowledge, and unstable commodity prices<br><br>• External costs: definition of external costs: cost external to an exchange / negative third party effect / spillover from production or consumption / cost which the price mechanism fails to take into account / cost outside of a transaction / social cost minus private cost equals external cost (**1+1 marks**).<br><br>• External costs of consumption of sugar: impact of ill health on third party e.g. increased NHS spending / absenteeism from work / loss of revenue for employers / lower tax revenue / more benefits spending (**up to 3 marks**).<br><br>• External costs of production of sugar: clearance of rainforests / damage to soil, wildlife and plant life / danger of libel action against producers / loss of tourism (**up to 3 marks**). **NB any appropriate example will trigger a mark.**<br><br>• Imperfect market knowledge: consumers may not realize the long term damage from consuming too much sugar e.g. ill health, for example, obesity, heart disease, diabetes, tooth decay, reduced life expectancy / reduced potential earnings from work (**3 marks**). **NB any appropriate example will trigger a mark.**<br><br>• Relevant diagram depicting external costs in production (also accept diagram depicting the equilibrium output for | |

| | | |
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| | MSB as less than MPB in the consumption of sugar) (**up to 4 marks**).<br><br>➢ Market equilibrium MPB = MPC curves(1)<br>➢ MSC curve (1)<br>➢ Social optimum position where MSC = MSB (1)<br>➢ Welfare loss triangle (1)<br><br>  <br><br><br>• Unstable commodity prices e.g. unstable producer incomes / falling investment / affordability for consumers **(3 marks)**<br><br>**NB: Reference must be made to both consumption and production of sugar, otherwise cap at 6 marks for KAA.**<br><br>**Evaluation (3+3 or 2+2+2 marks)**<br><br>• Significance of market failure: concerning external costs the market equilibrium output will exceed the social optimum output / sugar is over-produced and over-consumed / market price differs from social optimum price.<br><br>• Magnitude of external costs: sugar is heavily over-consumed in developed countries and responsible for many premature deaths / and so enormous pressure on health care provision / implications for taxation.<br><br>• Time factor: external costs from sugar may diminish if healthier substitutes are developed or grow in popularity / improved market knowledge has may lead to healthier lifestyles.<br><br>• Obesity and heart disease may be caused by factors other than the consumption of sugar e.g. burgers and smoking | **(14)** |

| | | |
|---|---|---|
| | • The sugar shortage in US is more associated with government failure by restricting imports of sugar to protect domestic farmers. This is not a market failure. Government actions also damage farmers in developing countries.<br><br>• Government import restrictions is a good idea since it increases sugar price and so reduces consumption of a good associated with health problems.<br><br>• Difficulty in measuring and attaching a monetary value to external costs **/** making it difficult to assess the extent of the market failure.<br><br>• Speculative buying of sugar in the commodity market / leading to profiteering or uncertainty over future prices.<br><br>• Sugar is not a complete market failure since benefits associated with production / consumption:<br>➢ Major source of income and employment in some developing countries.<br>➢ Export earnings for some developing countries.<br>➢ Major source of calorie intake for some people on low incomes.<br>➢ Quality of sugar – is it raw cane or refined?<br><br>**NB No marks available for discussion of solutions to market failure / or discussion of government failure**<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | |

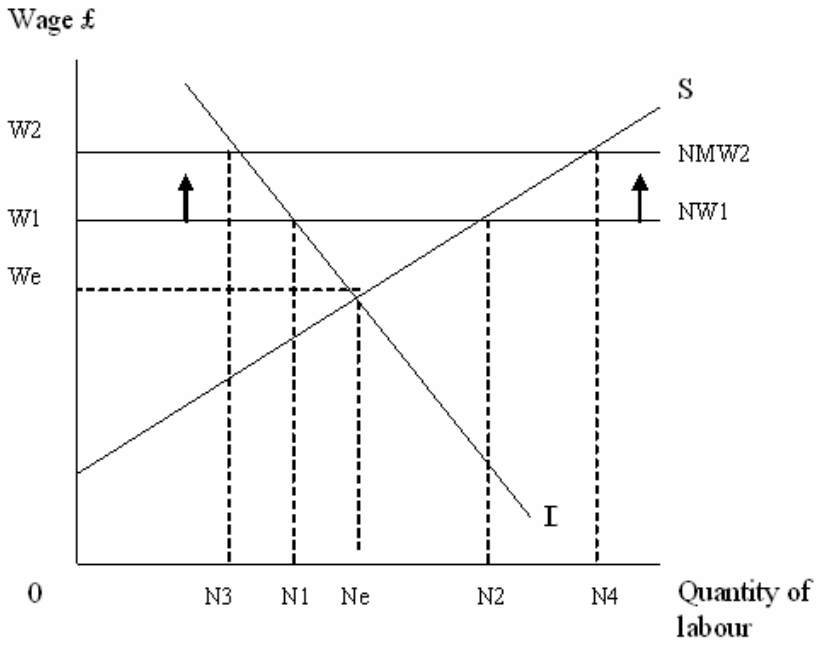
| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-4 | Definition of market failure and type e.g. external costs and application. |
| Level 2 | 5-8 | Application of market failure to both consumption and production of sugar. |
| Level 3 | 9-11 | One evaluation point developed. |
| Level 4 | 11-14 | Two or more evaluation points developed. |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **KAA = 4 marks**<br>• Definition of NMW [the legal minimum hourly rate of pay employers can set] (**1 mark**)<br>• Data reference to extract 1 e.g. the actual increase in minimum wage or the level of minimum wage or increase in food and fuel prices (**1 mark)**<br>• Identification of a reason for government intervention to impose NMW (**1 mark**) and its development (**up to 3 marks**).<br>Reasons might include:<br>➢ **Reduce poverty / inequality / exploitation**: the NMW may help poor people who are in low paid job / create fairer society / help part-time or female or young unskilled workers / maintain incentive to work.<br>➢ **Reduce voluntary unemployment**: the increase in NMW makes it worthwhile for low paid to remain in their jobs / fill low paid job vacancies / prevent unemployment trap or poverty trap / maintain differential between low paid work and benefits such as Job Seekers' Allowance<br>➢ **Inflation / cost of living**: to keep up with cost of living (higher fuel and food prices) / so that in real terms the NMW remains the same / to afford basic necessities.<br>➢ **Earnings growth**: to keep up with growth in average earnings / so in relative terms the NMW keeps its value / maintain incentive for low paid to remain in their jobs<br>➢ **Training & productivity**: the increase in NMW may give greater incentive for employers to train low paid staff / to raise productivity levels / and so justify the wage increase.<br>**NB: Accept an overlap in the explanation of a reason offered.** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **KAA = 6 marks**<br>• Definition of government failure (government intervention which leads to a net welfare loss / inefficient allocation of resources) (**1+1 marks**). Also accept idea of government intervention to correct market failure but it makes things worse (**1 mark)**. **NB a maximum of 2 marks available for definition.**<br>• Data reference to tax evading activities or unrecorded cash payments (**1 mark**)<br>• Identification of tax evading activities being illegal (**1 mark)**<br>• Hairdressers not declaring all their income / less tax revenue to the government (**1+ 1 marks**).<br>• Employers may pay below NMW rate / use of example such as immigrants or young unskilled / less tax revenue to the government (**1 + 1 + 1 marks**).<br>• Weak government implementation of NMW / monitoring and enforcement of hairdressers paying below the minimum wage (**1+1 marks).**<br>• An increase in the NMW may increase unemployment in hairdressing / and also reduce tax revenue or increase in benefits as without government intervention more staff may be employed (**1+1 marks**).<br>Accept 'higher order analysis' which suggests the government failure is not significant since: the NMW increase is small / data reference to hourly wage increases of 7p per hour / not worth the risk of fines for breaking law / especially as severe penalties / difficult to obtain staff / 87% of employees are paid above NMW / labour productivity still above wage cost / so profit made on employees even with higher wage. (**2 marks**)<br>**NB if no reference to informal economy or tax evading activities award up to 2 marks for the link with unemployment and loss of government revenue** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **KAA = 6 marks**<br>• Definition or understanding of the division of labour (production of a good or service is broken down into different tasks and labour allocated to each task) (**1 mark**).<br><br>• Application of division of labour to hairdressing: male or female cuts / hair stylists / washing hair / cleaning and serving drinks / cashier (**1 mark**)<br><br>• Explanation of one or more benefits:<br><br>➢ Increase in productivity (efficiency) / reducing costs per unit / leading to higher profits or revenue (**1+1+1 marks**).<br><br>➢ Diagram showing an increase in the supply curve (**1 mark)**<br><br>➢ Repetition means workers become more skilled / faster at specific tasks (**1 + 1 mark**s).<br><br>➢ Less training costs / less staff turnover (**1+ 1 marks**).<br><br>➢ More effective use of capital / seating and hair machines (**1 + 1 marks**).<br><br>**NB if not application to hairdressing award a maximum of 4 marks for KAA**<br><br>**Evaluation (2+2 marks)**<br><br>➢ Division of labour is quite limited in hairdressing salons since often just a one or two person business.<br><br>➢ Specialisation may limit a hairdressers market e.g. men's (barbers) or women's hairdressers.<br><br>➢ The provision of a personal service also means less room for specialisation for a haircut.<br><br>➢ Limited career opportunities through specialisation.<br><br>➢ Disadvantages may outweigh advantages, for example, repetition leads to boredom / reduced productivity / increased staff turnover.<br><br>➢ Division of labour may make the hairdressing business highly dependent on just one or two individual | **(10)** |

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| | members of staff – danger of illness or sudden resignation from job could expose the business. | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)** | **KAA = 8 marks**<br><br>• Data reference of the actual increase or level of the minimum wage e.g. 7p, 1.2% or £5.80 an hour / National Hairdressers Federation believes significant job losses will occur in current economic climate (**1 + 1 marks)**<br><br>• The increase in NMW increases costs / lower profits or even losses/ firms may lay off workers or exit industry (**1+1 + 1 marks**).<br><br>• Diagram of a labour market which shows (**up to 5 marks**):<br>➢ Initial diagram of labour market (both demand & supply curves) (**1**)<br>➢ Original NMW line (anywhere on diagram) (**1**)<br>➢ New and higher NMW line (anywhere on diagram) (**1**)<br>➢ Demand for hairdressers contract (fall from N1 to N3) or original excess supply (N1/ N2) (**1**).<br>➢ Supply for hairdressing work extends (from N2 to N4) or new excess supply (N3 – N4) (**1**)<br><br>  <br><br><br>**NB: Candidate may show NMW below or at free market wage equilibrium but likely to gain a maximum of 3 marks for the diagram.**<br><br>**NB: if no labour market diagram award a maximum of 5 marks in this section.**<br><br>**Evaluation (2+2+2 or 3+3 marks)** | |

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|---|---|---|
| | • Impact on job losses depend upon:<br><br>➢ **Magnitude** of NMW increase: the extract indicates this is very low at just 7p per hour (6p and 4p respectively for 18-21 year olds and 16-17 year olds) / so not much impact on job losses.<br><br>➢ Wage or price elasticity of demand for labour: if inelastic then few jobs lost / if elastic than more jobs lost / reference can be made to diagram.<br><br>➢ It depends on wage costs as a proportion of total costs: if low then easy to absorb the higher wages costs / if high then harder to absorb the wage rise / hairdressing is quite labour intensive with 126,000 employed in 2008.<br><br>➢ Most hairdressers are paid above NMW so little impact of the increase in NMW / data reference to just 27% being paid at the NMW or 73% paid above NMW / implies support for argument made by Brendan Barber, TUC general secretary (this could be shown by NMW being drawn so it remains below the free market wage).<br><br>➢ Trainee hairdressers are not subject to national minimum wage / despite extract implying trainee places may be cut.<br><br>➢ Employment in hairdressing actually increased by 5000 in 2008 / despite previous increases in the NMW.<br><br>➢ Economic recovery now underway so easier for firms to pass on extra wage costs to customers.<br><br>➢ Firms may decide to employ people illegally below the NMW / so limited impact on job losses if employees accept situation.<br><br>➢ Discussion of short run and long run implications.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately | **(14)** |

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-2 | Impact on job losses / higher wage costs. |
| Level 2 | 3-8 | Diagram showing an increase in the NMW |
| Level 3 | 9-11 | One evaluation point developed. |
| Level 4 | 12-14 | Two or three evaluation points well developed. |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)** | **KAA = 8 marks**<br><br>Factors influencing the supply of labour to any **one** occupation (**2+2+2+2 marks or 3+3+2 marks**).<br><br>➢ The wage rate or earnings / as the wage rate increases then so too will the supply of labour rise due to incentive of higher pay.<br><br>➢ Net advantages to an occupation / these include tips, hours of work, cleanliness of environment, career progression, job satisfaction, private pension scheme, sick pay and paid holidays.<br><br>➢ The level of qualifications, training or work experience required for a particular occupation / the higher the qualifications, training and work experience required, the lower the supply of labour.<br><br>➢ Income tax or national insurance contributions / the higher the rates of tax the lower the potential supply of labour.<br><br>➢ Government social security benefits such as Job Seekers Allowance and Housing benefit / the higher the benefits, the lower the supply of labour to low paid occupations.<br><br>➢ Higher university tuition fees or scrapping Education Maintenance Grants / may lead to increase in supply of school leavers to labour market.<br><br>➢ Raising of school leaving or retirement age / lead to an increase in supply of labour.<br><br>➢ Net migration flows into UK / the single European market has increased net migration flows into the UK.<br><br>➢ Trade Unions affecting rates of pay and other work conditions / so increasing supply of labour.<br><br>➢ Accept factors influencing the geographical supply of labour such as house prices.<br><br>**NB Do not accept the NMW.**<br><br>**Evaluation (2+2+2 or 3+3 marks)** | |

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| | ➢ **Magnitude** of factors affecting supply, for example, tips are substantial in hair dressing or, dangers involved in certain occupations (armed forces) are so great as to discourage supply.<br><br>➢ **Prioritise** between factors: for example, job satisfaction or career progression may be more important than pay, or flexibility in hours of work could be more important than pay.<br><br>➢ **Time factor:** For some occupations where significant training / qualifications are involved, supply might be limited in the short run but increase in the long run. Discussion of elasticity of supply is acceptable here.<br><br>➢ **State of economy:** many people may be discouraged from seeking work in a recession but encouraged to seek work in an economic recovery.<br><br>➢ Accept discussion of income and substitution effects / backward sloping supply curve.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(14)** |

| Level | Mark | Descriptor |
|---|---|---|
| Level 1 | 1-2 | Identification of two or more supply determinants. |
| Level 2 | 3-8 | Explanation of two or more supply determinants. |
| Level 3 | 9-11 | At least one evaluation point developed. |
| Level 4 | 12-14 | At least two or more evaluation points developed |

**6EC01: January 2011: Assessment Objectives**

| Question | Knowledge | Application | Analysis | Evaluation | Total |
|---|---|---|---|---|---|
| **Section A** | | | | | |
| **Q1** | 2 | 1 | 1 | | **4** |
| **Q2** | 1 | 2 | 1 | | **4** |
| **Q3** | 2 | 1 | 1 | | **4** |
| **Q4** | 1 | 2 | 1 | | **4** |
| **Q5** | 1 | 2 | 1 | | **4** |
| **Q6** | 2 | 1 | 1 | | **4** |
| **Q7** | 2 | 1 | 1 | | **4** |
| **Q8** | 1 | 2 | 1 | | **4** |
| **Total** | **12** | **12** | **8** | | **32** |
| **Section B** | | | | | |
| **Q9 (a)** | 2 | 1 | 1 | | **4** |
| **Q9 (b)** | 2 | 3 | 1 | | **6** |
| **Q9 (c)** | 2 | 2 | 2 | 4 | **10** |
| **Q9 (d)** | 2 | 4 | 2 | 6 | **14** |
| **Q9 (e)** | 4 | 2 | 2 | 6 | **14** |
| **Total** | **12** | **12** | **8** | **16** | **48** |
| **Q10 (a)** | 2 | 1 | 1 | | **4** |
| **Q10 (b)** | 2 | 2 | 2 | | **6** |
| **Q10 (c)** | 2 | 3 | 1 | 4 | **10** |
| **Q10 (d)** | 2 | 4 | 2 | 6 | **14** |
| **Q10 (e)** | 4 | 2 | 2 | 6 | **14** |
| **Total** | **12** | **12** | **8** | **16** | **48** |
| | | | | | |
| **Grand Total A+B** | **24** | **24** | **16** | **16** | **80** |

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| Surname | Other names |
|---|---|
| | |

Centre Number | Candidate Number

# Edexcel GCE

# Economics

## Advanced Subsidiary
## Unit 1: Markets: How they work and why they fail

Friday 28 May 2010 – Afternoon
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** A production possibility frontier can be used to illustrate the concept of:

**(1)**

**A** External cost

**B** Producer surplus

**C** Opportunity cost

**D** Equilibrium price.

Answer ☐

Explanation

**(3)**

**(Total for Question 1 = 4 marks)**



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**2** Which of the following factors is most likely to cause the price of gold to fall without a shift in the demand curve?

**(1)**

**A** An increase in national income

**B** A decrease in the price of silver

**C** An increase in the wages of gold miners

**D** A decrease in the cost of machinery used in gold mining.

Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3** Neringa is prepared to pay £2,500 for a luxury cruise to the Caribbean. If the current price is actually £2,000, which of the following might cause her consumer surplus to increase?

**(1)**

**A** An increase in wages paid to cruise holiday workers by £500 per year

**B** A decrease in value added tax placed on luxury cruise holidays

**C** An increase in the price of the cruise to £3,000

**D** A decrease in the number of companies offering luxury Caribbean cruises.

Answer ☐

Explanation

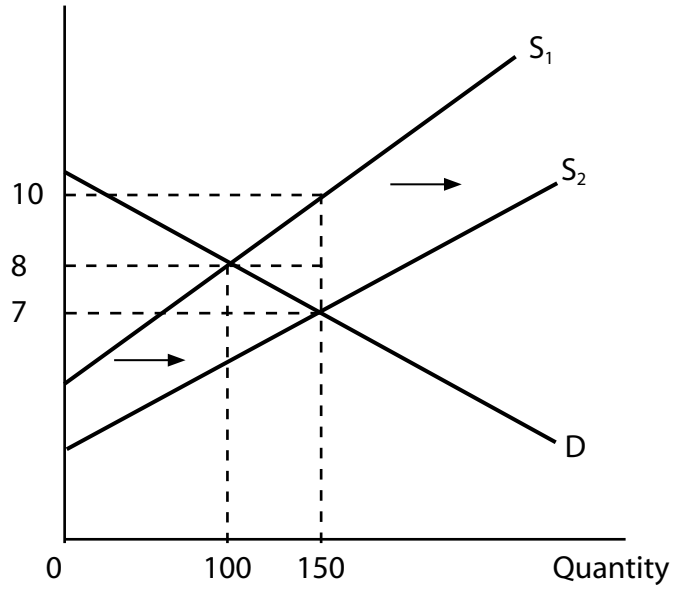
**(3)**

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



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**4** Price (£)




The diagram illustrates the effect of a government subsidy on a good. The total government expenditure on the subsidy will be:

**(1)**

**A** £100

**B** £150

**C** £450

**D** £1,050.

Answer ☐

Explanation

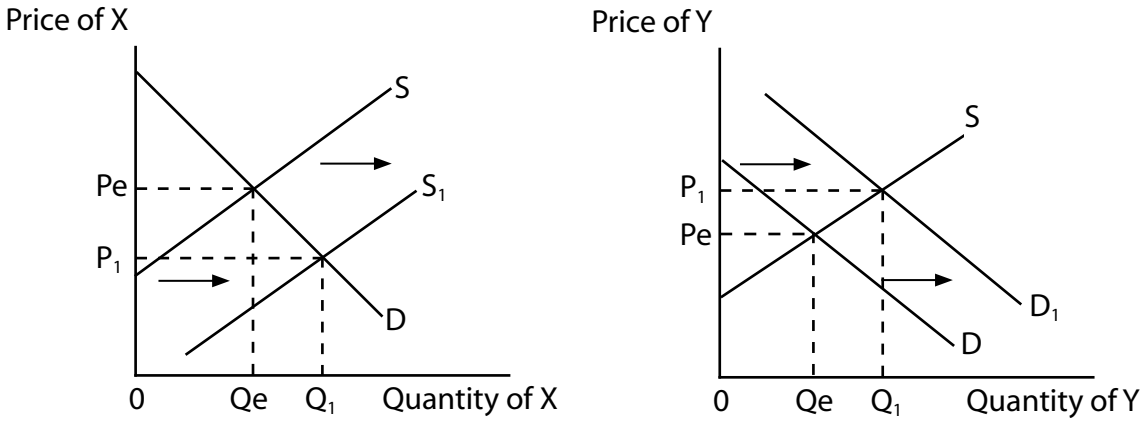
**(3)**

**(Total for Question 4 = 4 marks)**



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**5** **Market for X** **Market for Y**




The diagrams show the effects of an increase in supply of good X on the demand and price of good Y. Which of the following is most likely to be represented by good X and good Y?

**(1)**

**A** Lamb and chicken

**B** Bus travel and potatoes

**C** Computer games consoles and computer games software

**D** Leather and beef.

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**



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**6** Tradable pollution permits would be more effective in reducing carbon dioxide emissions within the European Union (EU) if:

**(1)**

**A** There is an excess supply of pollution permits

**B** Major polluting industries such as air travel are excluded from the carbon trading system

**C** It is difficult to monitor and prosecute firms for exceeding their pollution permits

**D** The EU is prepared to decrease the supply of pollution permits if the price falls too low.

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7** Which of the following forms of government intervention could help to solve the free rider problem?

**(1)**

**A** Provision of public goods

**B** Taxation on the consumption of public goods

**C** Banning the consumption of luxury goods

**D** Granting of subsidies to goods which yield high external costs.

Answer ☐

Explanation

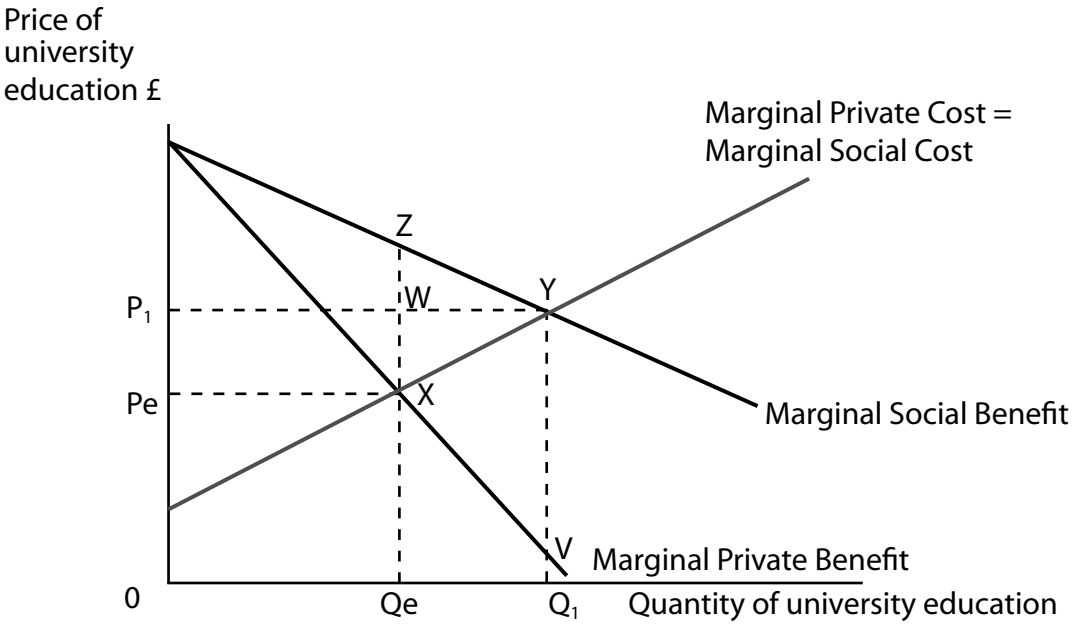
**(3)**

**(Total for Question 7 = 4 marks)**



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**8** **Market for university education**




The diagram shows the market for university education. Assume there are no external costs. Which of the following is true?

**(1)**

**A** The free market equilibrium quantity exceeds the social optimum quantity

**B** There is market failure at quantity Qe

**C** The triangle of welfare gain is XYV

**D** The marginal external benefit remains constant at all quantities.

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A: 32 MARKS**



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**Section B: Answer either Question 9 or Question 10.**

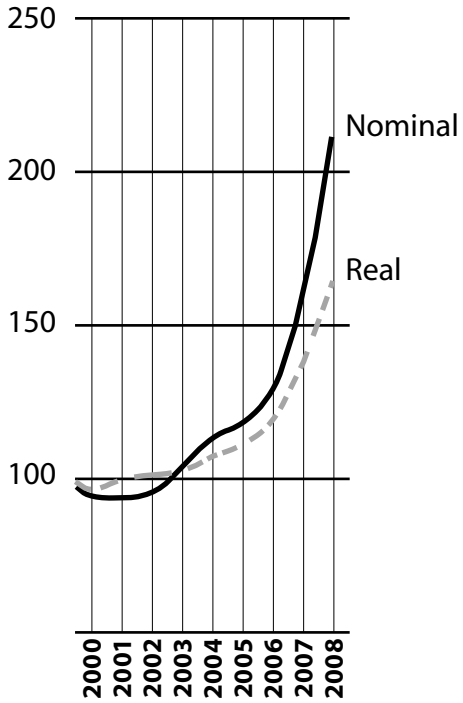
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 20.**

**You should spend 55 minutes on this section.**

## 9 Rising Food Prices

**Figure 1 Food and Agricultural Organisation (FAO) Food Price Indices, 2000–2008**




Source: ftp://ftp.fao.org/docrep/fao/meeting/013/k2414e.pdf

**Extract 1 Food Prices**

The UK faces a major food crisis unless urgent steps are taken to support its agricultural sector, warns a report by Chatham House, an influential research organisation. The report suggests that UK consumers must expect to pay significantly more for food to ensure long term security. It warns that developed countries have tended to take their food supply for granted and that recent sharp rises in commodity prices will occur more frequently in the future.

