AQA A-LEVEL ECONOMICS

ECONOMICS



EXAM QUESTION PACK

UNIT 1 OLD SPECIFICATION PAPERS

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General Certificate of Education
Advanced Subsidiary Examination
June 2014

Economics ECON1

Unit 1 Markets and Market Failure

Tuesday 13 May 2014 9.00 am to 10.15 am

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed

A
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 Which one of the following is true?

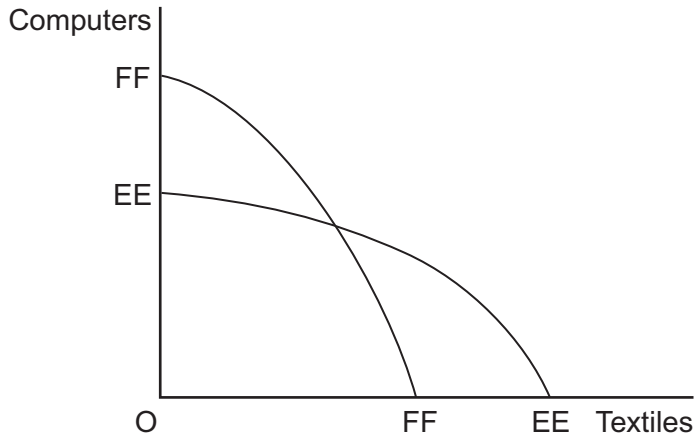
A A positive statement is one which can be tested against the facts.

B A positive statement is one which never contains words such as 'could' or 'should'.

C A normative statement is one which can be scientifically proven to be true or false.

D A normative statement is one which never contains words such as 'is' or 'will' or 'always'.

2 The diagram below shows two production possibility boundaries for an economy.



The movement of the boundary from EE to FF is likely to have occurred because

A consumers have switched their preferences from textiles to computers.

B there has been an increase in productivity in the computer industry and a decrease in productivity in the textiles industry.

C the production of computers has become more profitable than the production of textiles.

D economic resources are being underused in the textiles industry.

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3 A market is initially in equilibrium. The government then intervenes in the market, creating excess supply at the initial equilibrium price.

Other things being equal, which one of the following types of intervention would most likely have been carried out by the government?

A A tax on production

B A subsidy on production

C A minimum price set below the initial equilibrium price

D A maximum price set below the initial equilibrium price

4 The table below shows a household's demand for four different goods, **A**, **B**, **C** and **D**, at two separate income levels.

	Units of goods demanded			
Income	**A**	**B**	**C**	**D**
£40 000	200	200	200	200
£48 000	280	260	240	200

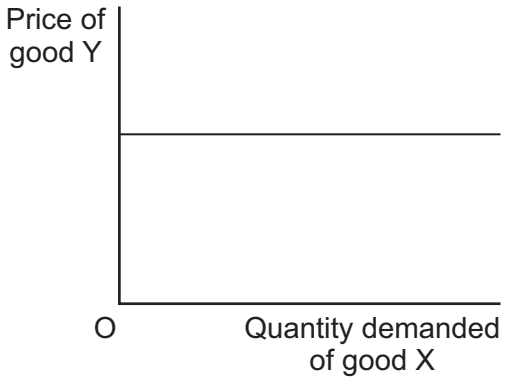
When income changes from £40 000 to £48 000, for which good (**A**, **B**, **C** or **D**) does the household have an income elasticity of demand of unity?

Turn over for the next question

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5 Which one of the diagrams below illustrates the relationship between two goods, X and Y, which are complementary goods?

A



B



C



D



6 A product has a price elasticity of supply of +1.5. If its price falls from £10.00 to £8.00, its supply will

A decrease by 30%.

B decrease by 40%.

C increase by 30%.

D increase by 40%.

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7 Government intervention in a market economy is most likely to lead to an increase in economic welfare if

A the market mechanism fails to take account of externalities.

B it leads to an increase in the consumption of demerit goods.

C the price elasticity of supply of private goods is high.

D the demand for inferior goods rises as income increases.

8 Which one of the following would an economist be most likely to classify as a consumption activity?

A The extraction of coal

B An individual doing the washing and ironing for clients

C Someone enjoying the flowers in a public park

D A garage mechanic replacing the battery in a car

9 The table below shows the marginal private and external benefits and the marginal private and external costs of a product at the free market equilibrium level of output.

	£
Marginal private benefit	12
Marginal external benefit	9
Marginal private cost	12
Marginal external cost	0

Government intervention in this market could improve the allocation of resources because the product is most likely to be

A a public good.

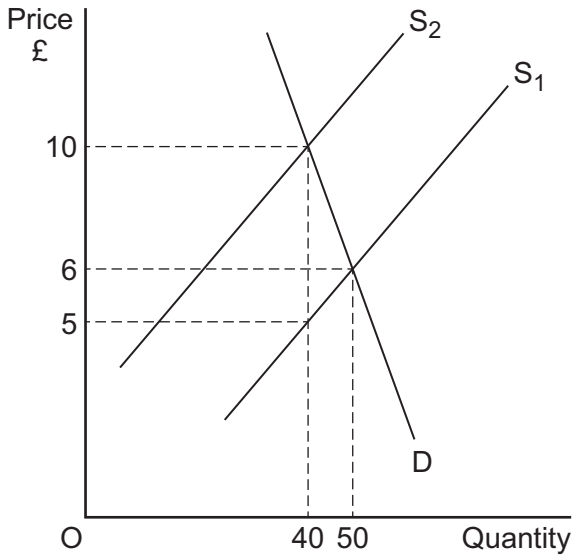
B a demerit good.

C an inferior good.

D a merit good.

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10 The diagram below shows the impact of a government imposing an indirect tax on a good, with the supply curve shifting from S_1 to S_2.



What is the tax per unit?

A £1

B £4

C £5

D £10

11 Which one of the following is most likely to reduce market failure?

A Increased economies of scale in production

B The existence of merit goods

C A decrease in the mobility of labour

D Improving the information available to consumers

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12 The table below shows the value of the price elasticity of demand facing each type of provider of passenger transport.

Train companies	Coach companies	Bus companies	Airline companies
−1.4	−0.8	−1.0	−0.5

If the fares charged for the use of each of these forms of transport rose by the same percentage, which type of provider would see the greatest proportionate increase in total sales revenue?

A Train companies

B Airline companies

C Bus companies

D Coach companies

13 A merit good, such as healthcare, is

A non-rival with positive externalities in consumption.

B rival with positive externalities in production only.

C non-excludable with positive externalities in production.

D excludable with positive externalities in consumption.

14 The table below shows the wealth distribution for an economy in 2008 and 2012.

Percentage of wealth owned by	2008	2012
Most wealthy 1%	20	25
Most wealthy 5%	35	40
Most wealthy 10%	45	50
Most wealthy 25%	70	75
Most wealthy 50%	90	95

Between 2008 and 2012, it may be concluded that

A there has been a reduction in inequality of income.

B there has been an increase in the wealth of all individuals.

C there has been a reduction in inequality of wealth.

D market failure is likely to have got worse.

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15 A market in which a number of firms are competing is gradually taken over by a monopolist. Unless there are economies of scale, this is likely to lead to lower

A costs.

B output.

C profits.

D prices.

16 A company wishes to increase labour productivity. All other things being equal, this is most likely to be achieved if the company

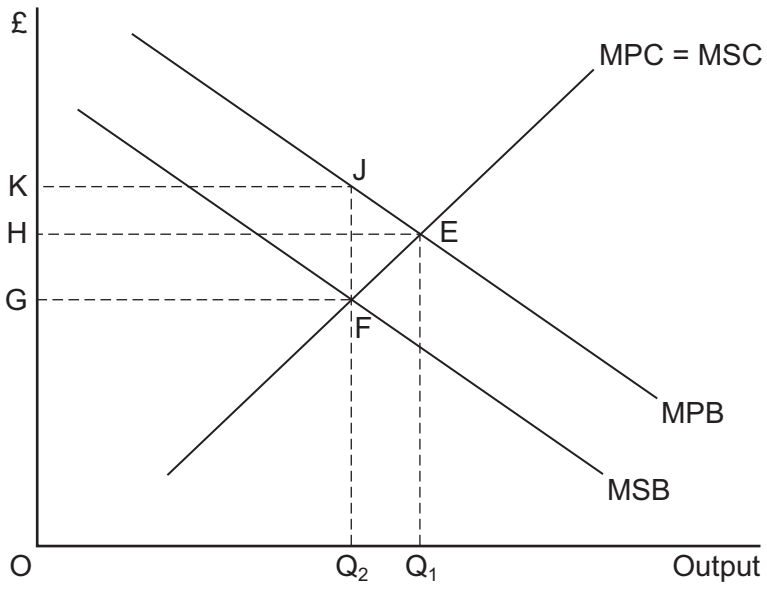
A employs more workers.

B reduces the wages it pays its employees.

C reduces current output.

D invests in more capital equipment.

17 The diagram below shows the marginal private benefit and marginal social benefit (MPB and MSB) curves and the marginal private cost and marginal social cost (MPC and MSC) curves for Good X.



To reduce the market equilibrium output from Q_1 to Q_2, the government could

A introduce a subsidy of GH.

B set a minimum price of OG.

C introduce a per unit tax of FJ.

D set a maximum price of OH.

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18 The main role of prices in a market economy is to

A determine the elasticity of demand curves.

B provide a mechanism for firms to make profits.

C improve the distribution of income.

D allocate scarce resources.

19 Which one of the following statements about subsidies is most likely to be correct?

A subsidy

A increases the price elasticity of demand of a good.

B leads to an increase in the output sold of a good.

C shifts the supply curve for a good to the left.

D leads to a rise in the equilibrium price of a good.

20 A free good has which one of the following characteristics?

A It has no opportunity cost in supply.

B It is generally supplied by the government because its consumption is considered to be socially desirable.

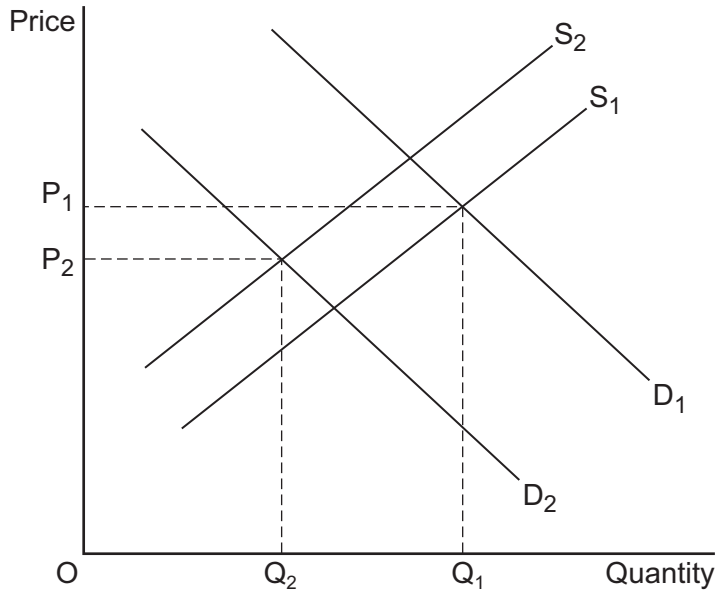
C It has no externalities associated with its consumption or production.

D It is in perfectly inelastic supply.

Turn over for the next question

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21 The diagram below shows the demand and supply curves of a consumer good where P_1 is the initial equilibrium price.



The decrease in price from P_1 to P_2 may be caused by a decrease in

A the price of substitutes and a rise in raw material costs.

B interest rates and a rise in incomes.

C the wages paid to all workers.

D income tax and value added tax.

22 One reason why the free market fails to achieve an optimal allocation of scarce resources is because

A public goods are provided free of charge to users.

B positive externalities lead to overproduction of a good.

C there is underproduction of goods with positive externalities.

D individuals' incomes and wealth are not identical.

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23 All other things being equal, which one of the following is most likely to discourage the growth of a firm?

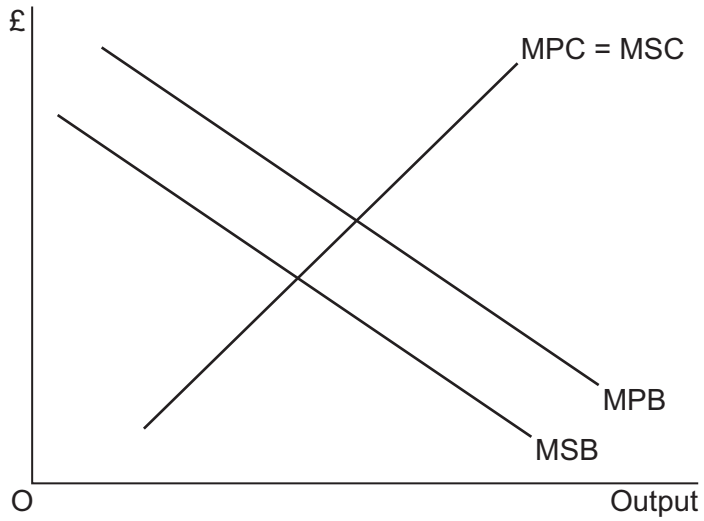
A Marketing economies of scale at high levels of output

B Low unit costs of production compared with competing firms

C An increase in market power at high levels of output

D Diseconomies of scale at low levels of output

24 The diagram below shows the marginal private benefit and marginal social benefit (MPB and MSB) curves and the marginal private cost and marginal social cost (MPC and MSC) curves for Good X.



From the diagram it can be inferred that Good X is a

A merit good.

B public good.

C demerit good.

D normal good.

Turn over for the next question

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25 A government imposes an indirect tax on a product. The price of the product is likely to rise by the full amount of the tax if the price elasticity of

A supply is perfectly elastic.

B supply is perfectly inelastic.

C demand is unit elastic.

D demand is perfectly elastic.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Now turn to page 14 for Section B

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Turn over for the next Section

Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2.
You are advised to spend at least 50 minutes on **Section B**.

Total for this Context: 50 marks

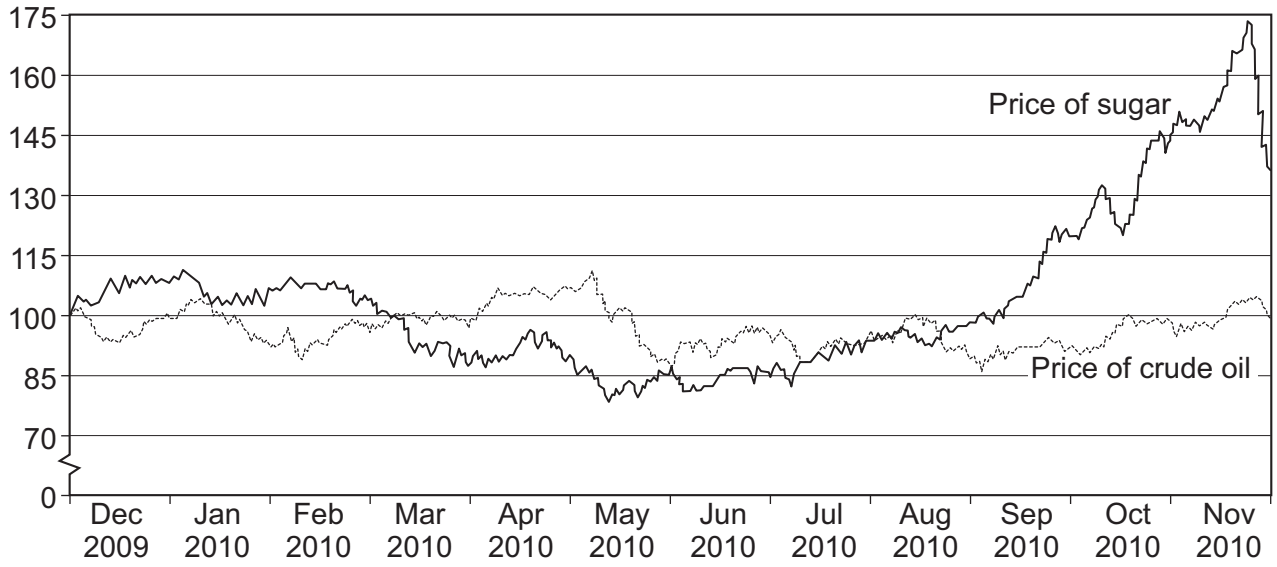
EITHER

Context 1

CRUDE OIL AND FOOD MARKETS

Study **Extracts A**, **B** and **C**, and then answer **all** parts of Context 1 which follow.

Extract A: Price indices for sugar and crude oil, December 2009 to November 2010 (1 December 2009 = 100)



Source: official statistics, 2010

Extract B: How crude oil markets and food markets affect each other

Global food markets and crude oil markets have become much more interrelated in recent years. Changes in crude oil markets affect food markets. Likewise, changes in food markets affect crude oil markets. Composite demand and derived demand provide part of the explanation.

One link between food and crude oil prices stems from the growing use of biofuel as an alternative to petrol and diesel fuels. Petrol and diesel fuels are both produced from crude oil. Crops such as sugar and wheat, which have always been used as foodstuffs, are now in demand as raw materials for biofuel production.

Rising incomes in China and India have increased the demand for motor fuels. This has affected the price of crude oil. A significant rise in the price of crude oil increases the demand for biofuel, which then results in the diversion of sugar cane and wheat away from foodstuffs into biofuel production.

Source: news reports, 2012

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Extract C: Biofuels, poverty and the environment

Some economists argue that the increase in food prices, caused by the rapid rise in biofuel production, is a major cause of famine and poverty in some of the world's economies.

According to an Oxfam report, the environmental policies of rich countries and the replacement of traditional fuels with biofuels have dragged more than 30 million people worldwide into poverty. Oxfam also says that biofuels will do nothing to combat climate change.

The report criticised rich countries for using subsidies and exemptions from tax to encourage the use of crops for biofuel rather than for food. Rich countries were said to be stealing crops and land away from food production, and they were destroying millions of livelihoods in the process. One adviser from the United Nations has described biofuels as a "crime against humanity".

However, the President of Brazil, a major biofuel-producing country, believes that the biofuel boom provides poor nations with a great opportunity. It creates a profitable export for farmers in Africa and Latin America that may enable them to grow their way out of poverty.

Source: news reports, 2012

0 1 Define the term 'derived demand' (**Extract B**, line 3).

[5 marks]

0 2 Using **Extract A**, identify **two** significant points of comparison between the price indices for sugar and crude oil over the period shown.

[8 marks]

0 3 With the help of an appropriate diagram and the information in **Extract B**, explain how rising incomes in China and India have affected the global price of wheat.

[12 marks]

0 4 'Some economists argue that the increase in food prices, caused by the rapid rise in biofuel production, is a major cause of famine and poverty in some of the world's economies' (**Extract C**, lines 1–2).

Using the data and your economic knowledge, evaluate the case **for** and **against** governments intervening to prevent agricultural products from being used to produce biofuel.

[25 marks]

Turn over ▶

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Do **not** answer Context 2 if you have answered Context 1.

Total for this Context: 50 marks

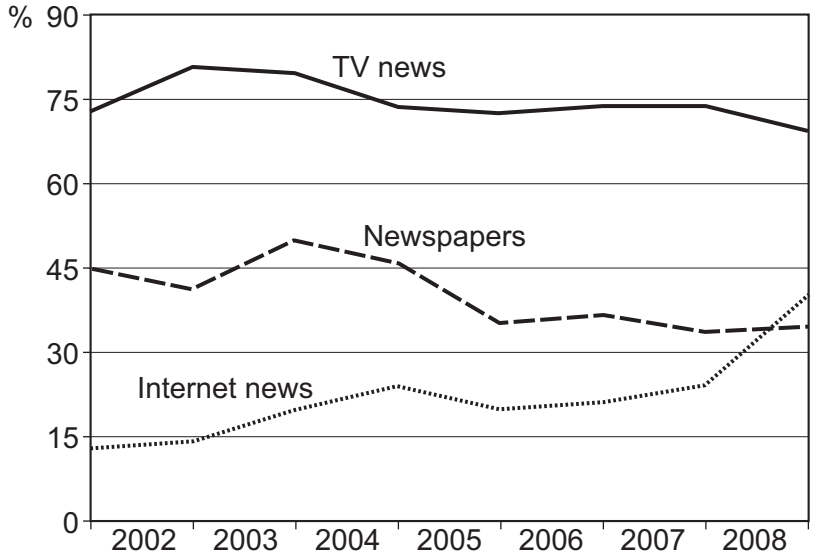
OR

Context 2

THE NEWSPAPER MARKET

Study **Extracts D**, **E** and **F**, and then answer **all** parts of Context 2 which follow.

Extract D: Percentages of the US population accessing news from various sources, 2002 to 2008



Source: news reports, 2009

Extract E: The declining sales of newspapers and the growth of online news

Traditionally, the main products sold by newspaper companies were newspapers themselves. Newspapers are generally regarded by economists as private goods. Newspaper companies earn revenue, partly from the price charged for the newspapers, and partly from money received from advertisers. Advertising in newspapers is necessary because the prices that readers pay are less than the journalism, paper and delivery costs that are incurred when producing and selling newspapers.

In recent years, the cost of producing newspapers has risen while sales have dropped significantly. Between 2008 and 2009, more than seventy local newspapers shut down in the UK. Most national newspapers make losses. Some survive because they have rich owners who pay for the losses.

However, virtually all newspapers now provide news on the internet, in the hope that money made from internet advertising can cover losses incurred from selling newspapers.

Source: news reports, 2010

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Extract F: How the internet is changing the ways in which people access news

When news is available completely free on the internet, it possesses some of the properties of a public good. However, whilst the owners of newspapers such as The Daily Mail and The Guardian provide free online versions of their printed newspapers, other owners do not. For example, readers of The Times and The Sunday Times must pay subscription fees to access online versions of these papers. Between these extremes, The Economist provides most of its online content for free but readers have to pay to read certain articles.

The variety of different pricing policies reflects the fact that newspaper companies are experimenting with a number of 'business models', as they seek to earn sufficient money from the internet to offset losses made from newspaper sales.

Some people argue that, because newspapers are such an important source of information and education, the government should help them to survive. Some argue that the government should also encourage free availability of online versions of newspapers. Whilst subsidies undoubtedly affect resource allocation, should newspaper companies be subsidised so that the general public can buy cheaper newspapers and access free online news?

Source: news reports, 2012

0 5 Define the term 'private goods' (**Extract E**, line 2).

[5 marks]

0 6 Using **Extract D**, identify **two** significant points of comparison between the various sources of news accessed over the period shown.

[8 marks]

0 7 With the help of an appropriate diagram and the information in the **Extracts**, explain why the quantity of newspapers sold by most newspaper companies has fallen.

[12 marks]

0 8 'Some people argue that, because newspapers are such an important source of information and education, the government should help them to survive' (**Extract F**, lines 10–11).

Using the data and your economic knowledge, evaluate the case **for** and **against** the government subsidising newspapers and online news.

[25 marks]

END OF QUESTIONS

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A LEVEL
ECONOMICS

ECON1/Unit 1 Markets and Market Failure
Mark scheme

2140
June 2014

Version 0.1 Final

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Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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AQA Advanced Subsidiary Economics

June 2014 **ECON1/1**

The following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

JUNE 2014 **ECON1/1**

1.	**A**	**9.**	**D**	**17.**	**C**
2.	**B**	**10.**	**C**	**18.**	**D**
3.	**B**	**11.**	**D**	**19.**	**B**
4.	**C**	**12.**	**B**	**20.**	**A**
5.	**B**	**13.**	**D**	**21.**	**A**
6.	**A**	**14.**	**D**	**22.**	**C**
7.	**A**	**15.**	**B**	**23.**	**D**
8.	**C**	**16.**	**D**	**24.**	**C**
				25.	**A**

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Advanced Subsidiary Economics

June 2014 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks MUST be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

A levels approach. This approach is used for marking questions **04** and **08** of the data response questions. The Levels Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVELS OF RESPONSE MARK SCHEME
FOR USE WITH QUESTIONS 04 AND 08 ONLY

AS **LEVELS OF RESPONSE**	**AO1** **KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology**	**AO2** **APPLICATION of theories, concepts and terminology**	**AO3** **ANALYSIS of economic problems and issues**	**AO4** **EVALUATION of economic arguments and evidence, making informed judgements**
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE LEVELS MARK SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I Where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Candidates will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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EITHER

Context 1 **Total for this Context: 50 marks**

01	Define the term 'derived demand' (**Extract B**, line 3).	**[5 marks]**

For an acceptable definition eg • the demand for a good / factor of production used to produce a good.	**5 marks**

Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'derived demand' even if the definition is not exactly the same as the acceptable examples quoted above.

If the definition is inaccurate or incomplete, a maximum of 4 marks can be awarded which may be broken down, for example as follows:

The demand for a good or service resulting from / leads to the demand for another good or service	**4 marks**
Stating that derived demand is related to the supply chain of a good or service.	**2 marks**
Stating that derived demand refers to the fact that the demand for two goods or services are linked as complements.	**1 mark**
An example of a good which is in derived demand e.g. iron and steel (the relationship between a factor of production / component and the good it is used to produce)	**1 mark**
Defining demand.	**1 mark**

Do not reward an answer which confuses derived demand with composite demand, unless the answer also contains one or more of the above.

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02	Using **Extract A**, identify **two** significant points of comparison between the price indices for sugar and crude oil over the period shown. **[8 marks]**	

Award up to 4 marks each for <u>each</u> significant point made

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison identified. Unit of measurement is used accurately – the candidate must acknowledge at least once within their answer that the data is in index number form.	**4 marks**
Identifies a significant point of comparison. Makes partially inaccurate use of the data to support the point of comparison identified. However, no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately **and/or** the dates are not quoted or are inaccurate.	**3 marks**
Identifies a significant point of comparison. Makes no correct use of the data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement used accurately.	**1 mark**

If a candidate identifies more than two significant points of comparison, reward the best two.

Do not reward points of comparison such as a statement that the prices of sugar and crude oil were exactly the same at the beginning of December 2009, ie comparisons that confuse absolute prices with prices stated in index numbers.

Valid points include:

- The price of sugar rose from an index number of 100 to an index number of about 137, whereas the price of crude oil stayed the same at an index number of 100.
- In terms of percentage changes, for the dates stated in the previous point of comparison, the price of sugar rose by about 37%, while the percentage change for crude oil was zero.
- The price index for sugar ranged from a low of 79 index points in early May 2010 to a high of about 173 index points in mid-November 2010. By contrast, the price index for oil ranged from a high of about 111 index points at the end of April/beginning of May 2010 to a low at the end of May / beginning of June 2010 and / or the beginning of September 2010 at 86 index points.
- The price index for sugar peaked in mid-November 2010 at 173 index points, whereas the price index for oil peaked at the end of April / early May 2010 at 111 index points.

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- The price index for sugar was lowest in early May 2010 at 79 index points, whereas the price index for oil was lowest at the end of May / beginning of June and / or the end of August / beginning of September 2010 at 86 index points.

Allow a margin of +/- 3 index points

MAXIMUM FOR PART 02: 8 MARKS

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03 With the help of an appropriate diagram and the information in **Extract B**, explain how rising incomes in China and India have affected the global price of wheat.

[12 marks]

When awarding marks for the diagram(s), it is important to reward candidates who produce an economically valid response even if it is not the one shown in Diagram 1 below. While the most obvious interpretation of the information in Extract B relates to a rightward shift in the demand for wheat, the rising price of fuel also leads to an increase in the cost of producing wheat, and hence to a leftward shift of the supply curve of wheat (Diagram 2). Diagram 3 combines both the rightward shift of the demand curve for wheat and the leftward shift of the supply curve of wheat.

Diagram 1

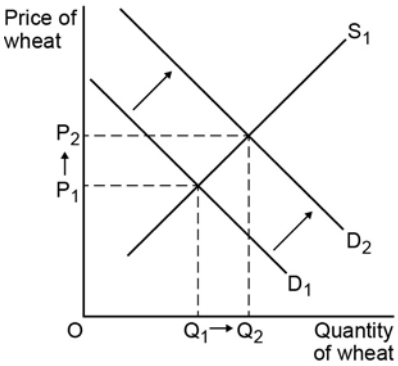


Diagram 2

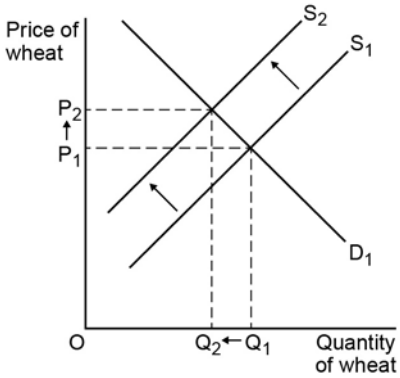
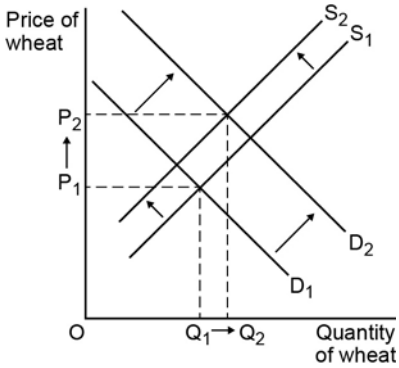


Diagram 3



The anticipated response for Diagram 1 showing a rightward shift of demand:
Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the demand curve to the right:	**1 mark**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

The anticipated response for Diagram 2 showing a leftward shift of supply:

Breakdown of the marks for the diagram:

For labelling all the axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the supply curve to the left.	**1 mark**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the initial equilibrium price P_1).	**1 mark per feature up to a maximum of 2 marks**

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The anticipated response for Diagram 3 showing a leftward shift of supply and a rightward shift of demand:

Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the demand curve.	**1 mark**
An accurately-drawn shift of the supply curve.	**1 mark**
Co-ordinates drawn in at the new combined equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the initial equilibrium price P_1).	**1 mark per feature up to a maximum of 2 marks**

Note: (i) **To earn the first mark in the grids, all the listed tasks must have been attempted and been completed correctly**.

(ii) **For the task of labelling axes, price and quantity, P and Q, a monetary symbol such as the £ sign on the vertical axis and physical units of measurement such as tonnes of a commodity on the horizontal axis are all valid**

Up to a MAXIMUM of 4 marks for diagram or diagrams

The anticipated written response:

Define income, demand, supply, equilibrium price, equilibrium quantity, composite demand, or any other relevant term: (only reward an accurate definition of 'derived demand' in the unlikely event that the answer to **Part 01** is completely wrong).	**1 mark per definition Maximum of 2 marks for definitions**
Award 2 marks for each logical link in the chain of reasoning, eg (*award leads to an increase in the price of wheat only once)*	
Rising incomes in China increase the demand for fuel **(2)** which increases the price of oil **(2)** so consumers and / or producers seek alternative goods / substitutes / biofuel **(2)** which increases the demand for wheat **(2)** as wheat is derived from the demand for biofuel **(2)** *which leads to an increase in the price of wheat* **(2)**	**Up to 8 marks**

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Rising incomes in China increase the demand for vehicles **(2 marks)**; this increases the demand for oil **(2 marks)**; this increases the price of oil **(2 marks)**; which increases the cost of fuel for farmers **(2 marks)**; which raises agricultural costs of production **(2 marks)**; which reduces the supply of wheat **(2 marks)**; *which increases the price of wheat* **(2 marks)**.	**Up to 8 marks**
Alternative links in the chain of reasoning may include references to price elasticity of supply, income elasticity of demand, normal goods, cross elasticity of demand, composite demand	**Up to 8 marks**

For explaining the adjustment process: for example, extension along the supply curve **(2)** to eliminate excess demand **(2)**.	**Up to 4 marks**

Note: Do not award marks for simply describing what the diagram shows.

Do not reward diagrams which are inconsistent with the written explanation, other than one mark for the initial set up.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 0 3: 12 MARKS

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04 'Some economists argue that the increase in food prices, caused by the rapid rise in biofuel production, is a major cause of famine and poverty in some of the world's economies ' **(Extract C, lines 1-2)**.

Using the data and your economic knowledge, evaluate the case **for** and **against** governments intervening to prevent agricultural products from being used to produce biofuel.

[25 marks]

Candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 13 marks**.

A maximum of 21 marks may be awarded if there is no **explicit** reference to the data.

Level 5	**Good analysis and good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	**17 to 21** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis but very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

It is expected that candidates might consider different types of government intervention in answer to the question, though there is no requirement to do so. However, the best answers will include some discussion of whether or not governments are able to or should *'prevent'* agricultural products being used in such a way.

Issues and areas for discussion include:

Introduction	• market failure • government intervention • the biofuel / oil market
Developing the response to the question: (Application)	➢ drawing on the information in ➢ **Extract A, B and C** regarding rising fuel and food prices and the impact on resource allocation ➢ **Extract B** regarding interrelationships between markets ➢ **Extract C** regarding the link between rising food prices, biofuel production and growing inequalities ➢ **Extract C** regarding the link between biofuel production and environmental externalities ➢ **Extract C** regarding the impact of subsidies and tax exemptions on resource allocation ➢ **Extract C** regarding the link between biofuel production and

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	opportunities to reduce inequalities. ➢ drawing on the candidate's knowledge of market failure and/or government failure in these markets
Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain ➢ why competitive markets rather than government action or intervention in markets lead to better outcomes ➢ how the change in land use toward producing crops to meet the demand for biofuels reflects the incentive function of prices ➢ the types of market failure which may occur ➢ why government action or intervention may eliminate or reduce the market failure ➢ how particular methods of government action may affect resource allocation ➢ the advantages and disadvantages of different forms of intervention • the use of appropriate diagrams to support the analysis
Evaluation	• questioning the assumptions made when developing the chains of reasoning outlined above • discussing ➢ the advantages and disadvantages of government action versus the free market ➢ whether or not all economists agree that 'the increase in food prices, caused by the rapid rise in biofuel production, is a major cause of famine and poverty in some of the world's economies' ➢ the possible conflict between reducing poverty and famine on the one hand, and stemming the problems resulting from oil depletion on the other hand ➢ market failure versus government failure arguments; ➢ short-run and long-run implications ➢ whether or not is possible and / or desirable to 'prevent' agricultural products being used in such a way

Examiners should note that credit can be given for basic evaluation if a candidate simply states but does not develop arguments in favour or against the governments taking action. Stronger evaluation is provided by candidates who are able to support arguments both for and against government action, and by clearly stating the assumptions underlying the arguments being used. Reward the relevant use of diagrams to support arguments, eg externalities diagrams in relation to the use of biofuel. Answers which only consider the UK government, or the government of a particular country will be narrower than those considering more than one government. An answer which evaluates different policies without considering intervention versus the alternative of letting the free market rule should be restricted to a maximum mark at the top of Level 3.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

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OR

Context 2 **Total for this Context: 50 marks**

05	Define the term 'private goods' (**Extract E**, line 2).	**[5 marks]**

For an acceptable definition eg • goods which are excludable and rival • goods which are excludable and diminishable • goods which are excludable and exhaustible.	**5 marks**

Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'private goods' even if the definition is not exactly the same as the acceptable examples quoted above.

If the definition is inaccurate or incomplete, maximum of 4 marks which may be broken down, for example as follows:

For defining as a good which is excludable **OR** rival (or diminishable or exhaustible) without mentioning a second characteristic of a private good.	**3 marks**
For stating what is meant by excludable.	**1 mark**
For stating what is meant by rival (distinguishable or exhaustible).	**1 mark**
Bought for consumption by an individual for their own benefit	**1 mark**
Consumers have a choice whether to buy it or not	**1 mark**
For stating an example of a private good (only if used in the correct context)	**1 mark**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

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06	Using **Extract D**, identify **two** significant points of comparison between the various sources of news accessed over the period shown.	**[8 marks]**

Candidates only need to refer to TWO of the sources to obtain full marks

Award up to 4 marks each for <u>each</u> significant point made:

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes partially inaccurate use of the data to support the feature identified. However, no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately **and/or** the dates are not quoted or are inaccurate.	**3 marks**
Identifies a significant point of comparison. Makes no correct use of the data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a candidate identifies more than two significant points of comparison, reward the best two.

The valid points include:

- The percentages of the US population accessing news from the three news sources adds up to more than 100% (about 131% at the start of 2002); many US residents access more than one news source eg about 13% accessing the internet, 45% accessing newspapers and 73% accessing TV news at the start of 2002.
- Over the period shown, more US residents accessed TV news than accessed either of the other two news sources. For example, at the beginning of 2002, about 73% of US residents accessed TV news, 45% accessed newspapers, and 13% accessed internet news.
- Over the period shown, the percentages of US residents who accessed TV news fell from about 73% to about 70%, while the percentage accessing internet news rose from about 13% at the beginning of 2002 to about 40% at the end of 2008, while the percentages of US residents who accessed newspapers fell from about 45% to about 35%.

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- Over the period shown, the percentage of the US population accessing TV news peaked at the end of 2002 / start of 2003 at 81%, those accessing newspapers peaked towards the end of 2003 / start of 2004 at 50%, and those accessing internet news peaked at the end of 2008 at 39%.
- Over the period shown, the percentage of the US population accessing TV news was lowest at the end of 2008 at 70%, those accessing newspapers was lowest at the end of 2007 / start of 2008 at 34%, and those accessing internet news was lowest at the start of 2002 at 13%.