The rapid rise in food prices is linked to the growth in global population and rising incomes in the developing world, along with increased costs of agricultural production.

The report warns of the limited availability of land for agricultural expansion in the UK and recommends a discussion of using intensive farming methods and genetically modified crops to increase output. However, this could reduce quality and bio-diversity while increasing the risk of crop diseases.



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The UK produces just 48% of the food it consumes. Around 30% comes from the rest of Europe and the remaining 22% from non-European countries. A crisis could develop through some form of external shock, such as animal or crop disease, or extreme weather events leading to a shortage of affordable food. It is households on low incomes which are hit the hardest by rising food prices.

The report calls for government funding to expand agricultural production, innovation and skills. This includes guaranteed minimum prices to encourage more domestic agricultural production.

The report also indicates the need for consumer attitudes to change. Around one third of all food purchased is thrown away, some 6.7 million tonnes a year, most of which is edible.

Source: 'Britain must revive farms to avoid grave food crisis', by Jamie Doward, *The Observer*, 1st February 2009.

(a) With reference to Extract 1 and Figure 1, explain the causes of the increase in the price of food. Use a supply and demand diagram in your answer.

**(8)**

(b) To what extent are households on low incomes 'hit the hardest by rising food prices' (*Extract 1, line 18*)?

**(6)**

(c) Assess whether the demand for food is likely to be price elastic or price inelastic.

**(6)**

*(d) Evaluate the likely economic effects of the introduction of 'guaranteed minimum prices to encourage more domestic agricultural production' (*Extract 1, lines 20 and 21*). Use an appropriate diagram in your answer.

**(12)**

(e) (i) Distinguish between *private costs* and *external costs*.

**(4)**

*(e) (ii) With reference to the concepts of private costs and external costs, assess the possible economic effects of 'using intensive farming methods and genetically modified crops' (*Extract 1, lines 11 and 12*). Use an appropriate diagram in your answer.

**(12)**

(a) With reference to Extract 1 and Figure 1, explain the causes of the increase in the price of food. Use a supply and demand diagram in your answer.

**(8)**



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(b) To what extent are households on low incomes 'hit the hardest by rising food prices' (*Extract 1, line 18*)?

**(6)**

(c) Assess whether the demand for food is likely to be price elastic or price inelastic.

**(6)**



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**Question 9 continues on the next page.**

*(d) Evaluate the likely economic effects of the introduction of 'guaranteed minimum prices to encourage more domestic agricultural production' (*Extract 1, lines 20 and 21*). Use an appropriate diagram in your answer.

**(12)**



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(e) (i) Distinguish between *private costs* and *external costs*.

**(4)**



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*(e) (ii) With reference to the concepts of private costs and external costs, assess the possible economic effects of 'using intensive farming methods and genetically modified crops' (*Extract 1, lines 11 and 12*). Use an appropriate diagram in your answer.

**(12)**

**(Total for Question 9 = 48 marks)**



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**If you answer question 10 put a cross in this box ☒ .**

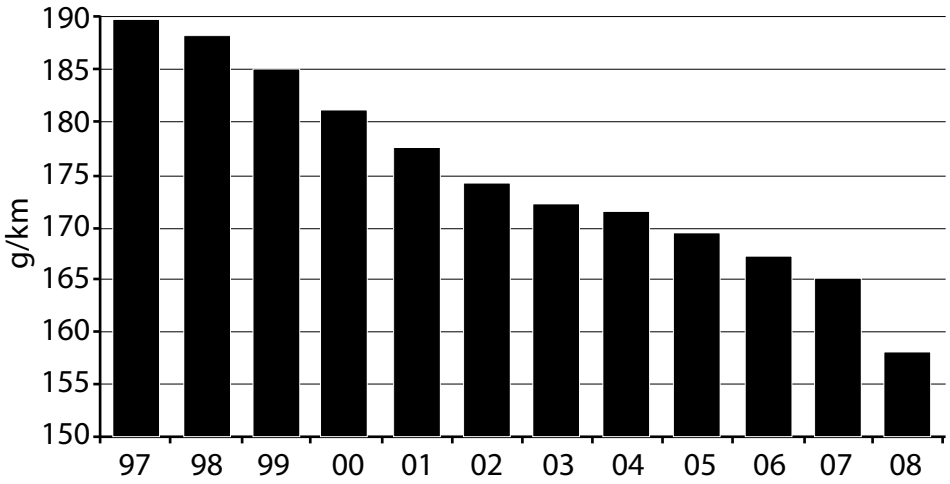
## 10 The Motor vehicle market

### Figure 1: UK new car sales

| Year | UK new car sales (million) |
|---|---|
| 2003 | 2.58 |
| 2004 | 2.57 |
| 2005 | 2.44 |
| 2006 | 2.35 |
| 2007 | 2.40 |
| 2008 | 2.26 |
| 2009 (forecast) | 2.16 |

Source: Society of Motor Manufacturers and Traders fact sheet 2009; www.smmt.co.uk

### Figure 2: Carbon dioxide emissions for new cars (grams per kilometre)




Source: Society of Motor Manufacturers and Traders fact sheet 2009; www.smmt.co.uk



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**Extract 1 Impact of the economic downturn on the UK car market**

The purchase of a car is the second largest expenditure item for consumers after buying a house. Not surprisingly, the economic downturn has caused a drastic fall in demand for new cars. New car sales fell by 21.8% in the first three months of 2009 in response to a 1% fall in real income over the same period.

Thousands of UK motor vehicle manufacturing jobs are likely to be lost this year. Nissan announced 1,200 redundancies in January and Toyota halved the number of shifts on its production lines. Several car companies have reduced wages, for example, Honda has reduced wage rates by 10%. Other companies have frozen pay to avoid compulsory redundancies. BMW and Ford closed their motor vehicle factories temporarily to reduce stockpiles of cars. General Motors, the owner of Vauxhall, may close its two UK plants in Luton and Ellesmere Port unless significant government grants or loans are provided. These factories are in areas of relatively high unemployment.

Source: Adapted from 'Fears for 40,000 jobs in British car trade as Toyota goes into red', by Leo Lewis and Tom Bawden, *The Times*, 23rd December 2008 and SMMT fact sheet smmt.co.uk

**Extract 2 Government car scrappage scheme**

In the 2009 Budget, Chancellor Alistair Darling announced that motorists who scrap a car more than ten years old will receive a £2,000 grant when purchasing a new vehicle. The scheme follows similar moves by major European countries, including France and Germany.

However, the motor vehicle companies have to contribute £1,000 to the subsidy and the remaining £1,000 is paid by the government. The UK scheme will cost just £300 million and will end when the money runs out. By contrast, the German government has allocated £4.49 billion, boosting new car sales by 40%.

The car scrappage scheme is likely to boost the sale of smaller models such as the Toyota Yaris, but will be of little benefit to larger and more expensive vehicles such as Jaguar. The scheme has also been criticised for benefiting foreign manufacturers since eight out of ten cars bought in the UK are imported. However, the government claims that many of these imported cars have UK-made parts and the scheme will help UK car retailers.

The Society of Motor Manufacturers and Traders urged the government to provide more help for the industry by reducing fuel taxes and making it easier for consumers to get car loans.

(Source: 'Budget 2009: car industry welcomes scrappage scheme', by Dan Milmo, *The Guardian*, 22 April 2009.

(a) (i) With reference to Extract 1 and Figure 1, explain the likely effect on total revenue for car manufacturers following the decrease in demand for new cars between 2007 and 2009. Use a supply and demand diagram in your answer.

**(6)**

(a) (ii) Assess the likely impact of the decrease in demand for new cars on the labour market for car workers.

**(6)**

(b) Explain why labour immobility might be a problem following the closure of car factories.

**(6)**

(c) With reference to Extract 1, discuss whether the demand for all cars is likely to be income elastic.

**(6)**

*(d) With reference to Extract 2 and Figure 2, assess the possible economic effects of the UK government car scrappage scheme.

**(12)**

*(e) Evaluate the possible economic effects of a decrease in fuel taxes, as recommended by The Society of Motor Manufacturers and Traders. Use an appropriate diagram in your answer.

**(12)**



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(a) (i) With reference to Extract 1 and Figure 1, explain the likely effect on total revenue for car manufacturers following the decrease in demand for new cars between 2007 and 2009. Use a supply and demand diagram in your answer.

**(6)**

(a) (ii) Assess the likely impact of the decrease in demand for new cars on the labour market for car workers.

**(6)**



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(b) Explain why labour immobility might be a problem following the closure of car factories.

**(6)**



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(c) With reference to Extract 1, discuss whether the demand for all cars is likely to be income elastic.

**(6)**



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**Question 10 continues on the next page.**

*(d) With reference to Extract 2 and Figure 2, assess the possible economic effects of the UK government car scrappage scheme.

**(12)**



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*(e) Evaluate the possible economic effects of a decrease in fuel taxes, as recommended by The Society of Motor Manufacturers and Traders. Use an appropriate diagram in your answer.

**(12)**



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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B: 48 MARKS**
**TOTAL FOR PAPER: 80 MARKS**



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# Mark Scheme (Results)
# Summer 2010

GCE

## GCE ECONOMICS (6EC01) Paper 01

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Summer 2010

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**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).**

| Question Number | Answer | Mark |
|---|---|---|
| 1 | Answer C (1)<br>• Definition of production possibility frontier (the maximum output combinations an economy can achieve when all its resources are fully / efficiently employed) (1)<br><br>• Definition of opportunity cost (the value of the next best alternative foregone) (1)<br><br>• Diagrammatic analysis or explanation of opportunity cost, e.g. depicting a movement along the production possibility frontier and showing the loss of output for one good and gain of another good (1+1)<br><br>Rejection marks<br>• Option A is incorrect since external costs are those costs not taken into account by the price mechanism and are not shown on a production possibility frontier. (1)<br>• Option B or D incorrect since producer surplus / equilibrium price is shown by use of a demand and supply diagram. (1) | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 2 | Answer D (1)<br>• A decrease in the machinery costs means a decrease in production costs for mining gold. (1)<br><br>• Increase in incentives to produce (1)<br><br>• Award for a correctly labelled diagram depicting an increase in supply and a fall in market price (1+1) OR identifying that the supply of gold will increase. (1)<br><br>Rejection marks<br>• Option A is incorrect since an increase in national income will shift the demand curve outwards / to the right / increase the price of gold. (1)<br><br>• Option B is incorrect since a decrease in the price of silver will cause a decrease / shift inwards in the demand for gold - a substitute good. (1) | (4) |

| | | |
|---|---|---|
| | • Option C is incorrect since an increase in wages of gold miners will lead to a decrease / inward shift in the supply curve for gold so price increases. (1) | |

| Question Number | Answer | Mark |
|---|---|---|
| 3 | Answer B (1)<br>• Definition of consumer surplus (the difference between the price one is prepared to pay for a good and the actual price / market price paid) OR (the area above the equilibrium price and below the demand curve). (1)<br><br>• Identification of original consumer surplus as £500 / further development using a numerical example(1)<br><br>• Definition of VAT (a tax placed on the expenditure / a tax set as a percentage of the price of a good) or indirect tax (1)<br><br>• Explanation that a reduction in VAT will reduce the price of cruise holidays and so lead to an increase in consumer surplus. (1)<br><br>• Diagrammatic analysis depicting an outward shift in supply curve (either showing the original consumer surplus / the new level of consumer surplus / the change in consumer surplus) (1+1) (accept parallel shift in supply)<br><br>Rejection marks<br>o Option A is incorrect since an increase in wages to cruise holiday workers will increase production costs / possibly raise the price of cruise holidays - reducing consumer surplus. (1)<br><br>o Option C is incorrect since an increase in price of cruise holidays to £3000 will eliminate Neringa's consumer surplus. (1)<br><br>o Option D is incorrect since a decrease in the number of companies in the industry may shift the supply curve inwards and so raise the price of Caribbean cruise holidays (1). | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 4 | Answer C (1)<br>• Definition of a subsidy (Government grant to firms to increase production / reduce price of a good) (1)<br><br>• Unit subsidy × quantity is £3 × 150 = £450 (accept other methods of calculating subsidy) (2) | |

| | | |
|---|---|---|
| | • Annotation of diagram to show subsidy area (but must be labelled)(1)<br><br>• Award for identifying unit subsidy as the vertical difference between the supply curves OR £3 (1)<br><br>Rejection marks<br>• Option B is incorrect as this is the consumer subsidy. (1)<br><br>• Option D is incorrect as this is the total consumer expenditure on the good plus the government subsidy. (1) | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 5 | Answer C (1)<br>• Definition or formula of cross elasticity of demand (the responsiveness in demand for one good due to a change in price of another good or %ΔQD good B ÷ %ΔP good A) (1)<br><br>• Games console and software games are complementary goods / joint demand. (1)<br><br>• Complementary goods have a negative cross elasticity of demand. (1)<br><br>• A fall in price of games consol will cause an increase in the demand for computer software games. (1)<br><br>Rejection marks<br>• Option A is incorrect since lamb and chicken are substitutes with a positive cross elasticity of demand / a decrease in price of one will cause a decrease in demand for the other. (1)<br><br>• Option B is incorrect since bus travel and potatoes are likely to be unrelated goods / inferior goods / they have a zero cross elasticity of demand. (1)<br><br>• Option D is incorrect since leather and beef are in joint supply. (1) | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 6 | Answer D (1)<br>• Definition / understanding of tradable pollution permits, e.g. an allowance on the amount of pollution firms may emit which can be bought and sold in the market. (1)<br><br>• Relevant diagrammatic analysis which shifts the supply curve for carbon permits inwards and so increases its price (1+1) OR written explanation that a decrease in the supply of permits will lead to a rise in price. (1) | |

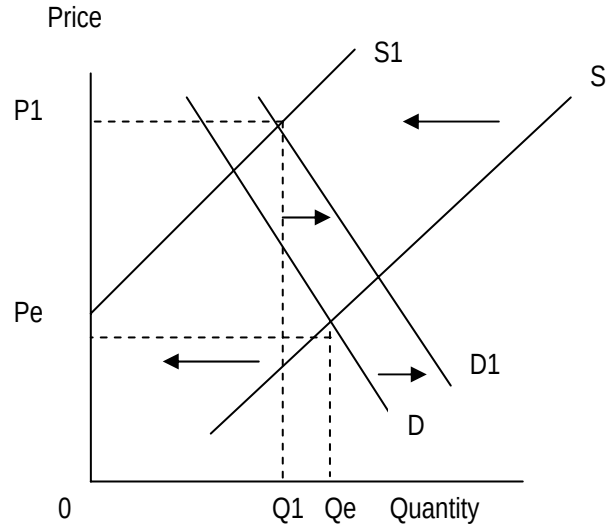
| | | |
|---|---|---|
| | • Higher price of permits increase the cost of polluting or act as an incentive for firms to reduce their pollution. (1)<br><br>• A low market price means firms have little incentive to reduce pollution / it might be cheaper to purchase additional permits rather than fund cleaner technology / install clean production methods. (1+1)<br><br>Rejection marks<br>• Option A is incorrect since an excess supply of pollution permits is likely to lead to a fall in price and so firms have less incentive to reduce pollution emissions. (1)<br><br>• Option B is incorrect since major polluting industries such as air travel should be included in the carbon trading scheme so that less pollution is emitted. (1)<br><br>• Option C is incorrect since some firms may deliberately exceed / ignore their carbon permits as there is little chance of paying for it. (1) | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 7 | Answer A (1)<br>• Explanation of the free rider problem (difficulty in charging people for consuming a good once it is provided) NB: Only award if reference made to the inability for charging consumers. (1)<br><br>• The free rider problem leads to under-provision of a good and so is market failure. (1)<br><br>• Definition of public goods (non-excludable and non-rivalry) (1)<br><br>• Example of a public good, for example, light house, pavements, street lighting, flood defence scheme, national defence and public firework display. (1)<br><br>Rejection marks<br>• Option B is incorrect since taxation of public goods will lead to a further reduction in their provision / increase market failure. (1)<br><br>• Option C is incorrect since luxury goods are private goods and so not relevant. (1)<br><br>• Option D is incorrect since subsidies to goods which yield high external costs will increase market failure / increase the gap between the market equilibrium and social optimum position / examples of goods which yield external costs such as tobacco smoking, alcohol consumption or private motoring. (1) | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 8 | Answer B (1)<br>• Definition of market failure (the price mechanism fails to allocate resources efficiently / inefficient allocation of resources / the price mechanism leads to a welfare loss) (1)<br><br>• Definition of external benefits (benefits external to an exchange / positive third party effects / benefits outside of a transaction / difference between social and private benefits / benefits the price mechanism ignores) (1)<br><br>• Identification of under-consumption of education / explanation of this e.g. a more productive workforce. (1)<br><br>• Social benefit exceeds social cost of university education for QeQ1 students (1)<br><br>• Identification of welfare gain or loss triangle is ZYX or annotation of diagram (1)<br><br>• Identification of market equilibrium position MPB=MPC / identification of social optimum equilibrium position MSB=MSC (1+1)<br>NB: Just identifying market equilibrium at output Qe and social optimum at output Q1 without reference to MSB/MSC/MPB/MPC then award 1 mark<br><br>Rejection marks<br>• Option A is incorrect since the free market quantity 0Qe is less than the | (4) |

| | | |
|---|---|---|
| | social optimum number of students 0Q1. (1)<br><br>• Option C is incorrect since the triangle of welfare gain is ZYX. (1)<br><br>• Option D is incorrect since the marginal external benefit increases / pivots as the quantity of students increase. (1) | |

| Question Number | Answer | Mark |
|---|---|---|
| 9(a) | • Direct reference to food price increase in Figure 1 e.g nominal price rise from 100 to more than 200 / real price rise from 100 to 160. (1)<br><br>The increase in price of food caused by:<br>• Increase in demand due to global population growth / increase in incomes in developing countries (1+1)<br>Either of these points may be developed to achieve 2 marks, e.g. reference to positive income elasticity of demand for food / normal good.<br>NB: 2 marks available for explaining increased demand.<br><br>• Decrease in supply due to increased costs of production / e.g. rising fuel prices, farm machinery and animal feed (1+1).<br>NB: 2 marks available for explaining decreased supply.<br>• Accept a reference to inelasticity of supply and/or demand (1).<br><br>NB: Award a maximum of 5 marks for explanation / data reference. | |

| | | |
|---|---|---|
| |  <br>**Diagram up to 4 marks:**<br>➢ **Original demand & supply diagram with equilibrium price(1)**<br>➢ **Increase in demand curve (1)**<br>➢ **Decrease in supply curve (1)**<br>➢ **New equilibrium price (1)**<br>**NB: Award a maximum of 2 marks for the diagram if just one curve is correctly shifted.** | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| 9(b) | **Award up to 4 marks for KAA**<br>• **Low income households likely to be hit the hardest since:**<br>➢ **Price elasticity of demand is inelastic / basic necessity / so an increase in food price will cause an increase in total spending on food (1+1)**<br>➢ **They spend a higher proportion of their income on food than other income groups / consequently spend less on other goods. (1+1)**<br>➢ **The extract refers to a 'shortage of affordable food' / suggesting it is the basics which are rising in price such as bread, potatoes, vegetables, rice and fruit. (1+1)**<br>• **Demand for food is income inelastic / the percentage change in spending** | |

| | | |
|---|---|---|
| | on food is less than the percentage change in income (1+1)<br><br>Evaluation (2 marks)<br>• Magnitude of the increase in food prices / significant increase of more than 100%.<br>• Discussion of real income falling.<br>• Discussion of households switching to inferior goods / lower priced alternatives.<br>• Composition / size of household.<br>• It depends on the meaning of 'households on low incomes'.<br>• An increase in price of luxury foods may have little impact on low income households who are unlikely to purchase these types of food.<br>• Government may respond by offering food subsidies / additional welfare payments. | (6) |

| Question Number | Answer | Mark |
|---|---|---|
| 9(c) | Award up to 4 marks for KAA:<br>• Definition / understanding of price elasticity of demand. (1)<br><br>• Understanding of price inelastic demand (the proportionate change in demand is less than the proportionate change in price). This may be shown by a diagram. (1)<br><br>• Food likely to be price inelastic in demand as a whole since essential good / necessity. (1)<br><br>• No substitute for food (1)<br><br>• Numerical application of price inelastic demand. (1)<br><br>• Food is price inelastic in demand as spending on it comprises relatively small proportion of total income (1)<br><br>Evaluation (2)<br>• Depends on type of food / luxury items such as caviar / eating out at restaurants may be price elastic in demand.<br>• Discussion of broad and narrow definition of food (food as a whole is price inelastic in demand).<br>• Comparison of different income groups / depends on whether a developed or developing country. | (6) |

| Question Number | Answer | Mark |
|---|---|---|
| 9(d) | Award up to 6 marks for KAA:<br><br>• Definition of minimum price (e.g. the minimum price below which the price of a good cannot fall / a floor price)(1)<br>Price | |

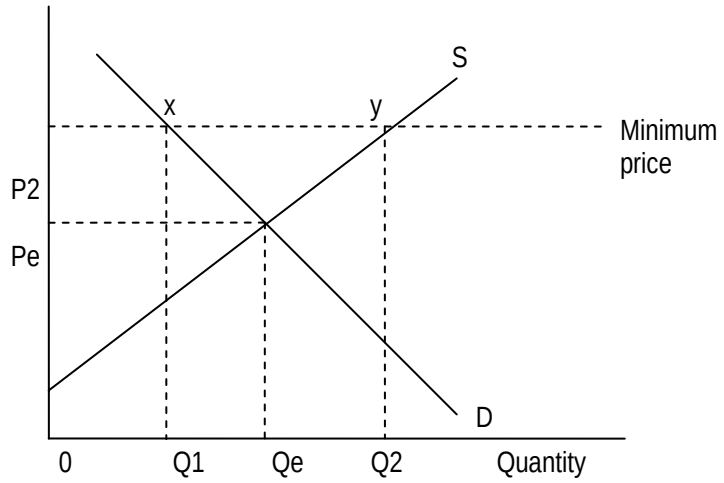



**Diagram up to 4 marks:**

- **Original equilibrium price (1)**
- **Guaranteed minimum equilibrium price (1)**
- **Identify excess supply or surplus as XY or Q1Q2(1)**
- **Area of government expenditure (Q1Q2xy) (1)**

- **Explanation of the effects of a minimum price e.g. production increases or more incentives to produce / government spending / revenue for farmers increase / demand contracts and supply extends (excess supply – unless already awarded in the diagram) / higher price in market (1+1).**
- **Consumer surplus falls / could be shown on diagram (1)**
- **Producer surplus rises / could be shown on diagram (1)**
- **Reduction in dependency on food imports / use of extract information**

**Note: If no relevant diagram, award up to 4 marks in this section.**

**Evaluation (3+3 or 2+2+2 marks)**

- **Depends on magnitude of minimum price above free market price.**
- **Minimum price might have no effect if set below free market price.**
- **Depends on price elasticities of demand & supply.**
- **Depends on how long the minimum price scheme is in operation.**
- **Impact on other countries e.g. dumping of food surpluses.**
- **Impact of higher food prices on the distribution of income.**
- **Discussion on perishability and costs of storing food surpluses.**
- **Discussion of how farmers may use their extra revenue e.g. investment.**
- **Opportunity cost to government spending on minimum price scheme.**
- **Discussion on quality of produce falling as farmers concentrate on maximising output.**
- **Discussion of government failure / misallocation of resources.**

**NB: Do not accept argument on buffer stocks, unless the focus is on the minimum price rather than the maximum price.**

**(12)**

| Question Number | Answer | Mark |
|---|---|---|
| 9(e)(i) | • Maximum of 2 marks available for private costs<br>• Definition of private costs: (1+1)<br>Costs internal to an exchange or a transaction / costs which the price mechanism take into account / costs to the consumer or producer directly for a good or service / financial cost or monetary cost to consumers or producer.<br>Identification of an example of private cost e.g. wages, raw materials, rent and purchase of machinery (1).<br><br>NB: 'cost to the individual or firm' is not enough for awarding a mark.<br><br>Maximum of 2 marks available for external costs<br>• Definition of external costs (1+1)<br>• Costs external to an exchange or transaction / costs which the price mechanism fail to take into account / negative third party effects / difference between social costs and private costs.<br>• Identification of an example of external costs e.g. pollution, congestion (1)<br>• Diagram showing private, external and social costs (1). | (4) |

| Question Number | Answer | Mark |
|---|---|---|
| 9(e)(ii) | Award up to 6 marks for KAA<br><br>NB: No marks for definitions of private costs and external costs as these have already been awarded in Q9e(i)<br><br>• Application of private costs of intensive farming / GM farming e.g. research and development costs / labour costs / raw materials / machinery costs (1+1).<br><br>• Application of external costs e.g. worse quality of food / public health issues / reduction in bio diversity / animal welfare / pesticides in rivers (1+1 marks). | |

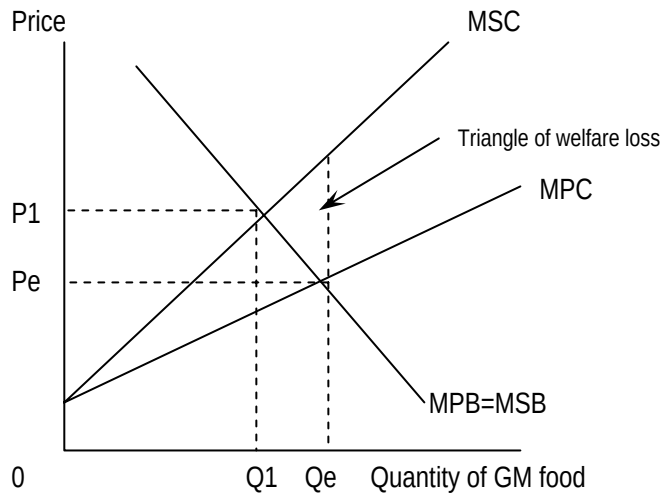



**Diagram up to 4 marks:**

- **Original MB and MPC curves (1)**
- **MSC curve (accept a parallel shift of the MSC curve) (1)**
- **Identification of market equilibrium and socially efficient quantity (1)**
- **Identification of triangle of welfare loss (1)**

**NB: 1 mark available if a demand and supply diagram is shown with supply shifting to the right, or written explanation to this effect.**

**NB: If no relevant diagram, award up to 4 out of 6 marks in this section.**

**Evaluation (3+3 or 2+2+2)**

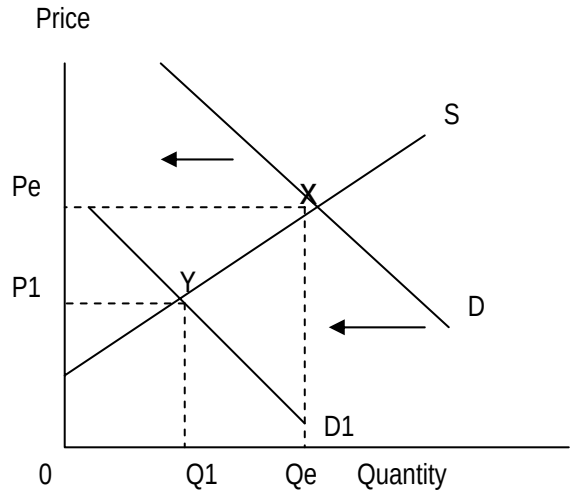
**NB: if candidates refer to both positive or negative effects then accept one side for KAA and the other for evaluation.**

- **Discussions of short run versus long run; GM farming may endanger food production in long run if smaller gene pool / intensive farming may damage soil fertility in long run.**
- **Discussion of loss of rare varieties of food products.**
- **Discussion of magnitude of intensive / GM farming. The UK is only half self-sufficient in food production and has acute shortage of farmland / perhaps GM farming has to be on a massive scale to have much impact.**
- **Discussion of the welfare loss triangle e.g. social costs outweighs social benefits for the marginal output QeQ1.**
- **Discussion of various benefits from intensive farming and genetically modified crops. These include:**
  **Increase food production and so reduce danger of shortage / help protect against climate change / lower prices / increase consumer**

**(12)**

| | | |
|---|---|---|
| | surplus and help low income groups / provide surpluses for people in developing countries / increase farm revenues and stabilise food prices / less pressure on grazing land in developing world.<br><br>• Discussion of imperfect market knowledge / uncertainty over long-term impact of GM farming.<br><br>• Discussion on whether costs outweigh benefits / cost-benefit analysis may be needed.<br><br>• Discussion of government regulations on GM farming to protect consumers.<br><br>• UK only produces 48% of its food so intensive / GM farming may be a necessary evil.<br><br>• Intensive / GM farming may not have to be undertaken if people are more careful on consuming food they buy rather than throw so much away as mentioned in extract (lines 22 & 23); one-third of all food is thrown away. | |

| Question Number | Answer | Mark |
|---|---|---|
| 10(a)(i) | Explanation of a decrease in sales up to 6 marks KAA:<br><br>• Total revenue likely to decrease (do not award for stating decrease in demand)(1)<br><br>• Data reference to Figure 1 e.g. fall in car sales from 2.4 million (2007) to 2.26 million (2008) or 2.16 million (2009). Be prepared to accept reference to falling car sales of 21.8% in the first 3 months of 2009. (1)<br><br>• This is because price decreases and quantity decreases (1)<br><br>• Definition of total revenue (total revenue gained by selling a given quantity of cars or price × quantity) (1) | |

| | | |
|---|---|---|
| |  <br>**Diagram up to 4 marks:**<br>➢ **Original demand and supply curves with equilibrium price(1)**<br>➢ **Decrease in demand curve (1)**<br>➢ **Original revenue (PeXQe0) OR (Pe x Qe)(1)**<br>➢ **New total revenue (P1YQ10) OR (P1 x Q1)(1)**<br><br>**Note: If no diagram, award up to 4 marks in this section.**<br>**Note: If the supply curve as well as demand curve is shifted, award a maximum of 2 marks.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| 10(a)(ii) | **Explanation KAA up to 4 marks**<br>• **Demand for car workers will decrease (1)**<br>• **Decrease in employment of car workers (1)**<br>• **Decrease in wage rate of car workers or pay freeze (1)**<br><br>**NB: Alternatively this may be shown by diagrammatic analysis of the labour market depicting an inward shift in the demand for labour / lower wages and employment (award 3 marks). Do not double award for both explanation and diagram.** | |

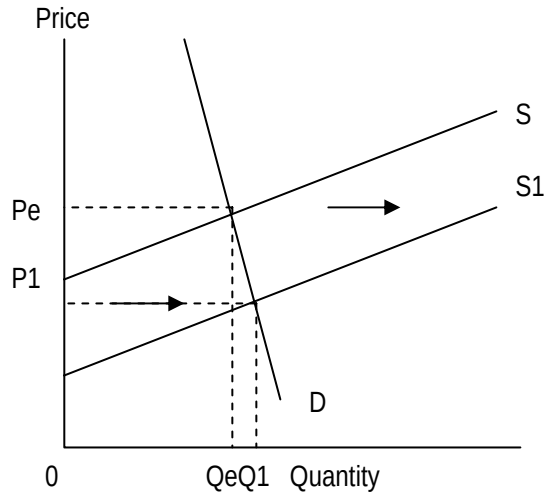
| | | |
|---|---|---|
| | NB: If two diagrams are shown – one for the car market and one for the car worker labour market which shows a decrease in demand for both (award 4 marks).<br><br>• Labour is a derived demand / demanded not for its own sake but for the goods it produces (1+1).<br><br>• Data reference e.g. Nissan announced 1200 redundancies / Toyota has halved production shifts / Honda has reduced wages / GM may close its plants (1).<br><br>• Change in working conditions e.g. shorter working week / flexible hours / sabbaticals / enforced holidays through temporary closure / underemployment (1+1).<br><br>Evaluation (2 marks)<br><br>• Magnitude of decrease in demand – very significant here. It may require retraining to provide new skills for car workers so they can move into different occupations.<br><br>• Short run and long run implications e.g. Vauxhall may be seeking to hold on to its workforce by offering sabbaticals in anticipation of an upturn in sales.<br><br>• Discussion on elasticity of demand or supply of labour.<br><br>• Accept idea of an increase in demand for second hand car sales people or car mechanics.<br><br>• Accept idea that wage rates may not fall too much due to the national minimum wage / strength of trade unions.<br><br>Government grants / loans may reduce impact of job losses. | (6) |

| Question Number | Answer | Mark |
|---|---|---|
| 10(b) | Explanation of KAA up to 6 marks<br><br>Candidates may refer to both geographical and occupational mobility / immobility of labour. | |

| | | |
|---|---|---|
| | • Explanation / understanding of geographical immobility / mobility of labour (difficulty in relocating to other regions to take available work) (1)<br><br>• Geographical mobility of labour will depend on individual e.g. age / family circumstances / knowledge of available jobs in other localities / house price differentials and rental differentials / removal costs (1+1+1).<br><br>• Data reference e.g. Magna motor vehicle plants at Luton and Ellesmere Port – areas of high unemployment and so a labour immobility problem (1).<br><br>• Explanation / understanding of occupational immobility / mobility of labour (difficulty in car workers taking available work in different occupations) (1)<br><br>• Occupational mobility may be quite low as car work is highly specialised / occupational mobility is low and so retraining courses may be required for car workers / lack of government funds available for retraining / discussion on transferable skills (1+1+1).<br><br>• Discussion on temporary plant closures – which may have little effect on mobility of labour if they reopen (1).<br><br>Use of real life example (1) | (6) |

| Question Number | Answer | Mark |
|---|---|---|
| 10(c) | Explanation KAA up to 4 marks:<br>• Definition or formula of income elasticity of demand (responsiveness of demand for a good due to a change in income). (1)<br>• Demand for new cars appear income elastic since proportionate change in demand is greater than the proportionate change in income / OR YED is greater than 1 / OR use of figures (1)<br>• Reference to the data: 1% fall in income has lead to a 21.8% fall in demand (1).<br>• Calculation of income elasticity of demand is 21.8 (1).<br>NB Do not award if answer states 21.8%<br>• Cars are a normal good (accept luxury) / they have a positive income elasticity of demand (1).<br>• Diagram depicting income elastic demand for new cars (1)<br><br>Evaluation (2)<br>• Depends on type of car e.g. luxury cars may have a different income elasticity of demand than smaller cars.<br>• Discussion of second hand cars which may be less income elastic in demand. They may even be inferior goods.<br>• YED for cars may change over time.<br>• People unlikely to purchase new car if uncertainty over future employment prospects and lack of consumer confidence (income elastic).<br>• Other factors e.g. the availability of finance might also be significant in determining changes in demand. | (6) |

| Question Number | Answer | Mark |
|---|---|---|
| 10(d) | **Explanation KAA of positive economic effects up to 6 marks (2+2+2 or 3+3):**<br><br>**NB Candidates may present either positive or negative effects of the car scrappage scheme for KAA marks. Accept presentation of the alternative view as evaluation.**<br><br>• **Benefits to motor vehicle firms include increase in sales, revenue and profits. Prevention of closure of factories.**<br><br>• **Benefits to motor vehicle scrap dealers.**<br><br>• **Benefits to motor vehicle workers include saving jobs or reducing the amount of redundancies.**<br><br>• **Benefits to consumers include cheaper prices and more consumer surplus.**<br><br>• **Benefits to government or macroeconomic arguments e.g. include less expenditure on unemployment-related benefits if redundancies reduced / possible fiscal neutral scheme as car sales bring in tax revenue.**<br><br>• **Benefits to environment shown in Figure 2 in reduced $CO_2$ emissions / less external costs.**<br><br>**Evaluation (2+2+2 or 3+3)**<br><br>**This may refer to the costs of the scheme or reasons why the positive effects are not so significant / limitations of the car scrappage scheme.**<br><br>• **Benefits not so significant since motor vehicle firms have to pay half of the grant to consumers / this could reduce profit margins and future investment.**<br><br>• **Domestic car manufacturers may not benefit much since eight out of ten cars purchased are imported / however, UK car component suppliers may benefit more.**<br><br>• **The more expensive car models are unlikely to benefit much from increased demand e.g. Jaguar and Land Rover, compared to the smaller, cheaper models of Ford Fiesta and Toyota Yaris.**<br><br>• **Limited funding of scheme (just £300 million compared to the German** | |

| | | |
|---|---|---|
| | government's £4.49 billion) / limited time span / job losses still being announced in motor vehicle industry.<br><br>• Consumers are already receiving price discounts / so these could be simply transferred to the scrappage scheme. Some consumers may have bought new cars without the scheme / danger that firms raise prices and then lower them again so no real change in car prices.<br><br>• Opportunity cost to government: taxpayers may lose out in form of higher taxes.<br><br>• There are significant CO2 emissions in the production of motor vehicles / it may be more environmentally friendly to use existing cars rather than scrap for new ones. | (12) |
| **Question Number** | **Answer** | **Mark** |
| 10(e) | Explanation KAA up to 6 marks<br>• Definition of fuel duty / indirect tax (tax on expenditure of fuel) (1)<br><br>• Explanation of diagram, e.g. decrease in motoring costs /encourage more consumption and production (1)<br><br>  <br><br><br>• Diagram (Up to 4 marks)<br>➢ Original demand & supply curve with equilibrium price and quantity (1)<br>➢ Outward shift of supply curve (1)<br>➢ New equilibrium price and quantity (1)<br>➢ Demand is price inelastic (1)<br>➢ Total expenditure on fuel is reduced (1)<br>➢ Identify the tax per unit (1)<br><br>Note: If no diagram, or one which does not <u>implicitly</u> refer to <u>fuel market</u> then award up to 4 marks in this section.<br><br>Note: If MPC, MSC and MB diagram used with tax being shown, award up to 4 marks. | |

| | | |
|---|---|---|
| | • Reference to public transport, where there may be an increase or decrease in demand (1)<br>• Fuel and cars are complementary goods / a fall in price of fuel will increase demand for cars (1+1)<br>• Benefit to the motor vehicle industry, e.g. more revenue and profits (1)<br>• Lower fuel prices may increase mobility of labour (1)<br>• Benefit to low income motorists (1)<br>• Accept macroeconomic argument, e.g. increased employment and incomes via the multiplier, impact on inflation (up to 2 marks)<br><br>Evaluation (2+2+2 or 3+3)<br><br>Candidates may refer to positive and negative effects of the fuel tax decrease for evaluation.<br><br>• Magnitude of tax decrease. Tax still comprises the majority of fuel price at the pump.<br><br>• Discussion of price elasticity of demand for fuel; it may be price inelastic and so have little impact for motorists.<br><br>• Discussion of a reduction in possibility of fuel tax protests. Less disruption to economy.<br><br>• Impact on economic recovery. It could increase investment in motoring industry / road transport industry.<br><br>• Other factors may affect the impact of falling fuel prices, e.g. availability of loans to purchase cars.<br><br>• Increase road traffic congestion. This could lead to higher transport costs in long run / increased negative externalities such as air and noise pollution.<br><br>• Impact on government finances, e.g. it may worsen since demand for fuel is price inelastic. | (12) |

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# Economics

## Advanced Subsidiary
## Unit 1: Competitive Markets: How they work and why they fail

Wednesday 13 January 2010 – Afternoon
**Time: 1 hour 30 minutes**

Paper Reference
**6EC01/01**

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** One reason for the existence of mixed economies is that

**(1)**

**A** the profit motive is always undesirable

**B** the free market economy always allocates resources efficiently

**C** competition between firms ensures consumer welfare is maximised

**D** the free market economy may lead to market failure.

Answer ☐

Explanation

**(3)**

**(Total for Question 1 = 4 marks)**

**2**

| Agricultural goods output (million units) | Manufactured goods output (million units) | |
|---|---|---|
| 0 | 90 | |
| 10 | 88 | |
| 20 | 84 | |
| 30 | 78 | |
| 40 | 70 | |
| 50 | 60 | |
| 60 | 48 | |
| 70 | 34 | |
| 80 | 18 | |
| 90 | 0 | |

A country has two economic sectors, agriculture and manufacturing. Its production possibilities are shown in the table. (You may use the last column in answering the question.)

It can be deduced that

**(1)**

**A** there is a constant opportunity cost as output changes

**B** the opportunity cost of producing manufactured goods decreases, the greater the output of manufactured goods

**C** the opportunity cost of producing agricultural goods increases, the greater the output of agricultural goods

**D** it is possible to achieve 60 million units of agricultural goods and 60 million units of manufactured goods simultaneously, given the existing technology and full employment of resources in the economy.

Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3**

| Type of flight | Price elasticity of demand |
|---|---|
| Short haul business | -0.70 |
| Short haul leisure | -1.52 |

Source: Department of Finance Canada 2008 (www.fin.gc.ca/fin-eng.html)

The table shows estimated price elasticities of demand for air travel for business and leisure customers of 'Air Canada', an airline company. It may be deduced from the data in the table that

**(1)**

**A** demand is more price elastic for business travellers than leisure travellers

**B** an increase in price for business travellers and a decrease in price for leisure travellers will increase total revenue

**C** air travel is an inferior good

**D** The cross elasticity of demand for business air travel with regard to a change in price of leisure air travel is negative.

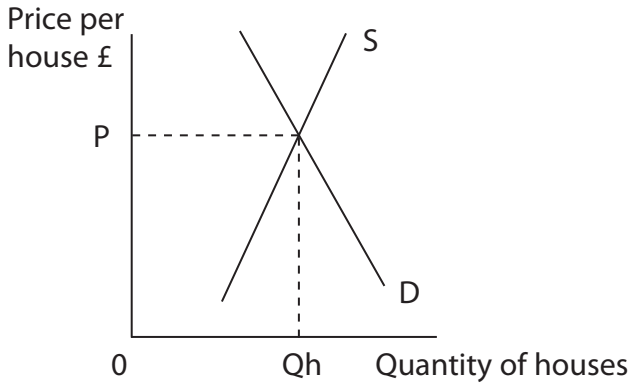
Answer ☐

Explanation

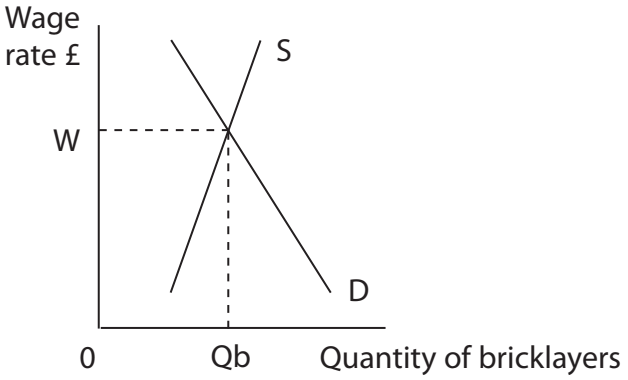
**(3)**

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

**4** Market for newly-built housing




Labour market for bricklayers




The diagrams show the market for newly-built housing and the labour market for bricklayers. New housing is a normal good. The initial price of housing is 0P and the initial wage rate for bricklayers is 0W. (You may annotate the diagrams in answering the question.)

A decrease in real incomes is likely to cause

**(1)**

**A** an increase in the price of new housing and an increase in the wage rate for bricklayers

**B** a decrease in the price of new housing and a decrease in the wage rate for bricklayers

**C** an increase in the price of new housing and a decrease in the wage rate for bricklayers

**D** a decrease in the price of new housing and an increase in the wage rate for bricklayers.

Answer ☐

Explanation

**(3)**

.....

.....

.....

.....

.....

.....

**(Total for Question 4 = 4 marks)**

**5** Which of the following forms of government intervention could correct market failure?

**(1)**

**A** Rationing of public goods

**B** Taxation of goods which yield high external benefits

**C** Banning the consumption of luxury goods

**D** Granting of subsidies to goods which yield high external benefits.

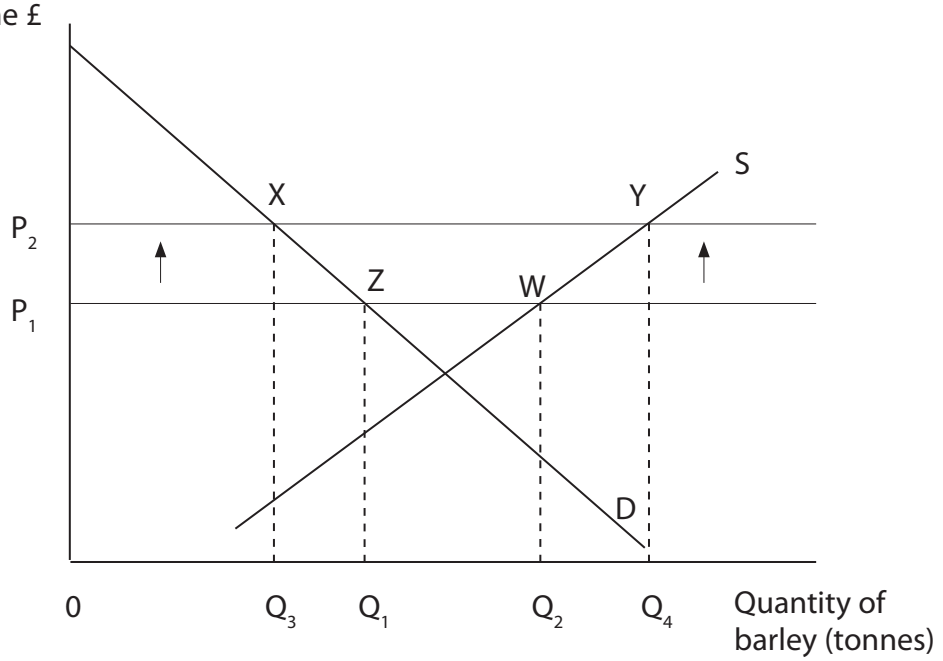
Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**

**6** Price per tonne £




The diagram shows the European Union (EU) barley market, where a minimum price scheme operates. The EU guarantees to purchase any surplus output at the minimum price. Initially the minimum price is at $0P_1$ and the EU purchases $Q_1Q_2$ of barley. If the minimum price is increased to $0P_2$ which of the following is correct?

**(1)**

**A** Producer surplus decreases

**B** Excess demand for barley increases

**C** EU spending on the minimum price scheme for barley increases

**D** Output of barley decreases.

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7** The cross elasticity of demand for tea is likely to be

**(1)**

**A** negative following a change in the price of milk

**B** positive following an increase in income since tea is an inferior good

**C** negative following a change in the price of coffee

**D** positive following a decrease in income since tea is a normal good.

Answer ☐

Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8** Which of the following is likely to be the most effective measure for increasing the geographical mobility of labour?

**(1)**

**A** A subsidy to firms that relocate to areas of high unemployment

**B** An increase in the Job Seeker's Allowance for the unemployed

**C** An increase in the stamp duty tax on buying a house

**D** Increased government provision of information on job vacancies in different areas of the UK.

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A: 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

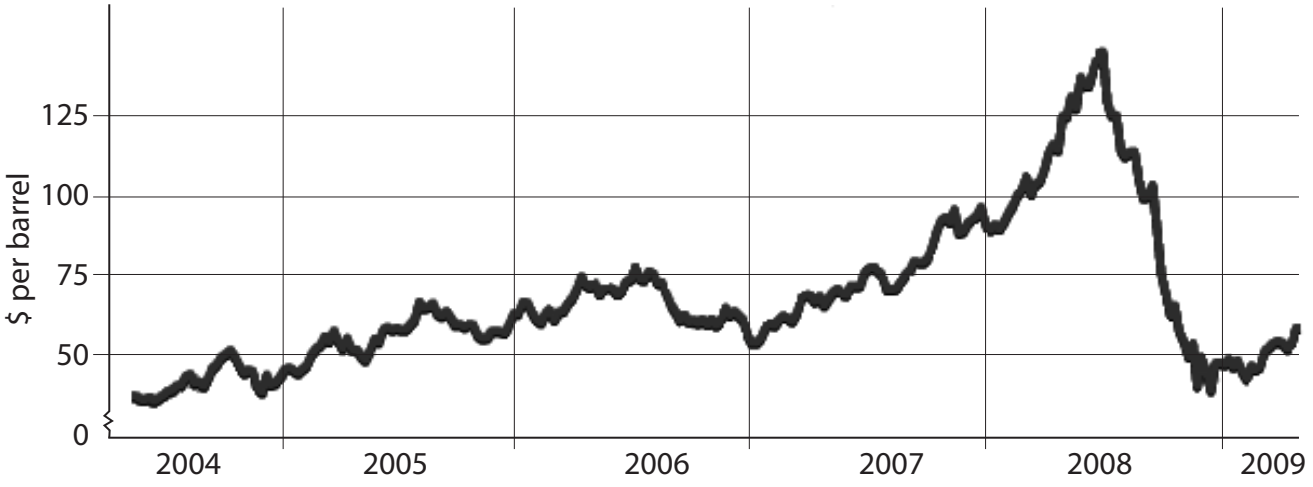
**If you answer Question 9 put a cross in this box ☒ .**

**Question 10 starts on page 22.**

**You should spend 55 minutes on this section.**

## 9 Oil prices

**Figure 1: The fluctuating price of oil, 2004–2009**




(Source: http://markets.ft.com/tearsheets/performance.asp?s=GB@IB.1)

### Extract 1 Soaring oil prices

Oil prices increased by more than 400 per cent between the start of 2004 and July 2008, from $25 to $139 a barrel, largely caused by rapid economic growth in China and speculative buying by traders intent on making quick profits. The major oil exporters were unable to respond by increasing production, due to a prolonged period of under-investment in refining capacity.

The high oil prices have led to an increase in oil exploration and investment in other regions. Many small oil fields in the North Sea that were once too small, too deep or too dangerous to explore are now being developed, but this could take many years to come on stream. Brazil and Azerbaijan have also invested heavily to raise future production.

(Source: adapted from 'Explorers find new fields to conquer', Dominic O'Connell, *Sunday Times*, 8th June 2008.)

**Extract 2 The impact of rising fuel prices on the airline industry**

There are fears that rising oil prices will worsen the global recession. Many industries are suffering, especially airlines. Hardly a week goes by without an airline company going bankrupt due to uncertainty over the costs of fuel and falling passenger demand. Douglas McNeill, of Blue Oar investments, believes that more than fifty European airlines are under threat as the industry faces its worst ever trading environment.