Allow a margin of +/- 3%

MAXIMUM FOR PART 06: 8 MARKS

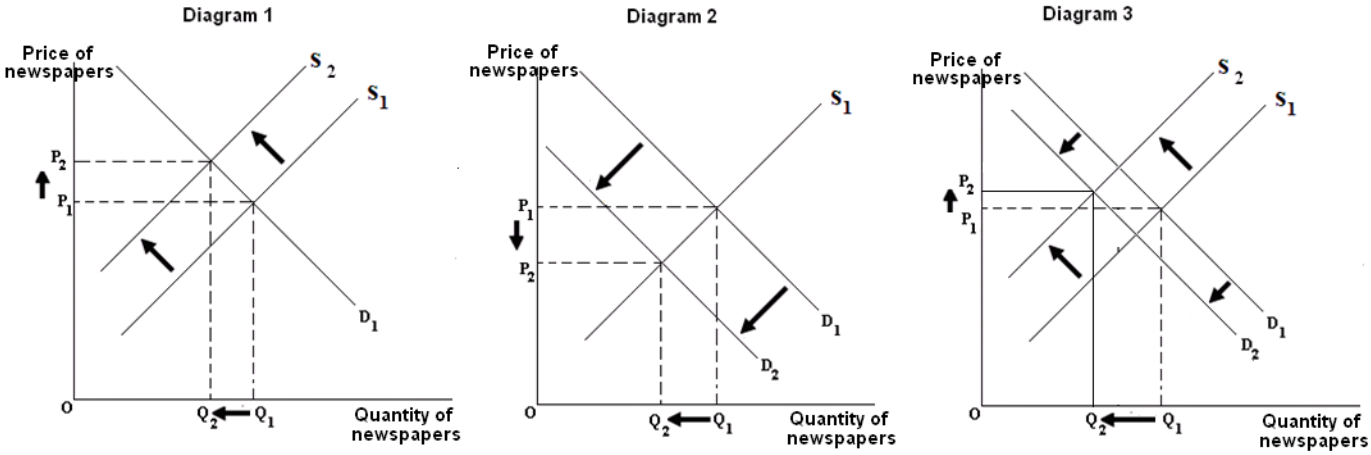
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07 With the help of an appropriate diagram and the information in the Extracts, explain why the quantity of newspapers sold by most newspaper companies has fallen.

[12 marks]

When awarding marks for the diagrams, it is important to reward candidates who produce an economically valid response even if it is not exactly the same as **Diagram 1** below. This diagram illustrates the supply curve of newspapers shifting to the left because of the rising cost of producing newspapers. **Diagram 2** illustrates the demand curve for newspapers shifting to the left because readers switch to other news media, including online newspapers. **Diagram 3** shows both events occurring. The diagram has been drawn so as to show the price of newspapers rising, but reward a similar diagram showing the price of newspapers falling because the demand curve has shifted further to the left than the supply curve.

The anticipated response for the diagram:



The anticipated response for Diagram 1 showing a leftward shift of supply:

Breakdown of the marks for the diagram:

For labelling all the axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the supply curve to the left.	**1 mark**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

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The anticipated response for Diagram 2 showing a leftward shift of demand:
Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the demand curve to the left:	**1 mark**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess supply at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

The anticipated response for Diagram 3 showing a leftward shift of supply and a leftward shift of demand:

Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the demand curve.	**1 mark**
An accurately-drawn shift of the supply curve.	**1 mark**
Co-ordinates drawn in at the new combined equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand or supply at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

Note: **(i) To earn the first mark in the grids, all the listed tasks must have been completed correctly**.

(ii) For the task of labelling axes, price and quantity, P and Q, a monetary symbol such as the £ sign on the vertical axis and physical unit of measurement such as newspapers on the horizontal axis.

Up to a MAXIMUM of 4 marks for diagram or diagrams

The anticipated written response

Define demand, supply, equilibrium price, equilibrium quantity, excess demand, excess supply or any other relevant term.	**1 mark per definition Maximum of 2 marks for definitions**
Award 2 marks for each logical link in the chain of reasoning	
Production costs rise **(2 marks)**; because of a specific reason, eg the increased cost of journalism **(2 marks)**; this reduces the supply of newspapers **(2 mark)**; which increases the price of newspapers **(2 marks)** and reduces the quantity sold	**Up to 8 marks**

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Increased competition from online news **(2 marks)** which is a substitute good **(2 marks)** and which is provided free/ easier to use **(2 marks)** leads to a decrease in demand for newspapers **(2 marks)** and reduces the quantity sold	**Up to 8 marks**

For explaining the adjustment process: for example, extension along the supply curve **(2)** to eliminate excess demand **(2)**.	**Up to 4 marks**

Note: Do not award marks for simply describing what the diagram shows.

Do not reward diagrams which are inconsistent with the written explanation, other than one mark for the initial set up.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 07: 12 MARKS

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08	'Some people argue that, because newspapers are such an important source of information and education, the government should help them to survive' **Extract F**, lines 10–11). Using the data and your economic knowledge, evaluate the case **for** and **against** the government subsidising newspapers and online news. **[25 marks]**

Candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 13 marks**.

A maximum of **21 marks** should be awarded if there is no **explicit** reference to the data.

Level 5	*Good analysis and good evaluation*	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	*Good analysis but limited evaluation* **OR** Reasonable analysis and reasonable evaluation	**17 to 21 marks** *Mid-Point 19 mark*
Level 3	*Reasonable including some correct analysis but very limited evaluation.*	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	*Weak with some understanding*	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	*Very weak*	**0 to 3 marks** *Mid-Point 2 marks*

Although **Extract F** mentions that some online news possesses public good properties, the possibility that newspapers and online news may also be judged to be merit goods is not mentioned. However, it is implicit in the last paragraph of the Extract, part of which forms the prompt to the question. Good answers may use public good theory and/or merit good theory to provide analysis before proceeding to evaluation. Answers which lack such analysis are likely to be superficial, though analysis and evaluation of subsidies can provide a valid way of approaching the question.

Issues and areas for discussion include:

Introduction	• subsidy • public good • merit good • news markets
Developing the response to the question: (Application)	➢ drawing on the information in ➢ Extract D, E and F regarding changes in sales of news sources and the impact on resource allocation ➢ Extract E regarding sources of revenue for news sources and costs and the impact on resource allocation ➢ Extract F regarding online news sources possessing the characteristics of a public good ➢ Extract F regarding the educational benefit of news sources, and

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	the implicit suggestion that they are merit goods ➢ Extract F regarding subsidising news sources • drawing on the candidates own knowledge of the state of newspaper markets and online provision of news

Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain ➢ why the alleged public good properties of free online news justify free provision of all online news ➢ why information and education possess merit good properties and analysing how, for a merit good, market provision results in under-provision ➢ why some news and information could be viewed as a demerit good ➢ the impact of a subsidy in the market(s) ➢ the advantages and disadvantages of providing a subsidy ➢ the impact of alternative forms of intervention • the use of appropriate diagrams to support the analysis
Evaluation	• questioning the assumptions made when developing the chains of reasoning outlined above • discussing ➢ the strength of the public good argument ➢ the strength of the merit good argument ➢ whether newspapers and online news should be treated differently ➢ the advantages and disadvantages of government action versus the free market ➢ market failure versus government failure arguments ➢ short-run and long-run implications ➢ the point that as technology develops, and the economy changes, some industries grow whereas others inevitably decline

Examiners should note that credit can be given for basic evaluation if a candidate simply states but does not develop arguments. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by candidates who are able to support arguments both for and against the provision of subsidies, and perhaps suggest alternative means of intervention, if at all. Reward the relevant use of diagrams to support arguments.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5

FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
June 2013

Economics ECON1

Unit 1 Markets and Market Failure

Monday 13 May 2013 9.00 am to 10.15 am

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 The main economic objective of firms in a market economy is most likely to be the

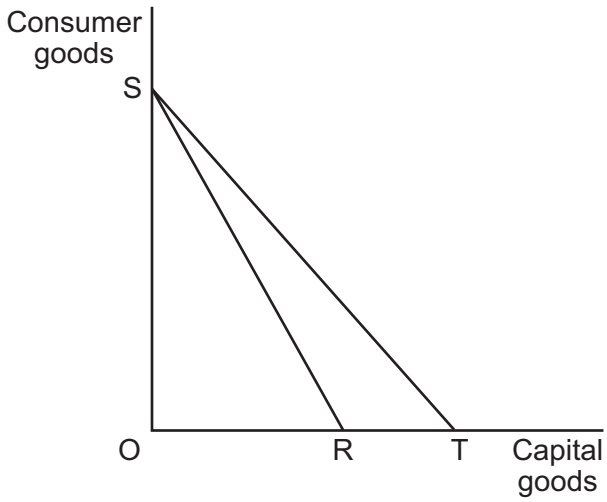
A achievement of economies of scale.

B maximisation of consumer satisfaction.

C achievement of an efficient allocation of resources.

D maximisation of profits.

2 The diagram below shows an economy's production possibility frontier for consumer goods and capital goods.



The movement of the production possibility frontier from SR to ST is most likely to indicate an increase in

A productivity in the production of capital goods.

B the resources employed in the production of capital goods.

C the demand for capital goods.

D the opportunity cost of the production of capital goods in terms of consumer goods.

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3 The price elasticity of supply for most goods is

A zero.

B between zero and –1.

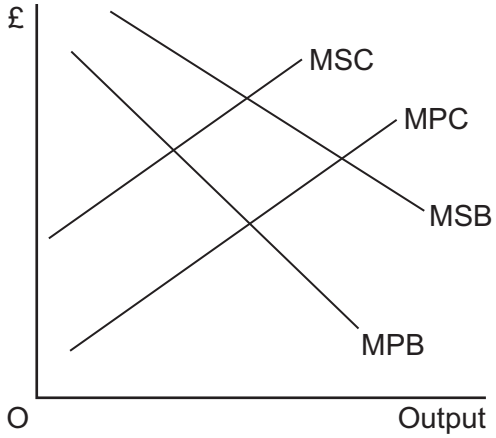
C between –1 and minus infinity.

D positive.

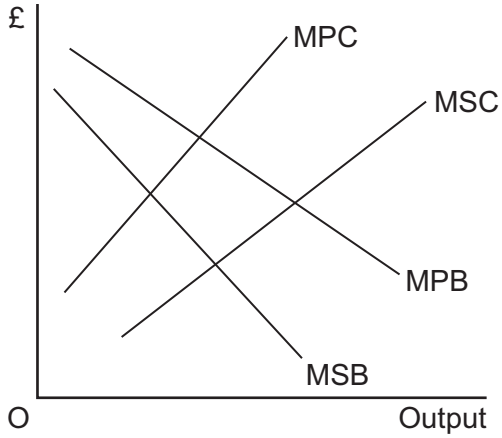
4 The diagrams below show the marginal private benefit (MPB) and marginal social benefit (MSB) curves and the marginal private cost (MPC) and marginal social cost (MSC) curves of the consumption and production of a good.

Which one of the following diagrams, **A**, **B**, **C** or **D**, correctly shows negative externalities in both the consumption and production of the good?

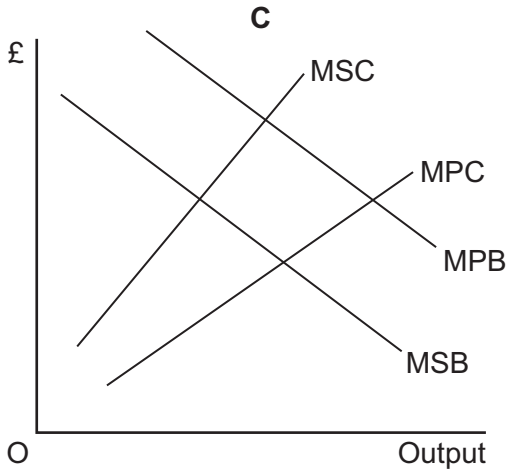
A



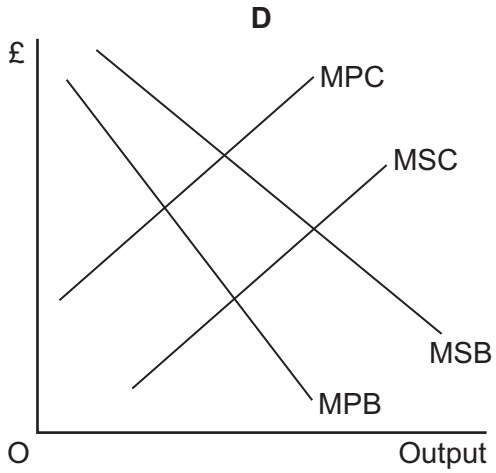
B



C



D



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5 Which one of the following is most likely to lead to greater labour productivity in an industry?

A An increase in market demand

B A fall in wages in the industry

C An increase in the number of firms in the industry

D An increase in capital investment in the industry

6 The table below indicates various types of market failure, the consequence of each of these failures and examples of possible intervention.

Situation	Type of market failure	Consequence of market failure	Example of intervention
A	Factor immobility	Inefficient allocation of resources	Increase in indirect taxation
B	Public goods	Not provided	Government provision
C	Demerit goods	Over-consumed	Maximum price controls
D	Merit goods	Under-provided	Minimum price controls

In which one of these situations is the example of intervention most appropriate?

A Situation A

B Situation B

C Situation C

D Situation D

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7 The existence of scarcity in an economy implies that

A there are no free goods.

B there are no public goods.

C individuals must make choices.

D there has been a misallocation of resources.

8 An increase in UK incomes leads to an increase in demand for holidays abroad and a decrease in demand for holidays in the UK. It can therefore be concluded that

A holidays in the UK are an inferior good while holidays abroad are a normal good.

B the demand for holidays abroad is income elastic while the demand for holidays in the UK is income inelastic.

C there is a negative cross price elasticity of demand between holidays abroad and holidays in the UK.

D holidays abroad have a high price elasticity of demand while holidays in the UK have a low price elasticity of demand.

9 The UK Government currently subsidises the building of social housing. Social housing is provided to low income households at rents which are lower than the free market rent.

Which one of the following would provide an economic justification for these subsidies?

A The unequal distribution of income and wealth caused by the free market results in an unsatisfactory allocation of resources.

B Subsidising low cost housing reduces inequalities in the distribution of wealth.

C Social housing is a public good because it is both non-rival and non-excludable.

D There is market failure in the housing market because of the existence of missing markets.

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10 Which one of the following best describes the relationship between the demand for air travel and the demand for airline pilots?

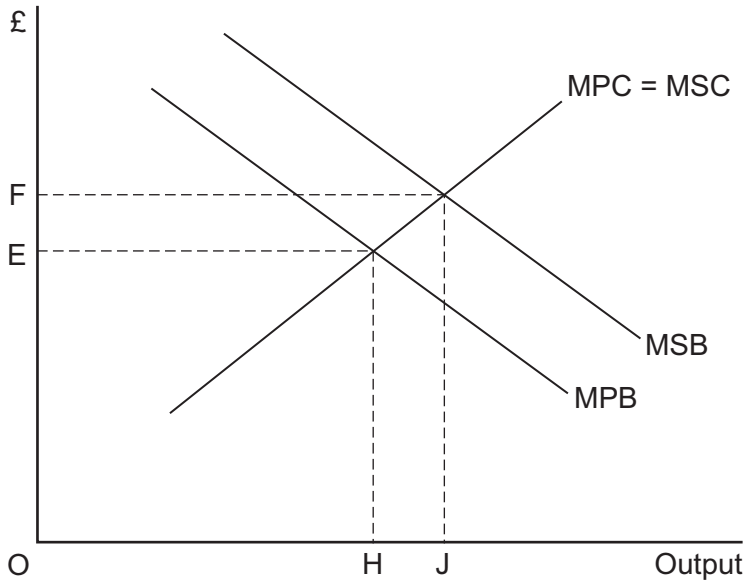
A Composite demand

B Derived demand

C Joint demand

D Complementary demand

11 The diagram below shows the marginal private benefit (MPB) and marginal social benefit (MSB) curves and the marginal private cost (MPC) and marginal social cost (MSC) curves for a merit good.



In the absence of government intervention in this market, a misallocation of resources is likely to occur because

A the free market price is too low.

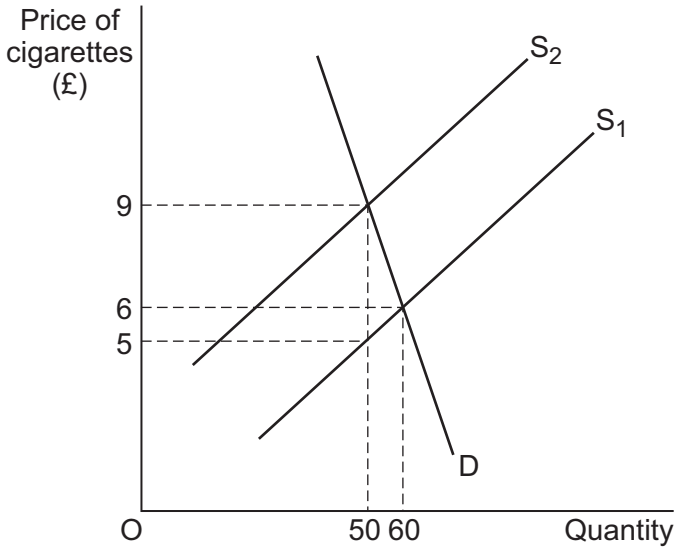
B there is over-production of the good, of HJ.

C the free market output is too high.

D there is under-consumption of the good, of HJ.

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12 The diagram below shows the demand (D) and supply (S) curves for cigarettes.



The government imposes an indirect tax on cigarettes which shifts the supply curve from S_1 to S_2. Which one of the following, **A**, **B**, **C** or **D**, shows the share of the total tax revenue paid by producers and the share paid by consumers?

	Producers (£)	**Consumers (£)**
A	50	150
B	150	50
C	0	200
D	450	360

13 When money is used as a medium of exchange,

A barter or swapping of goods is likely to become more common.

B trade is likely to increase.

C the relative prices of goods never change.

D specialisation and the division of labour are made more difficult.

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14 The table below shows the world prices ($/tonne) of various fruits for a two-year period.

Fruit	Year 1	Year 2
Oranges	150	80
Apples	200	140
Pears	80	70
Grapes	250	200

Which one of the following is supported by the data?

A The earnings of orange growers will have decreased between Year 1 and Year 2 if the demand for oranges is price elastic.

B The trend in the price of apples between Year 1 and Year 2 will encourage apple growers to increase output.

C The price elasticity of demand is lowest for pears.

D Total revenue from the sale of grapes will have fallen between Year 1 and Year 2 if the demand for grapes is price inelastic.

15 A firm increases the size of its business. As a result, its average costs fall because of better utilisation of its factory and the lower cost of buying advertising space. The firm therefore experiences greater

A technical and marketing economies of scale.

B purchasing and marketing economies of scale.

C financial and purchasing economies of scale.

D financial and technical economies of scale.

16 Which one of the following statements about market failure is correct?

A Small firms are less efficient than large firms due to diseconomies of scale.

B The existence of free riders will result in the over-production of public goods.

C The social benefits of some private goods exceed the private benefits.

D Markets do not supply merit goods.

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17 A misallocation of resources is most likely to occur in monopoly if

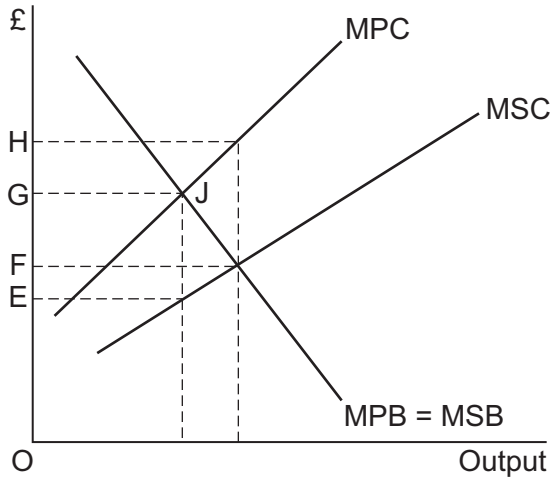
A other firms enter the industry.

B higher prices are charged than under competitive conditions.

C market output increases.

D there are economies of scale.

18 The diagram below shows the marginal private benefit (MPB) and marginal social benefit (MSB) curves and the marginal private cost (MPC) and marginal social cost (MSC) curves for Good X produced by a firm. The free market equilibrium position is at point J.



Which one of the following government policies should be used to correct the market failure that exists at point J?

A A per unit subsidy of FH

B A per unit tax of FG

C A per unit subsidy of EG

D A per unit tax of EG

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19 A product has a price elasticity of demand of –0.5. If the price of this product increases by 10%, then total revenue will

A rise by more than 10%.

B rise by less than 10%.

C fall by more than 10%.

D fall by less than 10%.

20 An inferior good always has

A positive price elasticity of demand.

B many substitutes.

C negative cross elasticity of demand.

D negative income elasticity of demand.

21 The table below indicates the average price of clothing in price index number form.

Year	Price Index
2008	100
2009	105
2010	120
2011	110
2012	125

Which one of the following can be deduced from the data above?

A The price of clothing rose throughout the whole period 2008 to 2012.

B Compared with 2012, the price of clothing was 20% cheaper in 2008.

C Revenue from the sale of clothing fell in 2011.

D Between 2010 and 2011, the price of clothing fell by 10%.

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22 Which one of the following is most likely to be an example of the immobility of a factor of production? Workers' unwillingness to

A change jobs.

B accept lower wages.

C improve productivity.

D attend training courses.

23 Market failure arises when

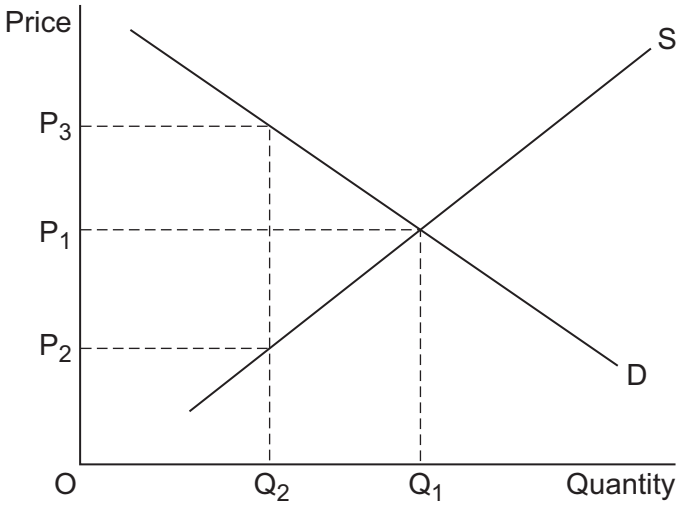
A prices rise in response to excess demand.

B no account is taken of positive externalities in consumption.

C firms are unprofitable and go out of business.

D costs increase as firms expand their production.

24 The diagram below illustrates the market demand (D) and supply (S) curves for a good. The production of the good creates a negative externality.



To reduce production and consumption of the good to OQ_2, the government could impose a

A price ceiling of OP_3.

B tax of P_2P_3.

C minimum price of OP_2.

D tax of P_2P_1.

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25 A government wishing to reduce firms' carbon emissions through the use of pollution permits may fail to achieve such a reduction because

A firms would need permits if their production processes pollute the environment.

B firms which do not use all of their permits can sell some of them to other firms.

C permits issued to firms do not impose strict enough limits on their carbon emissions.

D firms improve their technology to reduce the number of permits they require.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Turn to page 14 for Section B

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Turn over for Section B

Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2.
You are advised to spend at least 50 minutes on **Section B**.

EITHER **Total for this Context: 50 marks**

Context 1

THE PROVISION OF HIGHER EDUCATION IN THE UK

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

Extract A: Students in higher education in the UK in thousands, by type of course, 1980/1981 and 2008/2009

	1980/81	2008/09
Undergraduate		
Full-time	473	1328
Part-time	247	686
Postgraduate		
Full-time	62	269
Part-time	45	274
All higher education	827	2557

Source: *Social Trends* 41, 2011

Extract B: Students should not have to pay fees for attending university

Universities need more income if they are to continue to provide quality education and to compete in international education markets. Where is this money to come from?

Some suggest that universities should be financed, as they were before 1998, largely through government spending and taxation. Subsidies were paid directly to universities; students received grants from government to help finance their living costs. UK students did not have to pay tuition fees.

Others argue that universities should be financed by increasing the amount of money they receive from selling their research to commercial companies. However, even in the case of the most successful universities in the USA, business provides only about 1% to 2% of university income. Less successful American universities raise much less money in this way.

Another option is to persuade rich individuals and companies to donate money to universities. Top American universities such as Harvard and Yale are very successful in appealing for gifts of this kind. Even so, US universities fail to raise sufficient gift money to pay for most of the education they provide. Britain is very different from America and lacks a culture of charitable giving to universities.

Source: news reports, 2012

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Extract C: Should we charge students higher fees for attending university?

Since 1998, UK students have been charged tuition fees to help pay for their university courses. The fees were raised significantly in 2012. Supporters of student fees believe that fee income provides the best way of financing the growth of higher education. They argue that the lifetime return on a university degree is huge. The average graduate earns £160 000 more than the average non-graduate over a lifetime, as a result of gaining a degree. Therefore, those who personally profit from education should contribute more towards the cost of providing the service. Without the better-off paying fees, the argument goes, university remains a highly subsidised middle-class privilege. They conclude that this cannot continue and that politicians must give universities the freedom to charge higher fees.

However, tuition fees are often attacked on the grounds that they deter young people, especially those from poor families, from going to university. Nevertheless, until 2011 at least, despite fees being charged, university applications continued to increase across all income groups.

The debate is about more than paying for university education. It centres on the nature of the society in which we want to live. Some economists argue that education is a service which is essential to any society which claims to be civilised. They also believe that education is a service which markets tend to under-provide.

Source: news reports, 2012

0 1 Define the term 'subsidies' (**Extract B**, line 4). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison between the number of students on full-time courses and those on part-time courses over the period shown. *(8 marks)*

0 3 With the help of an appropriate diagram, explain the view of education as a '…service which markets tend to under-provide' (**Extract C**, line 18). *(12 marks)*

0 4 Using the data and your own economic knowledge, assess the case for financing universities mainly through charging fees to their students. *(25 marks)*

Turn over for Context 2

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Do **not** answer Context 2 if you have answered Context 1.

Total for this Context: 50 marks

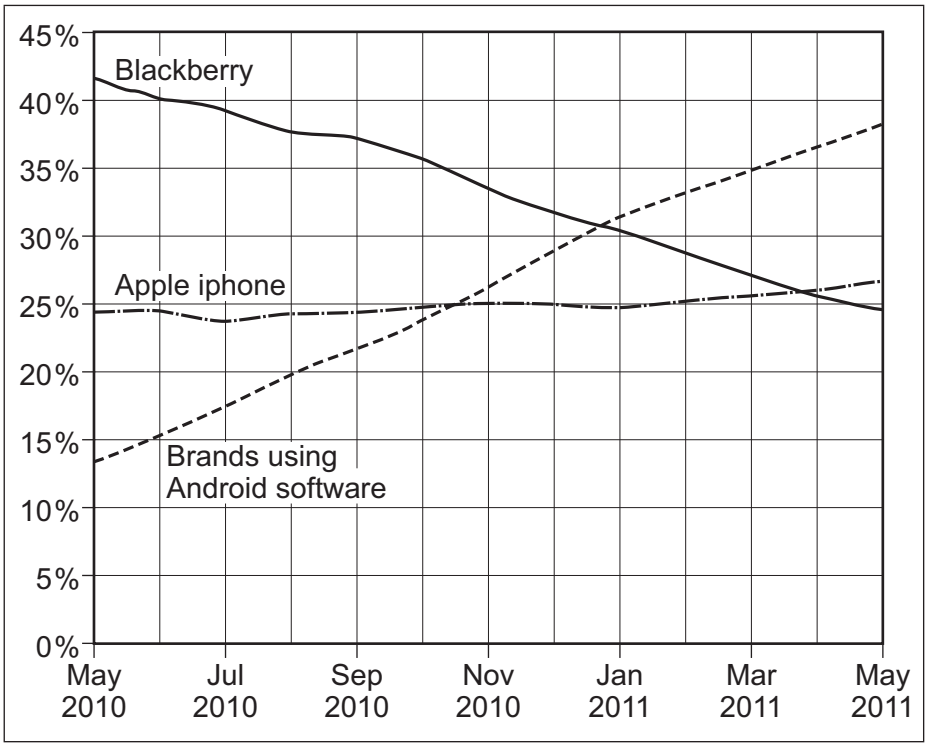
OR

Context 2

MARKETS FOR SMARTPHONES

Study **Extracts D**, **E and F**, and then answer **all** parts of Context 2 which follow.

Extract D: Market shares (%) of selected smartphone brands in the US market, May 2010 to May 2011



Source: news reports, 2012

Extract E: The use and production of smartphones

A smartphone is a device that lets the user make telephone calls, but also adds in features which, in the past, would have been found only on devices such as computers. These include the ability to send and receive e-mails. The worldwide smartphone market enjoyed explosive growth of 54.7% in 2011. In the UK, smartphones now account for one in three mobile phones, and an increasing proportion of the sales of new mobile phones.

A number of factors increased the sales of smartphones and some also caused their prices to fall in 2011. One of the factors was fashion. A smartphone is now viewed by many people, particularly the young, as a 'must-have' item. Fashion also means that some users want to buy the latest, most advanced, smartphone as soon as it is advertised, replacing the model bought the year before. Other factors include substantial economies of scale, improvements in productive efficiency and the entry of new firms into the market.

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Smartphones are assembled from a very large number of components produced in low-cost factories located mostly in Asia. Some people believe that the main reason why manufacturing costs are low stems from the low wages paid to Asian workers.

Smartphone manufacturers, with their headquarters in the USA and other rich countries, have been accused of exploiting the workers in poor countries whom they employ to make their phones.

Source: news reports, 2012

Extract F: Mobile phone use and possible health risks

The World Health Organisation (WHO) has stated that there "could be some risk" of mobile phone use causing cancer. Some national radiation advisory authorities have recommended measures to minimise exposure of their citizens to radiation emitted by mobile phones. However, an assessment by a European Commission Scientific Committee concluded that "exposure is unlikely to lead to an increase in cancer in humans".

Another area of concern is radiation emitted by the broadcasting masts which provide the link to and from mobile phones. In contrast to mobile handsets, this radiation is emitted continuously. People who spend long periods of time a short distance from active telecommunications equipment may be at risk of much greater exposure to radiation than the general population.

In February 2009, a French telecom company was ordered to take down a mobile phone mast due to uncertainty about its effect on health. However, the general presumption taken by courts of law is that mobile phone users themselves, and not governments, should take responsibility for avoiding health risks. They should do this, for example, by using hands-free devices to decrease radiation to the head. The use of mobile phones when driving can also cause accidents.

Source: news reports, 2009–2012

0 5 Define the term 'productive efficiency' (**Extract E**, line 12). *(5 marks)*

0 6 Using **Extract D**, identify **two** significant points of comparison between the market shares of smartphone brands over the period shown. *(8 marks)*

0 7 With the help of the information in **Extract E**, explain **two** possible reasons for the change in the sales of smartphones in 2011. *(12 marks)*

0 8 Using the information in the data and your own economic knowledge, evaluate the economic case **for** and **against** governments attempting to influence how mobile phones are manufactured and used. *(25 marks)*

END OF QUESTIONS

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General Certificate of Education (A-level)
June 2013

Economics ECON1

(Specification 2140)

Unit 1: Markets and Market Failure

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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AQA Advanced Subsidiary Economics

June 2013 **ECON1/1**

The following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

1.	**D**	**9.**	**A**	**17.**	**B**
2.	**A**	**10.**	**B**	**18.**	**A**
3.	**D**	**11.**	**D**	**19.**	**B**
4.	**C**	**12.**	**A**	**20.**	**D**
5.	**D**	**13.**	**B**	**21.**	**B**
6.	**B**	**14.**	**D**	**22.**	**A**
7.	**C**	**15.**	**A**	**23.**	**B**
8.	**A**	**16.**	**C**	**24.**	**B**
				25.	**C**

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Advanced Subsidiary Economics

June 2013 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

A levels approach. This approach is used for marking questions **04** and **08** of the data response questions. The Levels of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVELS OF RESPONSE MARK SCHEME: QUESTIONS 04 AND 08 ONLY

AS LEVELS OF RESPONSE	AO1 KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology	AO2 APPLICATION of theories, concepts and terminology	AO3 ANALYSIS of economic problems and issues	AO4 EVALUATION of economic arguments and evidence, making informed judgements
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Candidates will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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EITHER

Context 1 **Total for this Context: 50 marks**

01	Define the term 'subsidies' (**Extract B,** line 4).	*(5 marks)*

For an acceptable definition, eg • payments by the government/authority which reduce the costs of production of goods or services • payments by the government which increase the supply of goods or services/shift the supply curve to the right • money paid by the government to firms in order to reduce their costs and /or increase competitiveness • money paid by the government to reduce the market price • money paid by the government to increase consumption.	**5 marks**
Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'subsidies' even if the definition isn't exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example as follows:

Grants/payments to firms by the government.	**2 marks**
Diagram to illustrate a subsidy: 1 mark for labels, 1 for information shown.	**2 marks**
Money received by firms	**1 mark**
A form of government spending/intervention	**1 mark**
Payments of money	**1 mark**
The opposite of taxes	**1 mark**
An example of a good/service which may be subsidised (other than education).	**1 mark**

NB: If the candidate refers to for example, 'reduces costs of production'/'shifts supply curve to the right' with no reference to 'payment' and 'government', this should be awarded 2 marks for each statement.

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02 Using **Extract A,** identify **two** significant points of comparison between the number of students on full-time courses and those on part-time courses over the period shown. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point made:

Identifies a significant point of comparison Makes accurate use of the data to support comparison identified Unit of measurement given accurately	**4 marks**
Identifies a significant point of comparison Makes use of the data to support the comparison identified However, only one piece of data is given when two are needed **and/or** no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately **and/or** the dates are not quoted or are inaccurate	**3 marks**
Identifies a significant point of comparison No correct use of the data to support the comparison identified	**2 marks**
Identifies a significant feature of the data but no comparison is made Makes use of the data to support the feature identified Unit of measurement given accurately	**1 mark**

If a candidate identifies more than 2 significant points of comparison, reward the best two.

NB: Candidates need only refer to EITHER postgraduate OR undergraduate students to achieve full marks

The valid points include

- full-time undergraduate students increased from 473 000 in 1980/81 to 1328 000 in 2008/9, and part-time undergraduate students increased from 247 000 in 1980/81 to 686 000 in 2008/9
- full-time postgraduate students increased from 62 000 in 1980/81 to 269000 in 2008/9, and part-time postgraduate students increased from 45 000 in 1980/81 to 274000 in 2008/9
- over the years shown the highest absolute increases for each type of student were seen in undergraduate courses, with full-time undergraduate students increasing by 855000, and part-time undergraduate students increasing by 439 000
- over the years shown the highest % increases for each type of student were seen in postgraduate courses, with full-time postgraduate students increasing by 334%, and part-time postgraduate students increasing by 509%
- over the years shown the number of students on full-time courses was greater than the number on part-time courses for undergraduate courses, for example in 2008/9 there were 1 328 000 students on full-time courses and 686 000 on part-time courses
- over the years shown the number of students on full-time postgraduate courses was greater than the number on part-time courses in 1980/81 with 62 000 full-time students, and 45 000 part-time, whereas in 2008/09 there were more part-time students than full-time with 274 000 and 269 000 respectively
- over the years shown the highest number of full-time and part-time students was seen in 2008/9 on undergraduate courses with 1 328 000 students studying full-time and 686 000 studying part-time

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- over the years shown the lowest number of both full-time and part-time students was seen in 1980/81 on postgraduate courses with 62 000 students studying full-time and 45 000 students studying part-time.

For ease of reference:

- the absolute increase over the period for full-time undergraduate students was 855 000
- the absolute increase over the period for part-time undergraduate students was 439 000
- the absolute increase over the period for full-time postgraduate students was 207 000
- the absolute increase over the period for part-time postgraduate students was 229 000.

or

- the % increase over the period for full-time undergraduate students was 181%
- the % increase over the period for part-time undergraduate students was 178%
- the % increase over the period for full-time postgraduate students was 334%
- the % increase over the period for part-time postgraduate students was 509%.

or

- the absolute increase over the period for full-time students on both courses was 535 000 to 1597 000
- the absolute increase over the period for part-time students on both courses was 292 000 to 962 000

or

- the % increase over the period for full-time students on both courses was 199%
- the % increase over the period for part-time students on both courses was 229%

- Allow a margin of error of 10 000 or +/- 1 per cent when judging the changes.

MAXIMUM FOR PART 02: 8 MARKS

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03 With the help of an appropriate diagram, explain the view of education as a '…service which markets tend to under–provide' (**Extract C**, line 18). *(12 marks)*

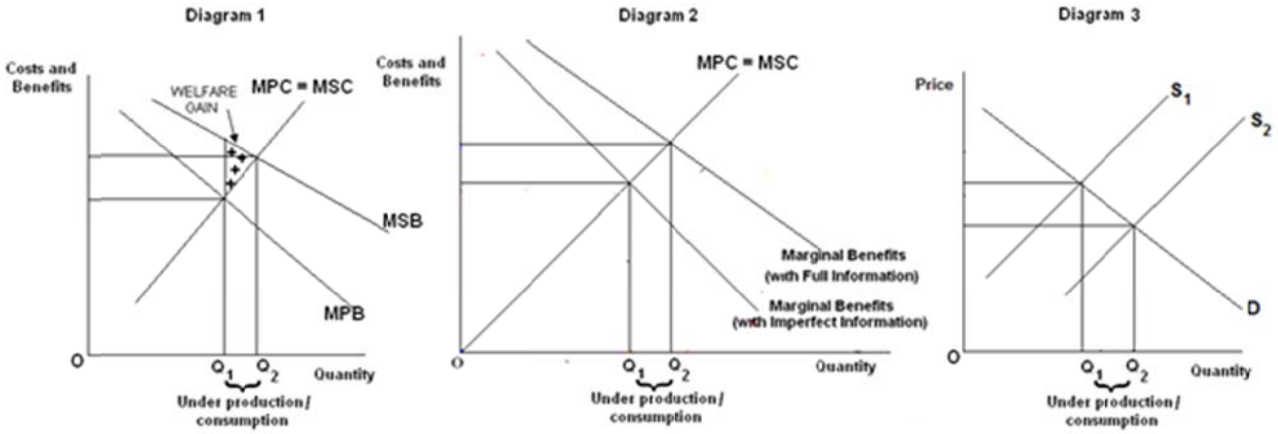
When awarding marks for the diagram, it is important to reward candidates who produce an economically valid response even if it is not exactly the same as diagrams 1, 2 or 3 below.