However, Willie Walsh, chief executive of BA, said "It's a positive thing if some of these airlines go out of business as it will take capacity out of the market. Look at Alitalia – it should not be allowed to continue in business. It is propped up by state subsidies from the Italian government".

Airlines are finding it difficult to raise fares when passenger demand is falling. Similarly, it is hard to cut costs in a safety conscious industry.

(Source: 'Final call for more than fifty airlines', David Robertson, Rachel Sylvester and Alice Thomson, *The Times*, 2nd August, 2008.)

**Extract 3 The price of petrol**

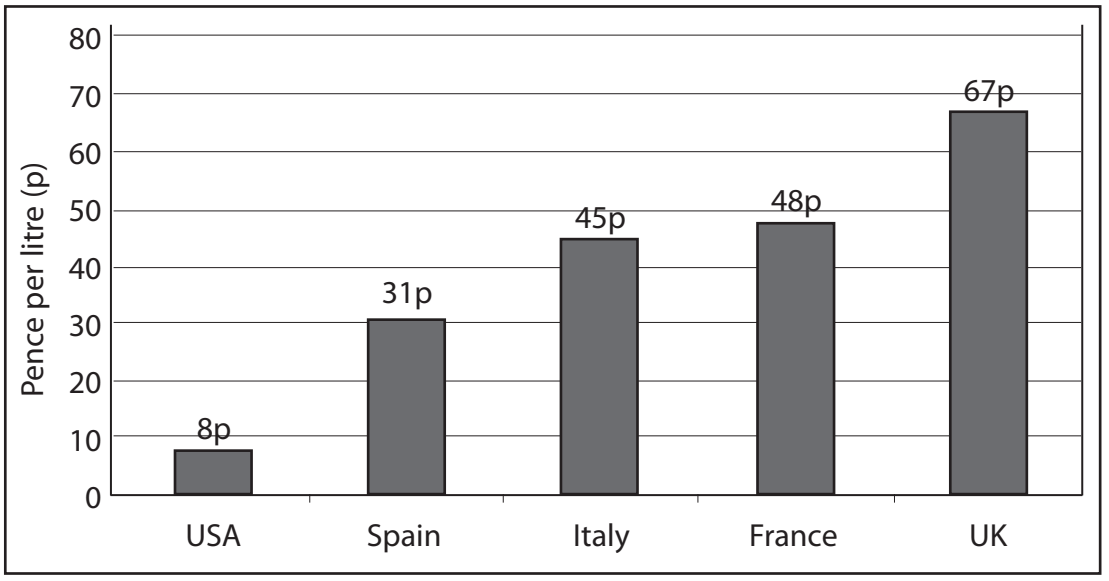
UK petrol prices increased by more than 33 per cent between the start of 2004 and July 2008, from 86 pence to 115 pence per litre – the highest in the European Union. This was due to the rising price of oil (from which petrol is derived) and higher taxes on petrol.

The surge in fuel prices led to growing protests across the UK as road haulage companies and motorists complained that the tax on petrol was too high. Many small transport firms faced ruin. The Freight Transport Association, a pressure group for road haulage firms, urged the government to cut taxes on road fuel. In response, the government has cancelled a planned tax increase of 2 pence per litre.

However, since July 2008 falling oil prices has taken some pressure off the government. Petrol prices have come back down to 89 pence per litre.

(Source: www.petrolprices.com 2009)

**Figure 2: Petrol tax for selected countries May 2008**




(Source: European Automobile Manufacturers Association 2008.)

(a) (i) With reference to Figure 1 and Extract 1, explain why oil prices increased rapidly between the start of 2004 and July 2008. Use a demand and supply diagram in your answer.

**(6)**

(a) (ii) With reference to Extract 1, discuss how the price elasticity of supply of oil might differ in the short run and long run.

**(6)**

(b) With reference to Extract 2

(i) examine the likely economic effects on airlines of rising oil prices.

**(8)**

*(ii) assess the likely economic effects of subsidies being given to Alitalia by the Italian government.

**(10)**

(c) Giving examples from the consumption of oil, explain what is meant by the term *external costs*.

**(6)**

*(d) Evaluate the likely economic effects of an increase in the tax on petrol in the UK.

**(12)**

(a) (i) With reference to Figure 1 and Extract 1, explain why oil prices increased rapidly between the start of 2004 and July 2008. Use a demand and supply diagram in your answer.

**(6)**

(a) (ii) With reference to Extract 1, discuss how the price elasticity of supply of oil might differ in the short run and long run.

**(6)**

(b) With reference to Extract 2

(i) examine the likely economic effects on airlines of rising oil prices.

**(8)**

*(ii) assess the likely economic effects of subsidies being given to Alitalia by the Italian government.

**(10)**

(c) Giving examples from the consumption of oil, explain what is meant by the term *external costs*.

**(6)**

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**Question 9 continues on the next page**

*(d) Evaluate the likely economic effects of an increase in the tax on petrol in the UK.

**(12)**

**(Total for Question 9 = 48 marks)**

**If you answer Question 10 put a cross in this box ☒ .**

## 10 Road congestion and road pricing in Great Britain

### Figure 1: Road transport statistics

| | 1996 | 2001 | 2006 |
|---|---|---|---|
| Number of licensed private cars (millions) | 21.2 | 23.9 | 26.5 |
| Private cars vehicle traffic (billion vehicle km travelled) | 359.9 | 382.8 | 402.4 |
| Public roads in use (km) | 387,000 | 391,000 | 398,000 |

### Figure 2: The cost of travel by motor vehicle, rail and bus

| Index 1996 = 100 | 1996 | 2001 | 2006 |
|---|---|---|---|
| Motoring (cars) | 100 | 114.8 | 119.0 |
| Bus fares | 100 | 120.2 | 146.6 |
| Rail fares | 100 | 116.6 | 136.3 |
| **Retail Price Index** | **100** | **111.5** | **129.7** |

### Figure 3: Household income and bus travel

| | 1996 | 2001 | 2006 |
|---|---|---|---|
| Average gross weekly household income (£ current prices) | £397 | £541 | £615 |
| Bus travel (billion vehicle km travelled) | 5.0 | 5.2 | 5.4 |

(Source of Figures 1–3: Annual Abstract of Statistics 2008.)

**Extract 1 Case for a national road pricing scheme**

A national road pricing scheme could reduce congestion on Britain's roads by fifty per cent according to a government report on 'The future of Britain's transport system' published today. The Chair of the report, Sir Rod Eddington, said charging motorists could reduce carbon emissions and save the economy up to £28 billion in wasted time delays by 2025.

It recommended that motorists pay more at peak times and in congested areas, up to £1.30 per mile. The funds raised could then be re-invested into improving the nation's road and rail network, particularly in heavily congested areas.

A national scheme would operate by installing satellite boxes in each car, with varying rates set at a 'per mile' basis for all roads depending on congestion and time of day.

Sir Rod Eddington commented: "I am in no doubt that by setting prices to reflect both the congestion and environmental costs of travel, the transport system can be used more efficiently; it will support UK competitiveness and will contribute to reduced emissions. I believe there is no attractive alternative to road pricing. Without a widespread scheme by 2015, Britain will require very significantly more road transport infrastructure".

(Source: 'Report calls for road pricing to ease congestion', by James Sturcke, *The Guardian*, 1st December, 2006.)

**Extract 2 Case against road pricing**

The government has postponed plans for a national road pricing scheme following an online petition with 1.8 million signatures objecting to it. The Minister for Transport, Ruth Kelly, stated that such a scheme raised concerns over privacy and fairness. Road pricing would affect motorists in different ways according to their income. There is also a huge cost involved and some uncertainty over the effectiveness of implementing a nationwide road pricing programme. Currently, more than a million motorists evade paying road tax.

Instead, the government favours car-sharing lanes, a tax on workplace parking and converting hard shoulders on motorways into extra lanes. According to the Department for Transport, converting hard shoulders into motorway lanes costs just £6 million per kilometre compared to £25 million per kilometre for widening schemes. A recent pilot scheme which used the hard shoulder on the M42 motorway proved to be successful.

Road pricing has not been completely abandoned. The government intends to introduce smaller schemes for selected lanes on motorways by 2015.

(Source: 'Road pricing scheme stalled', by Dan Milmo, *The Guardian*, 4th March 2008.)

(a) With reference to the data, explain **two** likely reasons for the change in the number of licensed private cars between 1996 and 2006.

**(6)**

(b) With reference to Figure 1 and other information, examine the likely effectiveness of building more roads as a means of reducing road congestion.

**(6)**

*(c) Evaluate the case for a national road pricing scheme to reduce road congestion.

**(12)**

(d) With reference to lines 8–9 of Extract 2, assess **one** alternative measure the government might undertake to reduce road congestion.

**(8)**

(e) Using the data in Figure 3, analyse whether bus travel is a normal or an inferior good.

**(6)**

*(f) Evaluate the likely benefits of an increased subsidy for bus and rail travel. Use an appropriate diagram to support your answer.

**(10)**

(a) With reference to the data, explain **two** likely reasons for the change in the number of licensed private cars between 1996 and 2006.

**(6)**

(b) With reference to Figure 1 and other information, examine the likely effectiveness of building more roads as a means of reducing road congestion.

**(6)**

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**Question 10 continues on the next page**

*(c) Evaluate the case for a national road pricing scheme to reduce road congestion.

**(12)**

(d) With reference to lines 8–9 of Extract 2, assess **one** alternative measure the government might undertake to reduce road congestion.

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**(6)**

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**(10)**

**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B: 48 MARKS**
**TOTAL FOR PAPER: 80 MARKS**

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# Mark Scheme (Results)
# January 2010

GCE

## GCE Economics (6EC01/01)

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January 2010

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**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**

**NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected)**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | **Answer D (1 mark)**<br><br>• Definition of mixed economy (e.g. resources are partly allocated by the price mechanism / market and partly by the government / state) (**1 mark**).<br><br>**OR**<br><br>• Definition of a free market economy (e.g. resources are allocated by the price mechanism / demand & supply)<br><br>**NB: Award just one mark even if both definitions are given.**<br><br>• Identification and development of a type of market failure (e.g. externalities / public goods / commodity price instability / immobility of labour / asymmetric information / unequal distribution of income / monopoly formation) (**1+1 marks**).<br><br>• Definition of market failure (e.g. price mechanism / market fails to allocate resources efficiently) (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | **Answer C (1 mark)**<br><br>• Definition of production possibility frontier (e.g. the maximum output combinations of two goods an economy can achieve when all its resources are fully and efficiently employed) (**1mark**).<br><br>• Definition of opportunity cost (e.g. value of the next best alternative foregone) (**1 mark**).<br><br>• Application to the table information to demonstrate that opportunity cost increases for agricultural goods as more is produced (at least two calculations need to be shown and this may be in the table or in the written explanation) (**2 marks**).<br><br>• Diagram of production possibility frontier, illustrating concept of increasing opportunity cost – it must be correctly labelled with agricultural and manufactured goods (concave to origin) (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | **Answer B (1 mark)**<br><br>• Definition or formula of price elasticity of demand (e.g. responsiveness of demand for a good due to a change in its price **or** %ΔQD ÷ %ΔP) (**1 mark**).<br><br>• Identification that demand is price inelastic for business travellers and price elastic for leisure travellers (**1 mark**)<br><br>• Demand is price inelastic for business travellers so an increase in price will raise total revenue (**1 mark**).<br><br>• Demand is price elastic for leisure travellers so a decrease in price will raise total revenue (**1 mark**).<br><br>• Relevant diagrammatic analysis showing how a change in price will increase total revenue (**up to 2 marks**). | **(4)** |

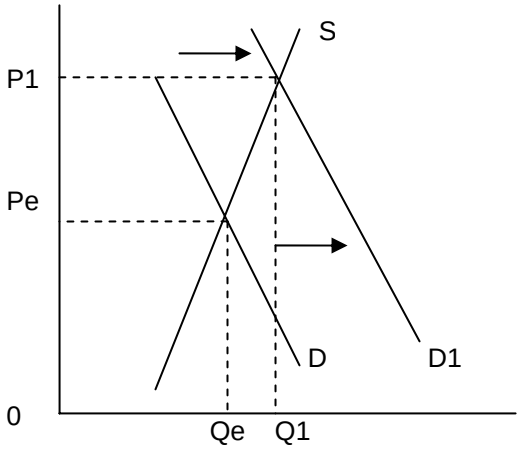
| Question Number | Answer | Mark |
|---|---|---|
| **4** | **Answer B (1 mark)**<br><br>• Definition of a normal good (e.g. as real income increases, so will demand increase for a good **OR** as real income decreases, so will demand decrease for a good) (**1 mark**)<br><br>• A fall in real income will cause a decrease in demand for new houses. This will cause price of housing to fall (**1 mark**).<br><br>• A decrease in demand for housing will cause a decrease in demand for bricklayers so wages will fall (**1 mark**).<br><br>• Labour is a derived demand – its demand is derived from the demand for the product it makes (**1 mark**).<br><br>• Application to **both** diagrams, showing an inward shift in demand for new housing and bricklayers (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | **Answer D (1 mark)**<br><br>• Definition of external benefits (e.g. positive third party effects / benefits external to an exchange / positive spillover effects / benefits from a transaction which the price mechanism ignores / difference between social benefits and private benefits) (**1mark**).<br><br>**OR**<br><br>• Definition of subsidy (grant to firms) / lower production costs (**1 mark**).<br>**NB: Award just one mark even if both definitions are given.**<br><br>• Application to goods / service which yield external benefits e.g. education and healthcare services. (**1 mark).**<br><br>• Diagrammatic analysis showing the subsidy increase in output and decrease in price (this could be shown by an MSB and MPB diagram, where the social equilibrium output is higher than the market equilibrium output) (**1 mark**).<br><br>• Also accept definition of market failure (price mechanism / market fails to allocate resources efficiently) (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6** | **Answer C (1 mark)**<br><br>• Definition of minimum price scheme (a floor price / minimum price below which price cannot fall) **or** explanation of the aim of a minimum price scheme (e.g. stabilise prices or increase producer income) (**1 mark**).<br><br>• Initial government spending on barley is Q1Q2WZ (**1 mark**).<br>• New government spending on barley is Q3Q4YX **OR** an explanation of how an increase in excess supply of barley will lead to an increase in the expenditure of the EU (**1 mark**).<br><br>• **Alternatively, the original and new areas of government spending may be annotated on the** | **(4)** |

| | | |
|---|---|---|
| | **diagram)** (**1+1 marks**). | |
| Question Number | Answer | Mark |
| **7** | **Answer A (1 mark)**<br><br>• Definition of cross elasticity of demand or formula (e.g. responsiveness in demand for one good due to a change in price of another good **or** %ΔQD good B ÷ %ΔP good A) (**1 mark**).<br><br>• Tea and milk are complementary goods / joint demand (**1 mark**).<br><br>• Application: for example, an increase in price of tea may cause a decrease in demand for milk and vice-versa. (**1 mark**).<br><br>• Diagrammatic analysis with application to tea and milk (**1 mark**).<br><br>• Tea and coffee are substitute goods since they have positive cross elasticity of demand (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **Answer D (1 mark)**<br><br>• Explanation of the geographical mobility / immobility of labour (e.g. the ability / inability of labour to move from one location to another in taking work) (**1 mark**).<br><br>• A major obstacle of geographical labour mobility is imperfect market knowledge of available jobs / asymmetric information **OR** by improving market knowledge of job vacancies, labour mobility will improve (**1 mark**).<br><br>• Examples of improving market information (for example, increase funding of Job Centres / more staffing / improve location of Job Centres / relocation grants) (**1+1marks**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)(i)** | **KAA 6 marks.**<br>• Data reference that oil prices increased from $25 to $139 per barrel / risen by more than 400% (**1 mark**)<br><br>• Correct diagram (**3 marks**)<br><br>  <br><br><br>➢ Original demand and supply, depicting equilibrium price (1)<br>➢ An increase in the demand curve (1)<br>➢ Increase in equilibrium price (1)<br><br>**NB: If candidate shifts supply curve inwards, award a maximum of 2 marks for diagram since the final equilibrium price is incorrect**<br><br>• **Reasons for increase in demand**<br>➢ Rapid economic growth in China / development of this point (**up to 2 marks**)<br>➢ Speculative demand from oil traders / development of this point (**up to 2 marks**)<br><br>• Inability of supply to respond / inelastic supply (**1 mark**).<br><br>**NB: Award a maximum of 3 marks if no diagram provided.**<br><br>**NB: Award a maximum of 5 marks if diagram is incorrect.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)(ii)** | **KAA 4 marks**<br>• Definition or formula of price elasticity of supply (e.g. responsiveness of supply of a good due to a change in its price **or** %Δ Quantity Supply ÷ %Δ Price) (**1 mark**)<br>• Short-run: supply appears price inelastic / major oil producers cannot raise production due to long period of under-investment (**up to 2 marks**)<br>• Long-run: supply appears more price elastic (less price inelastic) / the high price of oil acts as financial incentive to firms to invest more (**up to 2 marks**)<br>• **NB: If candidate just refers to supply being inelastic in the short run and elastic in the long run with no explanation, award 1 mark**<br>• Extract indicates increase in investment, for example, North Sea / Brazil /Azerbaijan (**1 mark**)<br>• Understanding of distinction between short-run and long-run in economics (at least one factor input is fixed in short run but all inputs are variable in the long run) (**1 mark**)<br><br>**Evaluation (2 marks for one factor)**<br>➢ Magnitude: major discoveries of oil may still be made, for example, in the Arctic and Antarctica, which could lead to greater price elasticity of supply in long run.<br>➢ Development of new technology to locate and extract oil.<br>➢ The fall in oil prices indicate much volatility in the oil market – oil producers are unlikely to invest in expanding capacity under such circumstances. Supply could be price inelastic.<br>➢ Oil may be price elastic from middle-east as easy to cut production when prices fall.<br>➢ Discussion on the availability of stockpiles of oil<br>➢ Oil is a finite resources and so ultimately is price | **(6)** |

| | | |
|---|---|---|
| | inelastic in supply. | |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)(i)** | **KAA 4 marks**<br>• Rising oil prices mean an increase in production costs for airline companies (**1 mark**).<br>• Airlines may raise fares / leading to a fall in quantity demanded / this can be shown in a diagram by **shifting supply inwards** (**up to 2 marks**)<br>• **NB Marks can only be awarded for the recession causing a fall in demand if it is suggested that the rise in oil prices has contributed to the recession**<br>• Profits may fall or losses made / danger of bankruptcy and exit from industry / cut costs e.g. laying off staff and redundancy costs / reduce number of flights / reduce investment into new planes / consider mergers / consider borrowing / / industrial disruption / sale of assets / impact on share prices (**two or more points up to 2 marks each**).<br>• Falling producer surplus (**1 mark**).<br>**Evaluation 4 marks (two or more evaluation points up to 2 marks each)**<br>➢ Hard to cut production costs as safety might be compromised e.g. reduction in maintenance / engineers / spare fuel carried / replacement of parts.<br>➢ Discussion on the magnitude of oil price increase of over 400% / fluctuations in oil prices.<br>➢ Fuel is only one part of production costs – need to consider it as a proportion of total costs. The airline has to pay for staff, leasing of planes, landing and navigation fees too.<br>➢ Airlines may not increase price and instead accept lower profit margins / lower dividend to shareholders / use up cash reserves from previous years of profits.<br>➢ Issue of price elasticity of demand for air fares: The extract suggests it is price elastic which means it is hard for airlines to pass on the extra costs to their customers via higher prices. | **(8)** |

| | | |
|---|---|---|
| | ➢ **NB Accept various arguments on business economics if relevant.** | |

| Question Number | | Indicative content |
|---|---|---|
| **9(b)(ii)** | | **KAA 6 marks**<br><br>➢ Definition of subsidy (a government grant to firms) (**1 mark**).<br><br>➢ Subsidy acts to reduce production costs / increase the competitiveness of Alitalia in relation to other airlines (**1+1 marks**).<br><br>➢ Diagram **or** written explanation (**up to 3 marks**).<br>(Diagram: Increase in supply curve / new equilibrium position showing lower price / subsidy area)<br>(Written explanation: lower price / increased output / benefits to Alitalia producers and consumers).<br><br>➢ Protection of employment with Alitalia / so the firm can remain in operation / prevent bankruptcy (**1+1 marks**).<br><br>**Evaluation (2+2 or 1+3 marks)**<br>➢ Danger of EU investigation into anti-competitive practices. May lead to fines and Alitalia to repay subsidies.<br><br>➢ Discussion of magnitude / duration of subsidy which determines the ability of firm to remain in production.<br><br>➢ Opportunity cost associated with government subsidy; higher taxes / less funds to spend elsewhere.<br><br>➢ Danger of retaliation by other governments to subsidise their airline firms. Perhaps some already do.<br><br>➢ Government failure: the subsidy could increase inefficiency of Alitalia in the long run and create dependency / lead to a misallocation of resources.<br><br>➢ Indirectly employment linkages with suppliers<br><br>➢ Discussion on the relevance of price elasticity of demand and total revenue<br><br>➢ It depends on how the subsidy is used: if for investment purposes then it could increase long term competitiveness / efficiency of the airline |
| Level | Mark | Descriptor |
| **Level 1** | 1-2 | Definition of subsidy / idea of increase in production. |
| **Level 2** | 3-4 | Explanation of falling prices and increasing production. |
| **Level 3** | 5-6 | Diagrammatic analysis or reference to lower production costs and efficiency. |
| **Level 4** | 7-10 | One or more evaluation points offered along with explanation of subsidies. |

| | | |
|---|---|---|
| | | |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **KAA 6 marks**<br><br>• Definition of external costs (**1+1 marks**)<br>(Costs external to an exchange / negative third party effects / negative spillover effects / costs outside a market transaction / costs the price mechanism fails to take into account / difference between social costs and private costs).<br><br>• **Identification (1+1) and development (1+1**). (These include air pollution / global warming / respiratory illnesses / acid rain / river pollution / motor vehicle use).<br><br>**NB: External costs from the consumption of oil can refer to any user of oil except oil producers.**<br><br>• Award for a diagram depicting external costs (**1 mark**) | **(6)** |

| Question Number | Indicative content |
|---|---|
| **9(d)** | **KAA 6 marks**<br>• Definition of (indirect) tax (compulsory charge on expenditure) (**1 mark**)<br>• Tax increase will increase cost of production (**1 mark**)<br><br>Diagrammatic **or** written explanation (**up to 3 marks**)<br><br>Diagrammatic explanation (decrease in the supply curve / new equilibrium price and quantity shown / tax incidence or tax area shown) (Accept parallel or pivotal shift in supply curve)<br><br>**NB: Accept MPC / MSC diagram with the addition of a tax**<br><br>Written explanation (higher price / lower output / reduce profits for producers)<br><br>• High petrol tax may reduce consumer and business confidence, increasing chance of a recession (**1 mark**)<br>• The high tax has added to inflation across economy since so many sectors rely on transport **(1 mark**)<br>• The tax may reduce external costs / protect environment / reduce C02 emissions & global warming / move towards social optimum position / internalise external costs (**1+1 marks**)<br>• More fuel protests which disrupt the economy (**1 marks**)<br>• Lower consumer surplus or producer surplus (**1 mark**)<br>• Increase in tax revenue (**1 mark**)<br>• Impact of high petrol tax on low income groups regressive tax (**1 mark**) |

**Evaluation (up to 3+3 or 2+2+2 marks)**

- Discussion of UK petrol tax rate being very high in comparison to other countries shown in Figure 3 / explicit data reference / implications for UK competitiveness.
- Discussion of the magnitude of the petrol tax increase / oil prices also falling over latter part of the period.
- Discussion of long run impact / whether the tax increase is part of an upward trend in taxation.
- Discussion of difficulties in setting tax rate to internalise external costs, reaching social optimum position (could be too high or too low).
- Motorists may reduce non-essential car journeys / use cleaner substitutes, for example, bus and trains or switch to eco-friendly vehicles / development of green transport.
- Tax revenue raised can be used to clean up environment / fund other areas of government spending such as renewable energy.
- Motorists still have the choice to drive – the tax operates with the price mechanism. It is not a regulation.
- Demand for petrol is price inelastic, which suggests many motorists are still prepared to pay the higher price for fuel.