All three diagrams analyse education provision in terms of education being a merit good.

Diagram 1 assumes that consumption of education generates positive consumption externalities which benefit society as a whole. Because a free market fails to take account of the positive externalities, underconsumption and thence also underproduction occurs.

Diagram 2 relates to the alternative way of defining a merit good in terms of imperfect information, which alternatively could be drawn as a demand and supply diagram when, following receipt of the full information, consumption and thence provision is higher.

Diagram 3 is a conventional supply and demand diagram showing the quantity of education provided at an unsubsidised market price (when the supply curve is S_1), and at a subsidised price (when the supply curve is S_2).



The anticipated response for the diagram

Breakdown of the marks for Diagrams 1 and 2

For labelling both axes, the private cost and benefit curves, and the horizontal coordinate, labelled for example Q_1, to show the level of provision of education in a market before externalities or the lack of perfect information are taken into account.	**1 mark**
For depicting social cost relative to private cost accurately on the diagram	**1 mark**
For depicting social benefit relative to private benefit (or marginal benefits with and without full information) accurately on the diagram.	**1 mark**
Horizontal coordinate accurately drawn after taking account of the externalities or lack of perfect information.	**1 mark**
Any other relevant feature of the diagram, eg marginal external benefit shown or welfare gain/loss shown; underproduction or underconsumption, the size of an information gap correctly labelled.	**1 mark per feature up to a maximum of 2 marks**

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Breakdown of the marks for Diagram 3

For labelling both axes, the demand curve and the supply curve S_1, and the horizontal coordinate, labelled for example Q_1, to show the level of provision of education in a market before the effect of a subsidy (for example) is taken into account.	**1 mark**
For showing a second supply curve, in this graph S_2, having taken into account the effect of a subsidy.	**1 mark**
For showing a second horizontal coordinate, Q_2.	**1 mark**
For labelling the distance between Q_1 and Q_2 underproduction or underconsumption, or labelling Q_2 as the socially optimal level of consumption.	**1 mark**
Any other relevant feature of the diagram, eg the free-market price of education; the subsidised price of education; quantity of education demanded if education is provided free.	**1 mark per feature up to a maximum of 2 marks**

Note:

(i) **To earn the first mark in the grids, all the listed tasks must have been completed correctly.**

(ii) **For the task of labelling axes, costs and benefits, c/b and/or price or a monetary symbol such as the £ sign on the vertical axis and quantity, output, or units of education are all valid, as are P and Q.**

Up to a MAXIMUM of 4 marks for diagram or diagrams

The anticipated written response

The quote or prompt at the beginning of the question, drawn from the last line of **Extract C** states that education is a service which markets tend to underprovide. However, neither **Extract B** nor **Extract C** offers any further prompts and no mention is made of education as a merit good. However, AS students are well versed in the fact that education can be classed as a merit good and they are expected to have developed their explanations accordingly. In the context of externalities, to be completely accurate the answers should focus on *consumption* externalities, but allow answers that simply refer to positive externalities without mentioning the word *consumption*.

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Define a relevant concept such as a merit good, marginal private, external and social costs and benefits, positive externality, an information gap, demand, supply.	**1 mark per definition Maximum of 2 marks**
Example of a private benefit	**1 mark**
Example of an external benefit/positive externality	**1 mark**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example	
Education, a merit good (**2 marks**) may be underconsumed (or underprovided) because consumers only consider the private benefits (**2 marks**) so the positive (consumption) externalities are not taken into account (**2 marks**) so the MPB is less than the MSB (**2 marks**) the level of consumption ends up below the socially optimum level (**2 marks**) and there is a deadweight loss of social welfare (**2 marks**).	**Up to 10 marks**
Consumers of education only consider the short term benefits (**2 marks**) because they possess imperfect information (**2 marks**) they do not fully consider the long-term benefits **(2 marks)** of eg higher eventual income (**1 mark eg**) so consumption occurs at the privately optimum level **(2 marks)** rather than the socially optimum level (**2 marks**) resulting in a misallocation of resources (**2 marks**) and which could be avoided by subsidising consumption (or production) of education **(2 marks)**.	**Up to 10 marks**
Alternatively/in addition to the above, other links include: • in the education market there is evidence of market failure • the market produces where MPB is equal to MPC • the market does not produce where MSB is equal to MSC • consumers possess imperfect information of the long term private benefits • less is consumed than if perfect information existed • the 'perceived' benefit is less than the 'actual' benefit • social benefits outweigh the private benefits • the MPC of production outweighs the MSC of production • a positive external benefit of production exists.	**2 marks for each alternative /additional link in the chain of reasoning** **Up to 10 marks**

Note: Do not award marks for simply describing what the diagram shows.

Up to a MAXIMUM of 10 marks for the written explanation

MAXIMUM FOR PART 03: 12 MARKS

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04 Using the data and your own economic knowledge, assess the case for financing universities mainly through charging fees to their students. *(25 marks)*

Level 5	**Good analysis and good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis but very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of 21 marks may be awarded if there is no explicit reference to the data.

The case for and against charging fees to students can only be properly assessed if the alternatives are also considered. **Extracts B & C** provide a number of prompts and it is expected that candidates will make use of one or more of these when developing their answers.

Issues and areas for discussion include:

Introduction	• explaining the charging of fees • stating the alternatives to charging fees • identifying education as a merit good.
Developing the response to the question: **(Application)**	• drawing on knowledge of fee charging in the UK in recent years • drawing on knowledge of recent proposals to change the nature of fee charging in future years • Extract B, (line 1): Universities need more income • Extract B, (lines 3-4): finance largely through government spending and taxation • Extract B, (lines 4-5): subsidies to universities and grants to students • Extract B, (lines 8-9): selling research to commercial companies • Extract B, (lines 9-11): evidence from US universities; • Extract B, (lines 13-14): philanthropic gifts • Extract B, (lines 14-16): evidence from US universities • Extract C, (lines 1-2): history of charging student fees in the UK • Extract C, (lines 2-12): case for and against charging fees • Extract C, (lines 15-18) issues extending beyond fee-paying.

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Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain how education possesses the properties of a merit good • developing the opposite case to explain how a free market can provide education • analysing subsidies • using a diagram to illustrate the effect of a subsidy • developing a chain of reasoning as to why market provision may result in under-provision • analysis of the case for and against universities being financed through charging student fees • analysis of the case for and against universities being financed through business contracts • analysis of the case for and against universities being financed through philanthropy or gifts • analysis of the case for and against universities being financed through government spending and taxation • use of the evidence in the Extracts and in the candidate's economic knowledge to back up the analysis.
Evaluation	• discussing the analytical consequences of treating education as a merit good • evaluating the strength of the merit good argument • discussing possible unintended consequences of subsidised or free provision • discussing why business contracts and philanthropy may not be able to finance universities • evaluating the case for charging students fees • evaluating the case against charging students fees • opportunity cost arguments • discussing the correct size, if any, of a subsidy • discussing whether or not different methods of finance should be used in tandem • discussing the implications of 'mainly' • evaluating the evidence in the data • evaluating market failure and government failure considerations • overall evaluation of the case for versus the case against.

Examiners should note that credit can be given for basic evaluation if a candidate simply states but does not develop arguments in favour or against different methods of financing higher education. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by candidates who are able to support arguments both for and against different types of finance, and by clearly stating the assumptions underlying the arguments being used. Reward the relevant use of diagrams to support arguments, eg merit good and subsidy diagrams.

USE THE DETAILED LEVELS MARK SCHEME ON PAGE 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

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OR

Context 2 **Total for this Context: 50 marks**

05	Define the term 'productive efficiency' (**Extract E**, line 12).	*(5 marks)*

For an acceptable definition, eg • the lowest-average cost level of output/production • production takes place at the lowest point on a 'u'- shaped average cost curve • maximising output from available inputs • minimising inputs to produce given output • when it is impossible to produce more of one good without reducing production of another good • production takes place where AC=MC (not in AS specification).	**5 marks**
Full marks should be awarded to a candidate who demonstrates a clear understanding of the term '**productive efficiency'** even if the definition isn't exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example, as follows:

Stating that it occurs at lowest average cost – no reference to output/production.	**4 marks**
Stating that productive efficiency occurs at all points on a firm/economy's production possibility frontier.	**2 marks**
When all resources are fully utilised	**2 marks**
Illustrating productive efficiency on a cost curve or PPF diagram: 1 mark for labels, 1 for information shown.	**2 marks per diagram (max 2 marks)**
Stating that production takes place at lowest cost – no reference to average unit.	**2 marks**
Defining efficiency in a 'general' way, eg reference to economies of scale, but without reference to production/minimising average costs.	**1 mark**
Defining production/productive	**1 mark**
Stating productive efficiency is an example of static efficiency.	**1 mark**

Do not reward an answer which confuses productive efficiency with allocative efficiency (the latter is not in the specification, but some candidates have learnt the concept).

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

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06 Using **Extract D**, identify **two** significant points of comparison between the market shares of smartphone brands over the period shown. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point made

Identifies a valid significant point of comparison. Makes accurate use of the data to support comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the comparison identified. However, no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately **and/or** the dates are not quoted or are inaccurate.	**3 marks**
Identifies a significant point of comparison. No use of the data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a candidate identifies more than 2 significant points of comparison, reward the best two. A candidate only needs to compare 2 of the lines in the graph.

The valid points include:

- comparing the first and last points of the iphone and Blackberry data series, the market share of the iphone grew (from about 24% to about 27%), whereas the share of Blackberry fell (from about 42% to about 25%)
- comparing the first and last points of the iphone and Android brands data series, the market share of the iphone grew (from about 24% to about 27%), whereas the share of Android grew (from about 13% to about 38%)
- comparing the first and last points of the Android brands and Blackberry data series, the market share of the Android brands grew (from about 13% to about 38%), whereas the share of Blackberry fell (from about 42% to about 25%)
- the iphone's market share was above Blackberry's market share in the latter part of the data period from April 2011 until May 2011, rising from about 26% to about 27%
- Blackberry's market share fell continuously throughout the data period, whereas the iphone's market share fell only in two short periods (June/July 2010 from about 24% to about 23.5% and December 2010/January 2011 from about 25% to about 24.75%)
- the market shares of Blackberry and Android brands were equal (at approx. 31%) in December 2010/January 2011
- the market shares of Android brands and iphone were equal (at approx. 25%) in October/November 2010
- the market shares of Blackberry and iphone were equal (at approx. 26%) in March/April 2011
- the largest market share (approx. 42%) of Blackberry was in May 2010, compared with that of the iphone (approx. 27%) in May 2011, or Android brand (approx. 38%) in May 2011

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- the smallest market share (approx. 25%) of Blackberry was in May 2011, compared with that of the iphone (approx. 24%) in July 2010, or Android brand (approx. 13%) in May 2010

  Allow a margin of error of +/- 1 per cent when judging market shares.

MAXIMUM FOR PART 06: 8 MARKS

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07 With the help of the information in **Extract E,** explain **two** possible reasons for the change in the sales of smartphones in 2011. *(12 marks)*

Extract E mentions two sets of factors that affected smartphone sales in 2011. These were a demand-side factor (fashion) and supply-side factors (economies of scale, productive efficiency and market entry). In the logical chains of reasoning below, only award once '*causes demand to increase'*, '*causes supply to increase'*, and '*and causes sales to increase'.*

Define demand, supply, equilibrium quantity, excess supply, or any other relevant term. Do not reward a definition of productive efficiency.	**1 mark per definition** **Maximum of 2 marks**
For each of the following explanations, award 2 marks for each logical link in the chain of reasoning.	
A smartphone is a fashion item **(2 marks)** and users replace their phones with the latest model in response to an advertising campaign **(2 marks)** which increases the demand for smartphones **(2 marks)** and causes sales to increase **(2 marks)**.	**Up to 8 marks**
As smartphone technology improves **(2 marks)** consumers are likely to embrace this as it enables them to enjoy more efficient means of communication **(2 marks)** this increases the demand for smartphones **(2 marks)** and causes sales to increase **(2 marks)**.	**Up to 8 marks**
Economies of scale **(2 marks)** reduce (average) costs **(2 marks)** and increase supply **(2 marks)** and causes sales to increase **(2 marks)**.	**Up to 8 marks**
Gains in productive efficiency **(2 marks)** reduce (average) costs **(2 marks)** and increase supply **(2 marks)** and cause sales to increase **(2 marks)**.	**Up to 8 marks**
The entry of new firms **(2 marks)** increases supply **(2 marks),** increases competition in the market **(2 marks)** which drives down prices **(2 marks)** and cause sales to increase **(2 marks)**.	**Up to 8 marks**
For an explanation of the adjustment process: for example an increase in demand causes excess demand at the original equilibrium **(2 marks)** and an extension along the supply curve **(2 marks)**.	**Up to 4 marks**
For diagrams which are consistent with the written explanation, eg a diagram showing the effect of a shift of demand; a diagram showing the effect of a shift of supply. Award marks as follows: • for labelling both axes, original supply and demand curves, price and quantity co-ordinates drawn in and labelled for example P_1 Q_1 **1 mark** • a relevant shift of the demand and/or the supply curve: **1 mark for each shift** • horizontal and vertical co-ordinates drawn in at the new equilibrium and labelled for example P_2 Q_2: **1 mark** • any other relevant feature of the diagram (eg excess demand; excess supply): **1 mark max**.	**Up to 4 marks**

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Note: (i) **Maximum of 8 marks if only one relevant reason is explained**

(ii) **Full marks can be earned without the use of a diagram**

(iii) **Award no marks for the diagram if there is no reference to it in the text**

MAXIMUM FOR PART 07: 12 MARKS

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08	Using the information in the data and your own economic knowledge, evaluate the economic case **for** and **against** governments attempting to influence how mobile phones are manufactured and used. *(25 marks)*

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis but very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

Answers discussing only policies cannot rise above 16 marks

A maximum of 21 marks may be awarded if there is no explicit reference to the data.

Answers discussing <u>only</u> phone manufacture <u>or</u> phone use cannot rise above 21 marks.

Candidates are likely to develop their answers to apply what they have been taught, namely *governments regulating or intervening in how mobile phones are manufactured and used*. While this is a valid response to the question, the wording also tries to prompt discussion of how governments may try to 'nudge' manufacturers and phone users into certain types of behaviour. For example, smartphone manufacturers such as Apple may voluntarily change the way they hire labour and phone users may take action to minimise the chance of suffering health problems.

Issues and areas for discussion include:

Introduction	• stating that a mobile phone is manufactured by assembling a large number of components into a finished phone • stating that a mobile phone is usually used next to the ear but can be used in other ways • stating that mobile phones emit radiation when used and that phone masts also emit radiation • stating different ways in which governments can attempt to influence how mobile phones are manufactured and used.
Developing the response to the question: **(Application)**	• drawing on knowledge of discussion in newspaper and TV programmes about manufacturing conditions and the alleged health hazards of using mobile phones • extract E Line 16: low wages paid to Asian workers • extract E Lines 18-19: manufacturers exploiting workers • extract F Lines 1-2: there "could be some risk" of mobile phone use causing cancer • extract F Lines 4-6: European Commission Scientific Committee concluded that "exposure is unlikely to lead to an increase in cancer in humans"

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	• Extract F (line 7): radiation emitted by the broadcasting masts • Extract F (lines 9-10): workers who spend long periods of time at a short distance from active telecommunications equipment may also be at risk • Extract F (lines 12-13): French telecom company ordered to take down a mobile phone mast due to uncertainty about its effect on health; • Extract F (lines 13-15): the general presumption taken by courts of law is that mobile phone users themselves, and not governments, should take responsibility for avoiding health risks.
Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain why production of mobile phones in competitive markets without any attempt by governments to influence production may lead to low costs, greater consumer choice and higher employment • developing a chain of reasoning to explain why production of mobile phones in competitive markets without any attempt by governments to influence production may lead to market failure, eg in the form of income inequalities and the emission of negative externalities of consumption and production • analysing how governments may attempt to influence how mobile phones are manufactured and used • analysing the question with cost and externality diagrams • analysing the question in terms of the signalling, incentive and rationing/resource allocation functions of the price mechanism.
Evaluation	• questioning the assumptions made when developing the chains of reasoning outlined above • distinguishing between the different cases relating to phone manufacture and phone use • contrasting the advantages and disadvantages of government action and leaving things to the free market • evaluating the evidence in the data • evaluating market failure and government failure considerations • overall evaluation of the cases for versus the cases against, both for manufacture and use.

Examiners should note that credit can be given for basic evaluation if a candidate simply states but does not develop arguments. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by candidates who are able to support arguments both for and against. Reward the relevant use of diagrams to support arguments.

USE THE DETAILED LEVELS MARK SCHEME ON PAGE 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Level Examination
January 2013

Economics ECON1

Unit 1 Markets and Market Failure

Tuesday 15 January 2013 1.30 pm to 2.45 pm

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries one mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 Which one of the following is a factor of production?

A The profits made by firms

B Land owned or rented by firms

C A bank loan

D The productivity of labour

2 Which one of the following is most likely to discourage the growth of a firm?

The existence of

A diseconomies of scale at low levels of output

B marketing economies of scale at high levels of output

C large economies of scale at low levels of output

D competing firms in the same industry

3 The income elasticity of demand for bus travel is −1.5. This means that

A a 10% increase in fares will lead to a 15% decrease in passengers.

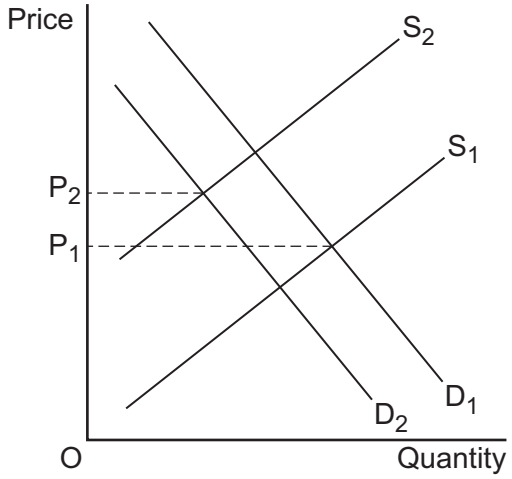
B bus travel is an inferior good.

C bus travel has a negative cross elasticity of demand.

D as unemployment falls, more people will use buses.

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4 The diagram below shows the demand and supply curves for butter, where P_1 is the initial equilibrium price.



The increase in price from P_1 to P_2 is most likely to be a result of

A an increase in butter production costs and a decrease in the price of complementary goods to butter.

B a successful advertising campaign for a butter substitute and a tax on butter.

C a decrease in the population and an increase in the subsidy on butter.

D a decrease in wages paid to all workers, including farm workers.

5 Which one of the following is an example of government failure?

A The government overproducing a merit good

B Government provision of national defence

C All subsidies given to private sector firms

D The government allowing free market forces to raise the price of oil

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6 The free market equilibrium price of a merit good is £50 per unit. At present, the government does not intervene in the market for this good. The government is most likely to correct the market failure associated with this good if it

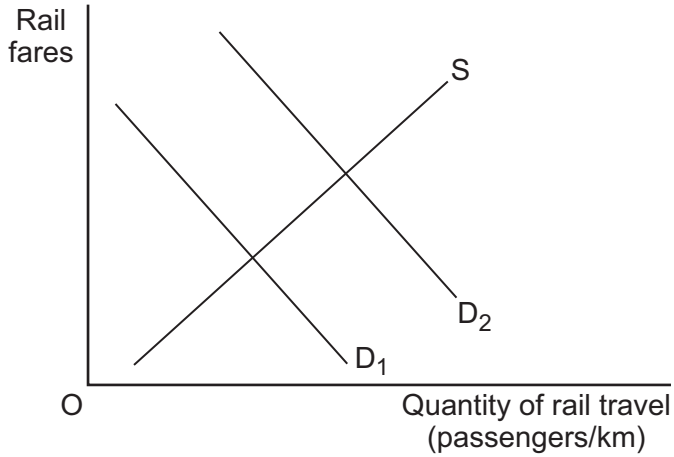
A imposes a maximum price of above £50 per unit.

B sets a minimum price of £50 per unit.

C taxes the free market price.

D subsidises the free market price.

7 The diagram below shows the demand for, and supply of, rail services.



The shift of the curve from D_1 to D_2 is most likely to result from

A a government decision to increase subsidies for rail travel.

B a reduction in the tax imposed on the price of a litre of petrol.

C a major expansion of the government's new railway track-building programme.

D a decision by the government to impose a tax on all car parking.

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8 A firm is productively efficient when

A it is operating at the lowest point on its average cost curve.

B it cannot increase current production even if demand for its product increases.

C output per worker cannot increase.

D an increase in production will decrease average costs.

9 Which one of the following is most likely to be a source of monopoly power?

A The employment of additional workers by a firm as it increases its size

B The existence of diseconomies of scale at high levels of output

C The granting of a patent to a pharmaceutical company for a newly developed drug

D The merger of two small firms in a large industry

10 The government is considering four possible capital investment projects. It has the resources to implement only one of these projects. The table below shows the estimated value of the private and external costs and benefits that each project is expected to yield.

	New hospitals (£ million)	**New roads (£ million)**	**New railways (£ million)**	**New housing (£ million)**
Private benefits	600	500	1000	150
Private costs	450	500	2000	70
Positive externalities	200	250	1000	40
Negative externalities	90	80	200	120

Which one of the projects should the government adopt if it wishes to maximise the economic welfare of the whole community?

A New railways

B New hospitals

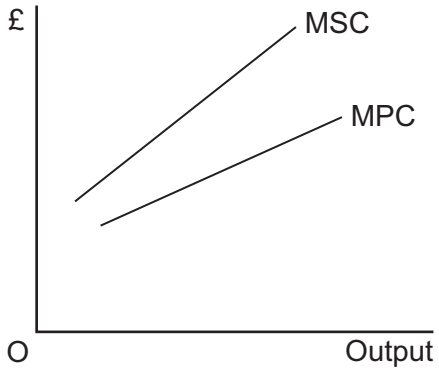
C New housing

D New roads

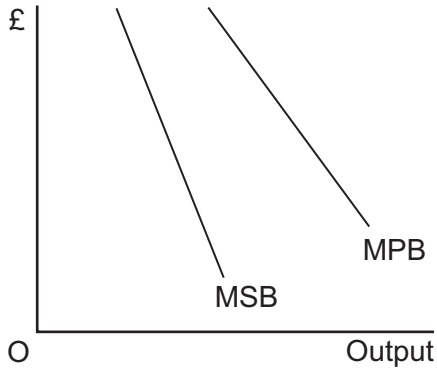
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11 The diagrams below show the marginal social cost and marginal private cost (MSC and MPC) curves and marginal social benefit and marginal private benefit (MSB and MPB) curves for different goods. Which diagram, **A**, **B**, **C** or **D**, is most likely to illustrate a demerit good?

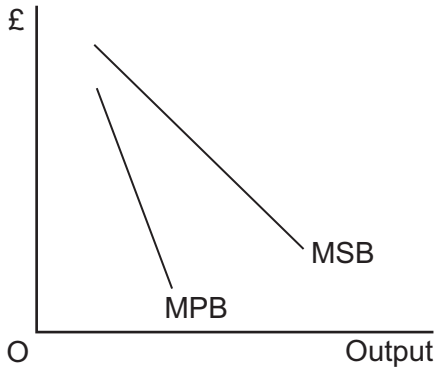
A



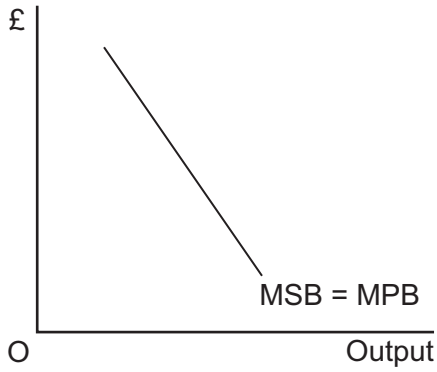
B



C



D



12 If there is a negative value for the cross elasticity of demand between two goods, this means that the two goods are

A complementary to each other.

B both inferior goods.

C unrelated to each other.

D substitutes for each other.

13 A shift to the right of the supply curve for a product can be caused by

A a rise in popularity of the product.

B a rise in costs of production.

C a tax on the product.

D the entry of new firms into the industry.

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14 In a free market, the rationing function of the price mechanism means that

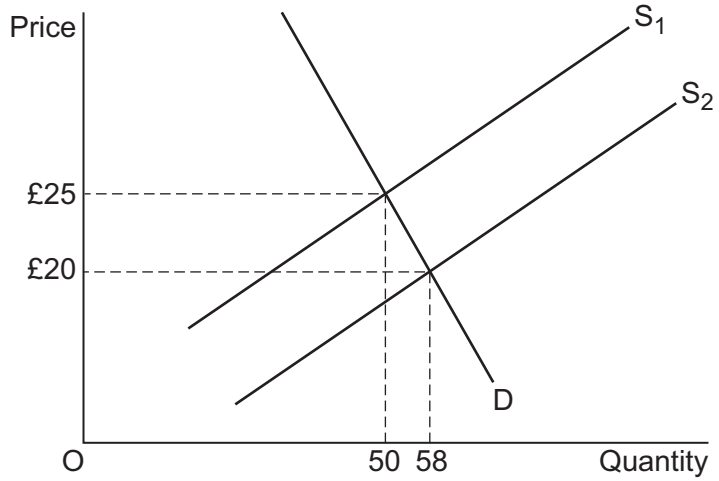
A an increase in demand, leading to a rise in price, will encourage new firms to enter the market.

B when there is a shortage of a product, the price will rise and deter some consumers from buying the product.

C changes in price provide information to both producers and consumers about changes in market conditions.

D if a product is scarce, a rise in price is likely to make the shortage worse.

15 The diagram below shows demand (D) and supply (S) curves for beef, where the initial equilibrium price is £25.



Which one of the following combinations, **A**, **B**, **C** or **D**, is correct?

	Cause of the fall in the price of beef	**Price elasticity of demand when the price of beef falls from £25 to £20**
A	Rise in the price of animal feedstuffs	Between −1 and minus infinity
B	Fall in the wage of agricultural workers	Between −1 and zero
C	Lower rent on agricultural land	Between −1 and minus infinity
D	Rise in the price of lamb	Between −1 and zero

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16 Merit goods are likely to be underprovided in a free market economy because their

A private benefits exceed their social benefits.

B social benefits exceed their social costs.

C private costs exceed their private benefits.

D social benefits exceed their private benefits.

17 At current levels of output, the marginal social cost of making a good is greater than its marginal private cost. Also, the marginal social benefit of the good is greater than its marginal private benefit. As a result, there will probably be

A a misallocation of resources.

B positive externalities in production.

C negative externalities in consumption.

D diseconomies of scale in production.

18 Which one of the following is an appropriate form of government intervention for the problem identified?

A The introduction of pollution permits to limit negative externalities

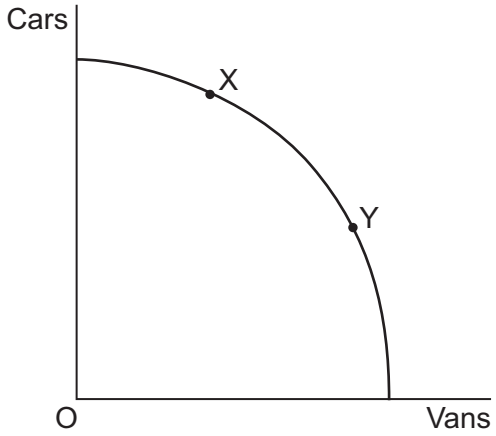
B The use of a buffer stock to stabilise the price of a public good

C The imposition of a maximum price for a merit good above its free market price

D The provision of a subsidy for a product which generates negative externalities

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19 In the diagram below, the production possibility frontier shows the various combinations of cars and vans that a firm can produce when all of its resources are fully and efficiently employed.



Which one of the following statements is correct?

The opportunity cost of producing one more car is

A greater at X than at Y.

B lower at X than at Y.

C the same at both X and Y.

D zero at both X and Y.

Turn over for the next question

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20 The table below shows indices of labour productivity for two firms between 2008 and 2011.

	Index of labour productivity (2010 = 100)	
Year	**Firm X**	**Firm Y**
2008	150	120
2009	120	110
2010	100	100
2011	80	80

Which one of the following can be concluded from the data?

A Firm X had a higher level of labour productivity than Firm Y in 2008.

B Productivity in both Firms X and Y was in equilibrium in 2010.

C Labour productivity was identical in both Firms X and Y in 2011.

D Labour productivity fell at a faster rate in Firm X than in Firm Y between 2008 and 2011.

21 A manufacturer of rubber tyres for motor vehicles invents and sells a new tyre. The new tyres cut petrol consumption by 25% on cars fitted with them.

Which one of the following is most likely to be correct? The

A supply of petrol will fall because petrol is in joint supply with tyres.

B demand for crude oil to produce petrol will fall because the demand for oil is derived from the demand for petrol.

C demand for car tyres will rise because tyres and petrol are in composite demand.

D demand for existing types of tyre will fall because they are in joint demand with the new tyres.

22 The price elasticity of supply of wheat is

A less elastic in the long run than in the short run.

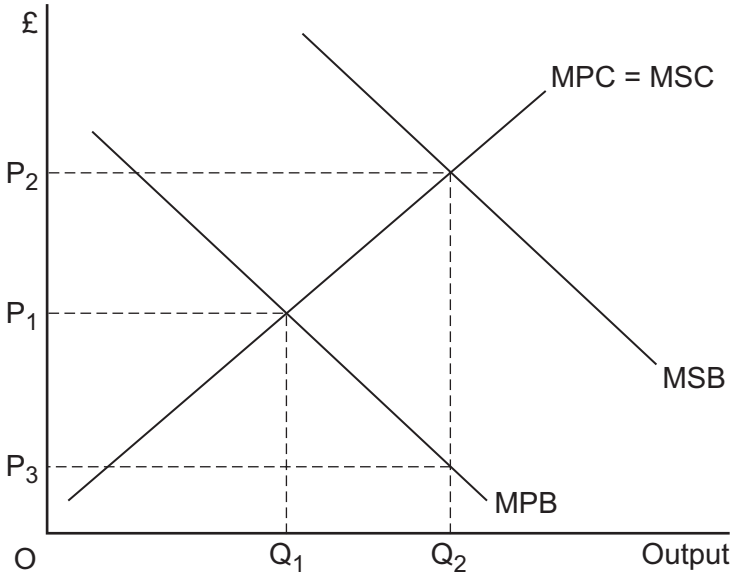
B determined by the availability of substitutes.

C affected by the stocks of wheat available.

D more elastic when there are restrictions on the amount of wheat that can be imported.

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23 The diagram below shows the marginal private benefit and the marginal social benefit (MPB and MSB) curves and the marginal private cost and the marginal social cost (MPC and MSC) curves for rented accommodation. The free market level of output is Q_1 at price P_1.



To achieve an efficient level of availability of rented accommodation, the government should

A supply Q_1Q_2 accommodation at a zero rent.

B impose a minimum price of OP_2 per unit of accommodation.

C provide a subsidy of P_3 P_2 per unit of accommodation.

D set a maximum price of OP_3 per unit of accommodation.

Turn over for the next question

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24 A free good

A is paid for by the government.

B has zero opportunity cost.

C is non-excludable and non-rival.

D has a perfectly inelastic supply.

25 Where there is partial market failure,

A a market exists but there is a misallocation of resources.

B the product is both non-excludable and non-rival in consumption.

C the market can only be competitive with government support.

D there is excess demand in the market at the current market price.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Now turn to page 14 for Section B

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Turn over for the next section

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Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2
You are advised to spend at least 50 minutes on **Section B**.

Total for this Context: 50 marks

EITHER

Context 1

CONGESTION ON THE ROADS

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

Extract A: Cars by fuel type, thousands, Great Britain, 2000 to 2011

Year	Petrol	Diesel	Other fuels*
2000	21 233	3 153	20
2001	21 641	3 460	25
2002	21 839	3 912	30
2003	21 805	4 400	35
2004	21 977	5 011	41
2005	21 876	5 596	48
2006	21 466	6 083	60
2007	21 264	6 657	78
2008	20 899	7 164	98
2009	20 491	7 641	114
2010	20 083	8 203	135
2011	19 548	8 763	155

Source: Department for Transport, April 2012

* Other fuels include gas, biofuels, electric and hybrid electric.

Extract B: Too much traffic on our roads?

The importance of the road network to transport and the economy is not always appreciated. In 2007, 92% of passengers and 67% of freight were transported by road. However, drivers impose costs on other road users by increasing their journey times, and inflict costs on non-road users through the generation of greenhouse gases, pollution and noise.

Some argue that the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus. This might be achieved by charging drivers more. However, increasing the cost of motoring will not be effective if the positive cross elasticity of demand between travel by car and other forms of passenger transport is very low.

An alternative approach is to increase the subsidies paid to other forms of transport. Such subsidies could be used to reduce the price charged and/or to improve the quality of the service provided. In 2011/2012, the bus companies received a subsidy of around £450 million, and bus passes, offering free off-peak travel to older and disabled people, cost the government approximately £1 billion.

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In 2011, despite difficult economic conditions, the railways experienced a 7% increase in passenger journeys and a 12.5% increase in the volume of freight carried. A £9.4 billion government-funded investment programme, announced in July 2012, is designed to increase capacity, reduce journey times and improve reliability. However, attempting to reduce congestion on the roads by getting people to travel by train is not without its problems. Shifting 10% of the current journeys by road onto rail would require more than double the current, already overstretched, rail capacity.

Source: news reports, August 2012

Extract C: How should we pay for roads?

Roads, and transport generally, have to be paid for, and so the issue is not whether we pay but how we pay. As more cars become electrified and fuel-efficient, the amount of revenue raised from petrol and diesel taxes, and other taxes on vehicles, will fall substantially in the future. The Institute for Fiscal Studies (IFS) estimates that replacing this lost revenue would require a 50% increase in taxes on fuel. A report produced by the IFS has argued that the government should review the present system of road taxes and move towards a nationwide system of road pricing.

One solution is to charge drivers for each mile travelled, with higher prices in congested areas at peak times. The aim of road pricing is to charge drivers for the costs they impose on other road users, and non-road users, to optimise the use of scarce road space. Such a system would mean that drivers would pay less per mile for the majority of miles driven but would be charged more when high demand for road space results in congestion. A small reduction in the number of vehicles on the road at peak times would produce a large reduction in congestion.

Taxes on fuel are another way to make the user pay for the external costs of motoring. Fuel tax collection costs are estimated at just 0.2% of the revenue generated. Road pricing, on the other hand, has high set-up and running costs, the best estimate being at least 10% of the revenue raised. However, these costs are likely to fall as a result of improvements in technology and economies of scale. There is also the question of fairness to consider. The less-well-off motorists may be priced off the roads by a system of road pricing but fuel taxes also hit the poor hardest.

Source: news reports, August 2012

0 1 Define the term 'positive cross elasticity of demand' (**Extract B**, line 9). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison, over the period shown, between those cars in Great Britain that use petrol and those that use diesel. *(8 marks)*

0 3 **Extract C** (lines 4 and 5) states that 'The Institute for Fiscal Studies (IFS) estimates that replacing this lost revenue would require a 50% increase in taxes on fuel'.

With the help of an appropriate diagram, explain how the price elasticity of demand for road travel will affect the total revenue that the government receives if it increases the taxes on fuel. *(12 marks)*

0 4 **Extract B** (lines 6 and 7) states that 'the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus'.

Using the data and your economic knowledge, assess which is the best policy that the UK government could adopt to reduce congestion on the roads. *(25 marks)*

Turn over ▶

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Do **not** answer Context 2 if you have answered Context 1.