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Definition of indirect tax / impact on price and output |
| **Level 2** | 3-4 | Explanation of one or two other economic effects |
| **Level 3** | 5-6 | Explanation of three or more economic effects |
| **Level 4** | 7-9 | One evaluation point well developed |
| **Level 5** | 10-12 | Two or more evaluation points well developed |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)** | **KAA 6 marks**<br><br>• The number of private licensed cars has increased from 21.2m to 26.5m or 25 per cent or 5.3m cars (**1 mark**).<br><br>• Accept any **two** factors:<br><br>➢ The cost of motoring has risen more slowly than bus and rail travel / they are substitutes / positive cross elasticity of demand / data use (**1+1+1 marks).**<br><br>➢ The real cost of motoring has fallen / cost of motoring has risen at a slower rate than the retail price index / data use (**1+1+1 marks**).<br><br>➢ Increase in public roads by kilometres / so may encourage more people to buy cars / data use (**1+1+1 marks**).<br><br>➢ Rise in household incomes / cars are a normal good / positive income elasticity of demand / motoring is more affordable / data use (**1+1+1 marks**)<br><br>**NB: Accept other plausible reasons, for example, increase in population, immigration and employment. Award a maximum of 2 marks for each factor and so overall there is a cap of 4 marks.** | **(6)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **Accept both views here on effectiveness of road building. Candidate should present an analysis as one way or the other as KAA (4 marks). Accept the alternative view as evaluation (2 marks).**<br><br>**If no reference to Figure 1, award maximum of 3 marks for KAA.**<br><br>Unlikely to be effective:<br>• Recent trends: Figure 1 shows that building more roads unlikely to be effective since it cannot keep pace with the increase in licensed cars or car vehicle journeys (**1 mark**)<br><br>• Use of absolute figures for example private cars rose by 5.3m whereas public roads rose by 11,000km / public roads increased by 2.9% but private car vehicle traffic increased by 11.8% or licensed cars increased by 25% over the period (**1+1 marks**).<br><br>➢ As a means of reducing congestion building more roads may involve an excessive financial cost to the government / opportunity cost (**1+1 marks**).<br><br>➢ Building more roads may encourage more road traffic until they become full (**1 mark**).<br><br>➢ Not enough space to build roads / congestion concentrated in built-up areas (**1+1 marks**).<br><br>➢ There may be greater congestion in the short run as more roads are built (**1 mark**).<br><br>➢ Difficulty in obtaining planning permission to build new roads / public protests (**1+1 marks**)<br><br>Likely to be effective:<br>➢ Road capacity increases (**1 mark**).<br><br>➢ Magnitude of increase in predicted road traffic compared to road building programme: depends on future growth of both / the Report refers to need for significant increase in road capacity if road pricing does not go ahead (**1+1 marks**).<br><br>➢ It is possible to target congestion bottlenecks and build more roads / motorways here (**1+1 marks**). | **(6)** |

| Question Number | Answer |
|---|---|
| **10(c)** | **Case for national road pricing scheme KAA 6 marks**<br><br>• Consideration of two or more points that road pricing might be effective in reducing congestion (**3+3 or 2+2+2 marks**).<br><br>• Road pricing may be effective since:<br><br>➢ Charging motorists for using the roads will increase the price and so should cause a fall in demand / the report suggests a saving of £28 billion or cut in congestion by 50% by 2025.<br><br>➢ Road space is a scarce resource / so the price mechanism should be allowed to operate to equate demand with supply. (This may be shown by diagram)<br><br>➢ Road pricing can charge motorists for the external costs such as congestion / so reach the social optimum level of motor vehicles on road.<br><br>NB Diagrammatic analysis which uses MSC, MPC and MB and showing the effects of the road price on traffic, award up to 3 marks.<br><br>➢ Road pricing can be varied according to time of day / so encouraging motorists to use at off-peak times to pay lower charge / this should reduce congestion by spreading out traffic flow.<br><br>➢ Revenue raised can be spent on reducing congestion further / by improving bus and rail transport or building around traffic bottlenecks. |

**Evaluation 6 marks (3+3 or 2+2+2 marks)**

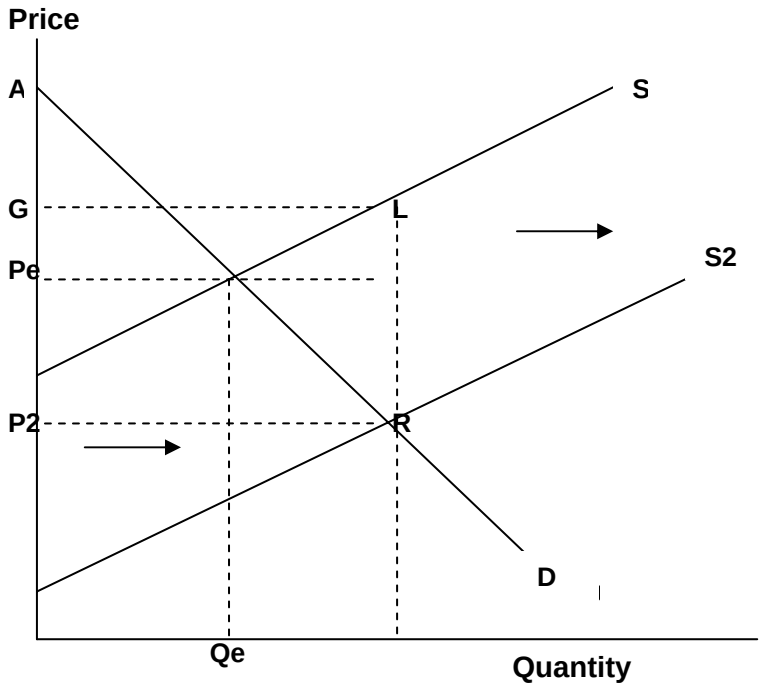
- It depends on the technology available / Extract 2 indicates more than a million motorists without road tax disc.
- The cost of implementing the scheme nationally is huge / opportunity cost / so may put off government / need financing over many years.
- It depends on the fees charged for using roads / the higher the price the more likely congestion will be reduced.
- Road pricing is extremely unpopular as indicated in Extract 2, where 1.8 million people signed petition against it / danger of protests similar to those of the fuel tax / issue of privacy / public disobedience so motorists refuse to pay.
- Issue of fairness; road pricing is a regressive tax / so hitting low income motorists hardest and might be unable to afford to drive.
- Lack of suitable alternatives such as bus and rail transport / so demand for road use might be price inelastic. Congestion might remain.
- Road pricing may lead to motorists using alternative routes which are not subject to a charge so shifting congestion elsewhere.

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Identification of one or two points but no explanation |
| **Level 2** | 3-4 | Identification and explanation of two points. |
| **Level 3** | 5-6 | Identification and explanation of three or more points. |
| **Level 4** | 7-9 | One evaluation point, for example, discussing both sides of argument. |
| **Level 5** | 10-12 | Two or more evaluation points, discussing both sides of argument. |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)** | **KAA 4 marks**<br>**Identification (1 mark) and explanation (3 marks)**<br><br>• **Car sharing**: means fewer vehicles on road as people share journeys / reduce transport costs for car sharers / less parking costs / schemes exist via internet / large companies operate scheme for their staff e.g. Boots in Nottingham.<br><br>• **Tax on workplace parking:** means higher cost of getting to work / encourage use of public transport or car sharing between employees / firms may have to raise wages to compensate**.**<br><br>• **Use of hard shoulders on motorways**: means more road space available / use at peak times / cheap way of increasing road space (£6m compared to £25m for widening road) / quick method of increasing road space / successful pilot scheme on M42.<br><br>**Evaluation 4 marks (2+2 marks)**<br><br>Car sharing lanes<br>➢ Issue of safety in sharing car with strangers<br>➢ Limited number of car sharing lanes<br>➢ Issue of convenience – only work if people have rigid work patterns / pick-up points / reliability / impact on mobility of labour.<br>➢ Needs monitoring and enforcement to ensure motorists comply<br><br>Tax on workplace parking<br>➢ Reduce mobility of labour.<br>➢ Discussion of who pays – employer or employee<br>➢ Tax evasion: difficult to monitor and implement / issue of tax for visitors who use motor vehicle<br>➢ Parking on nearby roads may cause hazards or congestion<br>➢ Renting of household drives as an alternative parking space<br><br>Use of hard shoulder<br>➢ Issue of road safety for broken down vehicles and emergency services getting to crashes<br>➢ May just encourage more motorists to use roads<br>➢ Limited to motorways and main roads<br>➢ Delays government spending on road widening and construction schemes<br>➢ Time lag on implementing scheme | **(8)** |

| | | |
|---|---|---|
| | **NB: Award marks if candidates use different measures to the three mentioned explicitly in Extract 2 on lines 8-9. However, do not award any marks for discussing road pricing / road tolls, building more roads and subsidies to bus and rail travel.**<br><br>**Measures which can be accepted for awarding marks include:**<br>➢ **higher road tax (road fund licence)**<br>➢ **higher tax on motor vehicles**<br>➢ **improving quality of alternative modes of transport**<br>➢ **higher duty on fuel**<br>➢ **public awareness campaigns on adverse effects of congestion**<br>➢ **regulation (such as permits to drive on certain sections of road or odd / even licence plates for motor vehicles)** | |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)** | **KAA 6 marks**<br><br>• Definition or formula of income elasticity of demand (**1 mark**)<br><br>• Bus travel is a normal good since as income rises so does demand for a good or service rise (**1 mark**)<br><br>• Explicit reference to data in Figure 3 (household weekly income risen from £397 to £615 and bus travel increased from 5.0 billion km to 5.4 billion km) (**1 mark**).<br><br>• A normal good has a positive income elasticity of demand (**1 mark**).<br><br>• Calculation of income elasticity of demand as 0.14 (**2 marks**) (Award 1 mark if candidate has calculated either percentage increase in income at 54.9% or percentage change in bus travel at 8%)<br><br>• Bus travel is income inelastic in demand (**1 mark**)<br><br>• Definition of inferior good (as income rises, demand for a good or service falls (**1 mark**)<br><br>• An inferior good has a negative income elasticity of demand) (**1 mark**).<br><br>• Accept diagram showing normal good (rising income and quantity demanded) (**1 mark**) | **(6)** |

| Question Number | Indicative content |
|---|---|
| **10(f)** | **KAA 6 marks**<br>• Definition of a subsidy (government grant to firms) (**1 mark**)<br>• Written explanation: subsidy should reduce price and increase quantity of rail and bus travel (**1 mark**)<br>• Subsidy acts to reduce production costs (**1 mark**)<br>• Benefits include: (**1+1+1+1 marks**)<br>➢ increase in quality of bus and rail services such as frequency, reliability and cleanliness<br>➢ increase in consumer surplus<br>➢ increase in producer surplus<br>➢ increase in employment in rail and bus travel industries<br>➢ less congestion on roads / less environmental pollution<br>➢ Help low income groups<br><br>Subsidy diagram **(up to 3 marks)**<br>➢ Shift of supply curve to the right (1)<br>➢ New equilibrium price and quantity (1)<br>➢ Subsidy area (GLRP2) (1)<br>➢ Incidence of subsidy area between consumers and producers (1)<br><br>  <br><br><br>**NB: Accept MSB, MPB and MSC diagram**<br>**NB: Award a maximum of 3 KAA marks in this section if no** |

| | | |
|---|---|---|
| | | **diagram provided**<br><br>**Evaluation (2+2 marks)**<br><br>• Discussion on magnitude of subsidy e.g. a small subsidy will have relatively little impact.<br><br>• Discussion on the time period in which subsidy may be offered e.g. a short period of time will have relatively little impact.<br><br>• Discussion on the time to implement improvements in bus and rail travel, for example, provision of additional buses and trains.<br><br>• Discussion of impact on government finances: an opportunity cost / taxes may have to rise / government spending may fall elsewhere / increase in government borrowing / impact on future generations.<br><br>• Discussion of price elasticity of demand, that is, public take-up of cheaper bus and rail travel. This could include consideration of the incidence of subsidy between producers and consumers.<br><br>• The subsidy may lead to inefficiency in bus and rail travel as firms become dependent on government funds. |
| Level | Mark | Descriptor |
| **Level 1** | 1-2 | Definition / explanation of one benefit of a subsidy |
| **Level 2** | 3-4 | Explanation of two benefits of a subsidy |
| **Level 3** | 5-6 | Diagrammatic analysis showing a subsidy |
| **Level 4** | 7-10 | One or more evaluation points offered |

| Question | Knowledge | Application | Analysis | Evaluation | Total |
|---|---|---|---|---|---|
| **Section A** | | | | | |
| **Q1** | 2 | 1 | 1 | | **4** |
| **Q2** | 2 | 1 | 1 | | **4** |
| **Q3** | 1 | 2 | 1 | | **4** |
| **Q4** | 1 | 2 | 1 | | **4** |
| **Q5** | 2 | 1 | 1 | | **4** |
| **Q6** | 2 | 1 | 1 | | **4** |
| **Q7** | 1 | 2 | 1 | | **4** |
| **Q8** | 1 | 2 | 1 | | **4** |
| **Total** | **12** | **12** | **8** | | **32** |
| | | | | | |
| **Section B** | | | | | |
| **Q9(a) (i)** | 2 | 3 | 1 | | **6** |
| **Q9 (a) (ii)** | 2 | 1 | 1 | 2 | **6** |
| **Q9 (b) (i)** | 1 | 1 | 2 | 4 | **8** |
| **Q9 (b) (ii)** | 2 | 2 | 2 | 4 | **10** |
| **Q9 (c)** | 2 | 2 | 2 | | **6** |
| **Q9 (d)** | 3 | 3 | | 6 | **12** |
| **Total** | **12** | **12** | **8** | **16** | **48** |
| | | | | | |
| **Q10 (a)** | 2 | 2 | 2 | | **6** |
| **Q10 (b)** | 2 | 2 | | 2 | **6** |
| **Q10 (c)** | 2 | 2 | 2 | 6 | **12** |
| **Q10 (d)** | 2 | 2 | | 4 | **8** |
| **Q10 (e)** | 2 | 2 | 2 | | **6** |
| **Q10 (f)** | 2 | 2 | 2 | 4 | **10** |
| **Total** | **12** | **12** | **8** | **16** | **48** |

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**Edexcel GCE**

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|---|---|
| | |

# Economics

## Advanced Subsidiary
## Markets: How they work and why they fail

| Wednesday 3 June 2009 – Afternoon<br>**Time: 1 hour 30 minutes** | Paper Reference<br>**6EC01/01** |
|---|---|

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*
- Calculators may be used.

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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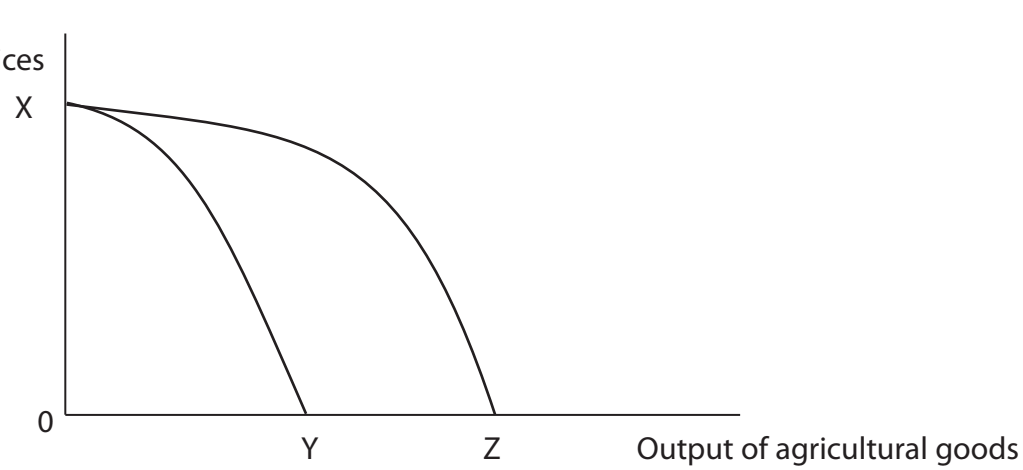
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M 3 4 4 7 9 R R A 0 1 3 2

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**Section A: Answer all the questions in this section**

**You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.**

**1** 


The diagram refers to a small Caribbean island producing agricultural goods and tourist services. Initially the economy has production possibilities shown by XY. The production possibility line then moves to XZ. This change is most likely to have been caused by:

**(1)**

**A** An increase in the demand for agricultural goods

**B** A rise in the cost of producing agricultural goods in terms of tourist services

**C** A decrease in the demand for agricultural goods

**D** Technological improvements in the agricultural industry

Answer ☐

Explanation

**(3)**

**(Total for Question 1 = 4 marks)**

**2** Which of the following is the most likely consequence of an increase in the division of labour in the production of beauty products?

**(1)**

**A** A decrease in the total revenue of beauty product manufacturers

**B** Decreased use of specialised manufacturing equipment

**C** A decrease in the cost per unit of beauty products

**D** A shift in demand for beauty products

Answer ☐

Explanation

**(3)**

**(Total for Question 2 = 4 marks)**

**3 UK Household Expenditure (Index numbers 1971 = 100)**

| Year | 1991 | 2005 | % change |
|---|---|---|---|
| Real household disposable income | 170 | 239 | +40.5% |
| Expenditure on food and soft drinks | 117 | 147 | |
| Expenditure on clothing and footwear | 187 | 460 | |

(Source: Social Trends 37, 2007 edition)

It can be deduced that between 1991 and 2005:

**(1)**

**A** Food and soft drinks were inferior goods

**B** Income elasticity of demand for food and soft drinks was greater than +1.0

**C** Food and soft drinks had a positive cross elasticity of demand with respect to clothing and footwear

**D** Income elasticity of demand for clothing and footwear was greater than that for food and soft drinks

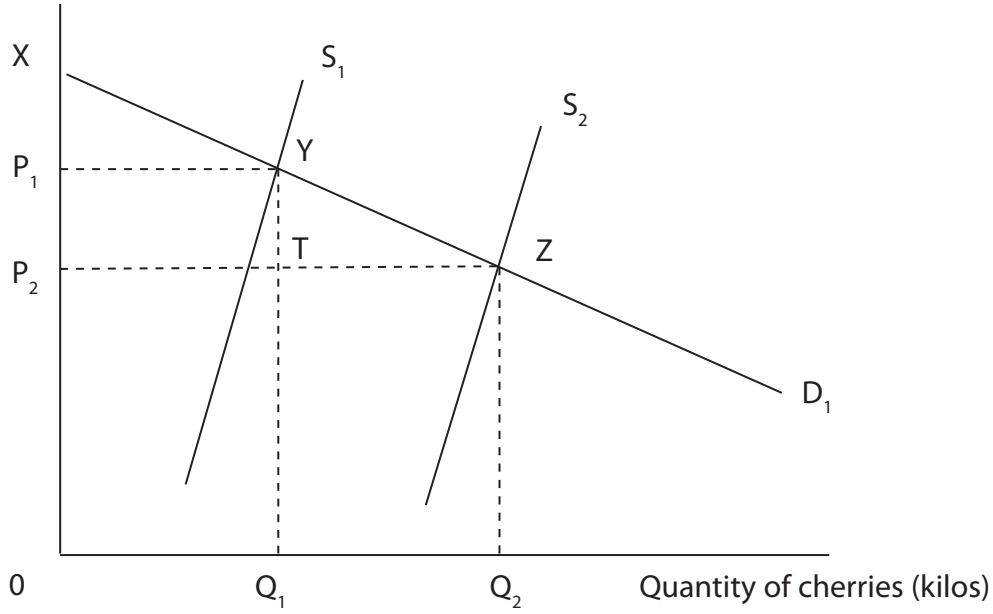
Answer ☐

Explanation

**(3)**

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

**4** Price of cherries per kilo £




The diagram shows the market for cherries. In year 1 demand is represented by $D_1$ and supply by $S_1$. In year 2, the supply of cherries increases to $S_2$. This causes consumer surplus to increase to the area:

**(1)**

**A** $XYP_1$

**B** YTZ

**C** $P_1YTP_2$

**D** $XZP_2$

Answer ☐

Explanation

**(3)**

**(Total for Question 4 = 4 marks)**

**5** With reference to the functions of the price mechanism in a free market economy, which of the following statements is true?

**(1)**

**A** Falling prices will encourage businesses to enter a market

**B** The price mechanism is used by a government to create production targets

**C** Excess supply of a good can be eliminated by allowing its price to rise

**D** The price mechanism acts as a rationing device

Answer ☐

Explanation

**(3)**

**(Total for Question 5 = 4 marks)**

**6** Which of the following goods are likely to have a positive cross elasticity of demand between them?

**(1)**

**A** Motor vehicles and rail travel

**B** Beef and leather

**C** Motor vehicles and petrol

**D** Beef and animal feed

Answer ☐

Explanation

**(3)**

**(Total for Question 6 = 4 marks)**

**7** In 2007, a packet of cigarettes priced at £5.30 included £4.13 of tax. The high level of tax on cigarettes may lead to **government failure** if:

**(1)**

**A** some people continue to purchase cigarettes

**B** the tax revenue generated from cigarettes meets the cost of treating smokers on the National Health Service

**C** cigarette smuggling is encouraged

**D** the marginal social cost exceeds the marginal private cost from cigarette smoking

Answer ☐

Explanation

**(3)**

**(Total for Question 7 = 4 marks)**

**8** The European Union Carbon Emissions Trading Scheme permitted the power, cement, steel, oil and paper industries to emit up to 1.9 billion tonnes of carbon dioxide in 2008. The purpose of the scheme is to:

**(1)**

**A** fine companies which pollute up to their allowances

**B** reduce market failure from the major carbon polluting industries

**C** tax companies which pollute up to their allowances

**D** prevent industries from buying and selling carbon permits between themselves

Answer ☐

Explanation

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A: 32 MARKS**

**Section B: Answer either Question 9 or Question 10.**

**If you answer question 9 put a cross in this box ☒ .**

**Question 10 starts on page 20.**

**You should spend 55 minutes on this section.**

## 9 The Housing Market

### Extract 1 Record fall in house prices

House prices fell by 13.4% between October 2007 and September 2008, the fastest rate for more than 50 years, according to Halifax Bank, Britain's biggest mortgage lender. The average price of a house fell from £198,533 to £172,108 over the period. Rising unemployment has reduced consumer confidence and new mortgages (house purchase loans) have become difficult to obtain. Banks have become very cautious over whom they lend to after experiencing losses from bad debtors.

Howard Archer, economist at Global Insight, predicted that the average house price will continue to fall to around £134,000 by 2010 due to concerns over the length of the economic downturn. The recent cuts in interest rates may have little impact as housing remains unaffordable for many people.

(Source: adapted from: 'House prices falling at fastest rate for 50 years, says the Halifax' by Myra Butterworth, *The Telegraph*, 10th October 2008.)

**Figure 1: Average house prices and weekly earnings by selected region in England**

| Region | Average house price | Average annual earnings (i) | Unemployment rate (%) (ii) |
|---|---|---|---|
| Yorks and Humber | £128 591 | £22 932 | 6.2 |
| North West | £137 487 | £23 411 | 6.6 |
| West Midlands | £162 861 | £23 343 | 6.4 |
| East Anglia | £169 788 | £24 342 | 4.8 |
| South East | £233 086 | £25 990 | 4.5 |
| Greater London | £269 723 | £31 861 | 7.5 |
| | | | |
| National | £172 108 | £24 888 | 5.7 |

(Source: HBOS.co.uk; ONS regional earnings survey, November 2008; Labour Force Survey (June-August 2008).)

(i) Annual gross earnings per adult in employment by region – median figures, April 2008.

(ii) Unemployment rate is the percentage of a region's workforce who are unemployed.

**Extract 2 First-time buyers priced out of housing market**

The number of first-time buyers has fallen dramatically over recent years according to Halifax Bank. It estimated that just 300,000 first-time buyers entered the housing market in 2007, down from 532,000 in 2002. Difficulties remain in obtaining mortgages and larger cash deposits are often required for these buyers, exceeding 10 per cent of the property value. First-time buyers are now more likely to be in their thirties than their twenties and to buy flats rather than terraced houses.

However, the Royal Institution of Chartered Surveyors believes that conditions for first-time buyers should improve over the next two years. Simon Rubinsohn, chief economist, said "there is huge pent-up demand from first-time buyers and should house prices continue to drop, many will be ready to enter the market."

(Source: adapted from 'First-time buyers priced out of market' by Patrick Collinson, *The Guardian*, 22nd December 2007.)

**Extract 3 Regional house prices**

Despite falling house prices, regional differentials are expected to remain. Average house prices in Greater London are much higher than for other regions. This appears to be caused by several factors, for example, variations in regional earnings and availability of land to build on. Differences in regional unemployment may also be a factor.

The government intends to permit the building of more than 1.1 million homes in the south-east by 2016, despite strong opposition from local councils and environmental groups.

(Source: adapted from 'The housing crisis hits home' by Alexander Frean & Alexandra Blair, *The Times*, 21st May 2005)

(a) With reference to Extract 1, explain **two** reasons why property prices fell by 13.4% between October 2007 and September 2008. Illustrate your answer with a supply and demand diagram.

**(7)**

(b) With reference to Extract 2, discuss the possible effects of falling house prices on first-time buyers.

**(6)**

(c) With reference to Figure 1 and Extract 3,

*(i) Examine **two** factors which might account for house price differences between any two regions.

**(12)**

(ii) Examine the likely impact of regional house price differences on the geographical mobility of labour.

**(7)**

(d) There is likely to be a major house building programme in South-East England over the next few years.

(i) Define the terms private costs and external costs.

**(4)**

*(ii) Using examples, evaluate the likely private costs and external costs of this house-building programme. Illustrate your answer with a diagram.

**(12)**

(a) With reference to Extract 1, explain **two** reasons why house prices fell by 13.4% between October 2007 and September 2008. Illustrate your answer with a supply and demand diagram.

**(7)**

(b) With reference to Extract 2, discuss the possible effects of falling house prices on first-time buyers.

**(6)**

(c) With reference to Figure 1 and Extract 3,

*(i) Examine **two** factors which might account for house price differences between any two regions.

**(12)**

(ii) Examine the likely impact of regional house price differences on the geographical mobility of labour.

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(d) There is likely to be a major house building programme in South-East England over the next few years.

(i) Define the terms private costs and external costs.

**(4)**

*(ii) Using examples, evaluate the likely private costs and external costs of this house-building programme. Illustrate your answer with a diagram.