Total for this Context: 50 marks

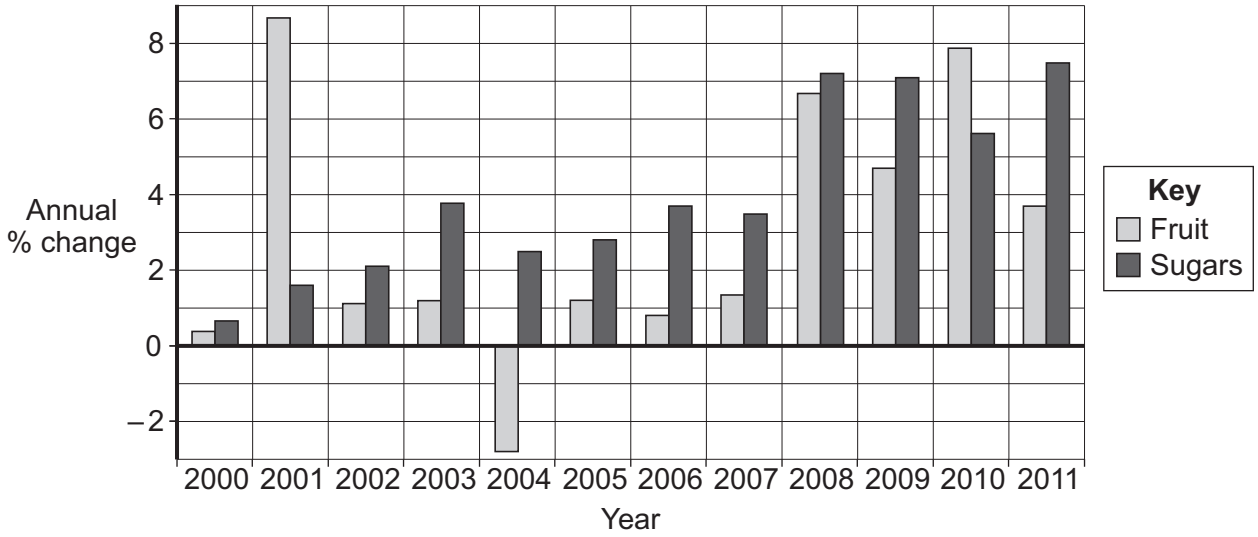
OR

Context 2

HEALTH AND DIET IN THE UK

Study **Extracts D**, **E and F**, and then answer **all** parts of Context 2 which follow.

Extract D: UK shop prices of fruit and sugars*, annual percentage change, 2000 to 2011



Source: National Statistics, June 2012

* Sugars includes sweets, chocolate, sugar and jam.

Extract E: Obesity – a growing problem

According to figures published in 2011, about half the adult population in developed countries is overweight or obese. In the UK, obesity rates are at 26% and, if the current rate of growth continues, experts predict that three-quarters of the population could be overweight within 10 to 15 years. Some believe that obesity is responsible for more ill health than smoking. Problems include high blood pressure and diabetes. A study by the National Audit Office estimates that obesity costs the National Health Service (NHS) at least £500m a year, as well as more than £2bn a year in lost output. In making decisions about what and how much to eat, consumers usually consider only the short-run marginal private costs and benefits.

So what is causing this growing problem? Poor diet is one factor. Bigger portions, increased demand for fast food meals and sweetened drinks are among the culprits. Agricultural policy in the US and Europe has also played a part. In the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables. According to a recent survey, sales of fruit in the UK are now 11.6% lower than in 2007.

Insufficient exercise is also to blame. A shift towards less physically demanding work, increasing use of transport and more labour-saving technology in the home have all contributed, whilst in both children and adults, there is an association between television viewing time and the risk of obesity. However, it must be remembered that for some people, obesity is caused by medical conditions over which they have little control.

Source: news reports, August 2012

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Extract F: Government intervention – food for thought?

One way to tackle obesity is by not putting on too much weight in the first place. A combination of a healthy, balanced diet and regular exercise should be sufficient in most cases. However, providing nutritional information and promoting healthy eating are not enough – the government needs to do more.

One option is a tax on junk food, possibly accompanied by subsidies for fruit and vegetables. But will demand be sufficiently price elastic? Such taxes may have to increase the price of unhealthy food and drinks by as much as 20% to cut consumption enough to reduce obesity, according to research published in the *British Medical Journal*. However, a spokesman for the Food and Drink Federation representing food producers and retailers claimed: "When the whole of the food industry is focused on continuing to give hard-pressed families great tasting food at an affordable price, discussion of adding 20% to food prices seems irresponsible."

Denmark, Hungary and France have introduced taxes on a variety of foods and drinks high in salt, sugar and fat but the UK government faced an outcry when it announced that it would add Value Added Tax (VAT) to hot food such as pasties. Other suggestions include a ban on firms such as McDonald's and Coca-Cola sponsoring major sports events such as the Olympics. Some head teachers have written to parents forbidding children from bringing in unhealthy snacks but others believe it has no effect, or that what children eat is not their responsibility.

As food profit margins rise, we get fatter and less healthy. Should companies do more to persuade their customers to eat more healthily? Should governments intervene? Why can't we just eat what we want?

Source: news reports, August 2012

0 5 Define the term 'marginal private costs' (**Extract E**, line 9). *(5 marks)*

0 6 Using **Extract D**, identify **two** significant points of comparison, over the period shown, between the annual percentage changes in the shop prices of fruit and sugars in the UK. *(8 marks)*

0 7 **Extract E** (lines 12 to 14) states that in 'the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables'.

With the help of an appropriate diagram, explain how subsidies on ingredients such as corn, soya beans and rice will affect the market for processed food. *(12 marks)*

0 8 **Extract F** (lines 3 and 4) states that 'providing nutritional information and promoting healthy eating are not enough – the government needs to do more'.

Using the data and your economic knowledge, assess the case **for** and **against** government intervention in the markets for food and drink to encourage a healthy diet. *(25 marks)*

END OF QUESTIONS

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Version 1



General Certificate of Education (A-level)
January 2013

Economics ECON1

(Specification 2140)

Unit 1: Markets and Market Failure

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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AQA Advanced Subsidiary Economics

January 2013 **ECON1/1**

Section A: Objective Test (ECON1/1)

The following list indicates the correct answers used in marking the candidates' responses.

Key List

1.	**B**	**9.**	**C**	**17.**	**A**
2.	**A**	**10.**	**B**	**18.**	**A**
3.	**B**	**11.**	**B**	**19.**	**A**
4.	**B**	**12.**	**A**	**20.**	**D**
5.	**A**	**13.**	**D**	**21.**	**B**
6.	**D**	**14.**	**B**	**22.**	**C**
7.	**D**	**15.**	**B**	**23.**	**C**
8.	**A**	**16.**	**D**	**24.**	**B**
				25.	**A**

* Option A was also accepted as a correct response for Question 11

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Advanced Subsidiary Economics

January 2013 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to students should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the student to score full marks in a variety of ways. Where the student's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the student's answer does not deserve credit, then no marks should be given.

Occasionally, a student may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the student might include in the answer.

(ii) **A levels approach.** This approach is used for marking questions **04** and **08** of the data response questions. The Levels of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the student. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVELS OF RESPONSE MARK SCHEME: QUESTIONS 04 AND 08 ONLY

AS LEVELS OF RESPONSE	AO1 KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology	AO2 APPLICATION of theories, concepts and terminology	AO3 ANALYSIS of economic problems and issues	AO4 EVALUATION of economic arguments and evidence, making informed judgements
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the student to answer the question properly.

I Where a relevant **ISSUE** is raised by the student.

K Where the student demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the student's response to the question. This should also be used where the student quotes relevant examples.

Ap Where the student demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the student demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the student **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Students will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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EITHER

Context 1 **Total for this Context: 50 marks**

01 Define the term 'positive cross elasticity of demand' (**Extract B**, line 9). *(5 marks)*

For an acceptable definition such as: • Positive cross elasticity of demand (CED) is a measure of the percentage increase (or decrease) in the quantity demanded of one good resulting from a percentage increase (or decrease) in the price of another. • CED measures the extent to which a change in the price of one product affects the demand for a different product. It is positive when the rise/fall in the price of the first product leads to a rise/fall in the quantity demanded of the other product. • CED equals the proportionate change in the demand for good A divided by the proportionate change in the price of good B. It is positive when the two products are substitutes. • CED = $\frac{\%\text{ change in quantity demanded of good A}}{\%\text{ change in price of good B}}$ When the change in quantity and price are both positive or are both negative.	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term **positive cross elasticity of demand** even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example, as follows:

Accurate definition of CED but doesn't explain what is meant by a *positive* CED.	**3 marks**
For correctly quoting the formula for CED but doesn't explain what is meant by a *positive* CED.	**3 marks**
For stating that the CED is positive if the two products are substitutes.	**2 marks**
For drawing an accurately labelled diagram to illustrate positive CED, eg with Price of Good A on the vertical axis and Quantity of Good B on the horizontal axis.	**2 marks**
For identifying a relationship between a change in the price of one good and a change in demand of another good eg no reference to percentage or to the "extent"	**2 marks**
For providing a reasonable example of two products that are likely to have a positive CED, eg train journeys and bus journeys (only credit one example).	**1 mark**
For quoting the formula upside down, eg CED equals the % change in the price of good B divided by the % change in the quantity demanded of good A.	**0 marks**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02 Using **Extract A**, identify **two** significant points of comparison, over the period shown, between those cars in Great Britain that use petrol and those that use diesel. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point made.

Identifies a significant point of comparison. Makes accurate use of the data to support the comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the comparison identified. However, only one piece of data is given when two are needed **and/or** no unit of measurement is given **and/or** the unit of measurement is inaccurate **and/or** the wrong date is given.	**3 marks**
Identifies a significant point of comparison. No correct use of data to support the comparison identified.	**2 marks**
Identifies a significant feature of one data series but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a student identifies more than 2 valid points of comparison, reward the best two.

Valid points include:

- the number of cars using petrol was lower at the end of the period than at the beginning whereas the number of cars using diesel was higher at the end of the period than at the beginning (from 21 233 000 to 19 548 000 for petrol and from 3 153 000 to 8 763 000 for diesel)

OR

- the difference between the number of cars using petrol and the number of cars using diesel was lower at the end of the period than at the beginning (from 18 080 000 to 10 785 000)
- the peak for the number of cars using petrol was in 2004 at 21 977 000 whereas the peak for the number of cars using diesel was in 2011 at 8 763 000
- the lowest number of cars using petrol was in 2011 at 19 548 000 whereas the lowest number of cars using diesel was in 2000 at 3 153 000
- the number of cars using petrol was higher than the number of cars using diesel throughout the period, eg in 2011, 19 548 000 cars used petrol whereas 8 763 000 cars used diesel
- the number of cars using diesel increased each year throughout the period whereas the number of cars using petrol fluctuated, eg the number of cars using petrol increased from 21 805 000 in 2003 to 21 977 000 in 2004 before falling to 21 876 000 in 2005 whereas the number of cars using diesel increased from 4 400 000 in 2003 to 5 011 000 in 2004 and increased again to 5 596 000 in 2005
- the range for cars using diesel is greater than the range of cars using petrol; diesel has a range of 5 610 000 whereas the range for petrol is 2 429 000

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The table below shows the percentages of cars using different fuel types over the period shown. It is not expected that students will make this type of calculation before quoting figures to support their comparisons, but some might. If they do, please check the accuracy of the figures quoted by using the table below.

Year	Petrol	Diesel	Other fuels*
2000	87.0%	12.9%	0.1%
2001	86.1%	13.8%	0.1%
2002	84.7%	15.2%	0.1%
2003	83.1%	16.8%	0.1%
2004	81.3%	18.5%	0.2%
2005	79.5%	20.3%	0.2%
2006	77.8%	22.0%	0.2%
2007	75.9%	23.8%	0.3%
2008	74.2%	25.4%	0.3%
2009	72.5%	27.1%	0.4%
2010	70.7%	28.9%	0.5%
2011	68.7%	30.8%	0.5%

A margin of +/- 1% is permissible, if percentage figures are quoted

MAXIMUM FOR PART 02: 8 MARKS

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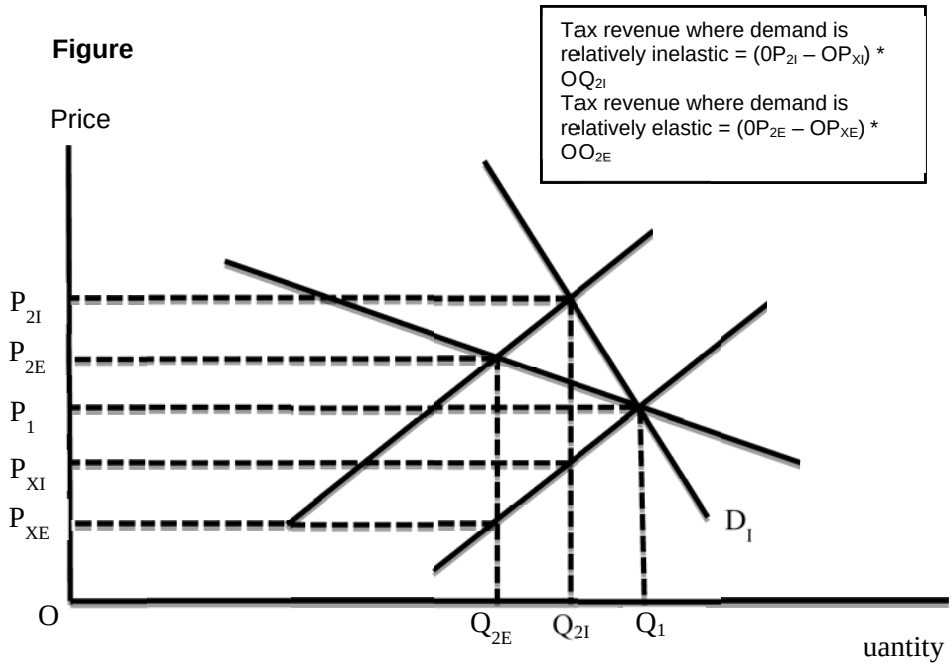
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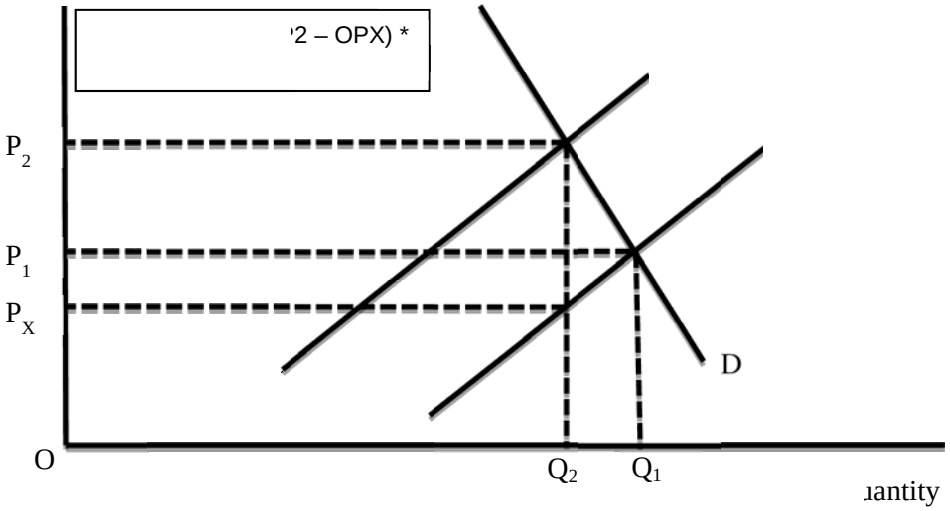
The anticipated response for the diagram

To illustrate the effect of an increase in the tax on fuel, students should shift the supply curve to the left. The majority of students are likely to include two supply curves on the diagram but, given that tax is already levied on fuel, some might include 3 supply curves. Both approaches are acceptable. Some students might also draw 2 separate diagrams, ie one where demand is relatively elastic and another where demand is relatively inelastic (accept the slope of the curve as illustrating the relative elasticity of demand). However, if 2 diagrams are drawn reward the better diagram.

Figure



Figure



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Examples of 2 acceptable diagrams are shown above. The first diagram illustrates that the more price inelastic the demand for fuel the larger the increase in tax revenue. The second diagram just illustrates the tax revenue and does not consider the impact of PED on the revenue raised. In this case, it is expected that the student will consider this as part of the discussion.

Neither diagram takes into account the original tax revenue. It is not expected that many students will draw a diagram that takes into account the original tax revenue but any such diagrams should also be rewarded as indicated below.

For a diagram which just illustrates a demand curve, students can earn up to 2 marks for labelling the axes, the demand curve and the lines drawn, and labels such as P_1Q_1 and lines drawn for the higher price and lower quantity such as P_2Q_2.

Breakdown of the marks for the diagram	
For labelling both axes, the original demand and supply curves, lines drawn from the initial equilibrium and labels such as P_1 and Q_1.	**1 mark**
An accurately-drawn shift of the supply curve to the left.	**1 mark**
Lines drawn from the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Showing the amount of tax revenue.	**1 mark**
Any other relevant feature of the diagram, eg the amount of tax per unit (ie the vertical distance between the supply curves), showing 2 demand curves with different PEDs, showing the amount of tax revenue for both relatively elastic and relatively inelastic demand.	**1 mark per feature up to a maximum of 2 marks**

Note:

(i) To earn the first mark in the grid above, all three listed tasks must have been completed correctly.

(ii) For the task of labelling the axes, price and quantity, P and Q (but not QD or QS), a monetary value such as a £ sign on the vertical axis are all acceptable. Price level is not acceptable.

Up to a MAXIMUM of 4 marks for diagram or diagrams

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The anticipated written response

Define demand, supply, tax, tax revenue, price elasticity of demand (PED), inelastic PED, elastic PED, or any other *relevant* term.	**Up to 1 mark per definition Maximum of 2 marks**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example:	
The demand for fuel is derived from the demand for road travel **(2 marks).** Demand is likely to be price inelastic **(2 marks)**. The tax will lead to a rise in the price of fuel **(2 marks)** the more inelastic the PED the smaller the fall (or percentage fall) in sales **(2 marks)** and hence the greater the increase in tax revenue **(2 marks)**. In the short run, since fuel/road travel has few substitutes **(2 marks)** demand is likely to be inelastic and so tax revenue is likely to rise **(2 marks)** but with development of electrified and more fuel-efficient cars demand will become more elastic **(2 marks)**.	**Up to 10 marks**
If the percentage increase in price is greater/less than the percentage decrease in sales **(2 marks)**, total revenue from selling fuel will increase/decrease **(2 marks)** if demand is inelastic tax revenue will increase **(2 marks)** but even if demand is elastic and the revenue from selling fuel falls **(2 marks)** this may be offset by the higher tax rate **(2 marks)**. Alternatively as the price of fuel increases demand for electrified and fuel-efficient cars is likely to increase **(2 marks)** further reducing tax revenue **(2 marks)**.	**Up to 10 marks**
An explanation of the impact on tax revenue that **USES** the first diagram above (or when 2 diagrams are used): When demand is relatively price inelastic the increase in the tax on fuel will raise the price from P_1 to P_{2I} whereas if demand is relatively price elastic the price will only rise from P_1 to P_{2E} **(2 marks)** the fall in sales is smaller when demand is relatively inelastic **(2 marks)** as can be seen from the diagram the tax revenue is larger when demand is inelastic $(0P_{2I} – OP_{XI}) \times OQ_{2I}$ than when it is elastic $(0P_{2E} – OP_{XE}) \times OQ_{2E}$ **(2 marks)**.	**Up to 6 marks**

Note: **(i) Only reward a particular link in the chain of reasoning ONCE, eg that the more inelastic the demand the greater the increase in tax revenue.**

(i) Do NOT award marks for simply describing what the diagram shows.

Up to a MAXIMUM of 10 marks for a written explanation

Up to a MAXIMUM of 8 marks for the whole question can be awarded if the student does not refer to total revenue/tax revenue that the government receives.

MAXIMUM FOR PART 03: 12 MARKS

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04 **Extract B** (lines 6 and 7) states that 'the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus'.

Using the data and your economic knowledge, assess which is the best policy the UK government could adopt to reduce congestion on the roads. *(25 marks)*

Extracts A, **B** and **C** provide a number of prompts for students and it is expected that they will make use of this material when developing their answers. It is anticipated that good answers will analyse the likely impact of at least two and probably three, or possibly more, methods that the UK Government might use to try to reduce congestion and attempt to assess the pros and cons of each method. Although not essential, it is likely that the best answers will also consider the relative merits of the different policies and conclude by including a supported final judgement that indicates which method(s) they consider is/are likely to be most effective (suitable) in reducing congestion.

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of **21 marks** may be awarded if there is no explicit use of the data, eg through the use of quotes or referring explicitly to the extracts.

A maximum of **16 marks** (top level 3) may be awarded if students only analyse and evaluate **one** policy.

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

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Issues and areas for discussion (it is expected that students will only cover some of these issues in the time available):

Introduction	• roads as a scarce resource • the price of using roads in the UK is not determined by the market but is influenced by decisions made by government, eg the tax on fuel • where the price is too low there will be excess demand for roads • congestion as a negative externality • the costs of congestion on other road users and non-road users • identification of various policies that a government might adopt to reduce congestion, eg increase taxes on cars/fuel, road pricing (various forms of road pricing might be mentioned), subsidising public transport, improving and investing in public transport.
Developing the response to the question: **Application**	Credit for application can be given for relevant application of economic theory, use of the data and the student's own knowledge of relevant aspects of transport. Examples might include: • use of the statistical data in **Extract A**, that shows a substantial increase in the total number of cars licensed in Great Britain • drawing on the prompts in **Extract B** regarding charging drivers more (lines 7 and 8) and cross elasticity of demand (line 9) • use of the prompts in **Extract B** regarding bus travel (paragraph 3), and rail transport (paragraph 4) • drawing on the prompts in **Extract C** regarding fuel taxes (lines 2 – 7) • drawing on the prompts in **Extract C** regarding road pricing (paragraph 2) • drawing on the prompts in **Extract C** regarding the costs of collecting fuel duties and of operating a system of road pricing (lines 16 to 19) • drawing on the prompts in **Extract C** regarding the fairness of taxing fuel and road pricing (lines 20 – 22) • use of own knowledge of other forms of road pricing, eg the London Congestion Charge, toll roads in the UK or abroad • use of own knowledge of the effectiveness of other approaches to reducing congestion in the UK or abroad, eg car sharing. Some examples of relevant economic concepts and principles that might be applied to this question include: the functions of price, elasticity, private and social costs, market failure and government failure.
Developing the response to the question: **Analysis**	• developing a chain of reasoning to explain why congestion is an economic problem • use of relevant diagrams to support the explanation above • developing a chain of reasoning to explain how increasing taxes on fuel will help to reduce congestion • developing a chain of reasoning to explain how a system of road pricing will help to reduce congestion (various forms of road pricing might be analysed) • explaining the importance of PED and CED in relation to the effectiveness of increasing taxes on fuel and road pricing • analysis of how subsidising, for example bus and rail transport, will help to reduce congestion • use of a relevant diagram to support the previous bullet point • developing a chain of reasoning to explain how investing in public transport and/or improving the quality of the service provided will help to reduce congestion • analysis of the evidence in the extracts.

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Evaluation	• the pros and cons of increasing taxes on fuel • the pros and cons of building more roads to reduce congestion • the pros and cons of road pricing • the pros and cons of different forms of road pricing • the pros and cons of subsidising travel by bus or rail • the pros and cons of investing in public transport and/or improving the quality of the service provided • possible unintended consequences of the different methods, eg the impact of road pricing on local business in towns and cities • the likelihood of government failure, eg inadequate information means that the government is likely to set a price for using roads (or the fuel duty) which is too high or too low, government policy is likely to be swayed by public opinion and electoral success • equity arguments, eg the impact of the different policies on: the poorest members of society, the road user versus the taxpayer, town versus country dwellers, commuters • the comparative costs to the taxpayer/society of implementing and operating the different methods, eg the cost of subsidising travel by bus, the cost of improving the rail network, the cost of investing in the technology needed to set up a system of road pricing and operating such a system • use of the data in the extracts to help to assess the different methods, eg **Extract C** paragraph 1 which points out the likelihood of a long-term decline in fuel duties, **Extract B** (lines 20 – 22) which indicates that it might be impractical to try to achieve a significant reduction in congestion by just relying on a switch to rail • consider the view that the only effective way to reduce congestion is likely to involve a combination of policies • an overall assessment of the relative merits of the different methods • a final judgement that considers which method(s) are likely to be most appropriate.

Examiners should note that credit can be given for basic evaluation if a student simply identifies some of the arguments for and against the different methods that might be employed to reduce congestion. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by students who are able to support arguments both for and against the different methods of reducing congestion by the use of evidence and/or sound economic analysis.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

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OR

Context 2 **Total for this question: 50 marks**

05	Define the term 'marginal private costs' (**Extract E**, line 9).	*(5 marks)*

For an acceptable definition, **such as**: • the cost borne by the party/parties involved in the activity/transaction due to the consumption (or production) of an extra unit • the change in cost borne by the consumer (or firm) due to an increase/decrease in the consumption (or production) of one more/less unit of a good/service • stating that marginal private cost is marginal social cost minus marginal external cost (externalities).	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term **marginal private cost** even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example, as follows

Definition that states that private cost = social cost minus external cost	**3 marks**
Definition of private cost but no correct definition of marginal.	**3 marks**
Definition of marginal but no correct definition of private cost.	**3 marks**
For an accurate diagram correctly illustrating a marginal private cost curve (one mark for labelling the axes and one for the curve).	**2 marks**
Definition of cost.	**1 mark**
For an example of a private cost (only credit one example).	**1 mark**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

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06	Using **Extract D**, identify **two** significant points of comparison, over the period shown, between the annual percentage changes in the shop prices of fruit and sugars in the UK. *(8 marks)*

Award up to 4 marks each for each significant point made.

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the comparison identified. However, only one piece of data is given when two are needed **and/or** no unit of measurement is given **and/or** the unit of measurement is inaccurate **and/or** the wrong date is given.	**3 marks**
Identifies a significant point of comparison. No correct use of data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data series but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a student identifies more than 2 valid points of comparison, reward the best two.

The valid points include:

- the annual percentage change of the prices of both fruit and sugars was higher at the end of the period than the beginning (from 0.4% to 3.7% for fruit and from 0.7% to 7.5% for sugars)
- the peak for annual percentage change of fruit prices was in 2001 at 8.7% whereas the peak for sugars was in 2011 at 7.5%
- the lowest annual percentage change of fruit prices was in 2004 at -2.8% whereas the lowest for sugars was in 2000 at 0.7%
- the only year when the prices of either item fell was in 2004 when fruit prices fell by 2.8% (no comparative data is needed for sugars for this point)
- the annual price changes for fruit were more volatile/had a greater range (-2.8% in 2004 to 8.7% in 2001, ie 11.5%) than sugars (0.7% in 2000 to 7.5% in 2011, ie 6.8%)
- the greatest difference in the annual percentage change in prices was in 2001 when fruit prices increased by 8.7% but sugars only rose by 1.6%
- in most years, the annual percentage change in sugars prices was higher than for fruit, eg in 2003, fruit prices increased by 1.2% but sugars prices rose by 3.8% OR the annual percentage change in fruit prices was only higher than for sugars in 2001 (8.7% compared to 1.6% respectively) and 2010 (7.9% compared to 5.6%)
- the annual percentage changes in both fruit and sugar were generally higher towards the end of the period/2008 onwards, eg only in 2001 (8.7%), was the growth of fruit prices higher than the years from 2008 onwards (6.7% in 2008 to 3.7% in 2011), whilst the four highest growth rates for sugars' prices all occurred in the period 2008 to 2011 (lowest of 5.6% in 2010). Accept any reasonable figures in comparison for this point.

Students who confuse levels of prices with annual percentage changes in prices should be awarded **2 marks** per comparison providing they identify a significant comparison **and make** accurate use of statistics.

Allow a margin of error of +/- 0.4% when judging the accuracy of statistics.

MAXIMUM FOR PART 06: 8 MARKS

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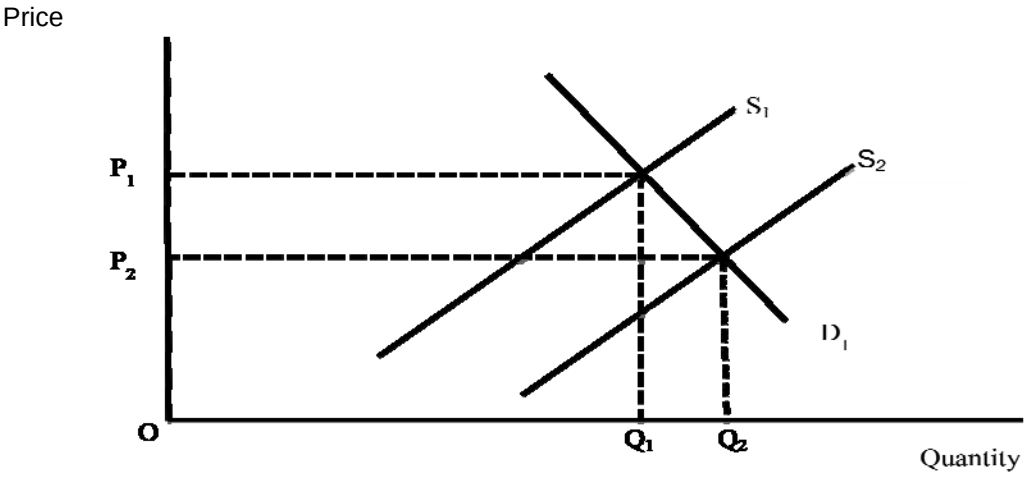
07 **Extract E** (lines 12 to 14) states that in 'the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables'.

With the help of an appropriate diagram, explain how subsidies on ingredients such as corn, soya beans and rice will affect the market for processed food.

(12 marks)

The anticipated response for the diagram

Given that the subsidies on corn, soya beans and rice will decrease their price, this will in turn reduce the cost of the ingredients for processed food. Consequently, the correct diagram involves a shift to the right of the supply curve. Do not penalise students who draw a diagram showing the impact of a subsidy on the markets for corn, soya beans and/or rice since this diagram could alternatively be used to indicate how the markets for processed food will be affected. Such a diagram also requires a rightward shift of the supply curve.



To illustrate the effect of a subsidy, it would also be acceptable to draw an MPC/MPB diagram, with MPC shifting to the right, with or without the inclusion of MSC and/or MSB curves.

Breakdown of the marks for the diagram.

For labelling both axes, the original demand and supply curves, lines drawn from the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the supply curve to the right.	**2 marks**
Lines drawn from the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram, eg the excess supply at the original price (or the extent of the subsidy **IF** the diagram clearly relates to corn, soya beans and/or rice).	**1 mark per feature up to a maximum of 2 marks**

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Note:

(i) To earn the first mark in the grid above, all three listed tasks must have been completed correctly.

(ii) For the task of labelling the axes, price and quantity, P and Q (but not Q_D or Q_S), a monetary value such as a £ sign on the vertical axis are all acceptable. Price level is not acceptable.

Up to a MAXIMUM of 4 marks for the diagram

The anticipated written response	
Define demand, supply, subsidy, market, derived demand or any other *relevant* term.	**1 mark per definition** **Up to a maximum of 2 marks**

For the explanation, award 2 marks for each logical link in the chain of reasoning, for example:	
The demand for ingredients/corn/soya beans/rice is derived from the demand for processed food **(2 marks)**. A subsidy will reduce the price of corn/soya beans/rice/ingredients **(2 marks)** reduce the cost of ingredients of processed food **(2 marks)**, which will increase the profits of producers **(2 marks)** and hence the supply of processed food **(2 marks)**. *This will reduce the price **(2 marks)** and increase the quantity sold **(2 marks)**.*	**Up to 10 marks**
An explanation relating to the adjustment process, ie the increase in supply of processed food causing excess supply at the original price **(2 marks)** and an extension along the demand curve **(2 marks).** *This will reduce the price* **(2 marks)** *and increase the quantity sold* **(2 marks)**.	**Up to 4 marks**
An explanation relating to the impact of price elasticity of demand/supply on the price and quantity of processed food.	**Up to 4 marks**

Note: (i) Only reward a particular link in the chain of reasoning ONCE, eg that the price of processed food will fall and that the quantity sold will rise.

(ii) Do NOT award marks for simply describing what the diagram shows, eg allow 'supply increases' but not 'supply shifts to the right'.

Up to a MAXIMUM of 10 marks for the written explanation.

Up to a MAXIMUM of 8 marks for the whole question can be awarded if the student does not link the markets for corn/soya beans/rice to the market for processed foods.

MAXIMUM FOR PART 07: 12 MARKS

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08	**Extract F** (lines 3 and 4) states that 'providing nutritional information and promoting healthy eating are not enough – the government needs to do more'. Using the data and your economic knowledge, assess the case **for** and **against** government intervention in the markets for food and drink to encourage a healthy diet. *(25 marks)*

Extracts D, **E** and **F** provide a number of prompts for students and it is expected that they will make use of this material when developing their answers. It is anticipated that good answers will consider merit and/or demerit good arguments as well as the pros and cons of alternative methods of intervention. Although much of the data relates to the UK, the wording of the question enables students to consider the appropriateness of different types and amounts of intervention to different countries, but this is not required for maximum marks. Some students may decide to discuss excess consumption of alcohol and whilst such a response has some merit, answers which focus mainly on this aspect are unlikely to warrant more than mid–Level 3.

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of **21 marks** may be awarded if there is no explicit use of the data, eg through the use of quotes or referring explicitly to the extracts.

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

Issues and areas for discussion (it is expected that students will only cover some of these issues in the time available):

Introduction	• identifying the extent of, and problems associated with, obesity • outlining methods of government intervention in the markets for food and drink.
Developing the response to the question: (Application)	Credit for application can be given for relevant application of economic theory, use of the data and the student's own knowledge of relevant aspects of the markets for food and drink. Examples might include: • use of the changes in price of fruit and sugars in **Extract D**, showing the greater growth in sugar prices since 2000 but the increased growth in both in the last four years • drawing on the prompts in **Extract E** regarding the extent of obesity (lines 1 – 4) and the problems it causes for health and production (lines 5 – 8) • use of the prompts in **Extract E** regarding the causes of poor diet, including the agricultural policy of the US and EU (lines 12 – 15)

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	• drawing on the prompts in **Extract E** regarding the contribution played by lack of exercise (lines 16 – 19) • drawing on the prompt in **Extract F** regarding the claim that providing nutritional information and promoting of healthy eating is not enough (lines 3 – 4) • use of **Extract F** to identify alternative methods of government intervention in the markets for food and drink to encourage healthy eating – a tax on unhealthy food and drinks, subsidies on fruit and vegetables, a ban on firms such as McDonald's and Coca-Cola sponsoring major sports events, head teachers writing to parents, firms persuading customers to eat more healthily or simply leaving the choice to consumers • use of own knowledge of, for example, campaigns and other methods to reduce the consumption of alcohol. Some examples of relevant economic concepts and principles that might be applied to this question include: functions of price, merit and demerit goods, externalities, market failure and government failure.
Developing the response to the question: **(Analysis)**	• developing a chain of reasoning to explain why healthy food and drink may be considered to be merit goods • developing a chain of reasoning to explain why unhealthy food and drink may be considered to be demerit goods • analysis of the consequences of 'leaving it to the market', eg rationing, incentive and signalling functions • analysis of the effects of alternative methods of government intervention, eg tax, subsidy, ban, advertising, etc. • analysis of the significance of elasticity – using the prompt in **Extract F** • the use of diagrams to illustrate merit and demerit goods plus alternative forms of intervention. (Strictly speaking the diagrams should relate to positive and negative externalities in consumption, however diagrams showing positive and negative externalities in production are acceptable) • developing a chain of reasoning to explain how and why government failure could result • analysis of the evidence in the extracts.
Evaluation	• the pros and cons of leaving it to the market • the advantages and disadvantages of alternative methods of intervention, both separately and in combination • equity versus efficiency arguments • the cost and opportunity cost of intervention • the practicalities of intervention and unintended consequences, eg the possible formation of a black market • other priorities of government, perhaps in different countries • the likelihood of government failure • an overall assessment of whether or not there should be government intervention in the markets for food and drink to encourage healthy eating.

A **MAXIMUM of 16 marks** (top of Level 3) can be awarded to a student who only considers the advantages and disadvantages of different types of government intervention, ie the case for and against intervention is not addressed.

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Examiners should note that credit can be given for basic evaluation if a student simply identifies some of the arguments for and against government intervention in the markets for food and drink to encourage a healthy diet. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by students who are able to support arguments both for and against intervention by the use of evidence and/or sound economic analysis.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
June 2012

Economics ECON1

Unit 1 Markets and Market Failure

Friday 18 May 2012 1.30 pm to 2.45 pm

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 The central purpose of economic activity is

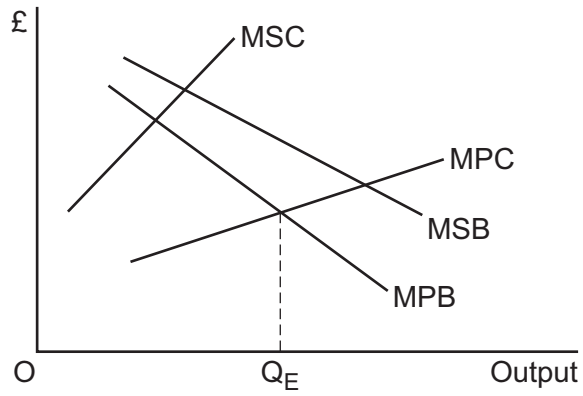
A to create maximum profit.

B the satisfaction of needs and wants.

C to achieve economic efficiency.

D to save scarce resources.

2 The diagram below shows the marginal private and social benefit (MPB and MSB) curves and the marginal private and social cost (MPC and MSC) curves for a good.

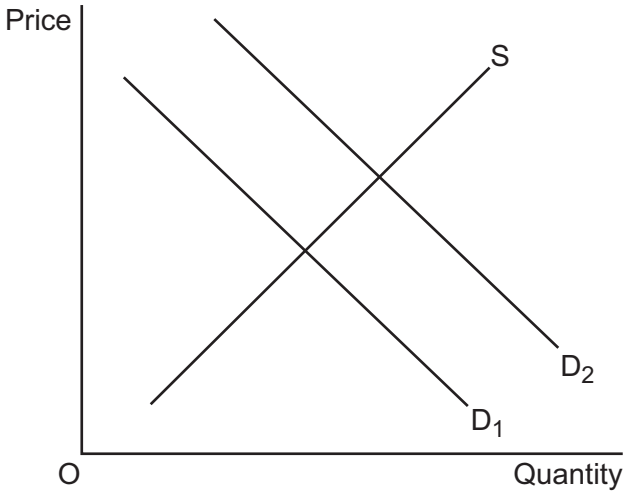


Which one of the following combinations of price and output, **A**, **B**, **C** or **D**, will improve the allocation of resources compared with the market outcome at Q_E?

	Price	**Output**
A	Lower	Lower
B	Lower	Higher
C	Higher	Lower
D	Higher	Higher

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3 The diagram below shows the supply (S) and demand (D) curves for a normal good.



The shift in demand from D_1 to D_2 could have been caused by

A a decrease in the price of a close substitute.

B an increase in the price of a complementary good.

C consumers' expectations that the price of the good is about to fall.

D an increase in the income of buyers.

4 To calculate the percentage change in the quantity supplied of a good following a change in its price, the price elasticity of supply should be

A divided by the percentage change in price.

B divided by the percentage change in quantity.

C multiplied by the percentage change in price.

D multiplied by the percentage change in quantity.

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5 An economy in which average incomes have fallen by 5% has also seen the demand for holidays overseas fall by 20%. It can be concluded from this that the income elasticity of demand for holidays overseas is

A +4.0

B –4.0

C +0.25

D –0.25

6 A monopoly market will be less economically efficient than a competitive market if, under monopoly,

A the market demand curve is inelastic.

B the main objective of the firm is maximum profit.

C there are both economies of scale and diseconomies of scale.

D prices are higher and output is lower.

7 An economy is always productively efficient if it

A continually increases its average standard of living.

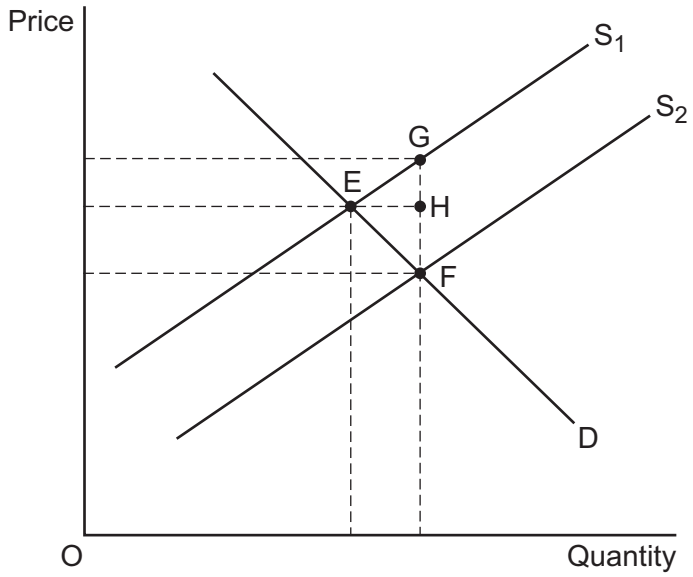
B maximises investment in capital goods.

C is operating with full employment of labour.

D can produce more of one good only by producing less of another.

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8 In the diagram below, the government introduces a subsidy on a good. This shifts the supply curve for the good from S_1 to S_2.



The subsidy paid per unit of the good sold is

A HG

B FH

C FG

D FE

9 The equilibrium price in a market

A is the market-clearing price.

B changes when demand equals supply.

C always increases when demand rises.

D is the balance of excess demand and excess supply.

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10 Which one of the following would be classified by an economist under the factor of production known as land?

A A tractor

B Chemical fertiliser

C Fish in the ocean

D A farmer

11 Government failure may result directly from

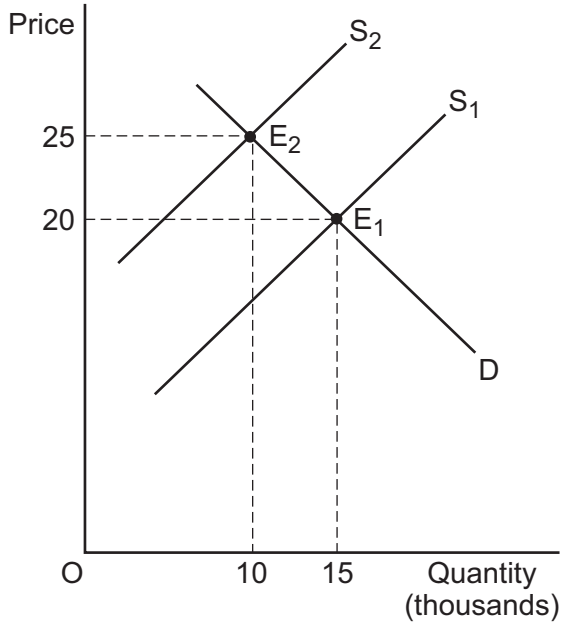
A the high cost of administering government policy.

B underconsumption of merit goods by the public.

C a failure of market prices to reflect social costs.

D goods being provided through the market mechanism.

12 The diagram below shows the market demand curve (D) and two market supply curves (S_1 and S_2) for a good. The initial market equilibrium is at E_1.



An increase in the cost of raw materials used in the production of the good shifts the supply curve from S_1 to S_2. What is the price elasticity of demand for the good between E_1 and E_2?

A –0.33

B –1.33

C –2.00

D –3.33

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13 Which one of the following is an example of composite demand?

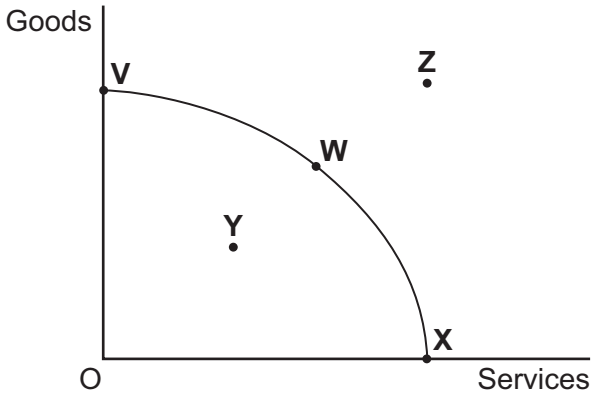
A The demand for labour increases as the demand for the good which that labour produces increases.

B The demand for petrol increases because car travel increases in popularity.

C The demand for strawberries increases following a series of price reductions.

D The demand for bricks increases for use in both house building and factory building.

14 The diagram below shows a country's production possibility frontier.



Which one of the following combinations of goods and services, **A**, **B**, **C** or **D**, could be produced with the resources available?

A Only W and Y

B Only V, W and X

C Only V, W, X and Y

D V, W, X, Y and Z

15 Positive externalities exist when

A production creates private benefits.

B private benefits are less than social benefits.

C private benefits are greater than private costs.

D social costs exceed private costs.

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16 Market failure arises whenever firms

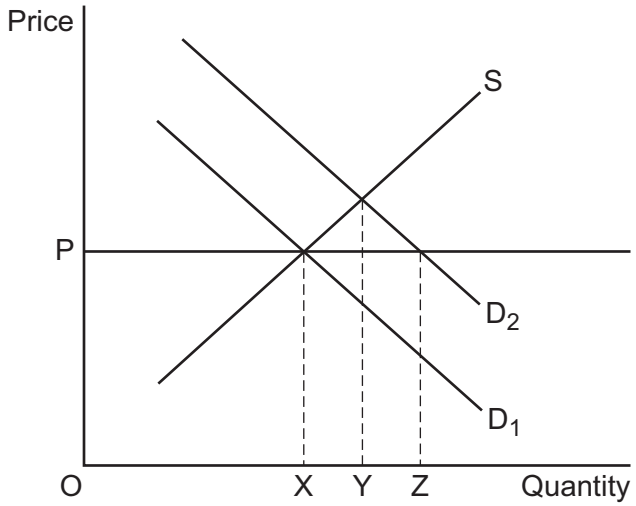
A make a loss.

B replace machines with workers.

C create externalities.

D reduce expenditure on research and development.

17 The diagram below shows the demand (D) and supply (S) curves for a good which generates positive externalities in consumption.



An increase in incomes causes the demand curve to shift from D_1 to D_2 but, in an effort to prevent the price from rising, the government fixes the maximum price of the good at P. If the price control is effective, which one of the following is most likely to occur?

A The quantity sold remains at OX and there is an unsatisfied demand XY.

B The quantity sold remains at OX and there is an unsatisfied demand XZ.

C The quantity sold increases to OY and there is an unsatisfied demand YZ.

D The quantity sold increases to OZ and there is no unsatisfied demand.

18 All other things being equal, supply curves slope upwards from left to right because

A higher prices lead to higher costs.

B lower prices lead to higher output.

C lower prices lead to higher demand.

D higher prices lead to higher profits.

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19 The table below shows the annual demand and supply schedules for an agricultural good.

Price (£)	Quantity demanded (000s of units)	Quantity supplied (000s of units)
10	4	12
9	6	10
8	8	8
7	10	6
6	12	4

The government fixes the minimum price at £9 to be maintained by intervention. How much will such an action cost the government each year?

A £90 000

B £72 000

C £54 000

D £36 000

20 One reason why UK governments provide education is because

A the private benefit from education is less than the social benefit.

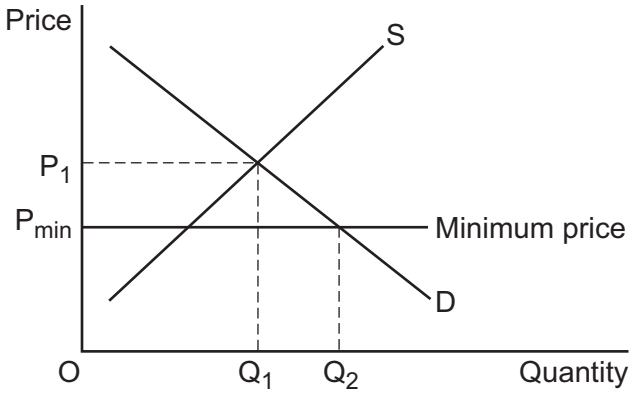
B education cannot be provided by the free market.

C all education is both a merit good and a public good.

D this ensures that the provision of education is maximised.

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21 The diagram below shows the supply (S) and demand (D) curves for sugar.



Price is initially at P_1. If producers now set a minimum price of OP_{min}, what effect will this have?

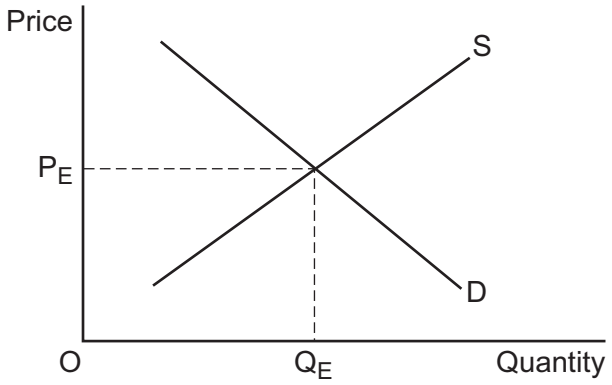
A Equilibrium price and quantity will remain at OP_1 and OQ_1 respectively.

B It will encourage suppliers to increase production from OQ_1 to OQ_2.

C The amount sold will increase from OQ_1 to OQ_2.

D The market price will fall from OP_1 to OP_{min}.

22 The diagram below illustrates the free market supply (S) and demand (D) curves for a merit good.



At the free market equilibrium position shown, there is a misallocation of resources because consumption of the good creates a positive externality. To improve the allocation of resources

A the existing quantity of the good should be supplied at a higher price.

B more of the good should be supplied.

C the demand curve for the good should shift to the left.

D the elasticity of demand for the good should be increased.

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23 An increase in the price of petrol will often result in consumers economising in their use of fuel by reducing the number of journeys they make in their cars. This

A is because petrol and car journeys are in joint supply.

B shows that there is a positive cross elasticity of demand between the price of petrol and the demand for car journeys.

C illustrates the operation of the rationing function of the price mechanism.

D is because the price elasticity of demand for petrol is positive.

24 A firm will always reduce its unit cost of production as it expands its output if it

A benefits from specialisation.

B reduces its price.

C moves down the economy's production possibility frontier.

D expands its use of capital and labour.

25 Market failure results in a misallocation of resources. In some cases, this can be corrected by the government

A restricting the manufacture of goods that generate positive externalities.

B providing public goods.

C subsidising all loss-making firms.

D placing a tax on merit goods.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Turn over for Section B

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Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2.
You are advised to spend at least 50 minutes on **Section B**.

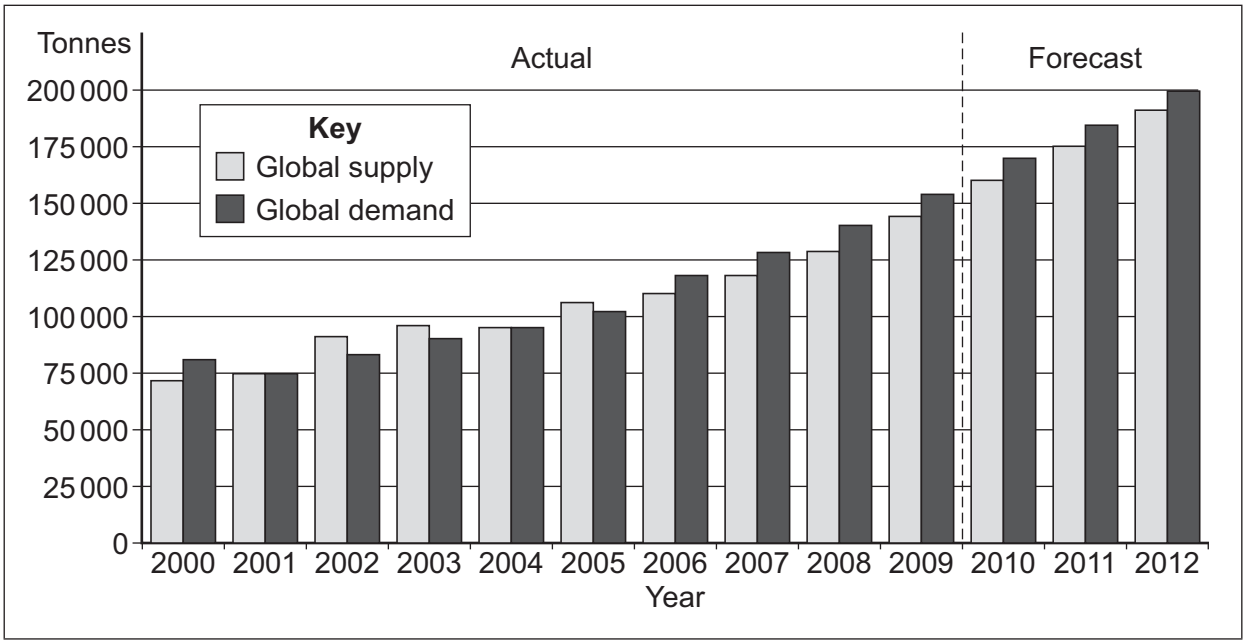
EITHER **Total for this Context: 50 marks**

Context 1

RARE-EARTH METALS

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

Extract A: Global supply of, and global demand for, rare-earth metals, tonnes, 2000 to 2012



Source: official statistics, 2010

Extract B: The use and production of rare-earth metals

Without rare-earth metals such as cerium and promethium, important modern technologies could not exist. Indeed, rare-earth metals function as a vital factor of production in all industries that make use of rechargeable batteries, solar cells and strong magnets. The production of *Toyota*'s Prius car makes use of several rare-earth metals. Without rare-earth metals, it would be impossible for electrically-powered cars to eventually replace petrol-driven cars. The growth of the renewable energy market would also be held back.

Currently, China produces about 97% of the global supply of rare-earth metals. Most of China's exports of rare-earth metals are bought by the United States and Japan. In 2010, the Chinese government ordered China's mining companies to cut exports of rare-earth metals by 35%. The United States and Japanese governments immediately accused China of exercising monopoly power at their expense. China's monopoly power is strengthened by the fact that demand for rare-earth metals is relatively price inelastic. Forcing up the prices of rare-earth metals in other countries currently gives China an artificial competitive advantage in world markets for high-technology manufactured goods.

Source: news reports, 2010

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Extract C: Rare-earth metals: a case of market failure?

Rare-earth metals have been called 'clean energy's dirty little secret'. The ores from which the metals are extracted are often radioactive. The resulting environmental costs are well illustrated by the *Mountain Pass* mine in California which, for many years, provided most of the world's rare-earth metals. In the 1980s, *Molycorp*, the company owning the mine, began piping radioactive waste water to evaporation ponds 14 miles away. However, leaks occurred and 600 000 gallons of hazardous waste flowed out into the surrounding desert.

According to some commentators, the mining industry is well known for the damage it inflicts on the environment. Very often, mining companies avoid paying for the cost of the pollution they discharge into rivers, particularly when operating in developing countries such as China. By contrast, governments in richer countries strictly regulate mining activities and make mining companies pay for much of the pollution they generate.

In 2002, the cost of meeting new environmental regulations forced *Molycorp* to close the *Mountain Pass* mine. However, after spending $2.4 m a year on meeting these regulations, *Molycorp* hopes to have the mine working again by late 2011. *Molycorp* believes that the high prices which rare-earth metals now command will allow the mine to make a substantial profit.

Monopoly power often leads to significant market failure. However, if high prices caused by the use of monopoly power lead to the opening of new mines outside China, markets for rare-earth metals may end up working rather well. Despite the cost of meeting tough environmental regulations, the way in which mining companies around the world are reacting to higher prices provides a good example of the incentive function of prices improving resource allocation.

Source: news reports, 2010

0 1 Define the term 'factor of production' (**Extract B**, lines 2–3). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison between the global supply of, and the global demand for, rare-earth metals over the period shown. *(8 marks)*

0 3 With the help of an appropriate diagram and the information in **Extract B**, explain how China can increase the prices of rare-earth metals by using monopoly power. *(12 marks)*

0 4 'According to some commentators, the mining industry is well known for the damage it inflicts on the environment' (**Extract C**, lines 8–9).

Using the data and your economic knowledge, evaluate the view that mining activities should be left to market forces with minimum intervention by governments. *(25 marks)*

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Do **not** answer Context 2 if you have answered Context 1.

Total for this Context: 50 marks

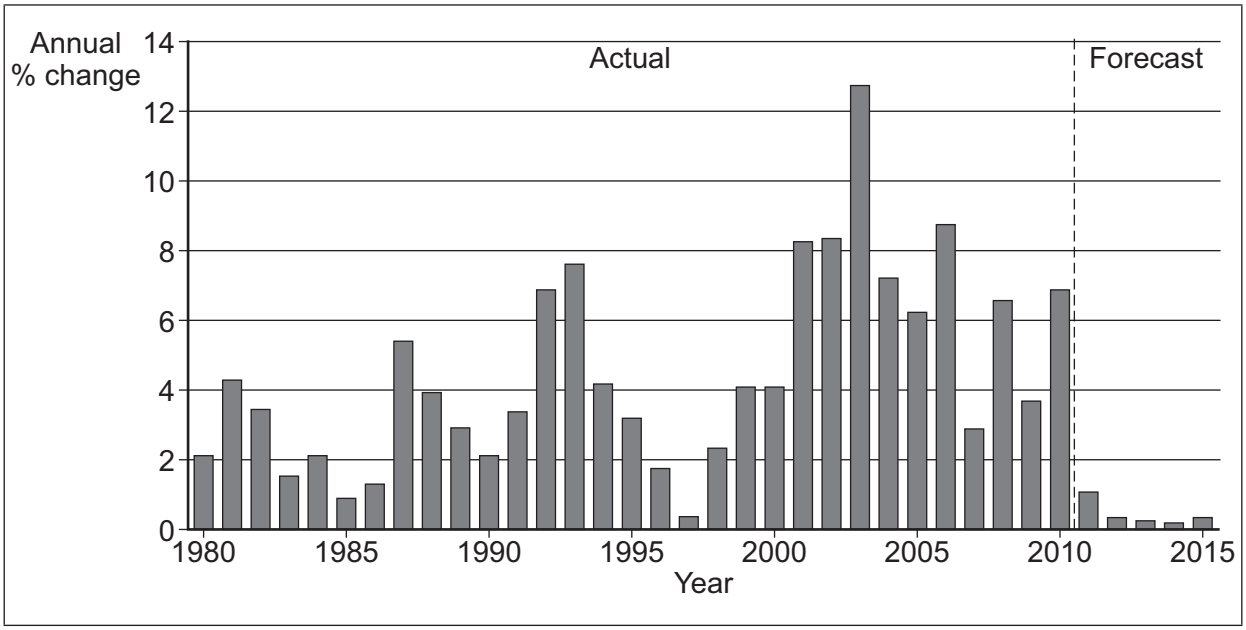
OR

Context 2

RATIONING THE SUPPLY OF HEALTH CARE SERVICES

Study **Extracts D**, **E and F**, and then answer **all** parts of Context 2 which follow.

Extract D: UK government spending on health care as a % of national output, annual % change, 1980 to 2015



Source: official statistics, 2011

Extract E: Matching supply and demand for health care services

Scarce resources can be allocated or rationed between competing uses in a number of ways. In a free market, the price mechanism rations the use of scarce resources. However, governments can also allocate resources, although this may lead to queues and lengthy waiting lists.

In the UK, most health care services are provided by the National Health Service (NHS). Many NHS services are free at the point of use for consumers and financed out of taxation. However, an ageing population, changing lifestyles and people's changing expectations of their right to health care are all factors which have led to excess demand for many NHS services.

Demand for most NHS services has always run ahead of supply. The government could try to match demand with supply either by reducing demand or by increasing supply. Demand could be reduced by charging patients for the health care they receive. Alternatively, the government could increase the supply of health care services by spending more on them. However, improvements in medical technology and the development of new, but usually expensive, drugs are dramatically increasing the cost of supplying NHS services to meet existing demand, let alone future demand. Increasing the supply of services may simply be unaffordable for the taxpayer.

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Perhaps the best route forward is to manage expectations so that people expect less from the NHS. For example, should people expect free treatment for a leg injury received while out jogging? Should people expect the NHS to provide a free hip replacement for a ninety year old who has already received two replacements in the past ten years? These are the kind of questions that might need answering in the near future.

Source: news reports, 2011

Extract F: Health care reform in the UK

Various government health care agencies in the UK are responsible for rationing scarce NHS resources: for example, by telling doctors whether or not they can prescribe very expensive drugs for the treatment of cancer patients.

This system for rationing scarce NHS resources has been criticised in two main ways. First, some argue that the system is unfair because it has led to a situation in which drugs and treatments are available in some parts of the country but not in others. Second, some argue that the system for making rationing decisions in the NHS is 'top-down', with managers at the top making the rationing decisions rather than the local doctors who care for the patients.

These criticisms lie behind the health care reforms announced by the Department of Health in 2011. It was proposed that in a new 'bottom-up' system, local doctors would take over the task of rationing scarce resources: for example, by ordering drugs and booking operations for their patients. One aim is to increase competition within the NHS, although critics believe that the reforms will lead to the eventual break-up of the NHS as a 'free-at-the-point-of-use' comprehensive service.

Some argue that the break-up of the NHS is already taking place. The NHS no longer provides free dental care for most of the UK population, which has led to a situation in which many people, especially the poor, go without regular dental health checks. Should the government restore free, or heavily subsidised, NHS dental care? Or should people have to pay full market prices for any dental care they receive?

Source: news reports, 2011

0 5 Define the term 'scarce resources' (**Extract E**, line 1). *(5 marks)*

0 6 Using **Extract D**, identify **two** significant features of changes in UK government spending on health care over the period shown. *(8 marks)*

0 7 With the help of an appropriate diagram and the information in **Extract E**, explain how excess demand for NHS services has increased. *(12 marks)*

0 8 'Scarce resources can be allocated or rationed between competing uses in a number of ways' (**Extract E**, lines 1–2).

Using the data and your economic knowledge, evaluate the case **for** and the case **against** the NHS charging for its services. *(25 marks)*

END OF QUESTIONS

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Version 1



General Certificate of Education (A-level)
June 2012

Economics ECON1

(Specification 2140)

Unit 1: Markets and Market Failure

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Advance Subsidiary Economics Unit 1

June 2012 **ECON1/1**

Section A: Objective Test (ECON1/1)

The following list indicates the correct answers used in marking the candidates' responses.

Key List

1.	**B**	**9.**	**A**	**17.**	**B**
2.	**C**	**10.**	**C**	**18.**	**D**
3.	**D**	**11.**	**A**	**19.**	**D**
4.	**C**	**12.**	**B**	**20.**	**A**
5.	**A**	**13.**	**D**	**21.**	**A**
6.	**D**	**14.**	**C**	**22.**	**B**
7.	**D**	**15.**	**B**	**23.**	**C**
8.	**C**	**16.**	**C**	**24.**	**A**
				25.	**B**

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Advanced Subsidiary Economics

June 2012 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to students should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the student to score full marks in a variety of ways. Where the student's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the student's answer does not deserve credit, then no marks should be given.

Occasionally, a student may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the student might include in the answer.

(ii) **A levels approach.** This approach is used for marking questions **04** and **08** of the data response questions. The Levels of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the student. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVELS OF RESPONSE MARK SCHEME:
FOR USE WITH QUESTIONS 04 AND 08 ONLY

AS **LEVELS OF RESPONSE**	**AO1** **KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology**	**AO2** **APPLICATION of theories, concepts and terminology**	**AO3** **ANALYSIS of economic problems and issues**	**AO4** **EVALUATION of economic arguments and evidence, making informed judgements**
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the student to answer the question properly.

I where a relevant **ISSUE** is raised by the student.

K Where the student demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the student's response to the question. This should also be used where the student quotes relevant examples.

Ap Where the student demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the student demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the student **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Students will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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EITHER

Context 1 **Total for this Context: 50 marks**

01	Define the term 'factor of production' (**Extract B**, lines 2-3).	*(5 marks)*

For an acceptable definition (eg a resource employed to produce goods and/or services; an input which enables production to take place; an input used in production; an economic resource used to produce goods and services).	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term 'factor of production' even if the definition isn't exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example as follows:

Stating all four of the usually identified factors of production: capital, labour, land, enterprise or the entrepreneurial input.	**3 marks**
Identifying two or three, but not all four, of the factors of production.	**2 marks**
Defining production, eg as the conversion of inputs into output.	**2 marks**
Stating that factors of production are resources.	**2 marks**
Stating that factors of production divide into fixed and variable factors of production.	**1 mark**
Identifying just one factor of production; or an example from the data.	**1 mark**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02 Using **Extract A**, identify **two** significant points of comparison between the global supply of, and the global demand for, rare-earth metals over the period shown.
(8 marks)

Award up to 4 marks each for <u>each</u> significant point made:

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison. Unit of measurement given accurately (tonnes).	**4 marks**
Identifies a valid significant point of comparison. Makes use of the data to support the point of comparison. However, only one piece of data is given when two are needed to make a valid comparison **and/or** no unit of comparison is given **and/or** the unit of comparison is used/applied inaccurately **and/or** wrong date is given.	**3 marks**
Identifies a significant point of comparison. No use of correct data to support the comparison identified.	**2 marks**
A significant feature of the data/part of the data is identified but this does not provide an overview of the whole data series. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a student identifies more than two significant points of comparison, reward the best two.

Significant points include:

- there is a generally positive relationship between the two variables. Global supply of rare-earth metals increased from about 73 000 tonnes in 2000 to about 190 000 (or approx 160%) tonnes in 2012. Global demand for rare-earth metals increased from about 80 000 tonnes in 2000 to about 200,000 (or approx 150%) tonnes in 2012
- the global supply of rare-earth metals and the global demand for rare-earth metals both increased in every single year in the data series except one. However the exceptions were in different years: 2004 for global supply, when supply fell from about 95 000 tonnes to about 90 000 tonnes, and 2001 for global demand, when demand fell from about 80 000 tonnes to about 75 000 tonnes
- the trough for the global supply of rare-earth metals occurred in 2000 (at about 73 000 tonnes), while the trough for the global demand for rare-earth metals occurred in 2001 (at about 75 000 tonnes)
- the peak for the global supply of rare-earth metals was expected to be in 2012 at about 190,000 tonnes, while the peak for the global demand was also expected to be in 2012 at about 200 000 tonnes.
- From the year 2006 the demand for rare earth metals was always larger than supply, however prior to 2006 supply sometimes exceeded demand. For example in 2012 global demand is expected to be 200 000 tonnes when supply is expected to be 190 000 tonnes. In 2005 supply was 104 000 tonnes and demand was just over 100 000 tonnes.

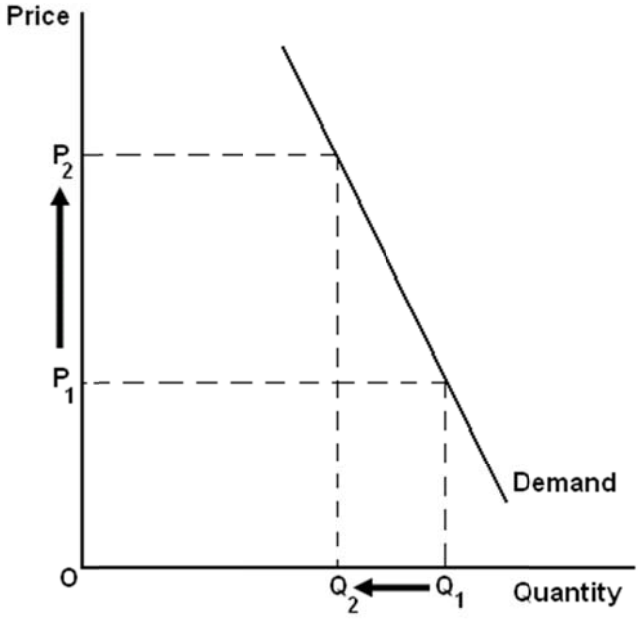
Allow a margin of +/- 5 000 tonnes

MAXIMUM FOR PART 02: 8 MARKS

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	xplain power. *marks)*

When awarding marks for the diagram, it is important to reward students who produce an economically valid response even if it is not the one shown below. For example re-take students may draw a cost and revenue diagram to show a monopoly restricting output so as to force up the price. Material from the A2 specification should be rewarded, providing it is relevant, accurately illustrated and explained. However, full marks can be earned solely through the use of material in the Unit 1 specification



Breakdown of the marks for the diagram:

For drawing and labelling both the axes and a demand curve.	**1 mark**
For showing initial price and quantity such as P_1 and Q_1.	**1 mark**
Showing a lower quantity level Q_2.	**1 mark**
Showing a higher price at the lower quantity level P_2.	**1 mark**
Any other relevant feature of the diagram (eg reference to the elasticity of the demand curve).	**1 mark per feature up to a maximum of 2 marks**

Up to a MAXIMUM of 4 marks for diagram

Note:

(i) To earn the first mark in the grids, both the two listed tasks must have been attempted and been completed.

(ii) For the task of labelling axes, price and quantity, P and Q, a monetary symbol such as the £ sign on the vertical axis and physical units of measurement such as tonnes of a commodity are all valid. For this diagram, the label 'Output' is valid.

(iii) Supply curves are not the anticipated diagram because it is not possible to identify a supply curve in monopoly. However, do not penalise a student who includes one or two supply curves in the diagram.

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The anticipated written response:

Define monopoly, monopoly power, demand, supply or any other relevant term.	**Up to 1 mark per definition** **Maximum of 2 marks for definitions**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example: **Only reward a particular link in the chain of reasoning ONCE.**	
Rare-earth metals are an essential raw material in the manufacture of solar cells, batteries etc. **(2 marks)**; there are few substitutes available as non-Chinese mines have been forced to close down **(2 marks)**; so the demand for rare-earth metals from China is price inelastic **(2 marks**); which provides China with a source of monopoly power **(2 marks)**; and creates conditions in which China's government can restrict exports of rare-earth metals **(2 marks)** which leads to an increase in price.	**Up to 8 marks**
China produces 97% of total output of rare-earth metals **(2 marks)**; this provides China with monopoly power **(2 marks)**; so it is able to instruct firms to restrict exports to the rest of the world (**2 marks)**; this effectively results in less supply **(2 marks)**; which results in a contraction along the demand curve **(2 marks)**; and as the demand for rare-earth metals is price inelastic **(2 marks)**; this leads to a greater proportionate increase in price as consumers of rare earth metals are rationed out of the market **(2 marks)**.	**Up to 8 marks**

If there is no reference to 'China' students should be awarded a MAXIMUM of 10 marks

Note: Do not award marks for simply describing what the diagram shows.

Students who draw a diagram which is inconsistent with their written explanation can only be awarded a maximum of 1 mark in total for the diagram.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 0 3: 12 MARKS

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04	'According to some commentators, the mining industry is well known for the damage it inflicts on the environment' (**Extract C**, lines 8-9). Using the data and your economic knowledge, evaluate the view that mining activities should be left to market forces with minimum intervention by governments. *(25 marks)*

Students will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded more than **13 marks**.

Extract C provides a number of prompts about how the mining of rare-earth metals causes damage to the environment, for example in line 6. The words 'market forces' in the question create an opportunity for students to discuss and compare how market forces operate in a highly competitive market and also in a market in which there is considerable monopoly power. The competitiveness of the market, together with the possible environmental issues, influences whether there is a case for government intervention in, or regulation of, the market. This issue, together with discussion of how well the incentive function of prices operates, provides a considerable opportunity for evaluation. Some students may focus on negative externalities versus the possible positive externalities resulting from utilising rare-earth metals, for example in hybrid and electric-powered cars.

A maximum of 21 marks may be awarded if there is no **explicit** reference to the data.

Level 5	**Good analysis <u>and</u> evaluation**	**22 to 25 marks (Mid-Point 24 marks)**
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks (Mid-Point 19 marks)**
Level 3	**Reasonable answer including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks (Mid-Point 13 marks)**
Level 2	**Weak with some understanding**	**4 to 9 marks (Mid-Point 7 marks)**
Level 1	**A very weak answer**	**0 to 3 marks (Mid-Point 2 marks)**

Issues and areas for discussion include:

Introduction	• outlining the damage mining can inflict on the environment • outlining methods of government intervention in the mining industry • explaining the meaning of market forces.
Developing the response to the question: (Application)	• drawing on the prompt in **Extract C** *(lines 23-24)* about how the incentive function of prices operates; • drawing on the prompt in **Extract B** *(lines 11-12)* about China's use of monopoly power • drawing on the prompt in **Extract C** *(lines 4-7)* about Molycorp and environmental pollution resulting from rare-earth mining. • drawing on the student's knowledge of market failure and/or government failure. • drawing on the prompt in **Extract B** *(lines 4-7)* about growth of the renewable energy market/Toyota's Prius Car.

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Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain why allowing markets to work may lead to a socially optimal level of output • developing a chain of reasoning to explain why competitive markets improve resource allocation • relating the incentive function of prices to resource allocation • developing a chain of reasoning to explain why the exercise of monopoly power may lead to resource misallocation • developing a chain of reasoning to explain why negative externalities may lead to resource misallocation. • developing chains of reasoning to explain how particular methods of intervention might lead to better or worse resource allocation.
Evaluation	• questioning the assumptions made when developing the chains of reasoning outlined above • contrasting the advantages and disadvantages of government intervention and leaving things to the free market • picking up on the point that while 'some commentators' believe that the mining industry is notorious for the damage it inflicts on the environment, others may disagree • discussing whether some but not other policies (e.g. command and control regulation, polluter must pay fines) may be successful • discussing the strengths of different arguments in different mining industries and making use of the student's knowledge of evidence • consideration of market failure versus government failure arguments • consideration of efficiency arguments • consideration of health and safety requirements

Examiners should note that credit can be given for basic evaluation if a student simply states but does not develop arguments in favour of markets or government intervention. Stronger evaluation is provided by students who are able to support arguments for both for and against free markets and government intervention, and by clearly stating the assumptions underlying the arguments being used. Reward the relevant use of diagrams to support arguments, e.g. externalities diagrams in relation to the environmental costs of mining.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 5 & 6 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

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OR

Context 2 **Total for this Context: 50 marks**

05	Define the term 'scarce resources' (**Extract E**, line 1).	*(5 marks)*

For an acceptable definition (eg factors of production/ inputs for which demand exceeds supply; factors of production/ inputs that are limited in supply; a resource is a factor of production or input used in the production process which are finite; scarce resources are factors of production/inputs which have an opportunity cost).	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term 'scarce resources' even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example as follows:

For explaining opportunity cost in production without specific reference to 'scarce resources'.	**2 marks**
For defining the word 'scarce' without a definition of 'resources'.	**2 marks**
For defining the word 'resources' without a definition of 'scarce'.	**2 marks**
A relevant diagram	**2 marks**
For an example of a scarce resource (one example only).	**1 mark**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

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06	Using **Extract D**, identify **two** significant features of changes in UK government spending on health care over the period shown.	*(8 marks)*

Award up to 4 marks each for each significant point made:

Identifies a significant feature Makes accurate use of the data the feature identified Unit of measurement given accurately	**4 marks**
Identifies a significant feature Makes accurate use of the data to support the feature identified. However, only one piece of data is given when two are needed **and/or** no unit of comparison is given **and/or** the unit of measurement is used/applied inaccurately **and/or** wrong date is given. Note: Candidates who fail to say that the data is a % of national output can only get a maximum of 3 marks.	**3 marks**
Identifies a significant feature No use of correct data to support the feature identified.	**2 marks**
A significant feature of **part** of the data is identified but this does **not** provide an overview of the whole data series. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

Note: Candidates are going to find it very difficult to deal with units of measurement, so as long as candidates have written the change in spending on health care as a % of national output once in their answer and added '%' after one number then the candidate can get the marks for the data.