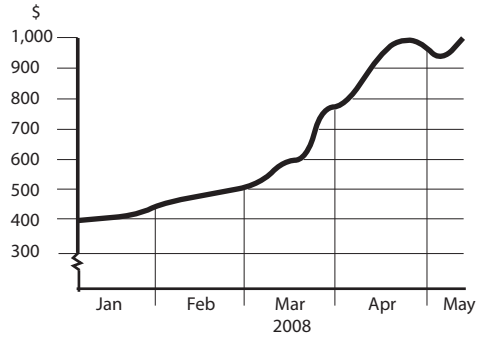
**(12)**

**(Total for Question 9 = 48 marks)**

**If you answer question 10 put a cross in this box ☒ .**

## 10 The rice market

**Figure 1: The price of rice, January to May 2008 (price per tonne US$)**




### Extract 1 Soaring rice prices

The price of rice increased dramatically from $400 to $1,000 per tonne between January and May 2008, sparking food riots and protests in many countries, ranging from Haiti in the Caribbean to Pakistan in Asia.

The soaring price of rice is due to rising incomes in developing countries such as China, and population growth in India and Indonesia; severe flooding and droughts in rice growing regions have also had an effect – the most recent example being a cyclone which devastated Myanmar in May 2008.

In Thailand, one of the world's largest rice producers, farmers have responded by raising supply. Fields which have been unused for many years are now being ploughed and rice seed planted. Farmers are even contemplating three or four harvests a year rather than the usual one or two. Many have given up jobs in towns and cities to return to the countryside and cash in from growing rice.

(Source: 'Fear of rice riots as surge in demand hits nations across the Far East' by Leo Lewis, *The Times*, 8th April 2008.)

### Extract 2 Government intervention in the rice market

Governments in several rice growing countries such as India, Vietnam, Egypt and Cambodia have imposed restrictions on rice exports in order to switch supplies to their own domestic consumers. This should make rice more affordable. However, it could cause problems in the long term since rice farmers will not benefit from the high global price that consumers in developed countries are prepared to pay. It will affect the incentive to produce.

The governments are also considering a buffer stock scheme which aims to adjust market supply between good and poor harvests and so guarantee rice at an affordable price. However, buffer stock schemes have failed spectacularly in other commodity markets, for example, coffee, cocoa and tin. These have reflected problems in funding and excess production. The millions of rice growers in Asia could make it unworkable.

(Source: 'Thai cartel idea outrages rice consumers' by Carl Mortishead, *The Times*, 3rd May 2008.)

(a) (i) With reference to Figure 1 and Extract 1, explain why the price of rice increased dramatically from $400 to $1,000 per tonne between January and May 2008. Use a supply and demand diagram in your answer.

**(8)**

(a) (ii) Outline **one** demand factor and **one** supply factor, **apart** from those mentioned in the extracts, which may have contributed to the increase in the price of rice.

**(4)**

(b) Assess whether the demand for rice is likely to be price elastic or price inelastic.

**(5)**

(c) With reference to Extract 1, discuss whether the price elasticity of the supply of rice in Thailand is likely to change over time.

**(9)**

*(d) To what extent might restrictions on rice exports lead to government failure?

**(10)**

*(e) Assess the likely success of a buffer stock scheme for stabilising the price and supply of rice. (Use an appropriate diagram in your answer.)

**(12)**

(a) (i) With reference to Extract 1 and Figure 1, explain why the price of rice increased dramatically from $400 to $1,000 per tonne between January and May 2008. Use a supply and demand diagram in your answer.

**(8)**

(a) (ii) Outline **one** demand factor and **one** supply factor, **apart** from those mentioned in the extracts, which may have contributed to the increase in the price of rice.

**(4)**

(b) Assess whether the demand for rice is likely to be price elastic or price inelastic.

**(5)**

(c) With reference to Extract 1, discuss whether the price elasticity of the supply of rice in Thailand is likely to change over time.

**(9)**

*(d) To what extent might restrictions on rice exports lead to government failure?

**(10)**

*(e) Assess the likely success of a buffer stock scheme for stabilising the price and supply of rice. (Use an appropriate diagram in your answer.)

**(12)**

**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B: 48 MARKS**
**TOTAL FOR PAPER: 80 MARKS**

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# Mark Scheme Summer 2009

GCE

## GCE Economics (8EC01)

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Summer 2009

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.


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**6EC01 Mark Scheme**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | **Answer D**<br>• Definition of a production possibility frontier (the maximum output combinations of two goods / services an economy can achieve when all its resources are fully / efficiently employed) (**1 mark**).<br><br>• An outward shift in agricultural goods indicates an increase in potential output (accept output) (**1 mark**).<br><br>• An increase in agricultural output can result from technological changes with no opportunity cost in tourist services (**1 mark**).<br><br>Application to technological improvements in agriculture e.g. new machinery, GM crops, fertilisers. ( **1+ 1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **2** | **Answer C**<br>• Definition of division of labour (production of a good is broken down into different tasks and labour allocated to each task) (**1 mark**).<br><br>• Advantages of division of labour, for example less time taken to train / repetition in one task quickly leads to greater productivity / greater variety of jobs to choose from / more efficient use of machinery (**1 + 1 mark**).<br><br>• Application to beauty industry, for example face creams, lipsticks, eye shadow, other make up (**1 mark**)<br><br>• Also award for diagram showing a decrease in average cost (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | **Answer D**<br>• Definition or formula of income elasticity of demand (responsiveness of demand for a good due to a change in income) (**1 mark**).<br>• Calculation of income elasticity of demand for clothing and footwear (+3.6 accept 3.5 or 3.7) (**1 mark**).<br>• Calculation of food and soft drinks (+0.63 accept 0.6 or 0.5) (**1 mark**).<br>• Both categories of food and soft drinks, and clothing and footwear are normal goods **(1 mark)** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **4** | **Answer D**<br>• Definition of consumer surplus (the difference in the price consumers are prepared to pay for a good and the actual market price paid) (also accept the area above the equilibrium price and below the demand curve) (**1 mark**).<br>• Original consumer surplus is XYP1 (**1 mark**).<br>• Increase in consumer surplus is P1YZP2 (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | **Answer D**<br>• Definition of free market economy (where resources are allocated by the price mechanism and there is no government intervention) (**1 mark**).<br>• Definition of the price mechanism **(1 mark)**.<br>• Application of price mechanism to rationing: eg an increase in price will cause demand to fall / diagrammatic analysis (**up to 2 marks**).<br>• Explanation of scarcity / basic economic problem **(up to 2 marks)** | **(4)** |

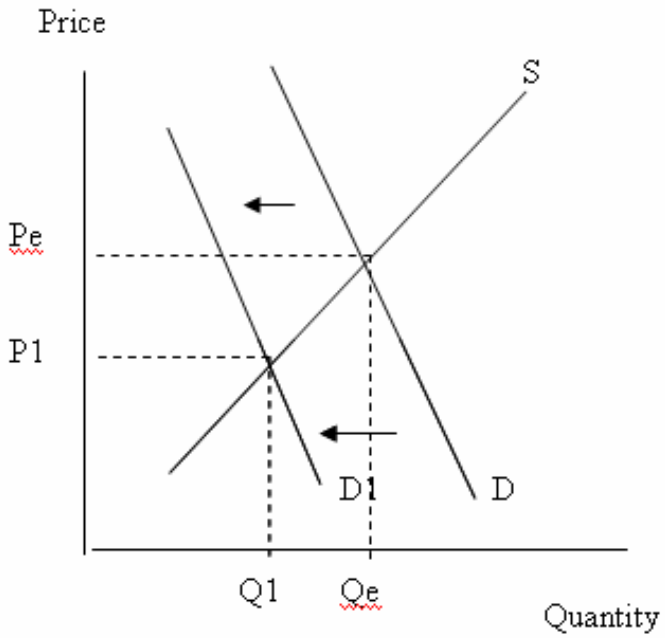

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| Question Number | Answer | Mark |
|---|---|---|
| **6** | **Answer A**<br>• Definition of cross elasticity of demand<br>• Goods which have a positive cross elasticity of demand are substitutes.<br>• Application to motor vehicles and rail travel.<br>Accept correct diagrammatic analysis depicting a positive cross elasticity of demand. | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **7** | **Answer C**<br>• Definition of government failure (government intervention leads to a net welfare loss / inefficient allocation of resources) (**1 mark**).<br>• High taxes on tobacco make it worthwhile for some people to break the law and smuggle in cheaper tobacco from abroad (**1 mark**).<br>• It is government failure since it leads to a loss of tax revenue (**1 mark**).<br>• Allow other forms of government failure, eg cheap smuggled cigarettes means people smoke more (**1 mark**) | **(4)** |


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| Question Number | Answer | Mark |
|---|---|---|
| **8** | **Answer B**<br>• Definition of market failure (the price mechanism leads to a net welfare loss / inefficient allocation of resources) (**1 mark**).<br>• Identification of the type of market failure (external costs) (**1 mark**).<br>Application: the carbon permits will restrict the amount of pollution from these industries to a certain level and so reduce extent of external costs (**1 mark**). | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | • Any two reasons for falling property prices: (**2 + 2 marks**)<br>➢ Rising unemployment / falling consumer confidence / more households unable to afford mortgage repayments or to purchase property.<br>➢ Credit crunch has meant banks are less willing to lend / due to poor debtors.<br>• Diagram showing a decrease in demand and falling house prices: (original equilibrium price and quantity; new equilibrium price and quantity; inward shift in demand curve) (**3 marks**)<br>  | **(7)** |

| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | • **Any two points developed (2 + 2 marks)**<br>➢ The fall in property prices means it is easier for first time buyers to afford to buy / take out smaller mortgages.<br>➢ If property prices continue to fall over next two years then more first-time buyers will be able to afford to get on housing ladder.<br>➢ Nature of first time buyers and type of housing sought is changing: first-time buyers are older / look for smaller, more affordable properties.<br><br>**Evaluation (2 marks for any one point)**<br>• It depends on the magnitude of house price fall – 13.4% is quite significant for one year; if this continues for the next two years then more first time buyers will be successful. However, house prices still greatly exceed average earnings so perhaps little impact.<br>• It depends on whether first-time buyers are able to obtain mortgages as banks have greatly reduced their lending. Banks lack funds to lend and are under pressure to reduce debts.<br>• The extract refers to the dramatic decrease in numbers of first time buyers / this is linked to difficulties in obtaining mortgages / higher cash deposit requirements.<br>• Some first-time buyers may become unemployed or risk becoming unemployed. This will reduce their ability to purchase property. | **(6)** |


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| Question Number | Answer | Mark |
|---|---|---|
| **9(c)(i)** | • Accept any two regions, though most candidates are likely to select Greater London / South East to compare with another region.<br><br>• Identification of two or more factors (**1 + 1 marks**)<br>➢ Differences in regional average earnings<br>➢ Differences in availability of land<br>Accept other factors, eg differences in wealth / employment rates / net migration / cultural attractions.<br>➢ Differences in regional unemployment rates.<br><br>• Development of two factors (**2 + 2 marks**)<br>➢ Higher regional earnings mean people can afford to pay more for housing – so higher demand will push up average price. Also accept view of lower average earnings in some regions.<br>➢ Availability of land in some regions is less than others; where supply very limited average house prices will be higher. Also accept view of more availability of land in some regions.<br>➢ Lower regional unemployment rates may lead to higher regional house prices / due to stronger demand in the housing markets.<br><br>**Evaluation: (3 + 3 marks or 2 + 2 + 2 marks)**<br>• Prioritise between the two reasons, eg differences in the cost of land might be the major cause.<br><br>• Regional average earnings may not account for the differences in house prices. The disparities in regional earnings are significantly less than regional house prices.<br><br>• Time factor – the major house building programme for south-east may reduce regional differences in house prices.<br><br>• Magnitude of the house price differentials.<br><br>• Geographical element could be involved. The further the region is from London the lower average house prices. This suggests access to London is major determinant of regional house price differentials. | |


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| | | |
|---|---|---|
| | • Data issues: more information required for example, regional wealth holdings / household earnings may be more appropriate than individual earnings / intra regional migration.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(12)** |

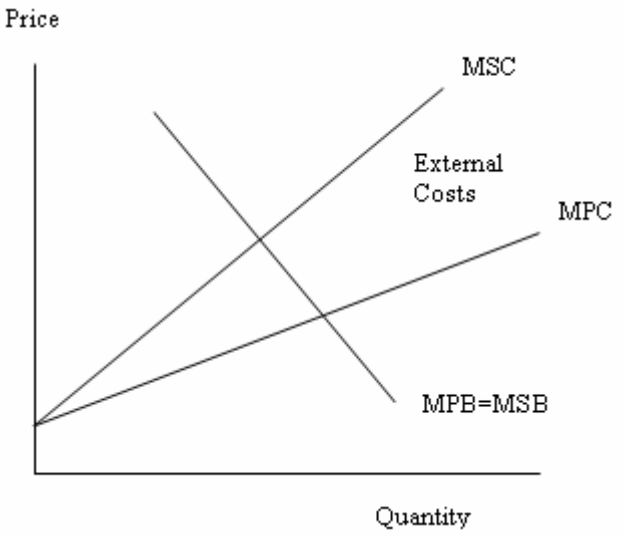
| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Identification of two factors but no explanation. |
| **Level 2** | 3-4 | Explanation of two factors but no evaluation. (Mark cap of 6 if no evaluation offered). |
| **Level 3** | 5-7 | Explanation of two factors and one evaluation point. |
| **Level 4** | 8-10 | Convincing explanation of two factors and two or more evaluation points offered. |

| Question Number | Answer | Mark |
|---|---|---|
| **9(c)(ii)** | • Understanding of geographical mobility of labour, eg the ability of labour to move from one region to another without obstacles (**1 mark**).<br><br>• People in high house price regions are likely to have more geographical mobility. They will find it relatively easier to move to lower price regions. (**1 mark**).<br><br>• People in low house price regions are likely to have less geographical mobility. They will find it relatively harder to move to higher price regions. (**1 mark**).<br><br>• Explanation such as labour shortages likely to arise in Greater London / South-East since people unable to afford to buy or obtain mortgage (**1 + 1 marks**).<br><br>• Labour can rent property rather than buy – as long as rent not too expensive. (**1 mark**)<br><br>**Evaluation (2 marks for one or more factors).**<br>• Magnitude: regional house price disparities are huge and people outside of the Greater London / South–East will have great difficulty in purchasing a house within this region.<br><br>• Labour mobility could increase due to immigration from Eastern Europe –despite high house prices in some regions.<br><br>• Labour may still be able move into Greater London / South-East if accept smaller property.<br><br>• Labour moving into Greater London / South-East are likely to be on higher earnings, so may be able to afford more expensive property.<br><br>• Labour might be able to commute into Greater London / South-East.<br><br>• Labour mobility not so significant since many people work from home due to growth of Information Technology sector. | **(7)** |


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| Question Number | Answer | Mark |
|---|---|---|
| **9(d)(i)** | • Definition of private costs: (cost internal to an exchange / cost which the price mechanism takes into account / a direct cost to the producer or consumer) (**1 + 1 marks**).<br><br>• Definition of external cost: (cost external to an exchange / negative third party effect / spillover from production or consumption / cost which the price mechanism fails to take into account / difference between private cost and social cost) (**1 + 1 marks**). | **(4)** |

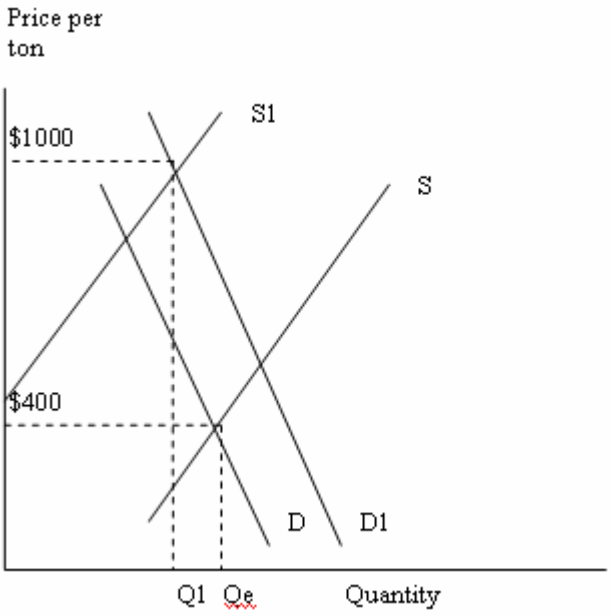

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| Question Number | Answer | Mark |
|---|---|---|
| **9(d)(ii)** | • An example of private costs from house building and development (labour / raw materials / machinery / land purchase / fuel / insurance / security) (**1 + 1 marks**).<br><br>• An example of external costs from house building and development (scenic pollution / noise pollution / air pollution from the machinery / damage to wildlife / falling property prices in nearby villages) (**1+1 marks**).<br><br>• Relevant diagram depicting marginal private cost and marginal social cost curves) (**2 marks**).<br><br>  <br><br><br>**Evaluation (3 + 3 or 2 + 2 + 2 marks)**<br>• Discussion of whether the house building programme is a market or government failure. Issue of internalising the external costs to reduce welfare loss.<br>• Discussion of magnitude of house building programme: more than 1.1 million homes in South-East. This is very ambitious.<br><br>• Time factor: 2016 means a relatively short time to construct so many homes. Will quality suffer?<br><br>• Size of external costs will depend on various factors, eg planning regulations, quality of new builds, size of new houses, environmental awareness of housing companies. | |

| | | |
|---|---|---|
| | • Credit crunch could mean the target for house building will not be met. House building companies face problems in raising finance / potential house buyers face problems raising finance.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-4 | Examples of private costs and external costs of a major house building programme. |
| **Level 2** | 5-6 | Examples and relevant diagrammatic analysis applied to house building programme. No evaluation. (Mark cap of 6 if no evaluation offered). |
| **Level 3** | 7-9 | Examples and relevant diagrammatic analysis; one evaluation point offered. |
| **Level 4** | 10-12 | Convincing examples and diagrammatic analysis; two or more evaluation points offered. |


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| Question Number | Answer | Mark |
|---|---|---|
| **10(a)(i)** | • Identification and explanation of increase in demand: rising incomes in developing countries such as China / population growth in India and Indonesia (**1 + 1 marks**).<br><br>• Identification and explanation of decrease in supply: severe floods and drought in rice growing regions (**1 + 1 marks**).<br><br>• Diagrammatic analysis which shows:<br>➢ an increase in the demand curve (**1 mark**).<br>➢ a decrease in the supply curve (**1 mark**).<br>➢ original equilibrium price and quantity (**1 mark**).<br>➢ New final equilibrium price and quantity (**1 mark**).<br>  | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)(ii)** | • Identification and explanation (**1 + 1 marks**)<br>➢ Demand factors include: change in tastes / rise in price of substitutes such as maize / fall in price of complements such as vegetables and fish / cut in income taxation leading to increase in disposable income.<br><br>• Identification and explanation (**1 + 1 marks**)<br>➢ Supply factors include: deterioration in quality of soil for rice growing / decrease in supply of agricultural land due to urbanisation / withdrawal of government subsidies to rice growers. | **(4)** |


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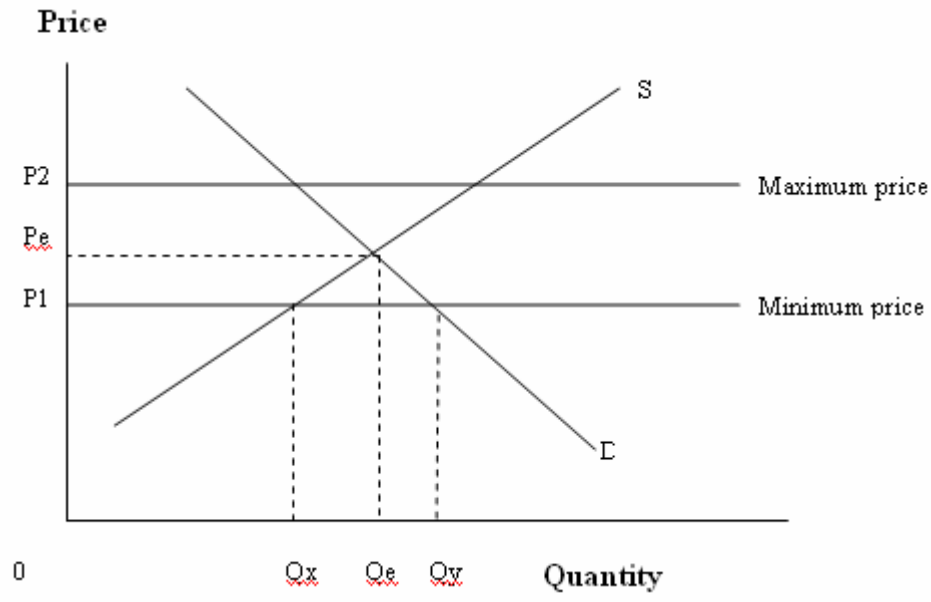
| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | • Definition or formula of price elasticity of demand (**1 mark**)<br><br>• Demand is likely to be price inelastic / it is an essential good (**1 + 1 marks**)<br><br>**Evaluation (up to 2 marks for either point)**<br>• Significance of price inelastic demand, for example, Extract 1 refers to food riots following price increase.<br><br>• No close substitutes exist for rice in many developing countries. | **(5)** |


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| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | • Definition or formula of price elasticity of supply (**1 mark**)<br>• Supply may be inelastic in the short run / due to time taken to grow (**1 mark**).<br>• Supply is relatively price elastic in the long run / as farmers give up their jobs in towns and cities and return to work the fields (**1 + 1 marks**).<br>• Diagram showing how price elasticity of supply might change over time (**1 mark**).<br>• Understanding that in the short run, at least one factor input is fixed in quantity whereas in the long run all factor inputs are variable (**1 mark**).<br><br>**Evaluation (2 + 2 marks)**<br>• Supply could be relatively elastic in the short run too since up to four harvests of rice can be planted each year.<br><br>• Discussion on the availability of land for growing rice / could switch land use from other types of crops to rice production / finite nature of land.<br><br>• Discussion on the mobility of factor inputs, for example, growing rice requires limited skills so plentiful supply of labour.<br><br>• Discussion on level of spare capacity in the economy.<br><br>• Discussion on the quality of farmland after storms, flooding and drought. This could make supply less elastic.<br><br>• Discussion on how long the price of rice will remain high – perhaps rice prices could fall dramatically over next few years if supply increases worldwide. | **(9)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(d)** | • Definition / understanding of government failure (government intervention in a market which leads to a net welfare loss / inefficient allocation of resources) (**1 + 1 marks**).<br><br>• Government intervention takes the form of restricting exports / which mean producers may switch supplies to domestic markets / reducing price for domestic consumers (**1 + 1 + 1 marks**),<br><br>• Government failure will occur if farmers lose incentive to grow rice for domestic market due to low price (**1 mark**). Development of this point, for example, farmers have less revenue to re-invest into rice production / farming commodities suffer a fall in incomes (**1 + 1 marks**).<br><br>**Evaluation (2 + 2 marks)**<br>• Magnitude of restriction on exports. The greater the restrictions the greater the effect on domestic farmers. The policy could backfire on the governments since there could still be rice shortages.<br><br>• Time period in which restrictions on exports of rice may occur – over a short period there may be little effect. Over a long period farmers may exit the market / suffer bankruptcy.<br><br>• Discussion of other effects, for example, a worsening in the Balance of Trade for rice exporting countries / negative multiplier effects / emergence of hidden market for exporting rice.<br><br>• Discussion of view that it is not a government failure since it should reduce food shortage / reduce food prices in domestic market. It depends on the response of rice farmers.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately | **(10)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Definition of government failure. No development. |
| **Level 2** | 3-4 | Explanation of why government failure – lower domestic price or rice may lead to lower production and revenue. (Mark cap of 6 if no evaluation). |
| **Level 3** | 5-7 | Explanation of why government failure and one evaluation point offered. |
| **Level 4** | 8-10 | Convincing explanation and two or more evaluation points. |

| Question Number | Answer | Mark |
|---|---|---|
| **10(e)** | • Correct diagram(s) (**up to 4 marks**) (accept variation which shows one target price).<br>  <br><br>• Explanation of how buffer stock schemes work (**up to 3 marks for any one point**).<br>➢ An organisation intervenes in the market by holding stocks of rice; it will buy or sell rice to stabilise price / producer revenue.<br>➢ Reference to output less than Qx or more than Qy and how this causes intervention through the buffer stock scheme.<br>➢ Stocks released on to market if supply is less than Qx / stocks added to if supply is greater than Qy.<br>**Evaluation (3 + 3 or 2 + 2 + 2 marks)**<br>• The scheme is unlikely to be successful since the extract refers to failure of previous buffer stock schemes.<br>➢ It requires spare stocks to cope with shortages – as in the current situation, otherwise the scheme will be unable to hold price down within the target range. The long term trend looks bleak as prices are likely to remain high.<br>➢ Rice producers may be unwilling to participate in a scheme that would reduce rice prices.<br>➢ It requires major rice producer countries to participate – otherwise risk being undersold. There is a danger of cheating among producers too. | |

| | | |
|---|---|---|
| | ➢ There are millions of rice farmers across south east Asia and so it will be very difficult to co-ordinate and manage the scheme.<br><br>➢ Require funds to purchase stocks or support farmers in time of surplus. There are also storage costs of the stockpiles. These funds may not be available.<br><br>➢ Danger of growth of substitute foods such as maize, wheat and barley.<br><br>The scheme could be successful:<br><br>➢ Rice can be stored for a relatively long time – as long as kept cool and dry. This enables the holding of stockpiles.<br><br>➢ It might work in the short term if producers and government are seeking price stability. Over the long term there is more pressure on the scheme to breakdown.<br><br>**Quality of written communication skills will be assessed in this question based on the candidate's ability:**<br>• To present an argument and conclude on the basis of that argument.<br>• To organise information clearly and coherently.<br>• To use economics vocabulary appropriately.<br>• To use grammar, spelling and punctuation appropriately. | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Limited explanation of buffer stock scheme. |
| **Level 2** | 1-4 | Correct diagram and explanation of buffer stock scheme. (Mark cap of 6 if no evaluation offered). |
| **Level 3** | 5-7 | Correct diagram and explanation of buffer stock scheme and one evaluation point offered. |
| **Level 4** | 8-10 | Convincing diagram, and explanation of buffer stock scheme with two or more evaluation points |

Write your name here

| Surname | Other names |
|---|---|
| | |

Centre Number | Candidate Number

# Edexcel GCE

# Economics

## Advanced Subsidiary

### Unit 1: Competitive Markets – How They Work and Why They Fail

| Friday 16 January 2009 – Morning<br>**Time: 1 hour 30 minutes** | Paper Reference<br>**6EC01/01** |
|---|---|

**You do not need any other materials.**

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions in Section A and **one** question from Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care with your spelling, punctuation and grammar, as well as the clarity of expression, on these questions.*
- Candidates may use a calculator.

## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

*Turn over* ▶

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**SECTION A**

**Answer ALL questions in this section.**

**You are advised to spend 35 minutes on this section.**
**Use the data to support your answers where relevant.**
**You are encouraged to annotate and include diagrams where appropriate.**

**1** **Statement 1:** The London Congestion Charge on motor vehicles has reduced air pollution in the city.

**Statement 2:** The plan to introduce a higher congestion charge for motor vehicles with a large engine is unfair.

Which of the following best describes the two statements above?

**A** Statement 1 is positive and statement 2 is normative.

**B** Both statements are normative.

**C** Statement 1 is normative and statement 2 is positive.

**D** Both statements are positive.

(a) **Answer** ☐ **(1)**

(b) **Explanation**

**(3)**

**(Total for Question 1 = 4 marks)**



N 3 4 4 1 3 A 0 2 2 8

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**2** One function of the price mechanism is to:

**A** eliminate surpluses of a good by allowing the market price to rise.

**B** encourage government intervention to reduce inequality in the distribution of income.

**C** signal changes in consumer demand for a good to producers.

**D** maintain price stability.

(a) **Answer** ☐

**(1)**

(b) **Explanation**

**(3)**

**(Total for Question 2 = 4 marks)**

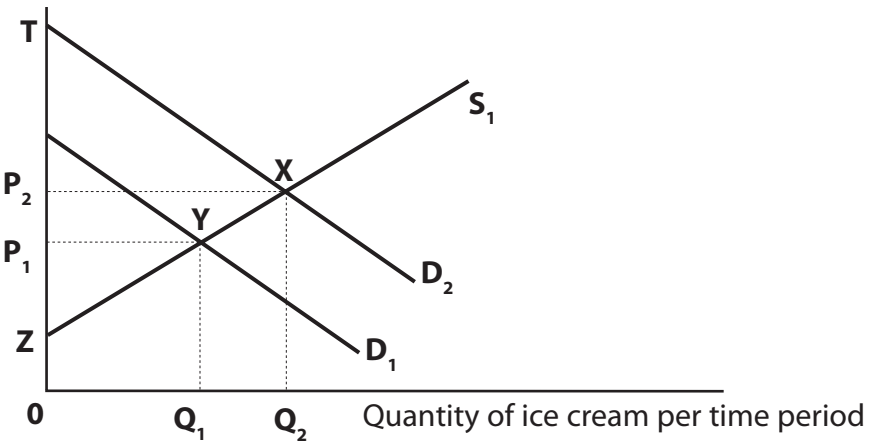






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**3** Price of ice cream




The diagram shows the market for ice cream. In the winter demand is represented by $D_1$ and supply by $S_1$, with the equilibrium price at $0P_1$. In the summer demand increases to $D_2$, raising price to $0P_2$ and causing a gain in producer surplus equal to the area:

**A** $P_2XT$.

**B** $P_1P_2XY$.

**C** $P_2XQ_20$.

**D** $P_1YZ$.

(a) **Answer** ☐ **(1)**

(b) **Explanation** **(3)**

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



N 3 4 4 1 3 A 0 4 2 8

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**4** A mobile phone company has 2 million customers for a package of services. Each customer pays a monthly fee of £25. The company conducts market research and estimates that price elasticity of demand for this package is –2.

If the company reduces monthly fees by £5, the change in total revenue is likely to be:

**A** + £6 million.

**B** – £3 million.

**C** – £6 million.

**D** + £3 million.

(a) **Answer** ____ **(1)**

(b) **Explanation** **(3)**

**(Total for Question 2 = 4 marks)**



N 3 4 4 1 3 A 0 5 2 8



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**5** Estimates of income elasticity of demand for selected soft drinks for the period 2001 – 2006:

| Soft drink | Income elasticity of demand |
|---|---|
| Fizzy drinks | - 0.24 |
| Fruit drinks | + 0.16 |
| Bottled water | + 1.05 |

(Source: Nielsen/Britvic 2007)

From the data in the table it may be deduced that:

**A** An increase in consumer income will lead to a more than proportionate increase in demand for fruit drinks.

**B** A decrease in consumer income will cause a fall in the demand for all of the drinks.

**C** An increase in consumer income will lead to a decrease in demand for fizzy drinks.

**D** A decrease in consumer income will lead to a less than proportionate decrease in demand for bottled water.

(a) **Answer** ☐ **(1)**

(b) **Explanation** **(3)**

**(Total for Question 5 = 4 marks)**



N 3 4 4 1 3 A 0 6 2 8

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**6** Which of the following statements about public goods is true?

**A** They are only provided by the price mechanism.

**B** They involve **no** opportunity cost in their provision.

**C** They are also known as '*free goods*'.

**D** They are characterised by the free rider problem.

(a) **Answer** ☐

**(1)**

(b) **Explanation**

**(3)**

**(Total for Question 6 = 4 marks)**

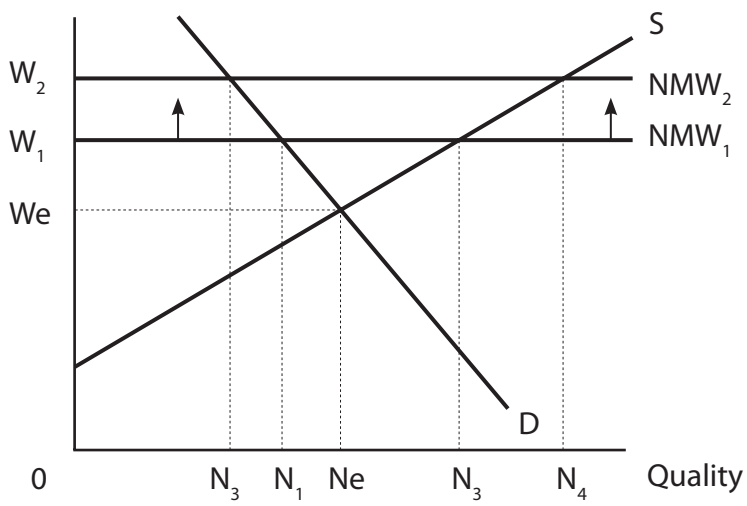


N 3 4 4 1 3 A 0 7 2 8



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**7** Hourly Wage Rate (£)




The diagram shows the labour market for unskilled fruit pickers in East Anglia. An increase in the national minimum wage (NMW) from $0W_1$ to $0W_2$ is likely to:

**A** increase unemployment amongst fruit pickers.

**B** cause an outward shift in the supply curve for fruit.

**C** increase employment amongst fruit pickers.

**D** increase the shortage of fruit pickers.

(a) **Answer** ☐

**(1)**

(b) **Explanation**

**(3)**

**(Total for Question 7 = 4 marks)**



N 3 4 4 1 3 A 0 8 2 8

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**8** Dentists working in a market economy may undertake non-essential dental work on patients. A likely explanation for this is:

**A** dental care is a public good

**B** the existence of asymmetric information

**C** significant external benefits result from dental care

**D** there is a shortage of dentists

(a) **Answer** ☐

**(1)**

(b) **Explanation**

**(3)**

**(Total for Question 8 = 4 marks)**

**TOTAL FOR SECTION A = 32 MARKS**



N 3 4 4 1 3 A 0 9 2 8



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**SECTION B**

**Answer EITHER Question 9 OR Question 10.**

**Write your answers in the spaces provided.**

**Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.**

**You are advised to spend 55 minutes on this question.**

## 9 Tuition fees in higher education

**Figure 1: World university rankings in academic research: top 10**

| University | Country | World ranking |
|---|---|---|
| Harvard | US | 1 |
| MIT | US | 2 |
| Cambridge | UK | 3 |
| Oxford | UK | 4 |
| Stanford | US | 5 |
| Berkeley, California | US | 6 |
| Yale | US | 7 |
| California IT | US | 8 |
| Princeton | US | 9 |
| Ecole Polytechnique | France | 10 |

(Source: *Times* Higher Educational supplement, 4th February 2007)

**Figure 2: Number of applications to higher education in UK 2003–2008**

| Year | Number of applications |
|---|---|
| 2003 | 476,467 |
| 2004 | 486,028 |
| 2005 | 522,155 |
| 2006 | 506,304 |
| 2007 | 534,495 |
| 2008 | 540,108 |

(Source: www.UCAS/statistics)





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**Extract One The case for increasing tuition fees in higher education**

University can give you a great start in life. You are more likely to be employed. You will earn, on average, well over £160,000 more over a lifetime than non-graduates with 'A' Levels, and 96% of students agree it is a worthwhile experience. Increased government investment in higher education means many more students now attend university than ten years ago. The UK has two universities ranked in the world's Top 10 for academic research and twenty-nine in the Top 200, according to the *Times* Higher Education survey. However, the US is in a league of its own, dominating research.

The expansion of higher education involves an opportunity cost to both the government and students. The UK government has increased its university tuition funding to £4,300 per student and also raised the student contribution from £1,175 to £3,000 per year. This means universities receive £7,300 in tuition fees for each student. But this figure is still well below the £11,500 average per student that American universities receive.

UK students do not have to finance tuition fees before or during the course since they can take out a loan at a rate of interest equal to the rate of inflation. Repayments only begin once they have finished studying, and are earning over £15,000 a year. For those from low-income families, there are grants worth up to £2,700 per year. Higher education can help reduce inequality.

Further increases in student contributions to tuition fees do more good than harm. It will encourage students to take their studies more seriously, and universities will be able to improve quality, innovation and choice in their education provision.

(Source: Adapted from 'Route to a secure future' by Bill Rammell, *The Guardian*, 4th September 2006 and 'The greater good is not served by market forces', Roger Brown, *The Guardian*, 11th December 2007.)

**Extract Two The case against increasing tuition fees in higher education**

The increase in tuition fees from £1,175 in 2005 to £3,000 in 2006 caused a 3% drop in applications for higher education. The huge rise in fees discouraged some young people, especially from low income families. It also undermined the government target of achieving 50% of young people in higher education by 2010.

According to a survey of university vice-chancellors, the student contribution to tuition fees will have to rise to £6,000 a year or more by 2010. Annual tuition fees are capped at £3,000 until then. The cost to the government of subsidising student loans and writing off unpaid debts has risen to nearly £1 billion a year. A highly qualified graduate workforce attracts more investment and generates more production and tax revenue for the economy. In this way, graduates already pay for their higher education.

(Source: Adapted from 'Fees trigger drop in university applications', by Donald Macleod, *The Guardian*, 10th February 2006)

**If you answer Question 9 put a cross in this box ☒ .**

(a) Using examples, explain what is meant by 'the expansion of higher education involves an opportunity cost to both the government and students'. (Extract 1, lines 8 and 9).

**(7)**

(b) Examine the likely impact on the production possibility frontier for the economy of 'increased government investment in higher education' (Extract 1, lines 3 and 4). Illustrate your answer with an appropriate diagram.

**(8)**

*(c) Apart from a shift in the production possibility frontier, examine **two** likely external benefits of higher education. Illustrate your answer with an appropriate diagram.

**(12)**

(d) (i) With reference to the first paragraph of Extract 2, calculate the percentage change in tuition fees between 2005 and 2006.

**(2)**

(ii) With reference to Figure 2 and Extract 2, evaluate the likely impact of an increase in tuition fees on applications to higher education.

**(7)**

*(e) To what extent will 'further increases in student contributions to tuition fees do more good than harm' (Extract 1, line 18) to students and universities?

**(12)**





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(a) Using examples, explain what is meant by 'the expansion of higher education involves an opportunity cost to both the government and students'. (Extract 1, lines 8 and 9).

**(7)**







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(b) Examine the likely impact on the production possibility frontier for the economy of 'increased government investment in higher education' (Extract 1, lines 3 and 4). Illustrate your answer with an appropriate diagram.

**(8)**



N 3 4 4 1 3 A 0 1 4 2 8

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*(c) Apart from a shift in the production possibility frontier, examine **two** likely external benefits of higher education. Illustrate your answer with an appropriate diagram.

**(12)**







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(d) (i) With reference to the first paragraph of Extract 2, calculate the percentage change in tuition fees between 2005 and 2006.

**(2)**



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(ii) With reference to Figure 2 and Extract 2, evaluate the likely impact of an increase in tuition fees on applications to higher education.

**(7)**







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*(e) To what extent will 'further increases in student contributions to tuition fees do more good than harm' (Extract 1, line 18) to students and universities?

**(12)**

**(Total for Question 9 = 48 marks)**

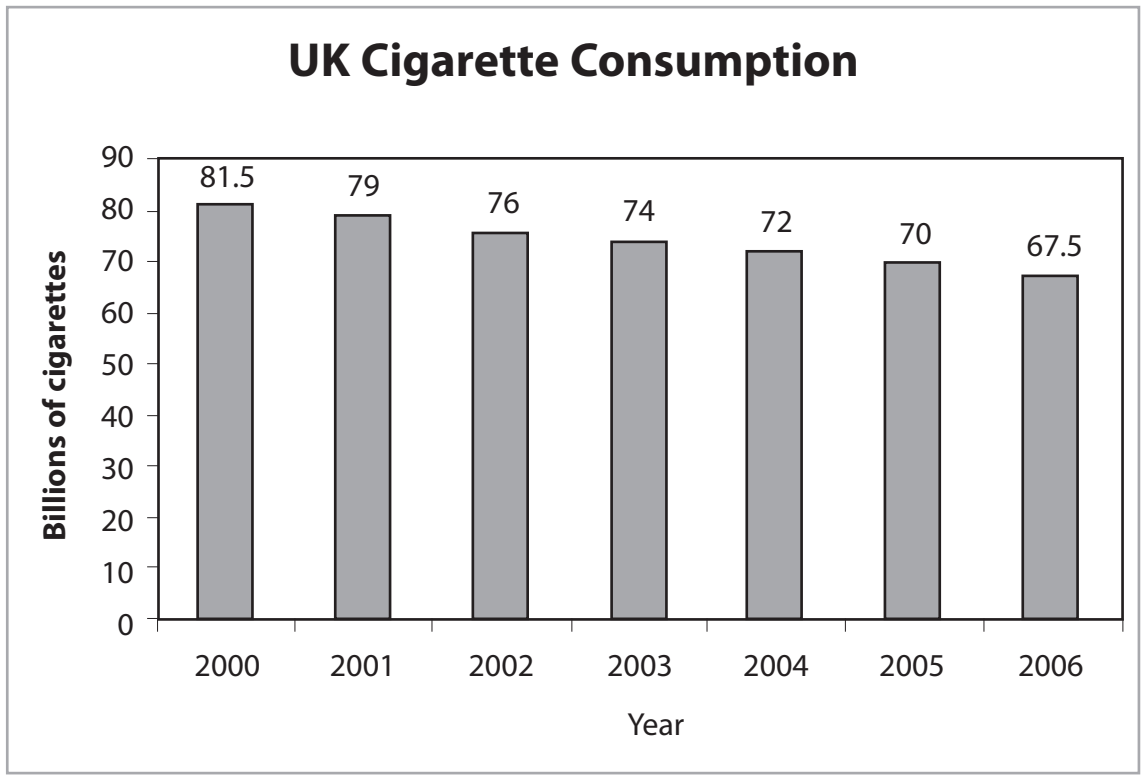


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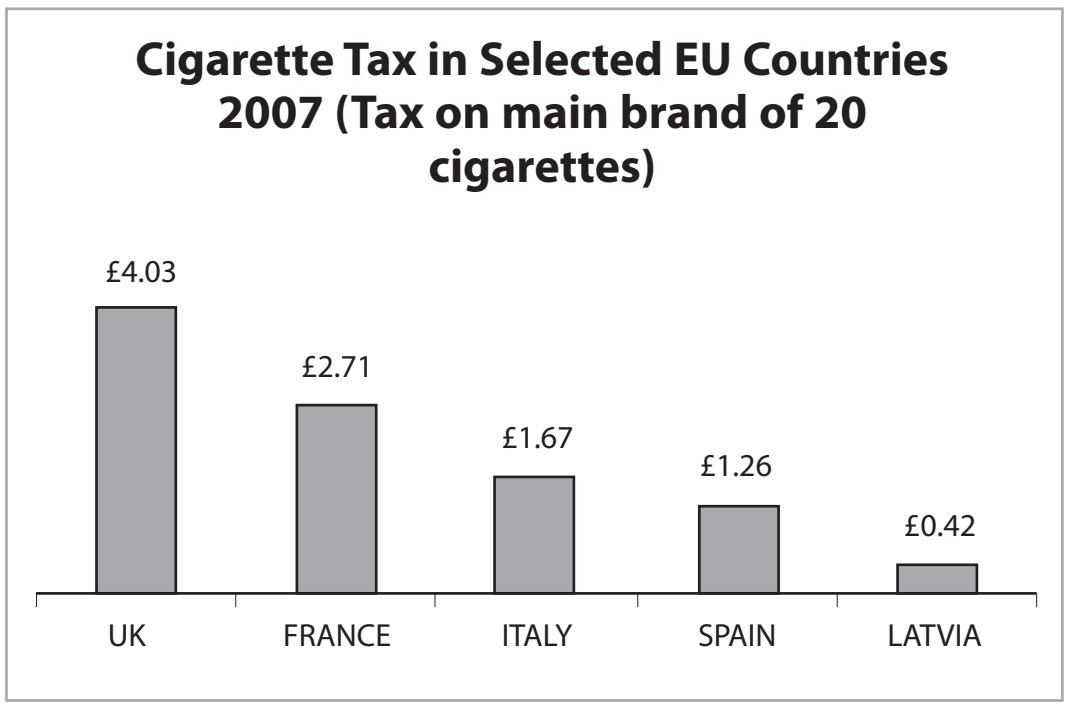
**10 The UK Tobacco Market**

**Figure 1:** **UK Cigarette Consumption (2000 – 2006)**




(Source: www.the-tma.org.uk)

**Figure 2:** **Cigarette Tax in selected EU countries (2000 – 2006)**




(Source: www.the-tma.org.uk)



N 3 4 4 1 3 A 0 1 9 2 8

*Turn over* ▶

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**Extract One** **Tobacco smoking in decline**

The government can be proud of its achievements in implementing strong tobacco control measures over recent years. The ban on tobacco advertising in 2003 and effective public health campaigns have helped smokers to give up. The ban on smoking in pubs, clubs and restaurants in July 2007 means the decline is set to continue.

However, smoking is hardly declining among socially disadvantaged groups. Currently, the government is unlikely to reduce health inequalities and in fact the gap is set to widen.

It is vitally important that the government increases measures to help poorer smokers to quit by widening access to 'stop smoking' treatments and maintaining funding of its mass media educational campaigns. The use of nicotine patches and gum, which are intended to reduce dependency on cigarettes, has helped many smokers give up. The government should also renew its efforts to reduce the illegal practice of tobacco smuggling which has encouraged smoking.

(Source: Adapted from Deborah Arnott, Director of the health campaigning charity ASH)

**Extract Two** **Tobacco taxes too high**

The UK has a higher tax rate on cigarettes than any other European Union country and according to figures from Her Majesty's Revenue and Customs, as much as £25 billion in revenue has been lost since 2000 due to smuggling and cross-border shopping. The Tobacco Manufacturer's Association estimate that UK tax was not paid on 27 per cent of cigarettes consumed in 2006.

Despite the introduction of a smoking ban in pubs, clubs and restaurants in England in July 2007 more than twenty-five per cent of the adult population continue to smoke. Many pubs, clubs and restaurants have invested in comfortable outdoor smoking areas in order to keep as many customers as possible.

The minimum legal age of sale for tobacco was increased from 16 to 18 years of age in October 2007 but this seems to have had little impact on reducing the numbers of young people who smoke, according to a Trading Standards survey in North West England. It found that many young people are still able to obtain tobacco from the informal economy, for example, street markets or neighbours.

(Source: The Tobacco Manufacturer's Association)



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**If you answer Question 10 put a cross in this box ☒ .**

(a) (i) With reference to Figure 1, calculate the percentage change in cigarette consumption in the UK between 2000 and 2006.

**(2)**

(ii) Analyse **two** likely effects on cigarette retailers of the change in cigarette consumption.

**(6)**

(iii) Using the concept of cross-elasticity of demand, assess the likely relationship between the demand for cigarettes and the price of nicotine replacement products.

**(10)**

*(b) Examine the effectiveness of indirect taxation as a means of reducing cigarette and tobacco consumption. Use a demand and supply diagram in your answer.

**(12)**

*(c) Examine the economic benefits of a reduction in cigarette and tobacco consumption.

**(12)**

(d) To what extent might asymmetric information exist in the tobacco market?

**(6)**

(a) (i) With reference to Figure 1, calculate the percentage change in cigarette consumption in the UK between 2000 and 2006.

**(2)**

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**(6)**



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**(10)**







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*(b) Examine the effectiveness of indirect taxation as a means of reducing cigarette and tobacco consumption. Use a demand and supply diagram in your answer.

**(12)**



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*(c) Examine the economic benefits of a reduction in cigarette and tobacco consumption.

**(12)**



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(d) To what extent might asymmetric information exist in the tobacco market?