If a student identifies more than two significant features, reward the best two.

Significant features include:

- over the whole of the period shown from 1980 to 2015, the annual % changes in UK government spending on health care range from a peak of about 12.5% of national output in 2003 to a low of about 0.2% of national output in 2014
- over the whole of the period shown, the data for annual % changes in UK government spending on health care start at about 2% of national output in 1980 which is higher than at the end of the period when it is forecast to be at about 0.4% of national output in 2015
- there is a significant contrast between the data for most of the years of actual measurement from 1980 to 2010 and most of the years of estimated measurement from 2011 to 2015. The annual % changes in the years of actual measurement were highly volatile, e.g. ranging from about 0.5% of national output in1997 to about 12.5% of national output in 2003. The annual changes in the years of estimated measurement were much less volatile, e.g. ranging from about 1.0% of national output in 2011 to about 0.2% of national output in 2014
- the data exhibits a cyclical pattern, e.g. with three cycles. The three cycles were from 1980 to 1985, 1986 to 1997, and 1998 to 2010. For example, annual % changes in UK government spending on health care rose from about 2% of national output in 1980 to about 4.5% of national output in 1981 at the peak of the first cycle, before falling to about 0.9% of national output in 1985. Reward also answers that identify four or five cycles.
- in every year in the data series, apart from 1997 when the actual increase was less than 1% of national output, the % annual increases in 'actual' spending recorded exceeded the forecast % increases. The forecast annual % increase for 2011 was about 1% of national output
- the annual % rate of change in UK government spending on healthcare peaked in 2003 at 12.5% of national output

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- the annual % rate of change in UK government spending on health care was forecast to be lowest in 2014 at 0.2% of national output.

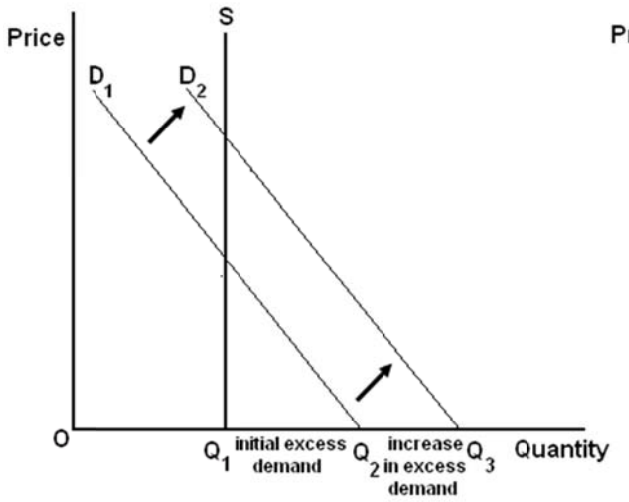
Allow a margin of +/- 0.5%

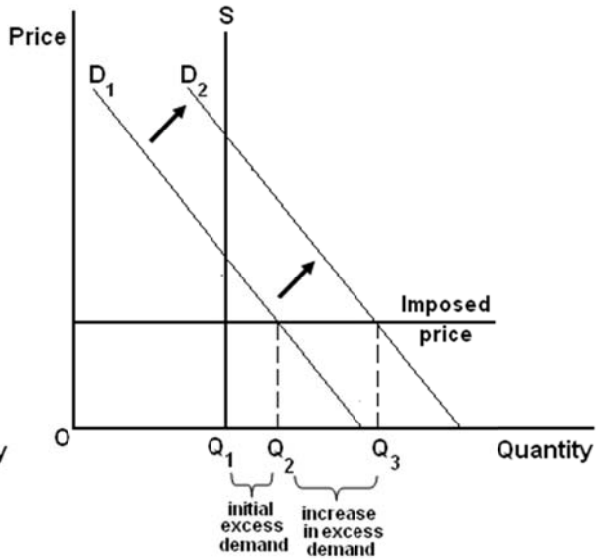
MAXIMUM FOR PART 06: 8 MARKS

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:plain *marks)*

When awarding marks for the diagram, it is important to reward students who produce an economically valid response even if it is not exactly the same as the diagrams below, for example, a diagram illustrating an upward sloping supply curve should be rewarded.
The left-hand diagram illustrates an initial state of excess demand when NHS health services are provided free of charge. It also illustrates the increase in excess demand resulting from the demand curve for NHS services shifting to the right. Reward also a diagram such as the right-hand diagram, which shows an increase in excess demand when an above-zero price is charged (as not all NHS services are provided free). Also reward a diagram showing an increase in excess demand resulting from the supply curve shifting to the right, but by not as much as the rightward shift of demand.





Breakdown of the marks for the diagram:

For labelling all the axes, the initial demand curve and the supply curve, and for labelling a relevant quantity such as Q1.	**1 mark**
For showing an initial level of excess demand on the diagram.	**1 mark**
For showing the demand curve shifting to the right.	**1 mark**
For showing the increase in the level of excess demand on the diagram.	**1 mark**
Any other relevant feature of the diagram, eg supply curve shifting to the right, but not by as much as the shift in the demand curve; the supply curve drawn and labelled as inelastic.	**1 mark per feature up to a maximum of 3 marks**

Note: (i) To earn the first mark in the grids, all the three listed tasks must have been attempted and been completed.
(ii) For the task of labelling axes, P and Q, a monetary symbol such as the £ sign on the vertical axis and quantity, or units of healthcare services are all valid.

Up to a MAXIMUM of 4 marks for diagram

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The anticipated written response:

Define demand, supply, excess demand, services, merit good or any other relevant term.	**Up to 1 mark per definition** **Maximum of 2 marks for definitions**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example: **Only reward a particular link in the chain of reasoning ONCE**	
The UK population is ageing **(2 marks)**; there are more consumers needing drugs/treatment for longer periods **(2 marks)**; which increases the demand for health care services **(2 marks)**; thereby adding to the initial level of excess demand which results from NHS services being under-priced or free **(2 marks)**.	**Up to 8 marks**
People's lifestyles are changing **(2 marks)** eg alcohol abuse, child obesity, diabetes **(2 marks)**; so people need different types of healthcare **(2 marks)**; which increases the demand for health care services **(2 marks)**; thereby adding to the initial level of excess demand which results from NHS services being under-priced or free **(2 marks)**.	**Up to 8 marks**
People's expectations of what they are entitled to are changing **(2 marks)**; there is less information failure regarding the different drugs/treatments people become more dependant on healthcare **(2 marks)**; which increases the demand for health care services **(2 marks)** thereby adding to the initial level of excess demand which results from NHS services being under-priced or free **(2 marks).**	**Up to 8 marks**
Both the demand for NHS services and the supply of NHS services are shifting to the right **(2 marks**); but 'demand is running ahead of supply' **(2 marks**); partly because of difficulties in increasing supply (inelastic supply) **(2 marks);** because of limited/lack of government funding **(2 marks**); thereby adding to the initial level of excess demand which results from NHS services being under-priced or free **(2 marks).**	**Up to 8 marks**

If students merely list relevant factors e.g. ageing population, changing lifestyles, changing expectations without further development, this should be treated as ONE link in the chain of reasoning and they should be awarded just 2 marks

Note: Do not award marks for simply describing what a diagram shows.

Students who draw a diagram which is inconsistent with their written explanation can only be awarded 1 mark for axes, supply and demand curves and initial equilibrium.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 07: 12 MARKS

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08 'Scarce resources can be allocated or rationed between competing uses in a number of ways' (**Extract E**, lines 1-2).

Using the data and your economic knowledge, evaluate the case **for** and the case **against** the NHS charging for its services. *(25 marks)*

Students will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded more than **13 marks**.

Extract E mentions a number of rationing devices: the price mechanism, queues and waiting lists, and government decisions. In the context of the NHS, **Extract F** mentions the 'post-code lottery' in which drugs and treatments sanctioned in one PCT area were not available in another region. Free provision at the point of use obviously indicates that the price mechanism is not currently being used for allocating scarce resources within the NHS between alternative uses. However, when evaluating, students may discuss whether the price mechanism leads to a better outcome with private or non-NHS health care. Some students may also discuss internal markets within the NHS, though at AS such discussion is certainly not expected.

A maximum of **21 marks** should be awarded if there is no explicit reference to the data.

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks (Mid-Point 24 marks)**
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks (Mid-Point 19 marks)**
Level 3	**Reasonable answer, including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks (Mid-Point 13 marks)**
Level 2	**Weak with some understanding**	**4 to 9 marks (Mid-Point 7 marks)**
Level 1	**Very weak**	**0 to 3 marks (Mid-Point 2 marks)**

Issues and areas for discussion include:

Introduction	• the basic economic problem • market failure: merit goods • relating scarcity to opportunity cost • mentioning alternative methods of provision of health care • explaining the rationing or allocative function of prices.
Developing the response to the question: (Application)	• drawing on the statements in **Extract E** *(lines 10-12, 19-22)* about alternative methods of provision of a good or service • drawing on the prompt provided in **Extract E** *(line 17)* about free at the point of use provision of health care services requires collective finance from taxation • drawing on the information in **Extract F** *(lines 5-6)* about the 'post-code' lottery implications on the free at the point of use provision • drawing on the information in **Extract F** *(lines 7-9)* about the implications of the 'top-down' planning and decision making in free at the point of use provision • drawing on the student's knowledge of health care provision in the UK.

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Developing the response to the question: (Analysis)	• developing a chain of reasoning to explain the case for the NHS continuing to provide most health care services free at the point of use for consumers, (eg merit good analysis, equity considerations, economies of scale arguments) • developing a chain of reasoning to explain the case against the NHS continuing to provide most health care services free at the point of use for consumers, (eg opportunity cost arguments, economic inefficiency, diseconomies of scale arguments) • developing a chain of reasoning to explain the case for NHS services being provided through an alternative method of provision • developing a chain of reasoning to explain the case against NHS services being provided through an alternative method of provision • using relevant diagrams in the analysis of alternative methods of provision, perhaps drawing on the earlier diagram used in the answer to **07** • use of the evidence in the Extracts and in the student's economic knowledge to back up the analysis.
Evaluation	• evaluating the strength of the merit good argument • evaluating the strength of the equity argument • evaluating the strength of the economies of scale argument • evaluating the case for at least one alternative method of provision/ means of reducing the demand for healthcare • evaluating the evidence in the data • evaluating market failure and government failure considerations • overall evaluation of the case for versus the case against.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 5 & 6 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
January 2012

Economics ECON1

Unit 1 Markets and Market Failure

Thursday 12 January 2012 9.00 am to 10.15 am

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 Which one of the following is classified as an economic resource?

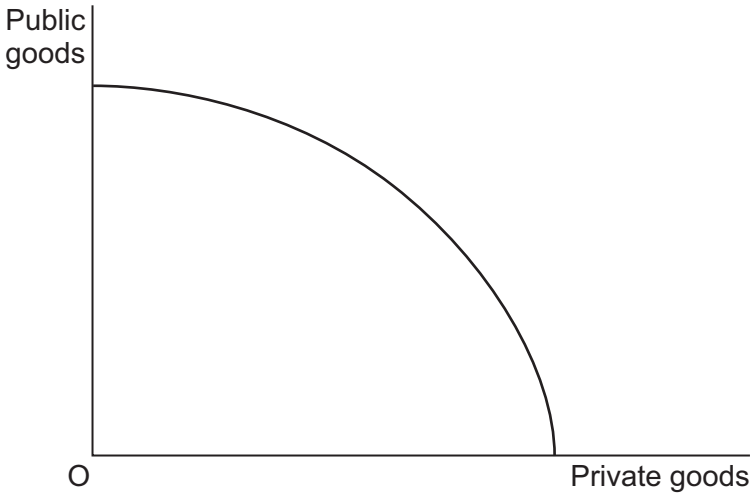
A Consumption

B Productivity

C Production

D Enterprise

2 The diagram below shows a production possibility frontier for an economy.



When the economy is operating on its production possibility frontier, an increase in the production of public goods will

A have no effect on the price of private goods because public goods are free.

B mean a reduction in the production of private goods.

C increase total output because public goods are non-rival.

D increase the opportunity cost of private goods.

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3 ‘OPEC is expected to cut output of crude oil by more than 1 million barrels per day when it meets in Vienna this week. The cut is intended to maintain the high world price for oil.’

Source: news reports, 2008

All other things being equal, if output of crude oil was cut in a such a way, which one of the following would happen in the world market for crude oil? There would be a

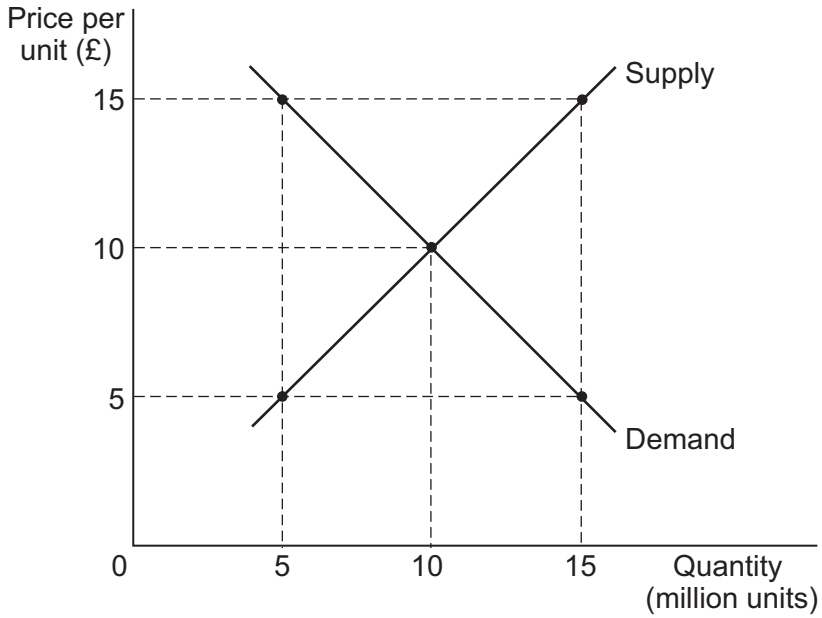
A movement along the supply curve.

B shift to the right of the supply curve.

C movement along the demand curve.

D shift to the left of the demand curve.

4 The diagram below shows the demand for, and supply of, butter in a country.



The government of the country decides that domestic farmers will receive a minimum price for butter produced of £15 per unit and arranges to sell the surplus butter to foreign buyers at £5 per unit. The cost of this scheme to the government will be

A £75 million

B £100 million

C £150 million

D £225 million

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5 Price elasticity of supply measures the responsiveness of the quantity supplied to a change in

A demand.

B price.

C costs of production.

D the size of firms.

6 Complete market failure always exists when

A there are negative externalities in production.

B the free market fails to provide sufficient merit goods.

C the free market underprices demerit goods.

D there is a missing market in the provision of public goods.

7 Specialisation requires the existence of

A economies of scale.

B economic efficiency.

C a system of exchange.

D rising productivity.

8 In an economy, some industries are dominated by a few large firms. Which one of the following is most likely to explain this situation?

In the economy

A small producers are likely to suffer from diseconomies of scale.

B as industries increase their output, firms are likely to be able to charge a higher price for their products.

C as firms increase their size, the employment of specialist managers may result in a fall in the average cost of running a business.

D small firms find it hard to compete because, as firms increase their output, the rise in employment is likely to reduce labour productivity.

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9 Which one of the following situations would lead to an increase in equilibrium price?

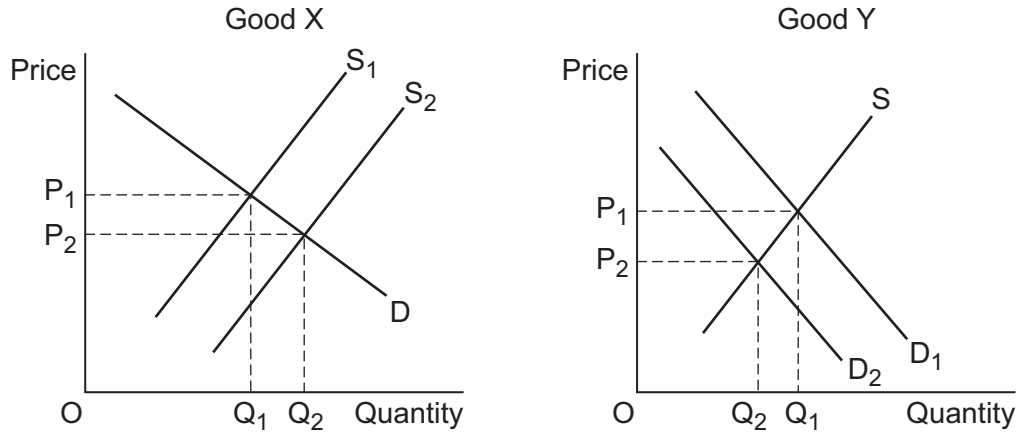
A Demand is perfectly inelastic and labour costs rise

B Demand is perfectly elastic and labour costs rise

C Supply is perfectly elastic and the price of a substitute good falls

D Demand is perfectly inelastic and labour costs fall

10 The two diagrams below show the markets for Goods X and Y.



The markets are initially in equilibrium at P_1 and Q_1. If the supply of Good X increases and both markets move to a new equilibrium at P_2 and Q_2, it may be concluded that Goods X and Y are in

A competitive demand.

B derived demand.

C composite demand.

D joint demand.

11 Which one of the following measures of elasticity indicates that two goods are substitutes?

A A negative income elasticity of demand

B A positive price elasticity of demand

C A positive cross elasticity of demand

D A negative price elasticity of demand

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12 The income elasticity of demand for a good is −3. Which one of the following statements is correct?

A A 20% increase in income leads to a 60% fall in quantity demanded.

B A 10% increase in price leads to a 30% fall in quantity demanded.

C The good is a normal good.

D Demand for the good is income inelastic.

13 'Electricity suppliers are required to buy a growing amount of electricity from renewable energy generators. Green energy generators are paid more for their electricity because there is a scarcity of supply of electricity generated from renewable resources.'

It can be deduced from the data above that

A the government pays a subsidy to generators of renewable energy.

B the social cost of electricity generated from renewable resources is greater than the private cost.

C the government is subsidising the negative externalities arising from the generation of 'green energy'.

D electricity suppliers are paying higher average prices for their electricity because some of the electricity is generated from 'green sources'.

14 The table below shows the private and external costs for four products. Which product **A**, **B**, **C** or **D**, has a market price which takes **least** account of negative externalities?

Product	Private cost per unit of output (£)	External cost per unit of output (£)	Market price (£)
A	10	2	12
B	12	5	15
C	16	7	22
D	22	8	24

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15 Government intervention to correct market failure may make the situation worse because

A the information needed to make sound economic decisions is widely dispersed amongst individuals and firms.

B the government is unable to provide private goods since they are both rival and excludable.

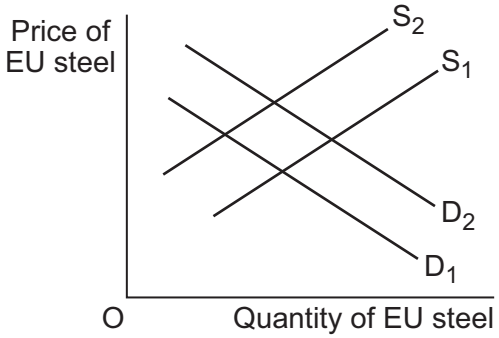
C positive externalities resulting from the consumption of merit goods means that they will be underprovided by the state.

D competition amongst firms in the private sector will inevitably result in an optimum allocation of resources.

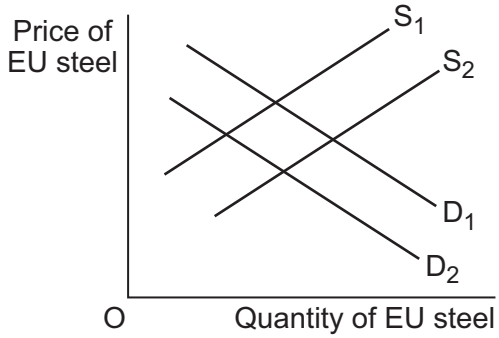
16 'European Union (EU) steel production declined last year following a big reduction in demand for steel from EU manufacturers. Production of steel-containing goods by EU manufacturers has fallen because of tough global competition.'

Which one of the following diagrams, **A**, **B**, **C** or **D**, best illustrates the reasons given for the decline in the production of steel in the EU?

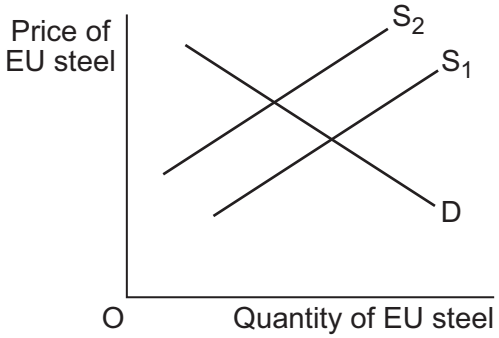
A



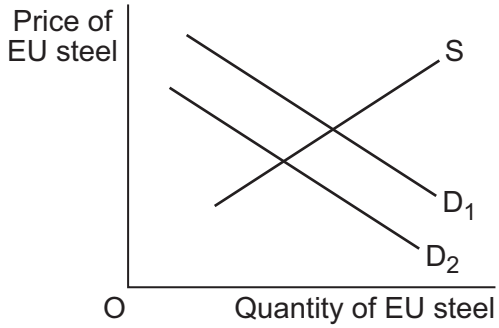
B



C



D



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17 A positive statement in economics is always

A capable of being tested.

B based upon an opinion.

C based upon numerical data.

D correct.

18 The table below shows the price and quantity demanded of two goods, X and Y.

Price of X (£)	Quantity demanded of X	Quantity demanded of Y
10	20	30
9	24	42

When the price of X falls from £10 to £9, the cross elasticity of demand for Y with respect to the price of X is

A +4

B +2

C −2

D −4

19 Government provision of a merit good can be justified because

A without government intervention there would be a missing market.

B merit goods are non-rival and non-excludable.

C without government intervention partial market failure would result.

D the provision of merit goods has an opportunity cost.

20 At all points on a country's production possibility frontier

A all firms are benefiting from economies of scale.

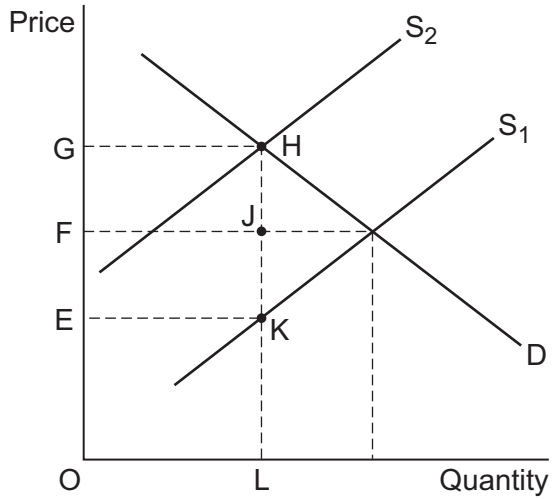
B productive efficiency is achieved.

C each point is equally socially desirable because output is at its maximum.

D there is an equal distribution of income in the economy.

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21 In the diagram below, the government imposes an indirect tax on a product. This shifts the product's supply curve from S_1 to S_2.



The government's tax revenue is shown by the area

A EFJK

B OGHL

C EGHK

D FGHJ

22 A good is excludable if

A it is possible to prevent someone from enjoying its benefits.

B it is supplied by the government rather than through the free market.

C one person's use has no effect on the quantity available for someone else.

D it is supplied at a zero price.

23 In a typical demand schedule, quantity demanded

A varies directly with price.

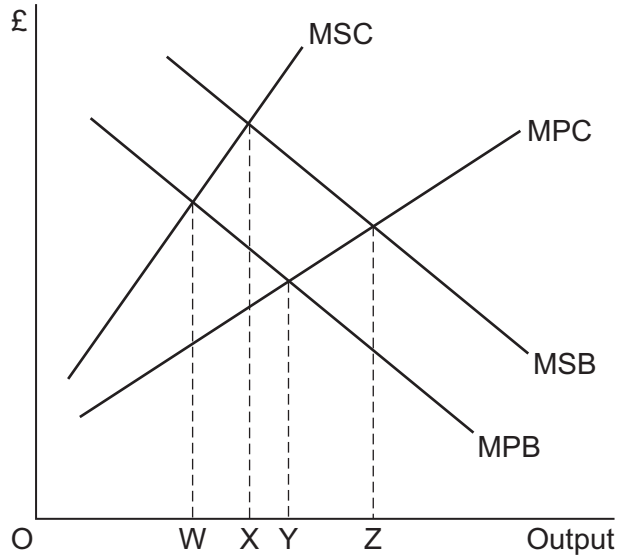
B varies proportionately with price.

C is determined by the elasticity of demand.

D varies inversely with price.

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24 The diagram below shows the marginal private cost and marginal social cost (MPC and MSC) and the marginal private benefit and marginal social benefit (MPB and MSB) of producing a good.



The optimal output of the good for society would be

A OW.

B OX.

C OY.

D OZ.

25 Which combination of example and policy, **A**, **B**, **C** or **D**, is most likely to be consistent with the source of market failure identified?

	Source of market failure	**Example of market failure**	**Policy to correct market failure**
A	Missing market	Health care	State provision
B	Positive consumption externalities	Education	Minimum price
C	Merit good	Petrol	Indirect taxation
D	Negative production externalities	Electricity generation	Pollution permits

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Now turn to page 12 for Section B

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Turn over for Section B

Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2.
You are advised to spend at least 50 minutes on **Section B**.

Total for this Context: 50 marks

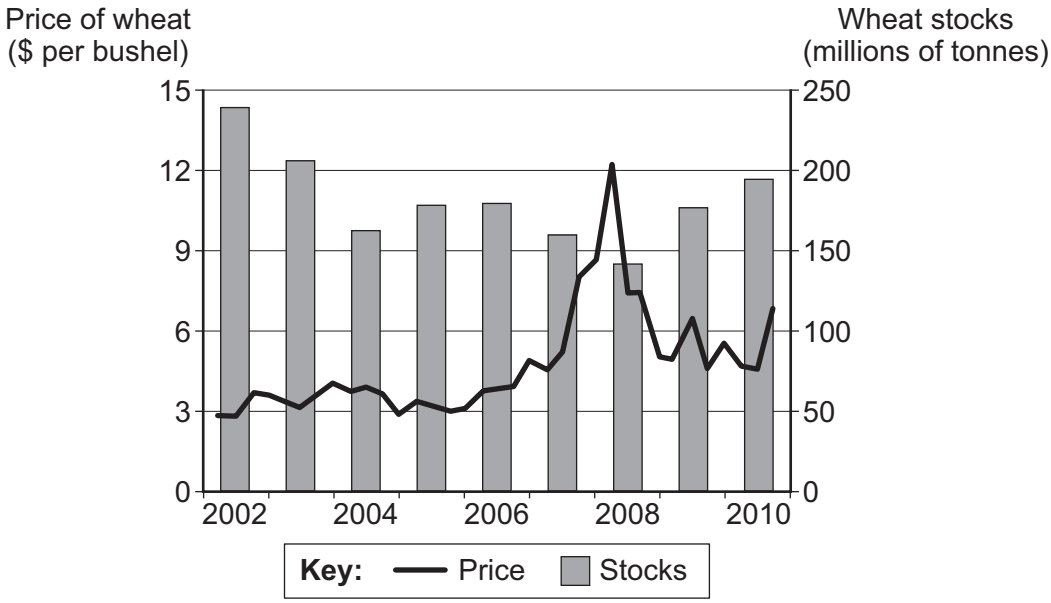
EITHER

Context 1

THE PRICE OF WHEAT

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

Extract A: World price of wheat (quarterly) and world stocks of wheat (at 1 January each year), 2002 to 2010



Note: (i) The data for 2010 are forecast data.
(ii) A bushel is a measure of the weight of wheat.

Source: news reports, 2010

Extract B: World wheat markets in 2010

In Europe and North America, wheat harvests are being marked by uncertainty. This is partly because Russia, a major wheat exporter, banned exports of wheat in 2010. Very dry weather and fires destroyed a third of the Russian wheat crop. These factors contributed to significant increases in world wheat prices between June and September 2010.

Demand conditions also contribute to the long-term trend for wheat prices to rise. Increasing demand from emerging-market countries, such as China and India, is affecting world wheat markets. This makes disruptions, such as Russia's export ban, more noticeable. Wheat is now a product in composite demand. Rising living standards in poor countries increase the demand for meat. This in turn increases the demand for wheat used for feeding animals. The growing use of biofuels is having a similar effect. A biofuel, derived from a plant such as wheat, is used as a substitute for oil. Fears have also arisen that the world is facing a food crisis similar to those in 2007 and 2008, and these fears have led to a growth in the speculative demand for wheat.

Source: news reports, 2011

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Extract C: Should governments intervene in wheat markets?

A closer look at the global wheat market provides a number of reasons why wheat prices might not continue to rise. Farmers throughout the world have responded to market conditions and have planted more wheat. The crop takes several months to grow but, in 2011, supply should increase. Livestock farmers are using less wheat to feed their animals, substituting cheaper grains in place of wheat.

Nevertheless, by creating confusing signals about which crops to plant for the next year's harvest, continuing price volatility may pose a problem for farmers. Droughts and floods resulting from climate change will also add to uncertainty. Pakistan, the world's eighth largest wheat producer, suffered devastating floods in 2010, although the country's wheat had already been harvested. However, the floods are almost certain to have an adverse effect on harvests in 2011 and 2012.

While governments of wheat-producing countries can ban exports to conserve shrinking supplies for their own citizens, what can a government of a wheat-importing country do? One solution is to leave everything to the market. Alternatively, a government can intervene in the free market. For example, a government could subsidise the price of wheat or take action to make sure that all locally-farmed wheat is used for food and not for biofuel. Another possibility is to use the law to impose a maximum price on wheat.

Source: news reports, 2010

0 1 Define the term 'composite demand' (**Extract B**, line 9). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison between changes in the world price of wheat and changes in world stocks of wheat over the period shown. *(8 marks)*

0 3 With the help of an appropriate diagram and the information in **Extract B**, explain why the world price of wheat changed in 2010. *(12 marks)*

0 4 Using the data and your economic knowledge, evaluate different ways in which the government of a country which imports large quantities of wheat can try to stabilise wheat prices within the country. *(25 marks)*

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Do **not** answer Context 2 if you have answered Context 1.

Total for this Context: 50 marks

OR

Context 2

TRAFFIC CAMERAS AND ROAD SAFETY

Study **Extracts D**, **E and F**, and then answer **all** parts of Context 2 which follow.

Extract D: Estimated annual costs and benefits of speed cameras and traffic-light cameras in ten selected police areas in the UK

	Number of sites	Annual costs of operation (£000)	Annual fine income generated (£000)	Annual value of accident reduction (£000)
Speed cameras	420	8 859	6 730	30 239
Traffic-light cameras	241	3 541	1 632	6 663

Note: (i) Fine income has been classified as a benefit for the government rather than as a cost imposed on motorists.
(ii) Traffic-light cameras detect motorists who pass through traffic lights when red.

Source: Police research paper

Extract E: Are speed cameras economically worthwhile?

Why do we have speed cameras? For cutting down speed and thus cutting accidents? Or is there no real evidence that they have such extensive external benefits?

The cost of installing each speed camera has been estimated to be around £18 000, added to which is the cost of keeping the camera in working order before it needs replacing.

Supporters of the use of speed cameras believe that any reduction in accidents resulting from their use justifies these costs. Moreover, they claim speed cameras can save the lives of drivers and other road users. Seen in this light, some economists believe that a speed camera is a merit good.

The *Hampshire and Isle of Wight Safety Camera Partnership* (HSCP) claims that a 1 mph reduction in speed leads to a 5% reduction in accidents. The external cost generated by traffic accidents is huge, up to £1 253 140 for each serious accident. This figure includes the costs of police time, other emergency services, the health service, insurance company involvement, time lost at work and so on.

However, a number of motoring groups dispute this. Some argue that motorists' behaviour, and not speed itself, is the underlying cause of road accidents. They believe that speed cameras actually cause accidents by artificially changing driver behaviour to something that they would not normally do. Motoring groups also argue that speed cameras are simply revenue-raising devices for the government. According to these arguments, the provision of speed cameras is a source of government failure.

Source: news reports, 2010

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Extract F: Who pays for speed cameras and who gets the financial benefits?

The costs of installing and maintaining speed cameras are paid for by local government (local councils), but central government receives the revenue generated by the fines levied on speeding motorists whose cars are photographed by the cameras.

In July 2010, the UK Government cut the money it gives each year to local councils to pay for the costs of operating the speed cameras. This was a key part of the Government's promise to 'end the war on motorists'.

Immediately, Oxfordshire County Council announced that, to save money, it was turning off all 72 of its road-side cameras. Other local councils said that they were considering similar action.

Lives may, however, be put at risk as a result of this spending cut. According to Britain's top traffic police officer, casualties have almost halved over eight years thanks to speed cameras and the public have come to accept them. He said: "We recognise that we have to save money. We recognise that road safety has to play its part in this, but these cuts are a threat to road safety."

Source: news reports, 2010

0 5 Define the term 'external cost' (**Extract E**, line 11). *(5 marks)*

0 6 **Extract D** shows differences in some of the costs and benefits between speed cameras and traffic-light cameras.

Identify **two** significant points of comparison between the costs and the benefits of the two types of road safety camera. *(8 marks)*

0 7 '. . . a speed camera is a merit good.' (**Extract E**, line 9).

With the help of an appropriate diagram, explain why merit goods are often underprovided. *(12 marks)*

0 8 '. . . the provision of speed cameras is a source of government failure' (**Extract E**, line 20).

Using the data and your economic knowledge, evaluate this view. *(25 marks)*

END OF QUESTIONS

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Version 1



General Certificate of Education (A-level)
January 2012

Economics ECON1

(Specification 2140)

Unit 1: Markets and Market Failure

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Advance Subsidiary Economics Unit 1

January 2012 **ECON1/1**

Section A: Objective Test (ECON1/1)

The following list indicates the correct answers used in marking the candidates' responses.

Key List

1	**D**	**10**	**A**	**19**	**C**
2	**B**	**11**	**C**	**20**	**B**
3	**C**	**12**	**A**	**21**	**C**
4	**B**	**13**	**D**	**22**	**A**
5	**B**	**14**	**D**	**23**	**D**
6	**D**	**15**	**A**	**24**	**B**
7	**C**	**16**	**D**	**25**	**D**
8	**C**	**17**	**A**		
9.	**A**	**18**	**D**		

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Advance Subsidiary Economics

January 2012 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the context questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

(ii) **A levels approach.** This approach is used for marking questions **04** and **08** of the context questions. The Levels of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVES OF RESPONSE MARK SCHEME: QUESTIONS 04 AND 08 ONLY

AS **LEVELS OF RESPONSE**	**AO1** **KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology**	**AO2** **APPLICATION of theories, concepts and terminology**	**AO3** **ANALYSIS of economic problems and issues**	**AO4** **EVALUATION of economic arguments and evidence, making informed judgements**
Level 5 22-25 marks (mid-point 24) **Good analysis <u>and</u> good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the student to answer the question properly.

I where a relevant **ISSUE** is raised by the student.

K Where the student demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the student's response to the question. This should also be used where the student quotes relevant examples.

Ap Where the student demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the student demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the student **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Students will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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EITHER

Context 1 **Total for this Context: 50 marks**

01	Define the term 'composite demand' (**Extract B**, line 9).	*(5 marks)*

For an acceptable definition, eg demand for a good that has multiple or at least two uses; where the product is required for more than one use; an increase in demand for one use will lead to a decrease in supply of the good for another	**5 marks**
Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'composite demand' even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, maximum of 4 marks which may be broken down, for example as follows:

Definition of demand	**2 marks**
For an accurate relevant diagram(s) illustrating a change in demand for the good for one use and an opposite shift in supply of the good for another use	**2 marks**
An example of composite demand from Extract B, eg wheat for at least two of food, biofuel and livestock feed. **or** An example not in the Extracts, eg wheat for bread and cakes, oil for petrol and plastics **Reward only one example.**	**1 mark**

No marks should be awarded for an answer which confuses composite demand with demand for complementary goods or with derived demand.

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02 Using **Extract A**, identify **two** significant points of comparison between changes in the world price of wheat and changes in world stocks of wheat over the period shown. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point made:

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the point of comparison. However, only one piece of data is given when two are needed to make a valid comparison **and/or** no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately.	**3 marks**
Identifies a significant point of comparison. No use of correct data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a candidate identifies more than two significant points of comparison, reward the best two ('significant' such as highest/lowest, major changes/trends over a period of time).

The significant points of comparison include:

- There is a generally inverse relationship between the two variables. For example, from 2002 to 2008 wheat stocks fell from approximately 240 million tonnes to about 140 million tonnes, while the price of wheat rose from around $3 a bushel to just over $12 a bushel.
- Over the whole period covered by the data, the price of wheat rose from around $3 a bushel to around $7 a bushel, compared to a fall in wheat stocks from 240 million tonnes to just under $200 million tonnes.
- The price of wheat was at its highest in beginning of 2008 at just over $12 a bushel, whereas wheat stocks were at their highest at 240 million tonnes in 2002.
- The price of wheat was at its lowest in the beginning of January 2002 at around $3 a bushel (or the end of 2004) whereas wheat stocks were at their lowest at around 140 million tonnes in 2008.
- Throughout the period, both the price of wheat in $ per bushel and the stocks of wheat in millions of tonnes fluctuated. The price of wheat had a range of approximately $3 per bushel to just over $12 per bushel, whilst stocks had a range of 240 million tonnes to 140 million tonnes.

Allow a margin of error of +/- 10 million when judging wheat stocks

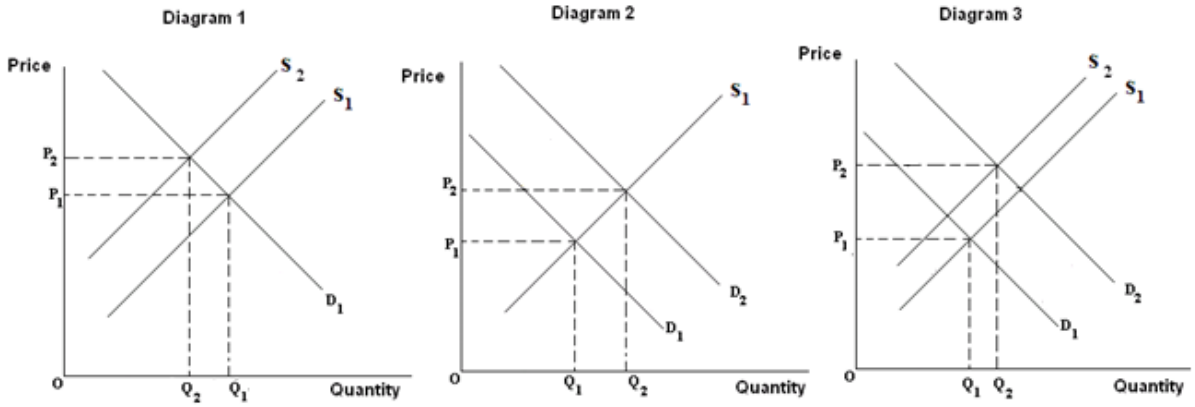
Allow a margin of error of +/- $1 when judging price per bushel

MAXIMUM FOR PART 02: 8 MARKS

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03	With the help of an appropriate diagram and the information in **Extract B**, explain why the world price of wheat changed in 2010. *(12 marks)*

When awarding marks for the diagram, it is important to reward candidates who produce an economically valid response even if it is not one of the three shown below for the global market for wheat.



The anticipated response for the diagram:

Three relevant diagrams are:

The anticipated response for Diagram 1 showing a leftward shift of supply:

Breakdown of the marks for the diagram:

For labelling all the axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark**
An accurately-drawn shift of the supply curve to the left.	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

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The anticipated response for Diagram 2 showing a rightward shift of demand:

Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the demand curve to the right.	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

The anticipated response for Diagram 3 showing a leftward shift of supply and a rightward shift of demand:

Breakdown of the marks for the diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the demand curve.	**2 marks**
An accurately-drawn shift of the supply curve.	**2 marks**
Co-ordinates drawn in at the new combined equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (eg the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

Note: if in Diagram 3 the supply curve shifts by more than the demand curve, the new equilibrium would depict a fall in the equilibrium quantity of wheat. This is a valid response.

Up to a MAXIMUM of 4 marks for diagram(s)

Note:

(i) To earn the first mark in the grids, all the three listed tasks must have been attempted and been completed

(ii) For the task of labelling axes, price and quantity, P and Q, a monetary value such as the £ sign on the vertical axis and physical units of measurement such as tonnes of wheat are all valid, though the labels 'output' and 'price 'level' are not valid.

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The anticipated written response:

Extract B mentions two sets of factors that affected the price of wheat in 2010. These were:

- supply-side factors: the Russian ban on exports; very dry weather; fires
- demand-side factors: increasing demand from emerging-market countries and rising living standards in poor countries; demand for wheat as an animal feed; the growth of demand for use as a bio-fuel; growth in the speculative demand for wheat.

Define demand, supply, excess demand, excess supply or any other relevant term Do **not** reward a definition of 'composite demand' (question 01)	**Up to 1 mark per definition Maximum of 2 marks for definitions**
For each of the following explanations, award 2 marks for each logical link in the chain of reasoning. **Award 'this causes the price of wheat to rise' only once.**	
Russia bans wheat exports **(2 marks)** causing the supply curve of wheat to fall in wheat-importing countries **(2 marks)** *and the price of wheat to rise* **(2 marks)**.	**Up to 6 marks**
Natural events (floods, droughts) **(2 marks)** reduce the supply of wheat **(2 marks)** *and the price of wheat to rise* **(2 marks)**.	**Up to 6 marks**
Rising living standards in poor countries increase the demand for meat **(2 marks)** causing the demand for wheat as animal feed to rise **(2 marks)** *and the price of wheat to rise* **(2 marks)**.	**Up to 6 marks**
Increased demand for biofuel **(2 marks)** increases the demand for wheat **(2 marks)** *and the price of wheat to rise* **(2 marks)**.	**Up to 6 marks**
Award 2 marks also for any of the following points in a logical chain of reasoning	
An explanation relating to the adjustment process: explaining excess demand resulting from an increase in demand (or from a decrease in supply) **(2 marks)** leading to the price of wheat rising **(2 marks)** followed by an extension of supply (or a contraction of demand) **(2 marks)**	**Up to 6 marks**
An explanation relating to price elasticity of supply/price elasticity of demand	**Up to 6 marks**

Note: Do not award marks for simply describing what a diagram shows.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 03: 12 MARKS

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04 Using the data and your economic knowledge, evaluate different ways in which the government of a country which imports large quantities of wheat can try to stabilise wheat prices within the country. *(25 marks)*

Level 5	**Good analysis <u>and</u> evaluation**	**22 to 25 marks (Mid-Point 24 marks)**
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks (Mid-Point 19 marks)**
Level 3	**Reasonable answer, including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks (Mid-Point 13 marks)**
Level 2	**Weak with some understanding**	**4 to 9 marks (Mid-Point 7 marks)**
Level 1	**A very weak answer**	**0 to 3 marks (Mid-Point 2 marks)**

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of 21 marks may be awarded if there is no explicit reference to the data.

An answer which does not demonstrate at least <u>some</u> awareness that the question relates to a wheat-importing country should be limited to 21 marks (top Level 4).

Extract C provides a number of prompts about methods (ways) of government intervention, whereas **Extract B** discusses the causes of price instability which the intervention might try to address. It is expected that candidates will make use of this material when developing their answers.

Issues and areas for discussion include:

Introduction	• explaining the meaning of stable prices • identifying different relevant stabilisation policies: buffer stock intervention, granting subsidies, imposing price ceilings, encouraging domestic production.
Developing the response to the question: **Application**	• drawing on the prompts provided in Extract B which suggest why the price of wheat is unstable • drawing on the prompts provided in Extract C which suggest how the market mechanism responds to shortages, increases supply, and thereby stabilises the price of wheat • drawing on the prompt in Extract C about production lags • drawing on the prompts provided in Extract C which suggest how government intervention may be needed because of the breakdown in the signalling function of prices.

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Developing the response to the question: **Analysis**	• developing a chain of reasoning to explain why the price of wheat is unstable • developing a chain of reasoning to explain how instability can best be dealt with by the market • developing chains of reasoning to explain how particular methods of intervention might reduce price instability • an analysis of particular methods of intervention specifically for wheat-importing countries • using relevant diagrams for, eg, buffer stocks; price controls; subsidies • analysis of the evidence in the extracts
Evaluation	• questioning the assumptions made when developing the chains of reasoning outlined above • contrasting the advantages and disadvantages of interventionist and non-interventionist policies (or ways of intervention) • discussing whether and to what extent one or more of the analysed policies/ways will be successful. (Relevant discussion of import controls should be rewarded though not expected) • discussing whether some but not other policies/ways (eg buffer stock intervention) may be successful. • discussing whether or not the instability can be dealt with by the market • discussing the limitations of particular methods of intervention specifically for wheat-importing countries, eg buffer-stock scheme intervention • discussion of government failure

Examiners should note that credit can be given for basic evaluation if a candidate simply identifies some of the arguments for and against particular relevant ways in which a government of a wheat-importing country can try to stabilise wheat prices within the country. Basic evaluation (and good analysis) would allow the answer to achieve a low Level 4. Stronger evaluation is provided by candidates who are able to support arguments both for and against the different ways, although answers cannot get above 21 marks unless they demonstrate at least some awareness that the question relates to a wheat-importing country. The question refers to 'different ways' in the plural. Two ways analysed and evaluated in depth can reach the higher levels in the mark scheme; likewise three or more analysed and evaluated in rather less depth.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 5 & 6 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

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OR

Context 2 **Total for this Context: 50 marks**

05	Define the term 'external cost' (**Extract E**, line 11).	*(5 marks)*

For an acceptable definition (eg cost received by a third party; adverse spin-off effect; (marginal) social cost greater than (marginal) private cost).	**5 marks**
Also, award 5 marks for an acceptable definition of a pure consumption external cost, a pure production external cost, or a mixed consumption/production external cost.	
Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'external cost' even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, maximum of 4 marks which may be broken down, for example as follows:

Accurate definition of an externality, without any reference to external costs.	**2 marks**
Defining an external cost as a negative externality.	**1 mark**
An example of external cost from Extract E, eg accidents; cost of police time **or** An example not in the extract, eg pollution; congestion **Allow only one example**.	**1 mark**
For an accurate relevant diagram.	**2 marks**

Maximum of 4 marks if definition is incomplete or inaccurate

Do not award marks for an answer which defines an external cost as a cost to society as a whole.

MAXIMUM FOR PART 05: 5 MARKS

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06 **Extract D** shows differences in some of the costs and benefits between speed cameras and traffic-light cameras.

Identify **two** significant points of comparison between the costs and the benefits of the two types of road safety camera. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point of comparison made:

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the point of comparison. However, only one piece of data is given when two are needed to make a valid comparison **and/or** no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately.	**3 marks**
Identifies a significant point of comparison. No use of correct data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made Makes use of the data to support the feature identified Unit of measurement given accurately	**1 mark**

If a candidate identifies more than two significant points of comparison, reward the best two.

The significant points of comparison include:

- The cost of operating of speed cameras at £8 859 000 is higher than the cost of £3 541 000 for traffic-light cameras (alternatively £21093 per speed camera site compared to £14693 per traffic light camera site).
- The fine income generated by speed cameras at £6 730 000 is higher than the income of £1 632 000 generated by traffic-light cameras (alternatively, £16024 per speed camera site compared to £6772 per traffic light camera site).
- The value of accident reduction of speed cameras at £30 239 000 is higher than the value of accident reduction of traffic-light cameras at £6 663 000 (alternatively, £71998 per speed camera site compared to £27647 per traffic light camera site).
- At £6 730 000, the annual fine income generated by speed cameras is about 0.76 of the costs of operating the speed cameras (£8 859 000), compared to the fine income of £1 632 000 for traffic-light cameras, which is about 0.46 of the costs of operating the traffic light cameras (£3 541 000).
- The ratio of benefits of accident reduction with speed cameras at £30 239 000 to operating costs at £8 859 000 (a ratio of 3.41) is higher than the ratio of accident benefits with traffic light cameras at £6 663 000 to £3 541 000 (a ratio of 1.88).

MAXIMUM FOR PART 06: 8 MARKS

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07 '….a speed camera is a merit good' (**Extract E**, line 9).

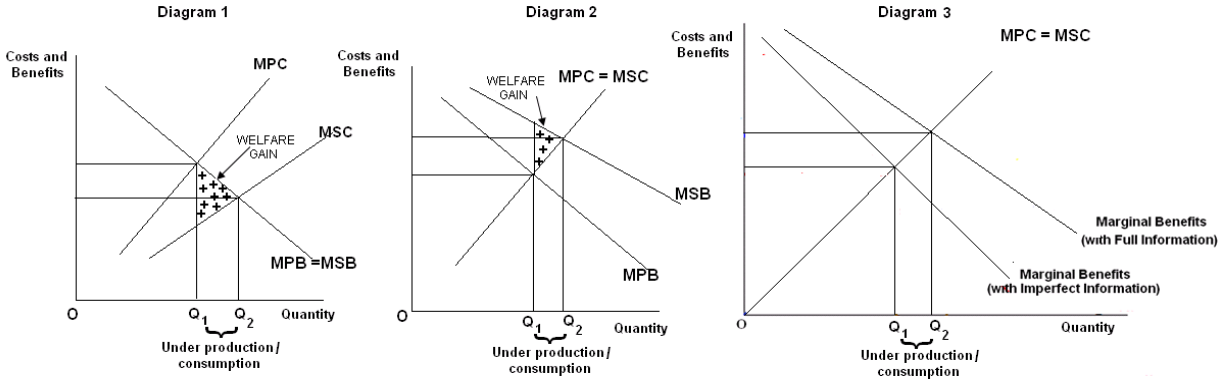
With the help of an appropriate diagram, explain why merit goods are often underprovided. *(12 marks)*

When awarding marks for the diagram, it is important to reward candidates who produce an economically valid response even if it is not a variant of the three below.

Diagram 1 represents the positive external benefit of production as a negative external cost.

Diagram 2 assumes that consumption of a merit good generates positive consumption externalities that benefit motorists. Because a free market fails to take account of the positive externalities, under-consumption and thence also under-production occurs.

Diagram 3 relates to the alternative way of defining a merit good in terms of imperfect information**, which alternatively could be drawn as a demand and supply diagram when, following receipt of the full information, consumption is higher**.



Breakdown of the marks for the diagram:

For labelling all the axes, the private cost and benefit curves, and the horizontal coordinate, labelled for example Q_1, to show the level of provision of a merit good before externalities or the lack of perfect information are taken into account.	**1 mark only**
For depicting social cost relative to private cost accurately on the diagram.	**1 mark**
For depicting social benefit relative to private benefit accurately on the diagram.	**1 mark**
Coordinate accurately drawn after taking account of the externalities or lack of perfect information.	**1 mark**
Any other relevant feature of the diagram, eg marginal external benefit shown or welfare gain shown; under-production correctly labelled.	**1 mark per feature up to a maximum of 2 marks**

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Note: **(i)** **To earn the first mark in the grids, all the three listed tasks must have been attempted and been completed**.

(ii) **For the task of labelling axes, costs and benefits, c/b and/or price or a monetary symbol such as the £ sign on the vertical axis and quantity, output, or units of a good such as speed cameras are all valid**.

(iii) **Although Diagram 1 shows an external benefit of production rather than consumption, it should still be given credit.**

Candidates who draw a diagram which is inconsistent with their written explanation can only be awarded 1 mark for axes, cost and benefit (supply and demand) curves and initial equilibrium.

Up to a MAXIMUM of 4 marks for the diagram

The anticipated written response:

Define a relevant concept such as a merit good, marginal private, external and social costs and benefits, an information gap. Do not reward a definition of 'external cost' (question 05) but allow MARGINAL external cost.	**Up to 1 mark per definition Maximum of 2 marks for definitions**
Example of a merit good other than speed camera (one only).	**1 mark**
Example of a positive externality	**1 mark**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example:	
Merit goods are often underprovided because consumers only consider the private benefits (**2 marks**) so the positive (consumption) externalities are not taken into account (**2 marks**) so the MPB is less than the MSB (**2 marks**) the level of consumption ends up below the socially optimum level (**2 marks**) and there is a deadweight loss of social welfare (**2 marks**)	**Up to 10 marks**
Consumers only consider the short term benefits (**2 marks**) because they possess imperfect information (**2 marks**) they do not fully consider the long-term benefits of eg driving safely (**2 marks**) so consumption occurs at the privately optimum level rather than the socially optimum level (**2 marks**) and there is a misallocation of resources (**2 marks**)	**Up to 10 marks**
Instead of/in addition to the above, other relevant links include: • A market produces where MPB = MPC • The market does not produce where MSB = MSC • Consumers possess imperfect information of private costs and private benefits and/or long-term private costs and benefits	**Up to 10 marks per explanation**

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• Less is consumed than if perfect information existed • The social benefits outweigh the private benefits • The MPC is greater than the MSC • Positive external benefit of production exists • A negative external cost exists	

Note: Do not award marks for simply describing what a diagram shows.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 07: 12 MARKS

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08	'. . . the provision of speed cameras is a source of government failure' (**Extract E**, line 20). Using the data and your economic knowledge, evaluate this view. *(25 marks)*

Level 5	**Good analysis and good evaluation**	**22 to 25 marks (Mid-Point 24 marks)**
Level 4	**Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	**17 to 21 marks (Mid-Point 19 marks)**
Level 3	**Reasonable answer, including some correct analysis but very limited evaluation**	**10 to 16 marks (Mid-Point 13 marks)**
Level 2	**Weak with some understanding**	**4 to 9 marks (Mid-Point 7 marks)**
Level 1	**Very weak**	**0 to 3 marks (Mid-Point 2 marks)**

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of 21 marks may be awarded if there is no explicit reference to the data.

Extracts E and **F** provide a number of prompts and it is expected that candidates will make use of these when developing their answers. Whereas Part 07 of the question prompts a candidate to consider a speed camera as a merit good, Part 08 provides the additional prompt to consider a speed camera to be a demerit good, for example through causing rather than reducing road accidents. According to the line of argument taken, the government may end up providing too few or too many speed cameras. Also the social cost of provision may exceed the social benefit of provision.

Issues and areas for discussion include:

Introduction	• identifying the purpose of a speed camera to reduce motorists' speeds of driving • stating that a speed camera may be said to be either a merit good or a demerit good • defining government failure.
Developing the response to the question: **Application**	• drawing on the prompt provided in Extract E that speed cameras reduce the negative externalities caused by driving too fast • drawing on the prompt provided in Extract E that by creating incentives for drivers to vary their motoring behaviour, speed cameras cause accidents • applying these arguments to the issue of whether a speed camera is a merit good or a demerit good.
Developing the response to the question: **Analysis**	• developing a chain of reasoning to explain why speed cameras are a possible source of government failure • developing a chain of reasoning to explain why speed cameras are not a source of government failure • developing a chain of reasoning to explain why speed cameras may be considered an example of a public good • using relevant diagrams for merit goods, demerit goods, positive and negative externalities • analysis of the evidence in the Extracts.

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Evaluation	• discussing the analytical consequences of treating a speed camera as either a demerit good, or as a merit good • discussing the issue that their main purpose is to raise revenue for the government • discussing possible unintended consequences of using speed cameras, e.g. drivers slowing down and then accelerating may cause accidents that would not otherwise occur; vandals destroying or damaging speed cameras • discussing the overall economic costs and benefits of speed cameras • discussing the evidence in the data.

Examiners should note that credit can be given for basic evaluation if a candidate simply identifies some of the arguments for and against the view that government failure exists in the provision of speed cameras. Basic evaluation (and good analysis) would allow the answer to achieve a low Level 4. Stronger evaluation is likely to focus on speed cameras as a public good and as such government intervention is required as they are unlikely to be provided by the market. Two issues analysed and evaluated in depth can reach the higher levels in the mark scheme; likewise three or more analysed and evaluated in rather less depth.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 5 & 6 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
January 2011

Economics ECON1

Unit 1 Markets and Market Failure

Wednesday 12 January 2011 1.30 pm to 2.45 pm

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Instructions
- In **Section A**, answer **all** questions on your objective test answer sheet.
- In **Section B**, answer **EITHER** Question 26 **OR** Question 27 in your AQA answer book.
- For **Section A**, do all rough work in this question paper, **not** on your objective test answer sheet.

Section A (ECON1/1)
- Use a black ball-point pen. Do **not** use pencil.

Section B (ECON1/2)
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A** and 50 marks for **Section B**.
- In **Section A**, each question carries 1 mark. No deductions will be made for wrong answers.
- In **Section B**, the marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 The fundamental economic problem facing all societies is

A what, how and for whom goods and services should be produced.

B the existence of unemployed resources.

C a significant divergence between social and private costs of production and consumption.

D inequalities in the distribution of income and wealth.

2 Which one of the following is an example of an economy of scale?

A A firm using its existing capacity more efficiently

B A company using its factory to produce more than one product

C A car firm increasing its range of models

D A firm employing specialist managers as its size increases

3 Which one of the following statements about a merit good is true?

A It may be provided by the free market but not in sufficient quantities.

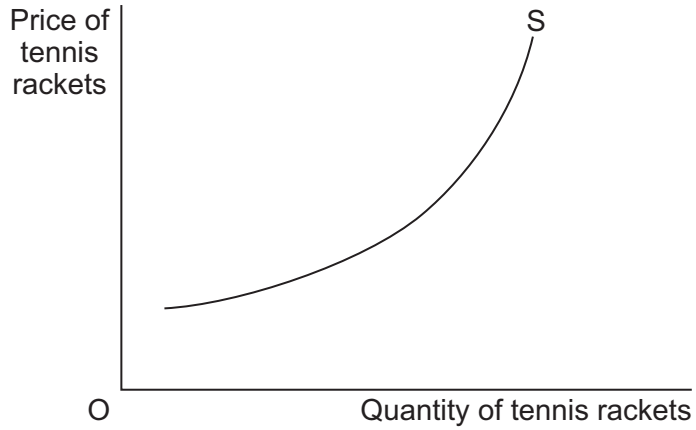
B Once the good has been supplied to one consumer, there is no extra cost in supplying it to others.

C It is always provided free to consumers.

D It tends to be provided by the government because it is non-excludable.

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4 The diagram below illustrates the industry supply curve for tennis rackets.



All other things being equal, the upward slope of the supply curve is due to

A the existence of a monopoly in the industry.

B higher prices providing a profit incentive for firms to expand production.

C the elasticity of supply exceeding the elasticity of demand for tennis rackets.

D higher prices providing an incentive for firms to increase their productive efficiency.

5 The demand for capital goods such as plant and machinery is said to be an example of derived demand because it depends on

A the productivity of capital goods.

B the quantity of consumer goods purchased.

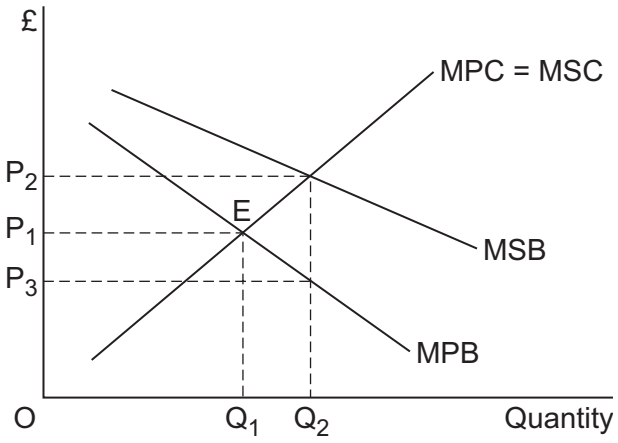
C the price of capital goods.

D the amount of labour employed by a firm.

Turn over for the next question

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6 The diagram below shows the marginal private and social benefit (MPB and MSB) curves and the marginal private and social cost (MPC and MSC) curves for a merit good.



The initial market equilibrium is at point E. To avoid a misallocation of resources in the market, the government could

A introduce a subsidy of P_3P_2 per unit produced.

B set a maximum price of P_1 per unit sold.

C raise price to P_2 per unit sold.

D set a minimum price of P_1 per unit sold.

7 A free good has which one of the following characteristics?

A It has no opportunity cost in supply.

B It is generally supplied by the government because its consumption is considered to be socially desirable.

C It has no externalities associated with its consumption or production.

D It is in perfectly inelastic supply.

8 Which one of the following statements involves a value judgement?

A The supply of beef is likely to be inelastic in the short run.

B Economies of scale can lead to lower prices.

C Inferior goods have a negative income elasticity of demand.

D The government was wrong to increase spending on roads.

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9 In August 2000, the World Health Organisation said that a 10 % increase in cigarette prices worldwide would reduce consumption of cigarettes by 4 % in high-income countries and by 8 % in low-income countries.

The above statement suggests that

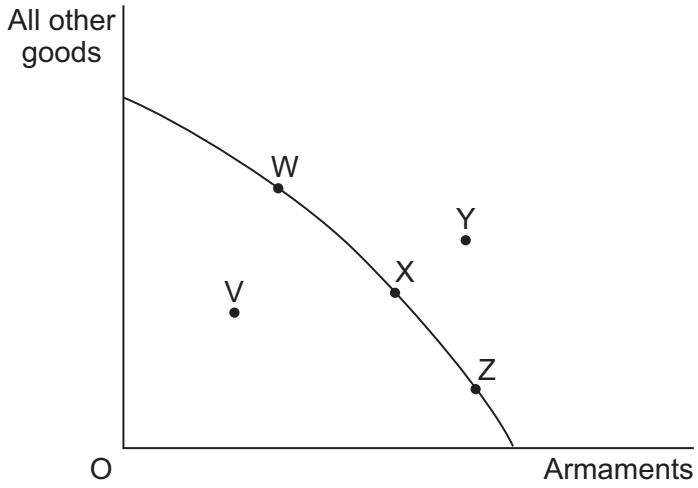
A smokers in high-income countries are twice as addicted to cigarettes as those in low-income countries.

B demand for cigarettes is price elastic in both low-income and high-income countries.

C income elasticity of demand for cigarettes is higher in low-income countries than in high-income countries.

D price elasticity of demand for cigarettes is negative in both high-income and low-income countries.

10 The diagram below shows the production possibility frontier for an economy.



Which one of the following movements involves a trade-off between providing more armaments and providing more of all other goods?

A V to W

B V to X

C X to Y

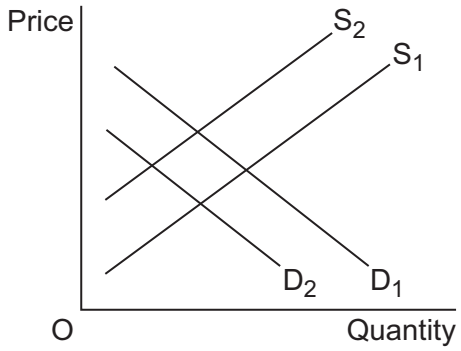
D X to Z

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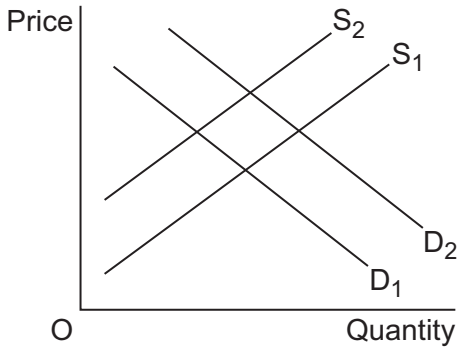
11 In the diagrams below, S_1 and D_1 show the original supply and demand curves for Good X, while S_2 and D_2 show shifts of these curves.

Which diagram, **A**, **B**, **C** or **D**, illustrates the effects of an increase in the price of a good that is complementary to Good X and an increase in labour productivity in the production of Good X?

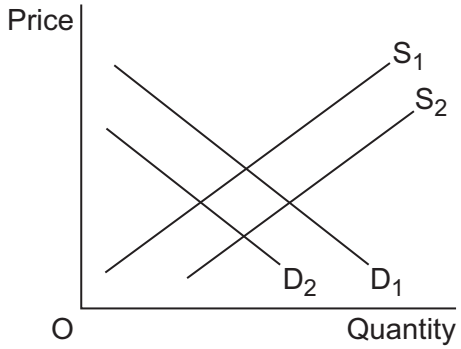
A



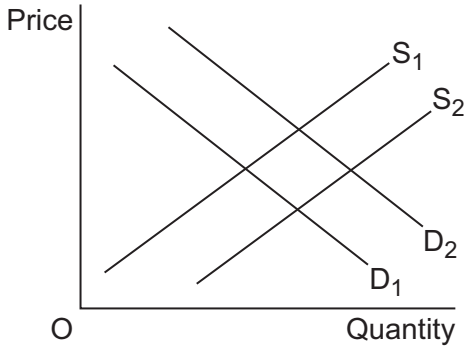
B



C



D



12 The table below shows the value of the price elasticity of demand facing each type of provider of passenger transport.

Train companies	Bus companies	Coach companies	Airlines
−1.4	−0.8	−0.7	−0.5

If the fares charged for the use of each of these forms of transport rose by the same percentage, which type of provider would see the greatest proportional increase in total sales revenue?

A Train companies

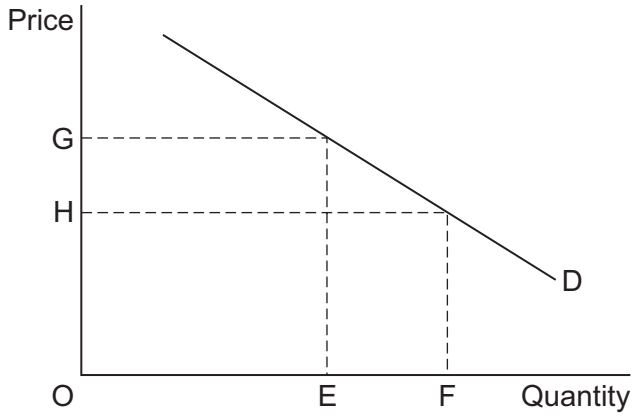
B Bus companies

C Coach companies

D Airlines

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13 The diagram below shows the demand curve facing a monopolist.



The monopolist prices its product at OG. If the monopolist is experiencing diseconomies of scale, breaking up the monopoly and introducing competition into the market is most likely to

A change output from OF to OE.

B increase productive efficiency by EF.

C result in a fall in price from OG.

D lead to an increase in average costs of HG.

14 At current levels of output, the marginal social cost of making a good is greater than its marginal private cost. Also, the marginal social benefit of the good is greater than its marginal private benefit. As a result, there will probably be

A a misallocation of resources.

B positive externalities in production.

C negative externalities in consumption.

D economies of scale.

15 A tradeable pollution permit

A is needed to equalise positive and negative externalities in production.

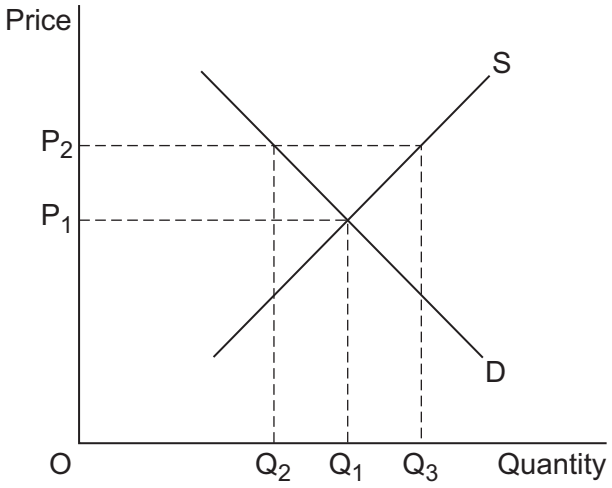
B will be bought by a firm if its price is less than the social cost of the pollution it creates.

C is designed to reduce the negative externalities arising from pollution.

D can be used only by the firm to which it is issued.

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16 The diagram below shows the demand and supply curves for wheat in the European Union (EU).



The free market price of wheat is OP_1. It has been agreed as part of the Common Agricultural Policy (CAP) to maintain a price of OP_2 within the EU and to do so through intervention buying. In achieving a price of OP_2, the amount spent on intervention buying by the EU would be

A $OP_1 \times OQ_1$

B $OP_2 \times OQ_2$

C $OP_2 \times Q_2Q_3$

D $OP_2 \times OQ_3$

17 In July 2007, smoking in enclosed public places in England became illegal.

Such a policy would inevitably lead to government failure if

A the government's tax revenue from cigarette sales fell.

B the economic benefits arising from the ban were outweighed by its costs.

C some people continued to smoke cigarettes in their own homes.

D jobs were lost in the tobacco industry.

18 Specialisation and the division of labour require

A a means of exchanging goods and services.

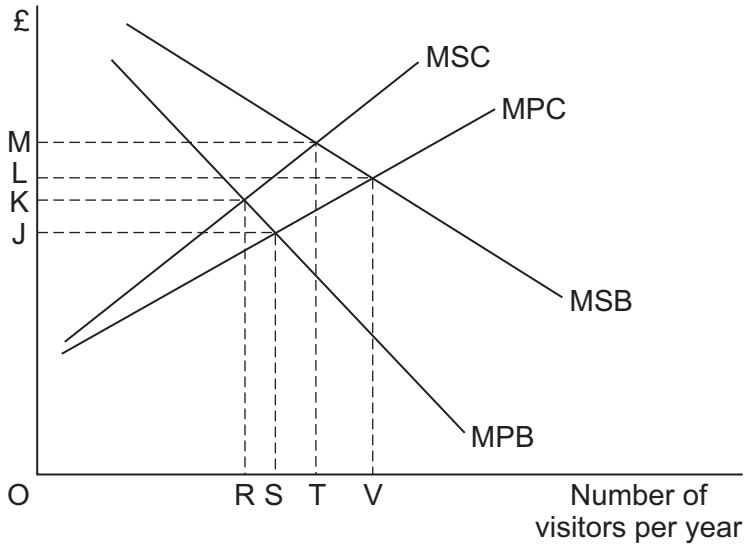
B that the economy is operating on its production possibility frontier.

C an absence of negative externalities.

D competitive markets.

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19 The diagram below shows the marginal private and social benefits (MPB and MSB) and the marginal private and social costs (MPC and MSC) associated with opening up a remote area of outstanding natural beauty to the general public.



What is the optimum number of visitors per year that should use this attraction?

A OR

B OS

C OT

D OV

20 One reason why the free market fails to achieve an optimal allocation of scarce resources is because

A public goods are provided free of charge to users.

B positive externalities lead to overproduction of a good.

C there is underproduction of goods with positive externalities.

D individuals' incomes and wealth are not identical.

21 Labour productivity in an economy is likely to improve if there is

A a reduction in the number of firms in an industry.

B an improvement in allocative efficiency.

C an increase in the quantity of capital per worker.

D a reduction in negative externalities in production.

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22 The table below shows the shares of disposable income in an economy for five income groupings, as a percentage of the total, for the period 2004 to 2009.

Year	Lowest 20%	Next 20%	Middle 20%	Next 20%	Top 20%	Total (%)
2004	10	14	18	23	35	100
2005	9	13	16	23	39	100
2006	6	10	15	23	46	100
2007	7	11	16	23	43	100
2008	6	10	16	23	45	100
2009	6	10	16	23	45	100

From the data it can be concluded that

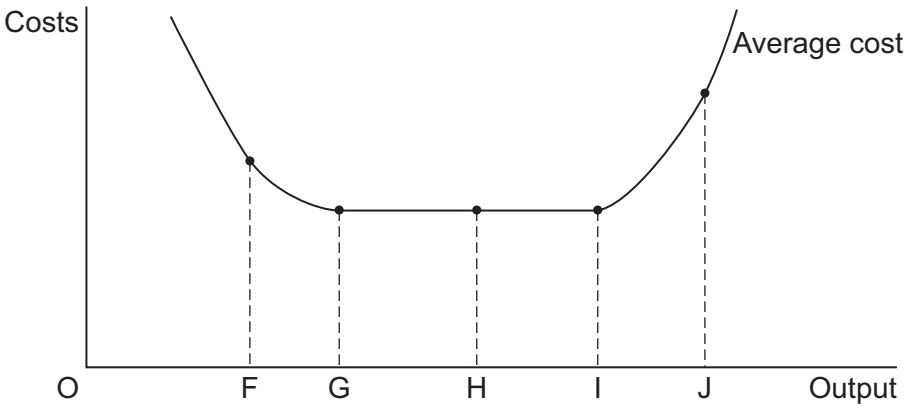
A over the period shown all income groups, except the Top 40%, experienced a fall in their disposable income.

B between 2007 and 2009 there was a small increase in inequalities of disposable income.

C between 2004 and 2009 the rich became poorer and the poor became richer.

D total disposable income remained constant over the entire period shown.

23 The diagram below shows the average cost curve for a business.



The business moves from being productively inefficient to being productively efficient when output changes from

A G to H.

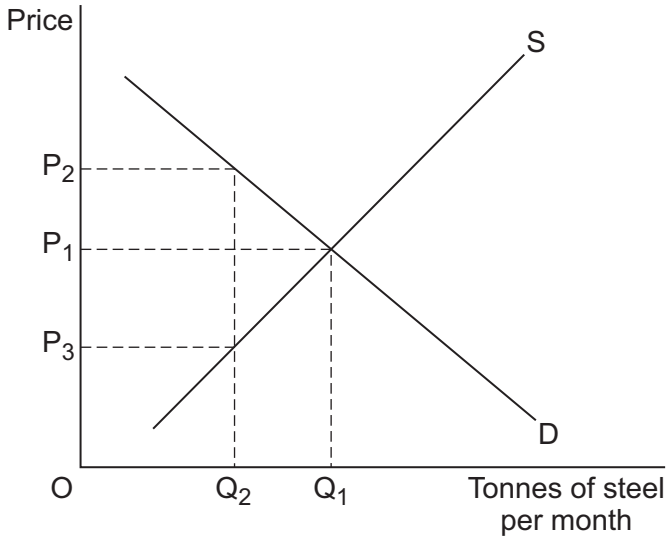
B J to G.

C I to H.

D F to J.

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24 The diagram below shows the market for steel in the UK.



The government recognises that steel production creates negative externalities in the form of carbon dioxide emissions that are associated with global warming. To comply with international treaties, the government agrees to limit the production of steel, reducing the industry output from OQ_1 to OQ_2 per month. To achieve this end, the government could

A offer a subsidy to the steel industry equal to P_2P_1 per tonne of steel produced.

B set and enforce a maximum price of OP_2 per tonne of steel.

C set and enforce a minimum price of OP_3 per tonne of steel.

D introduce an indirect tax of P_2P_3 per tonne of steel produced.

25 A pure public good (or service) is always

A provided by the government for all consumers.

B provided free of charge for all consumers.