**(6)**







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**(Total for Question 10 = 48 marks)**

**TOTAL FOR SECTION B = 48 MARKS**

**TOTAL FOR PAPER = 80 MARKS**





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# Mark Scheme (Results)
# January 2009

GCE

## GCE Economics (6EC01) Paper 01

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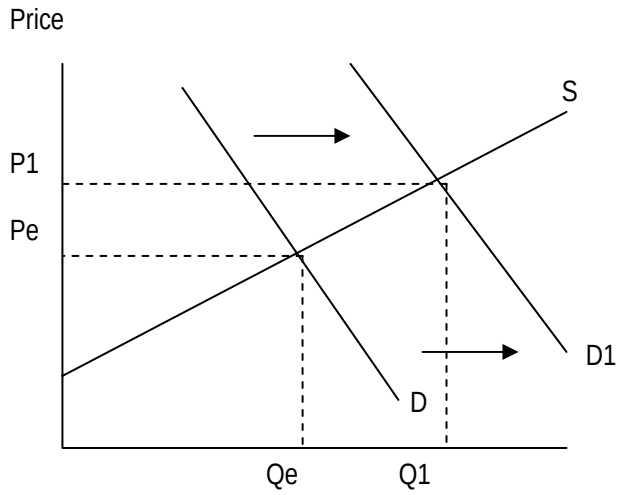
**Candidates can be awarded up to 3 marks for explanation even if the incorrect key is used**

**Candidates can be awarded on maximum of 3 marks for identifying and explaining incorrect options**

| Question Number | Answer | Mark |
|---|---|---|
| **1** | **A**<br><br>• A positive statement is an assertion of a fact / can be proved or disproved / value free (**1 mark**).<br><br>• Statement 1 is positive as it contains something (air quality) which can be tested. (**1 mark**).<br><br>• A normative statement is a value judgement / cannot be tested as true or false (**1 mark**).<br><br>• Statement 2 is normative as it contains the value judgement of 'unfair' (**1 mark**). | **(1)**<br><br>**(3)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **2** | **C**<br><br>• A general understanding of the price mechanism e.g. invisible hand / interaction of supply and demand / allocation of resources **(1 mark)**<br><br>• An increase in demand for a good will lead to a rise in its price (**1 mark**) which provides an incentive for producers to expand / raise supply / more profits can be made (**1 mark**)<br><br>• Also, a decrease in demand for a good will lead to a fall in its price **(1 mark)** and so producers contract / reduce supply /less profits can be made (**1 mark**).<br><br>Also award:<br>➢ Relevant diagram which shifts the demand curve and shows impact on price and producer supply **(up to 2 marks)**<br><br>  <br> | **(1)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3** | **B**<br><br>• Definition of producer surplus (the difference between the price producers are willing to supply a good for and the actual market price) (**1 mark**).<br><br>• Annotation of diagram which shows the new area of producer surplus **(1 mark)**<br><br>• Original producer surplus (in winter) is P1YZ (**1 mark**).<br><br>New level of producer surplus is P2XZ (**1 mark**). | **(1)**<br><br>**(3)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **4** | **A**<br><br>• Definition of price elasticity of demand or its formula (the responsiveness in demand for a good due to a change in its price or the percentage change in demand divided by the percentage change in price) or definition of total revenue(**1 mark**). Note: only award 1 mark for definitions.<br><br>• Original total revenue is 2 million × £25 = £50 million (**1 mark**).<br><br>• New total revenue is 2.8 million × £20 = £56 million (**1 mark**).<br><br>Also award:<br>➢ Demand rises by 40% or price falls by 20% (**1 mark**)<br>➢ Demand is price elastic so total revenue will increase if price falls **(1 mark)**.<br><br>**Note: Expect to award full marks if calculations and correct option selected** | **(1)**<br><br>**(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5** | **C**<br><br>• Definition of income elasticity of demand or its formula (the responsiveness in demand for a good due to a change in income or, the percentage change in demand divided by the percentage change in income) (**1 mark**).<br><br>• Fizzy drinks are an inferior good (**1 mark**)<br><br>• Inferior goods have a negative income elasticity of demand (**1 mark**).<br><br>• Normal goods have a positive income elasticity of demand / application of data to normal goods **(1 mark)**<br><br>Also award:<br>➢ Numerical application such as a 10% rise in income will cause a 2.4% decrease in demand for fizzy drinks (**1 mark**).<br>➢ Diagram depicting an inferior good **(1 mark)** | **(1)**<br><br>**(3)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **6** | **D**<br><br>• Definition of public good (a good which has non-rivalry and non-excludability characteristics) Also accept non-rejectable (**1 mark**).<br><br>• Explanation of the free rider problem (once a public good is provided, it is impossible to prevent people who have not paid it consuming it) (**1 mark**) and further development which might include an example such as street lighting, pavement, national river flood scheme, sea defences **(1 mark)**<br><br>• It is very hard to quantify and attach monetary values to the quantity of a public good each individual consumes (**1 mark**).<br><br>Also award:<br>➢ Public goods would be under-provided for if left to the market (**1 mark**). | **(1)**<br><br>**(3)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **7** | **A**<br><br>• Definition or understanding of NMW e.g. legal minimum that employers must pay to workers (**1 mark**).<br><br>• Original unemployment / excess supply $N_1N_3$ **(1 mark)**<br><br>• New unemployment / excess supply $N_3N_4$ **(1 mark)**<br><br>The above two points may be shown on the diagram<br><br>• Employment falls / demand for labour falls from $N_1$ to $N_3$ **(1 mark)**<br><br>• Supply of labour increases from $N_3$ to $N_4$ **(1 mark)**<br><br>Also award:<br>➢ Explanation that an increase in NMW may increase production costs and also increase incentives to work **(up to 2 marks)**<br><br>**Note: Award marks if candidate clearly understands that excess supply / unemployment has increased but appears confused by the mislabelling of the quantity axis of the diagram.** | **(1)**<br><br>**(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **8** | **B**<br><br>• Explanation of asymmetric information (consumers have less market knowledge than producers) (**1 mark**).<br><br>• Application e.g. consumed may not know appropriate dental treatment **(1 mark)**. Any further development which might include another example **(1 mark)**<br><br>• The producer may act in self-interest by conducting more treatment in order to gain more revenue / profits (**1 mark**).<br><br>Also award:<br>➢ Asymmetric information is an example of market failure **(1 mark)** | **(1)**<br><br>**(3)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **9(a)** | **Knowledge, application and analysis (up to 7 marks)**<br><br>• Definition of opportunity cost or implied understanding (the value of the next best alternative foregone) (**1 mark**).<br><br>• Development of opportunity cost e.g. limited resources / scarcity **(1 mark)**<br><br>• Government contribution per student to tuition fees is £4,300 per year; the next best alternative for government could be: lower taxes / more funds available for other areas of spending such as primary education or healthcare / possible decrease in government borrowing. (**Up to 3 marks**).<br><br>• Student contribution to tuition fee alone is up to £3,000 per year; the next best alternative for students could be: not going into debt / spending the tuition fee money on something else / getting a job and earning income instead of studying / increased leisure time. (**Up to 3 marks**).<br><br>Also award:<br>➢ Diagrammatic analysis or opportunity cost on a production possibility frontier **(2 marks)** | **(7)** |

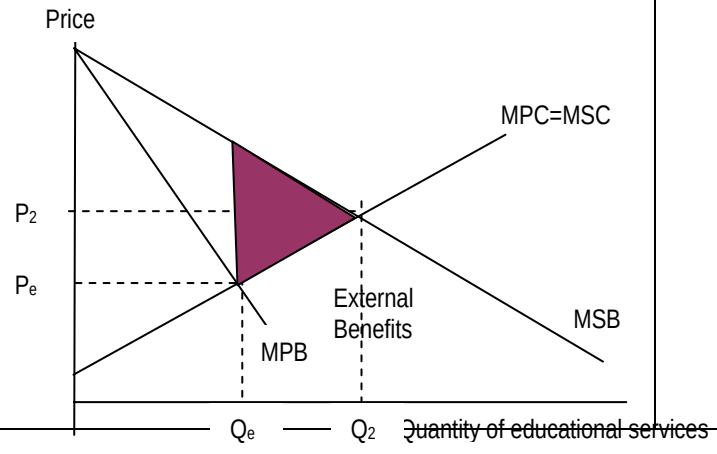


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| Question Number | Answer | Mark |
|---|---|---|
| **9(b)** | **Knowledge, application and analysis (up to 5 marks)**<br><br>• Definition of 'production possibilities' (the maximum output an economy can achieve when all its resources are fully / efficiently employed) (**1 mark**).<br><br>• Understanding of an increase in output / education is a capital or investment good / leads to higher skills / or productivity of workforce / the economy could become more competitive. (**Up to 3 marks**).<br><br>• Diagram showing outward shift in production possibilities **(1 mark**) plus relevant labelling **(1 mark).** For example: capital / consumer goods, or, reference to education / economy<br><br>• **Note:** if no diagram, award a maximum of 3 marks in this section.<br><br>**Evaluation (up to 3 marks for one evaluation point well developed, or 2+1)**<br>➢ Magnitude of the expansion of higher education.<br><br>➢ Types of expansion in higher education. Is it vocational or science based?<br><br>➢ Little impact in short-run and it could take many years before any outward shift in production possibilities.<br><br>➢ Impact may not be that significant if other economies invest even more in higher education than the UK.<br><br>➢ Where did government obtain funds for higher education expansion – was it from cutting investment elsewhere or did taxes have to increase? Award for an understanding of a current sacrifice. | **(8)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **9(c)** | **Knowledge, application and analysis (up to 8 marks)**<br>• Definition of external benefits (benefits external to an exchange / benefits ignored by the price mechanism / positive third party effects / difference between private and social benefits / positive spillover effects) (**1+1 marks**).<br><br>• Identification and explanation of two external benefits from higher education (**2+2 marks**). These include:<br><br>➢ Increased competitiveness for UK economy suggested by Figure 1 on academic research. Innovation and invention is more likely, developing new products. UK has two universities in Top 10 and twenty-nine in Top 200.<br><br>➢ Increased profits for firms since: higher productivity of graduates mean higher revenue. Also there could be lower training costs for firms if graduates already possess vocational skills.<br><br>➢ Improved government finances since: increase in tax revenue from higher earnings of graduate / increase in business tax revenue as firms make more profits / less likelihood of graduates claiming unemployment benefits.<br><br>➢ Indirect employment / income effects for firms which cater for students e.g. bookshops, bars and property rental. These are not part of the initial exchange.<br><br>**Note: Do not award for increased national output.**<br><br>**Diagram (External benefits identified in between private and social benefits – up to 4 marks)**<br>  <br> | |



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| | | |
|---|---|---|
| | ➢ MPC = MPB **(1 mark)**<br>➢ Add on MSB curve **(1 mark)**<br>➢ Identify market equilibrium and social optimum **(1 mark)**<br>➢ Identify welfare gain **(1 mark)**<br><br>**Note: If no diagram, award up to 6 marks in this section.**<br><br>**Evaluation (up to 4 marks for one well-developed point or 2+2 marks)**<br>➢ Explanation of triangle of welfare gain as an evaluative point, where social benefits exceed social costs for an incremental output.<br><br>➢ The increase in profits for firms may not be so significant since graduates are paid more than non-graduates. It depends on the difference between the extra revenue and extra costs from employing graduates.<br><br>➢ The improvement in government finances may occur only in the long run since it is still funding a significant proportion of tuition fees for graduates; also, repayment of student loans only occur after graduates are in employment above a certain income level.<br><br>➢ The indirect employment and income effects from higher education may be specific to certain areas and industries, for example, university towns and bookshops. Also, there would be indirect effects if people did not study in higher education – so the net difference should be considered.<br><br>➢ Prioritize between the two external benefits.<br><br>➢ Magnitude of external benefits. | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Definition or identification of two external benefits. No diagram or explanation. |
| **Level 2** | 3-4 | Definition or identification of two external benefits. No diagram or explanation. |
| **Level 3** | 5-8 | Definition and explanation of two external benefits with diagram. (Mark cap 8 if no evaluation) |
| **Level 4** | 9-12 | Convincing explanation of two external benefits with diagram; one evaluation point (well developed) or two or more points. |



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| Question Number | Answer | Mark |
|---|---|---|
| **9(d)(i)** | • Percentage change in tuition fees from 2005 to 2006 is:<br><br>£3,000 - £1,175 × 100 = 155.3%<br>----------<br>£1,175<br><br>• **Note**: correct answer (accept 155%) (**2 marks**)<br><br>• **Note**: correct workings but incorrect answer (**1 mark**) | **(2)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **9(d)(ii)** | **Knowledge, analysis and application (up to 4 marks)**<br><br>• It has become more expensive to afford higher education / at end of three year course students will be in a lot of debt (**1+1 marks**)<br><br>• Demand for higher education may fall **(1 mark)**<br><br>• Data application: demand fell by 3% from 522,155 to 506,304 **(up to 2 marks)**<br><br>• Another significant increase in tuition fees is predicted in 2010 according to the extract (from £3,000 a year to £6,000 a year - a doubling in fees) (**1 mark**).<br><br>• Application of price elasticity of demand **(1 mark)**<br><br>**Evaluation (up to 3 marks for one evaluation point well developed, or 2+1)**<br>➢ Figure 1 indicates that only a temporary drop in student applications for 2006 / the trend depicts more growth from 476,467 in 2003 to 540,108 in 2008 (13.3%) (**1+1 marks**).<br><br>➢ It suggests that higher education still represents good value for money / the government is still subsidising tuition fees / by £4,300 per year / graduates still earn well over £100,000 more over a life time than non-graduates (**2 marks**).<br><br>➢ Tuition fees are only part of the total cost of higher education for students<br><br>➢ Discussion of the expected doubling of tuition fees in 2010. This could have a similar effect to that of 2006 – but not reduce the underlying trend of growing application numbers. Alternately, perhaps this large increase will have a significant impact on reducing applications since it implies a doubling of student debt (2 marks).<br><br>➢ Different impact on different income groups e.g. low income groups may suffer more than high income groups. It depends on additional grants available. | **(7)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **9(e)** | **Knowledge, Application & Analysis: (up to 6 marks).**<br>**It may do more good since: (2+2+2)**<br><br>**Students**<br>➢ Students might take their education more seriously and work harder / since they make significant financial contribution. (**1+1 marks**).<br><br>➢ Students learn to manage their finances **(1 mark)**<br><br>➢ Improved quality of education for students / for example, lower teacher-student ratio, more support services, more IT funding per student (**1+1 marks**).<br><br>➢ Lower student drop-out rate from university / so less likely that a year is wasted (**1+1 marks**).<br><br>➢ Students might select courses which will generate earnings potential in future / for example, science based courses or vocational courses (**1+1 marks**).<br><br>➢ According to the research in Extract One, students still gain more income over their lifetime with a degree compared to A' Levels (£160,000) / so can afford to pay more in tuition fees / especially as back loaded – so only pay once in employment (**1+1 marks**).<br><br>**Universities**<br>➢ Increase total funds for universities to improve quality of education / resources / staff pay / teacher-student ratio (**1+1 marks**).<br><br>➢ Universities might become more innovative / for example, more research projects or use of new technology (**1+1 marks**).<br><br>➢ Universities might increase efficiency since student customers pay more / universities directly responsible to their customers / provide more learning support services (**1+1 marks**).<br><br>➢ Fall in student numbers / staffing implications<br><br>**Note:** If only students considered and not universities, award a maximum of 4 marks in this section (vice-versa).<br><br>**Evaluation: (2+2+2 marks)** | |



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| | | |
|---|---|---|
| | **NB Arguments for and against an increase in tuition fees can be regarded as evaluation, and so no cap applied here.**<br><br>**Problems (harm) could arise since:**<br>➢ Increase inequality as fewer low income students enrol for university.<br><br>➢ University revenue is influenced by price elasticity of demand for tuition<br><br>➢ Increase student debt levels: significant increases in student contributions are likely – extract mentions it will have to increase to at least £6000 per year by 2010.<br><br>➢ Problem of non-payment of student loans for tuition fees – extract indicates almost at £1 billion.<br><br>➢ Time lag between student loan for tuition fees and repayment in work. Meanwhile government finances could worsen. Less funds made available for universities?<br><br>➢ Insufficient high skilled jobs available for graduates compared to less skilled jobs for non-graduates. Unemployment may rise for graduates.<br><br>➢ Government may not achieve target of 50% of young people in higher education by 2010. Discussion of this target as being arbitrary.<br><br>➢ Government might be tempted to reduce its own contributions and so no extra funds for universities.<br><br>➢ University income from tuition fees still too low (£7,400) to compete with US higher education system (£11,500). Figure 1 reveals that UK is well behind the US in terms of academic research (however, it is in front of other countries). | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Identification of one or more relevant points but no explanation |
| **Level 2** | 3-4 | Explanation of two or more relevant points but no evaluation offered. (Mark cap to 6 if no evaluation). |
| **Level 3** | 5-8 | Explanation of two or more relevant points with limited evaluation. |
| **Level 4** | 9-12 | Convincing explanation with two or more evaluation points. |



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| Question Number | Answer | Mark |
|---|---|---|
| **10(a)(i)** | 67.5 billion – 81.5 billion<br>---------- × 100 = **-17.18%**<br>81.5 billion<br><br>• **Note**: correct answer (accept -17% or 17.2%, without minus sign) (**2 marks**)<br><br>• **Note**: correct workings but incorrect answer (**1 mark**) | **(2)** |

| Question Number | Answer | Mark |
|---|---|---|
| **10(a)(ii)** | **Knowledge, Application & Analysis: (up to 6 marks).**<br>**NOTE: Focus should be on tobacco retailers**<br><br>• Identification of two effects (**1+1 marks**)<br>This could include impact on revenue, profits, employment, investment, diversification and efficiency.<br><br>• Development of the two effects (**up to 4 marks**)<br><br>➢ Falling revenue / profits: this could lead to the retailers exiting (especially tobacconists) the market and sacking staff.<br><br>➢ Accept diagrammatic analysis which shows an inward shift of demand curve **(1 mark)** and falling price **(1 mark)**<br><br>➢ Diversification into offering other products, especially if more shelf space is now available for things like sweets and drink.<br><br>➢ Cut costs in order to maintain profits. For example, this might involve sacking staff, reducing pay or changing opening hours.<br><br>➢ Less funds available for investment, for example, improving shop front or layout of store.<br><br>➢ Idea of little impact since the decline is over a long period of time / retailers sell many other products than just tobacco.<br><br>➢ Demand is price-inelastic so retailers may raise price to maintain revenue / profits<br><br>➢ Application of the data, referring to 17% fall in tobacco consumption / 14 billion cigarettes **(1 mark)** | **(6)** |

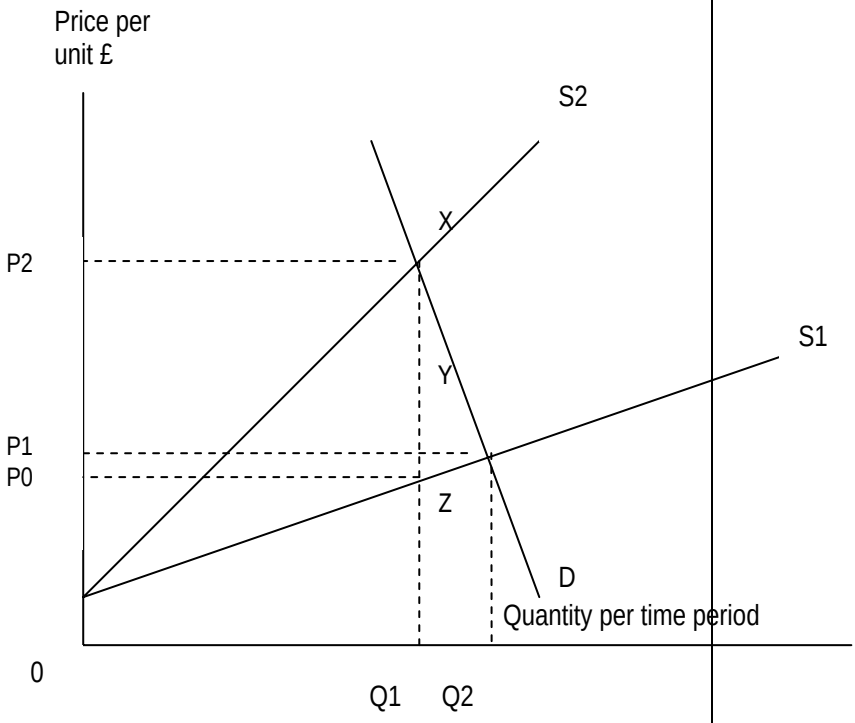


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| Question Number | Answer | Mark |
|---|---|---|
| **10(a)(iii)** | **Knowledge, Application & Analysis: (up to 6 marks)**<br><br>• Definition or formula of cross elasticity of demand (**1 mark**)<br><br>• Use of extract, e.g. lines 10/11 refer to nicotine patches and gum may reduce dependency on tobacco **(1 mark)**<br><br>• Cigarettes and nicotine replacement products are substitutes / with a positive cross elasticity of demand (**1+1 marks**).<br><br>• Complementary goals have a negative cross elasticity of demand **(1 mark).**<br><br>• Application: a rise in price of nicotine gum will cause a rise in demand for cigarettes **or** a fall in price of nicotine gum will cause a fall in demand for cigarettes **(2 marks)**. Alternatively, award 1 mark if candidate refers to a change in price of tobacco on the demand for nicotine replacement products.<br><br>• Diagram depicting the relationship (**1 mark**). Candidates do not need diagram for complete marks.<br><br>**Evaluation (2+2 marks or 3+1 marks).**<br><br>➢ Weak / low positive relationship since nicotine replacement products are poor substitutes / some replacement products are more effective than others.<br><br>➢ Weak / low positive relationship since tobacco is highly addictive.<br><br>➢ Nicotine replacement products may even be offered free on NHS – yet many people still smoke cigarettes.<br><br>➢ Some smokers do not want to give up – so little impact here / XED = 0.<br><br>➢ Nicotine replacement products are unlikely to impact on people just starting to smoke or who smoke for social reasons. | **(10)** |



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| Question Number | Answer | Mark |
|---|---|---|
| **10(b)** | **Knowledge, Application & Analysis: (up to 7 marks)**<br>• Definition of indirect tax (a government levy or charge on tobacco) (**1 mark**).<br><br>• Identification or reference to different types of tax (**1 mark**).<br>• Tax has effect of increasing costs to producers who try and pass on to consumers in the form of higher prices (**1+1 mark**).<br>• Also reference to falling profits which lead to less output and hence less consumption **(1 mark).**<br>• Explanation of diagram / effect in terms of increasing price and reducing quantity demand (**1 mark**).<br>• Data application e.g. UK has £4.03 tax per packet of cigarettes **(1 mark).**<br><br>Diagram (**4 marks**)<br>❖ Inward shift in supply curve (accept parallel or pivotal shift) **(1)**<br>❖ Tax incidence for consumers and producers **(1)**<br>❖ Overall tax area **(1)**<br>❖ Original and new equilibrium price / quantity shown **(1)**<br>❖ Demand curve drawn relatively price inelastic **(1)**<br><br>  <br> | |



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| | **Note: Accept MPB / MPC / MSC approach for a diagram, but they need to show the imposition of a tax on MPC curve**<br>**Note: If no diagram award a maximum of five marks for this section**<br><br>**Evaluation (3+2 marks for two well developed points or 2+2+1 marks)**<br>➢ Cigarettes are addictive and so demand is likely to be price inelastic. This implies taxation may be ineffective in reducing smoking and a very high tax is required to have an impact.<br><br>➢ Magnitude of the taxes on cigarettes: this is very large and so must have a significant effect on reducing smoking.<br><br>➢ Taxation may be ineffective for 'socially disadvantaged' groups as many still smoke. Poorer smokers may lack access to treatments for quitting.<br><br>➢ Difficult to determine impact of high taxes on cigarettes from other factors causing a decrease in demand (demand estimation problem).<br><br>➢ The high taxes have encouraged tobacco smuggling. This may represent a government failure since considerable loss of tax revenue according to HMRC.<br><br>➢ The Tobacco Manufacturers Association estimate that 27% of all cigarettes consumed in 2006 were non-UK duty paid. This implies that many were breaking the law. | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Definition of indirect tax and/or recognition of increasing price of tobacco. |
| **Level 2** | 3-4 | Diagrammatic analysis which accurately depicts a decrease in supply and tax incidence or area. (Mark cap to 7 if no evaluation offered). |
| **Level 3** | 5-8 | Diagrammatic analysis which accurately depicts a decrease in supply and tax incidence or area. Limited evaluation offered. |
| **Level 4** | 9-12 | Convincing diagrammatic analysis with two or more evaluation points. |



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| Question Number | Answer | Mark |
|---|---|---|
| **10(c)** | **Knowledge, analysis and application (up to 7 marks)**<br><br>**At least two benefits required for awarding the seven marks available in this section. (4+3 or 3+2+2 marks)**.<br><br>➢ Increase in health of workforce / less absenteeism from work: this could lead to greater productivity – means more revenue, profits and lower costs of production for firms.<br><br>➢ Reduction in demand for smoking related healthcare services: this could mean a reallocation of resources to other areas of healthcare. Perhaps a reallocation of resources to other areas of government spending, for example, education and training.<br><br>➢ Improved government finances: greater income tax revenue collected from healthier workforce / less government spending on NHS. It may enable the government to cut taxation or reduce its debt.<br><br>➢ Increase in life expectancy for people: this raises quality of life. Also, it means higher earnings potential over a life span for households.<br><br>➢ Also accept reduction in external costs: less air pollution / less passive smoking / drop in cancer rates / less litter / less risk of fire in buildings.<br><br>**Note** that candidates may refer to private and external benefits here – this is totally acceptable. Some candidates may illustrate by diagram where MSB is to the left of MPB **(2 marks)**<br><br>**Evaluation (3+2 marks for two well developed points or 2+2+1 marks).**<br><br>➢ Increase in health of the workforce is more of a long term trend. Also, some people may not be able to work properly without cigarettes!<br><br>➢ Reduction in demand for smoking related healthcare services is likely to be offset by an increase in other illnesses as people live longer, for example, arthritis and Alzheimer's disease.<br><br>➢ Government finances may worsen since less tobacco tax revenue and more spending on state | |



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| | pensions as people live longer.<br><br>➢ Loss of trade in pubs, clubs and restaurants as smokers stay at home. Tobacco companies suffer from falling sales and profits. Unemployment may rise in the leisure industry.<br><br>➢ Magnitude and prioritisation of the benefits / short run versus long run. | **(12)** |

| Level | Mark | Descriptor |
|---|---|---|
| **Level 1** | 1-2 | Identification of one or two benefits with no explanation. |
| **Level 2** | 3-4 | Explanation of two or more benefits but no evaluation. (Mark cap to 7 if no evaluation offered). |
| **Level 3** | 5-8 | Explanation of two or more benefits with limited evaluation. |
| **Level 4** | 9-12 | Convincing explanation of two or more benefits with two or more evaluation points. |



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| Question Number | Answer | Mark |
|---|---|---|
| **10(d)** | **Knowledge, analysis and application (up to 4 marks)**<br>• Definition of asymmetric information (when one party has less market knowledge than the other party – usually consumers have less knowledge than producers) (**1 mark**).<br><br>• Explanation why one party (consumers) have less market knowledge than producers (**up to 3 marks for one point well developed or 2+1 for two or more points**).<br><br>➢ Some consumers may not be fully aware of the dangers from tobacco smoking to their health and so continue to smoke.<br><br>➢ Consumers may be less aware of low tar / high tar tobacco brands.<br><br>➢ Some consumers simply do not believe government health warnings / see some heavy smokers reach old age.<br><br>➢ Many consumers lack medical knowledge – whereas producers can employ medical specialists and scientists.<br><br>➢ Some consumers may not be aware of dangers of passive smoking.<br><br>➢ Some consumers may withhold information about their smoking e.g. for insurance purposes.<br><br>➢ Asymmetric information may vary between countries, for example less developed countries are likely to suffer from lack of market knowledge on smoking.<br><br>**Evaluation (up to 2 marks for any one point)**<br>➢ Asymmetric information does not exist here since most consumers are aware of dangers from smoking but are addicted.<br><br>➢ Most consumers likely to be aware of dangers from smoking due to public health campaigns e.g., education in schools and adverts and warnings & pictures on cigarette packets.<br><br>➢ Time span – smokers believe they may not get cancer until later in life / do not consider the issue until the long term. | **(6)** |



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