C available for consumption by others when consumed by an additional person.

D heavily subsidised by the government.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Turn over for Section B

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Section B: Data Response

Answer **EITHER** Question 26 **OR** Question 27.
You are advised to spend at least 50 minutes on **Section B**.

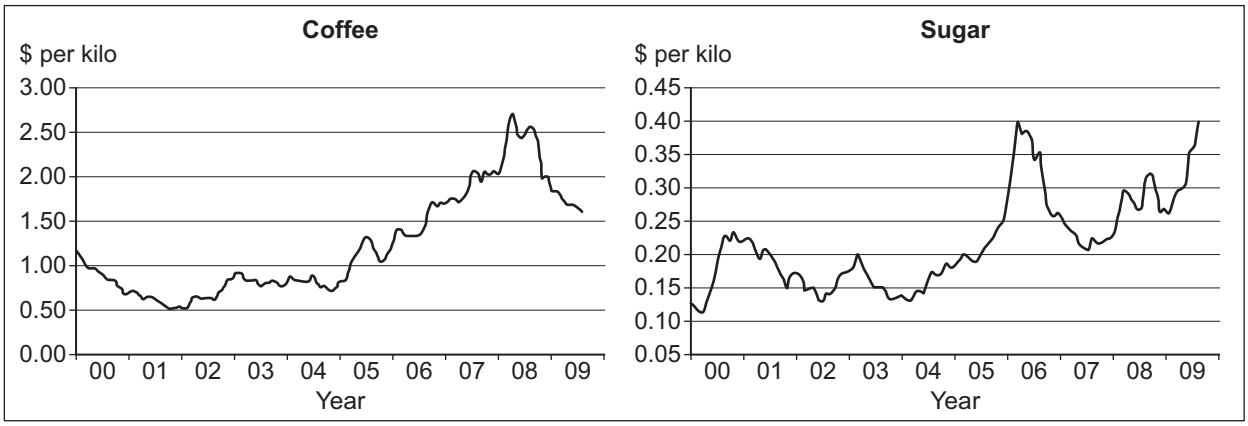
EITHER **Total for this question: 50 marks**

Question 26

UNSTABLE PRIMARY PRODUCT PRICES

Study **Extracts A**, **B and C**, and then answer **all** parts of Question 26 which follow.

Extract A: World prices of coffee and sugar, $US per kilo, January 2000 to July 2009



Source: official statistics

Extract B: The coffee and sugar markets

Early in 2008, the prices of both coffee and sugar increased sharply because of poor crop harvests and strong demand.

In Colombia in South America, supply constraints caused the equilibrium price of coffee to rise to a 12-year high. The Colombian crop was damaged by heavy rainfall, which also washed away some of the roads which were used to transport the beans to coffee markets.

In 2009, sugar prices in New York and London rose by 52 per cent to their highest in almost three years. Speculators anticipated that India, the world's largest consumer of sugar, would require substantial sugar imports to compensate for the failure of the domestic sugar crop.

Significant changes in Indian sugar output are a critical factor in determining the world price of sugar. At the beginning of 2009, traders forecast that India's sugar output would fall by about 40 per cent to 15 million tonnes during the growing season, well below the country's consumption of about 23 million tonnes a year.

Source: news reports, 2009

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Extract C: The rise and fall of buffer stock schemes for primary products

The governments of poor countries tend not to worry when the world prices of the primary products they sell to other countries rise dramatically. However, when prices fall, governments are more likely to be concerned. Until recently, governments sometimes tried to deal with falling prices by purchasing buffer stocks.

However, buffer stock schemes have generally failed to stabilise world commodity prices or producers' incomes. Very often the schemes fail because stocks of commodities such as foodstuffs and metals are more frequently bought than sold. As a result, the cost of purchasing an ever-increasing buffer stock becomes unsustainable. Few buffer stock schemes now survive.

The schemes that failed typically involved commodities whose prices were disturbed by long-lasting shocks. Supply shocks included a sequence of bumper harvests, while demand shocks often resulted from a shift of demand away from a commodity such as tin to plastic and glass substitutes.

Source: news reports, 2009

0 1 Define the term 'equilibrium price' (**Extract B**, line 3). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison between changes in the world price of coffee and changes in the world price of sugar over the period shown. *(8 marks)*

0 3 With the help of an appropriate diagram and the information in **Extract B**, explain why the world price of sugar changed in 2009. *(12 marks)*

0 4 Evaluate the case **for** and **against** using a buffer stock scheme to stabilise the price of a commodity such as sugar or tin. *(25 marks)*

Turn over for the next question

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Do **not** answer Question 27 if you have answered Question 26.

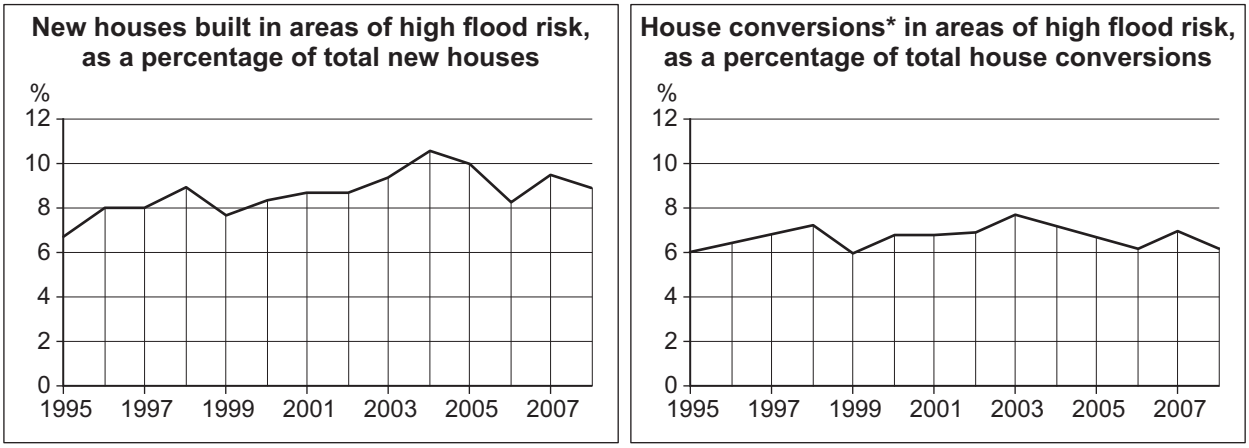
OR **Total for this question: 50 marks**

Question 27

FLOODING AND FLOOD DEFENCES

Study **Extracts D**, **E and F**, and then answer **all** parts of Question 27 which follow.

Extract D: New houses and house conversions in areas of high flood risk, as a % of the total for each category of housing, UK, 1995 to 2008



* Note: a house conversion is a building previously used for another purpose, such as a factory or a warehouse, which has been converted into housing use.

Source: official statistics, 2009

Extract E: Flooding

Flooding sometimes results from market failure. One example is the negative externality caused by farmers and forestry companies. They cut down trees in hills surrounding flood plains (the low-lying land next to rivers). This increases the risk of floods, which are suffered as negative externalities by some of the households living on flood plains. Trees help to intercept and absorb rainwater so, by cutting them down, the risk of flooding increases.

The increased risk of flooding results partly from global warming, but other factors are also involved. One has been government. Successive governments have allowed construction companies to build houses on flood plains. If the houses had not been built, fewer people would have suffered the negative externality.

Source: news reports, 2009

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Extract F: Flood defences

A flood defence provides a collective barrier for everyone it protects against the damage that flooding can cause. Some economists say that flood defence is an example of a public good.

However, spending on new flood defences and on maintaining the large number of existing, though inadequate, defences has to be paid for by somebody. So, who should pay?

Should the households who suffer from flooding be the only ones who pay? Should people who never suffer from flooding also have to pay? Should it be the businesses that insure houses that are at risk from flooding who pay? Recent research by the Environment Agency showed that two in five households at risk did not know whether their insurance would cover them in a flood.

Should it be the government, and thus ultimately tax payers, who pay? Should it be farmers and forestry companies? Or should it be house-building companies? The government says that developers building homes should pay part of the money needed for flood defences.

Source: news reports, 2009

0 5 Define the term 'market failure' (**Extract E**, line 1) *(5 marks)*

0 6 Using **Extract D**, identify **two** significant points of comparison between the changes in the two types of house building over the period shown. *(8 marks)*

0 7 With the help of an appropriate diagram and the information in **Extract E**, explain why the negative externalities caused by the cutting down of trees may lead to market failure. *(12 marks)*

0 8 **Extract F** (lines 4–5) suggests that public goods such as flood defences have to be paid for by somebody.

Evaluate the view that the provision and maintenance of flood defences should be paid for solely by the government. *(25 marks)*

END OF QUESTIONS

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Version 1.1

General Certificate of Education
January 2011

ECONOMICS ECON1

Unit 1 : Markets and Market Failure

Final

Mark Scheme

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Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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January 2011 **ECON1/1**

Advance Subsidiary Economics Unit 1

Section A: Objective Test (ECON1/1)

The following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

1.	**A**	**9.**	**D**	**17.**	**B**
2.	**D**	**10.**	**D**	**18.**	**A**
3.	**A**	**11.**	**C**	**19.**	**C**
4.	**B**	**12.**	**D**	**20.**	**C**
5.	**B**	**13.**	**C**	**21.**	**C**
6.	**A**	**14.**	**A**	**22.**	**B**
7.	**A**	**15.**	**C**	**23.**	**B**
8.	**D**	**16.**	**C**	**24.**	**D**
				25.	**C**

Advanced Subsidiary Economics

January 2011 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

(ii) **A levels approach.** This approach is used for marking questions **04** and **08** of the data response questions. The Levels Of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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LEVELS OF RESPONSE MARK SCHEME: QUESTIONS 04 AND 08 ONLY

AS **LEVELS OF RESPONSE**	**AO1** **KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology**	**AO2** **APPLICATION of theories, concepts and terminology**	**AO3** **ANALYSIS of economic problems and issues**	**AO4** **EVALUATION of economic arguments and evidence, making informed judgements**
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

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THE KEY TO BE USED WHEN USING THE LEVELS MARK SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I Where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

A Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Candidates will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

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Question 26

01	Define the term 'equilibrium price' (**Extract B**, line 3).	*(5 marks)*

For an accurate definition, eg: • the price at which quantity demanded and quantity supplied are equal • the price of a commodity at which the quantity that buyers wish to buy equals the quantity that sellers wish to sell • the price at which a market clears (or is in a state of balance or rest) • the price at which there is no tendency for the price to change • the price at which there is no excess demand or supply.	**5 marks**
Full marks can also be awarded for an **accurately labelled** supply and demand diagram, provided the candidate includes a commentary that shows that she/he understands that the intersection of the S and D curves shows the equilibrium price.	

If the definition is incomplete, marks may be broken down, for example as follows:

Defining 'price' as the rate of exchange at which one good is exchanged for another good	**3 marks**
A relevant diagram, without an accompanying commentary, illustrating an equilibrium price (micro, but not macro)	**2 marks**
Defining equilibrium as a state of rest or as a state of balance, without relating this to equilibrium price	**2 marks**
Giving an example of a price, eg the price of bread	**1 mark max for examples**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

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02	Using **Extract A**, identify **two** significant points of comparison between changes in the world price of coffee and changes in the world price of sugar over the period shown. *(8 marks)*

Award up to 4 marks each for <u>each</u> point made:

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the point of comparison. However, only one piece of data is given when two are needed to make a valid comparison **and/or** no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately.	**3 marks**
Identifies a significant of comparison. No use of correct data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made Makes use of the data to support the feature identified Unit of measurement given accurately	**1 mark**

If a candidate identifies more than two points of comparison, reward the best two.

The valid points include:

- over the whole period, the prices of both coffee and sugar rose, from about $1.2 a kilo to $1.6 a kilo in the case of coffee compared to $0.13 a kilo to $0.41 in the case of sugar
- over the whole data period, the price of coffee rose 33% compared to the price of sugar which rose by 215%
- over the whole period, a kilo of coffee was more expensive than a kilo of sugar; for example $1.2 compared to $0.13 at the beginning of 2000
- the peak values occurred at different dates: the end of 2007/beginning of 2008 at $2.70 for coffee, compared to early 2006 and July 2009 at $0.40 for sugar
- the lowest values occurred at different dates: late 2001/beginning of 2002 at $0.50 for coffee, compared to early 2000 at $0.12 for sugar
- the price of coffee rose by $2.20 (or 440%) between its lowest price and its peak price, compared to which the price of sugar rose by $0.28 (or 233%) between its lowest price and its peak price
- the price of coffee fluctuated between a low of $0.5 at the end of 2001/beginning of 2002 and a high of about $2.70 at the end of 2007/beginning of 2008, compared to the price of sugar fluctuating between a low of about $0.12 early in 2000 and a high of $0.40 in early 2006 and July 2009.

The figures quoted above are approximations and the candidate should be allowed a small margin of error without penalty. However, very inaccurate statistics should not be rewarded.

MAXIMUM FOR PART 02: 8 MARKS

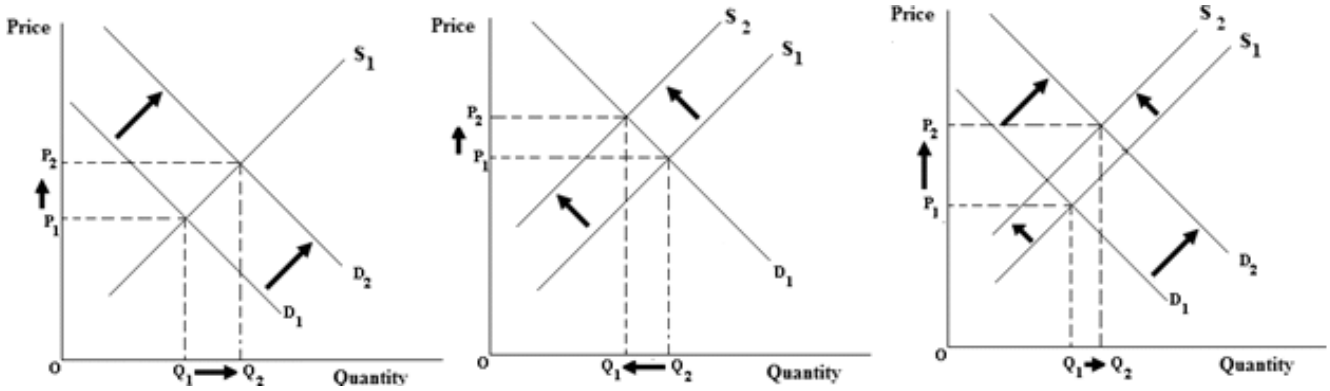
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03	With the help of an appropriate diagram and the information in **Extract B**, explain why the world price of sugar changed in 2009. *(12 marks)*

The anticipated response for the diagram:

Extract B mentions two factors that affect the positions of the demand and supply curves for sugar. These are:

- an increase in forecast (speculative) demand for sugar, which shifts the demand curve to the right;
- a bad harvest causing the output of a main producer, India, to fall significantly. This would shift the world supply curve to the left.



Breakdown of the marks for the left-hand diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the demand curve to the right:	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

Breakdown of the marks for the central diagram:

For labelling both axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the supply curve to the left:	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

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Breakdown of the marks for the combined (right-hand) diagram:

For labelling all the axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark only**
An accurately-drawn shift of the demand curve:	**2 marks**
An accurately-drawn shift of the supply curve:	**2 marks**
Co-ordinates drawn in at the new combined equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium).	**1 mark per feature up to a maximum of 2 marks**

Up to a MAXIMUM of 4 marks for diagram(s)

Note:

(i) To earn the first mark in the grids, all the three listed tasks must have been attempted and been completed

(ii) For the task of labelling axes, price and quantity, P and Q, a monetary symbol such as the $ sign on the vertical axis and physical units of measurement such as kilos of sugar are all valid, though the labels 'output' and 'price level' are not valid

The anticipated written response:

Define demand and/or supply. **Do not credit a definition of equilibrium price**:	**1 mark per definition Maximum of 2 marks for definitions**
For each of the following explanations, award 2 marks for each logical link in the chain of reasoning.	
Sugar traders forecast a shortage **(2 marks)** causing the demand curve for sugar to shift to the right **(2 marks)** and the price of sugar to rise **(2 marks)**	**Up to 6 marks**
A bad harvest reduces the quantity of sugar **(2 marks)** causing the supply curve of sugar to shift to the left **(2 marks)** and the price of sugar to rise **(2 marks)**	**Up to 6 marks**
Explaining excess demand resulting from an increase in demand (or from a decrease in supply) **(2 marks)** followed by an extension of supply (or a contraction of demand) **(2 marks)**, leading to the price of sugar rising **(2 marks)**	**Up to 6 marks**

Note: Do not award marks for simply describing what a diagram shows without identifying an initial cause or causes.

Candidates who draw a diagram which is inconsistent with their written explanation can only be awarded 1 mark for axes, supply and demand curves and initial equilibrium.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 03: 12 MARKS

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04	Evaluate the case **for** and **against** using a buffer stock scheme to stabilise the price of a commodity such as sugar or tin. *(25 marks)*

Level 5	**Good analysis and good evaluation**	**22-25 marks (mid-point 24)**
Level 4	**Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	**17-21 marks (mid-point 19)**
Level 3	**Reasonable answer, including some correct analysis but very limited evaluation**	**10-16 marks (mid-point 13)**
Level 2	**Weak with some understanding**	**4-9 marks (mid-point 7)**
Level 1	**Very weak**	**0-3 marks (mid-point 2)**

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

Issues and areas for discussion include:

Introduction	• Definitions: buffer stock; buffer stock scheme • Explanation of what is meant by price stability • Stating that buffer stock buying and selling is a mechanism for stabilising prices
Developing the response to the question: **APPLICATION**	• Recognition from Extract C that, when prices fall, governments are more likely to be concerned (line 3) • Recognition that market forces usually determine the prices of commodities such as sugar and tin • Recognition that, without intervention, the prices of coffee and sugar have been unstable (Extract A)
Developing the response to the question: **ANALYSIS (chains of reasoning)**	• Analysis of the causes of price instability in an unregulated free market • Analysis of how buffer stock intervention can, in principle, stabilise prices • Analysis of the problems that arise when implementing buffer stock intervention • Analysis of reasons why buffer schemes may collapse • Use of diagrams as part of the analysis
EVALUATION	• Comparison of the circumstances in which a buffer stock scheme may work well with the circumstances in which a buffer stock scheme may work badly • Consideration of evidence to support either or both of the above • Assessment of the benefits versus the costs of stable prices • Consideration of the strength of the case for and against buffer stock intervention • Consideration of alternative forms of intervention, e.g. minimum price legislation • Assessment of whether one country acting on its own can succeed in stabilising prices

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	• Consideration of the differing effects of price stability on farmers' incomes and consumer welfare • Consideration of the problems that arise from financing a buffer stock scheme

USE THE DETAILED LEVELS OF RESPONSE MARK SCHEME ON PAGES 4 & 5 WHICH OFFERS FURTHER GUIDANCE

MAXIMUM FOR PART 04: 25 MARKS

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Question 27

05	Define the term 'market failure' (**Extract E**, line 1). *(5 marks)*

For an accurate definition, eg: • occurs when the production and/or use of goods and services by the market is not efficient • occurs when the production and/or use of goods and services by the market is not equitable (socially desirable) • when a market results in a misallocation of resources	**5 marks**
Full marks can also be awarded for an **accurately labelled** marginal cost and benefit diagram, provided the candidate includes a commentary that shows that she/he understands why the diagram shows market failure occurring.	

If the definition is incomplete, marks may be broken down, for example as follows:

Providing a definition of a particular form or cause of market failure, eg a public good	**3 marks**
Defining a market failure in terms of a market achieving an unsatisfactory outcome	**2 marks**
A relevant diagram, without an accompanying commentary, illustrating a market failure	**2 marks**
Stating a 'stand-alone' example, eg merit good, but **not** flooding	**1 mark max for examples**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

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06	Using **Extract D**, identify **two** significant points of comparison between the changes in the two types of house building over the period shown. *(8 marks)*

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the point of comparison. However, only one piece of data is given when two are needed to make a valid comparison **and/or** no unit of measurement is given **and/or** the unit of measurement is used/applied inaccurately.	**3 marks**
Identifies a significant point of comparison. No use of correct data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data but no comparison is made Makes use of the data to support the feature identified Unit of measurement given accurately	**1 mark**

If a candidate identifies more than two points of comparison, reward the best two.

The valid points include:

- the % of newly-built houses in areas of flood risk as a % of the total of newly-built houses increased over the whole period from around 7% in 1995 to around 9% in 2008, whereas the % of house conversions in areas of flood risk as a % of total house conversions was roughly the same, from around 6% in 1995 to only just over 6% in 2008.
- throughout the whole period, newly-built houses in areas of flood risk formed a higher % of total newly-built houses than did house conversions in areas of flood risk as a % of total house conversions. For example, early in 1996, the former accounted for 8%, whereas the latter accounted for about 6.5%.
- newly-built houses in areas of flood risk peaked in 2004 at around 10.2% of total newly-built houses whereas house conversions in areas of flood risk peaked a year earlier in 2003 at just under 8% of total house conversions.
- the least difference between the two percentages (about 1%) was at the beginning of 1995. At this date, newly-built houses in areas of flood risk as a % of total newly-built house conversions was around 7%, while house conversions in areas of flood risk as a % of total house conversions was around 6%.
- the greatest difference between the two percentages (about 3%) was either at the beginning of 2004 or in 2007. At the beginning of 2004, newly-built houses in areas of flood risk formed about 10.2% of total newly-built houses, while house conversions in areas of flood risk formed about 7.2 % of total house conversions. Early in 2007, newly-built houses in areas of flood risk formed about 9.4% of total newly-built houses, while house conversions in areas of flood risk formed about 6.4% of total house conversions
- there were fluctuations in both data series throughout the data period, but the fluctuations were not very great or volatile, ranging from about 7% early in 1995 to

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10.2% early in 2004 for newly-built houses in areas of flood risk as a % of the total of newly-built houses, compared to a range extending from 6% early in 1995 (or in late 1998/early 1999) to about 7.8% in late 2002 for house conversion in areas of flood risk as a % of total house conversions.

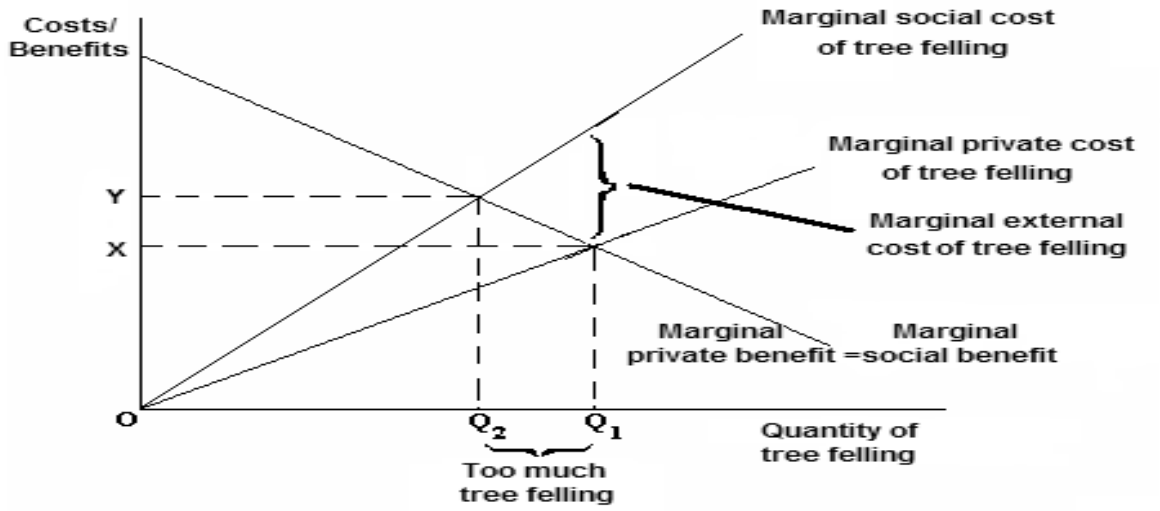
The figures quoted above are approximations and the candidate should be allowed a small margin of error (+/- 0.2%) without penalty. However, very inaccurate statistics should not be rewarded.

MAXIMUM FOR PART 06: 8 MARKS

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07	With the help of an appropriate diagram and the information in **Extract E**, explain why the negative externalities caused by the cutting down of trees may lead to market failure. *(12 marks)*

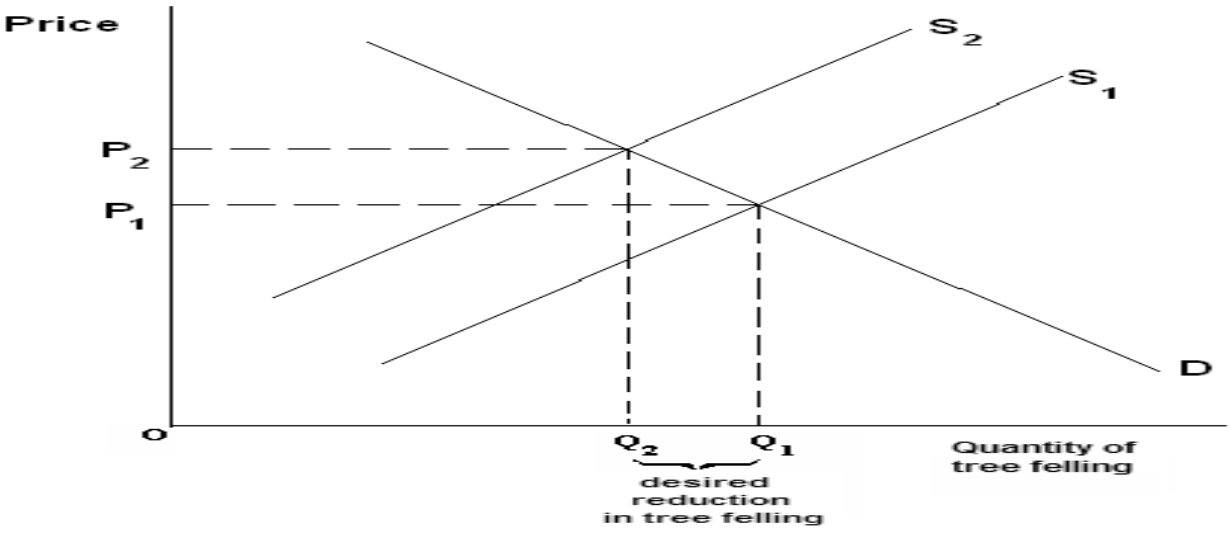
The anticipated response for the diagram:



Breakdown of the marks for the diagram:

For labelling the vertical axis 'Costs/Benefits' (also accept 'costs', 'benefits', '£'s) and the horizontal axis 'quantity of tree felling' (also accept 'quantity', 'output'), the MPC and MSC curves and the marginal benefit curve (it is not necessary to label explicitly MPB and MSB):	**1 mark only**
For drawing the MSC line to the left of the MPC line:	**1 mark**
Vertical co-ordinate drawn and labelled where MPB = MPC:	**1 mark**
Vertical co-ordinate drawn and labelled where MSB = MSC:	**1 mark**
Marginal external cost correctly labelled:	**1 mark**
Any other relevant feature of the diagram, eg deadweight/welfare loss; over-felling of trees indicated on the diagram:	**1 mark per feature up to a maximum of 2 marks**

For a supply and demand diagram:



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Note: It is also acceptable for candidates to use a demand and supply diagram relating to trees rather than the felling of trees.

Breakdown of the marks for this diagram:

For labelling all the axes, original supply and demand curves, and co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1:	**1 mark only**
Supply curve correctly shifted to the left (or upward) to S_2:	**2 marks**
Coordinates at the new equilibrium drawn and correctly labelled:	**1 mark**
Over-felling of trees correctly shown:	**1 mark**
Any other relevant feature of the diagram, eg excess demand at original price:	**1 mark per feature up to a maximum of 2 marks**

Up to a MAXIMUM of 4 marks for diagram(s)

Note:

(i) **To earn the first mark in the grids, all the three listed tasks must have been attempted and been completed**

(ii) **For the task of labelling axes for a supply and demand diagram, Note (ii) for the answer to Part 03 of Question 26 is relevant for this answer**

The anticipated written response:

Define a relevant concept, eg externality, negative externality, MEC, MSC. **Do not credit a definition of market failure.**	**1 mark per definition Maximum of 2 marks for definitions**
Identify a relevant negative externality, eg the damage to property or life caused by flooding; the destruction of a beautiful view; damage to communications; carbon sink loss:	**1 mark only**
For each of the following explanations, award up to 2 marks for each logical link in the chain of reasoning, eg:	
The person or organisation cutting down trees on high ground does not suffer the cost of flooding suffered by those who live on low ground **(2 marks)**; the negative externality is delivered and received outside the market **(2 marks)**; those who suffer from the flooding cannot use the market to charge those who cut down the trees for the costs they incur **(2 marks)**; this results in a misallocation of resources or an inefficient resource allocation **(2 marks)**:	**Up to 8 marks**
Explaining any other relevant point, eg those who cause flooding have no incentive to take action to reduce the costs they imposed on others:	**Up to 4 marks**

Note: Do not award marks for simply describing what a diagram shows.

Candidates who draw a diagram which is inconsistent with their written explanation can only be awarded 1 mark for axes, supply and demand curves and initial equilibrium.

Up to a MAXIMUM of 10 marks for a written explanation

MAXIMUM FOR PART 07: 12 MARKS

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08	**Extract F** (lines 4-5) suggests that public goods such as flood defences have to be paid for by somebody. Evaluate the view that the provision and maintenance of flood defences should be paid for solely by the government. *(25 marks)*

Level 5	**Good analysis <u>and</u> good evaluation**	**22-25 marks (mid-point 24)**
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17-21 marks (mid-point 19)**
Level 3	**Reasonable answer, including some correct analysis but very limited evaluation**	**10-16 marks (mid-point 13)**
Level 2	**Weak with some understanding**	**4-9 marks (mid-point 7)**
Level 1	**Very weak**	**0-3 marks (mid-point 2)**

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

Issues and areas for discussion include:

Introduction	• Definitions: public goods, defined in terms of non-excludability and non-rivalry • Statement of the different economic agents, households suffering flooding etc., who might pay for flood defences • Discussion in the context of flood defences of differences between paying for initial provision and subsequent maintenance
Developing the response to the question: **APPLICATION**	• Explanation of how households who suffer from flooding might pay (Extract F, line 7) • Explanation of how households who do not suffer from flooding might pay (Extract F, line 8) • Explanation of how insurance companies might pay (Extract F, line 9) • Explanation of how the government (and taxpayers) might pay (Extract F, line 12) • Explanation of how construction companies might pay (Extract F, line 13)
Developing the response to the question: **ANALYSIS** **(chains of reasoning)**	• Analysis of the implications of non-excludability in the case of flood defences • Analysis of the implications of non-rivalry in the case of flood defences • Analysis of how taxes finance government provision and maintenance • Analysis of some of the alternative ways (listed above) of

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	paying or financing mentioned in Extract F
EVALUATION	• Assessment of whether or not the different ways of paying for/financing flood defences are all appropriate • Discussion of the opportunity costs of the different methods of finance • Evaluation of market failure versus government failure consequences • Evaluation of the case for and against government provision and payment/finance • Assessment of the cases for and against the other forms of paying for/financing initial provision • Assessment of the cases for and against the other forms of paying for/financing ongoing maintenance • Discussion of the effects of different methods of payment/finance on resource allocation and incentives • Understanding of the implications of the word 'solely'

USE THE DETAILED LEVELS OF RESPONSE MARK SCHEME ON PAGES 4 & 5 WHICH OFFERS FURTHER GUIDANCE

MAXIMUM FOR PART 08: 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
January 2010

Economics ECON1

Unit 1 Markets and Market Failure

Wednesday 13 January 2010 1.30 pm to 2.45 pm

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Instructions
- In **Section A**, answer **all** questions on your objective test answer sheet.
- In **Section B**, answer **EITHER** Question 26 **OR** Question 27 in your answer book.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section A (ECON1/1)
- Use a black ball-point pen. Do **not** use pencil.

Section B (ECON1/2)
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A** and 50 marks for **Section B**.
- In **Section A**, each question carries 1 mark. No deductions will be made for wrong answers.
- In **Section B**, the marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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SECTION A: OBJECTIVE TEST

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 Which one of the following is a positive economic statement?

A Resources are best allocated via the market mechanism.

B Government spending on health care should be increased.

C An increase in interest rates will reduce house prices.

D Pollution is the most serious of all economic problems.

2 Two products are in joint supply when

A a fall in the output of one product is accompanied by a decrease in the output of the other product.

B an increase in the demand for one product reduces the supply of the other product.

C a rise in the quantity supplied of one product reduces the supply of the other product.

D a fall in the price of one product reduces the cost of supplying the other product.

3 Government failure always occurs when

A government intervention leads to a net welfare loss compared to the free market solution.

B social costs in a market are greater than social benefits.

C the government fails to intervene in the market.

D externalities exist in a market.

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4 The marketing department of a company manufacturing and selling washing machines has found that its product has a price elasticity of demand equal to –0.75. This suggests that if the company raises the price of washing machines

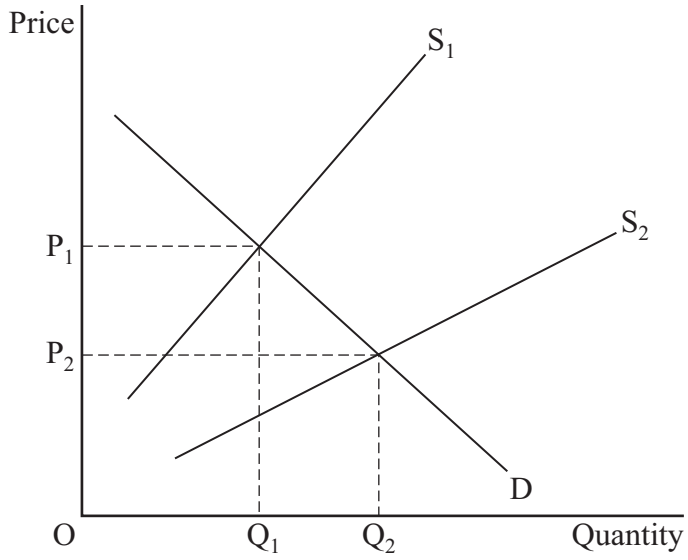
A the quantity demanded will fall by 75%.

B the amount consumers spend on the product will increase.

C the quantity demanded will increase by 75%.

D the amount consumers spend on the product will fall.

5 The diagram below shows the market for a certain good.



The rightward shift of the supply curve from S_1 to S_2 could be caused by

A an increase in the demand for the good.

B the creation of a monopoly by the firms in the industry supplying the good.

C a reduction in the rate of Value Added Tax (VAT) applied to the good.

D a decrease in the cost of the raw materials used in the production of a substitute good.

6 A market is defined as being in equilibrium when

A there is maximum output at minimum cost.

B prices are at their lowest possible level.

C there is no tendency for the market price to change.

D consumer satisfaction is maximised.

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7 'According to the Environment Secretary, the country has to "face up to the need to make some difficult choices" on reducing its growing mountain of waste. Household waste is growing at about 3% a year, creating a need for a doubling of waste disposal capacity by 2020. But landfill and incineration are unpopular, while the introduction of recycling and composting has been hampered by a lack of demand for recycled materials.'

It can be inferred from the data that

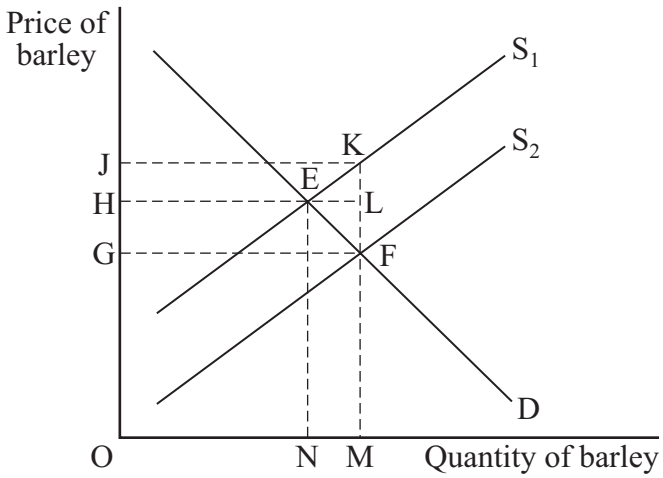
A the opportunity cost of landfill is incineration.

B greater composting of waste would reduce the annual rate of growth of waste.

C the private cost of waste disposal is greater than the social cost.

D prices for recycled materials are low.

8 The diagram below shows the effects of a subsidy shifting the supply curve for barley from S_1 to S_2.



Total government spending on the subsidy is shown by the area

A NELM.

B GJKF.

C GHLF.

D GHEF.

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9 The abolition of betting tax led to an estimated 37% increase in sales during the last quarter at Stanley's, a chain of betting shops. Betting tax was an indirect tax on each bet placed by customers.

Source: news reports, January 2002

The abolition of betting tax can be shown by the

A supply curve of bets shifting to the left.

B supply curve of bets shifting to the right.

C demand curve for bets shifting to the left.

D demand curve for bets shifting to the right.

10 A government grants producers a subsidy for a product. Which one of the following is likely to result in the largest increase in its sales?

A Supply is price elastic

B Supply is price inelastic

C Demand is price inelastic

D Demand is price elastic

11 For monopoly to persist over time in a market, it is most likely that

A the good produced is a necessity.

B the firm is charging high prices.

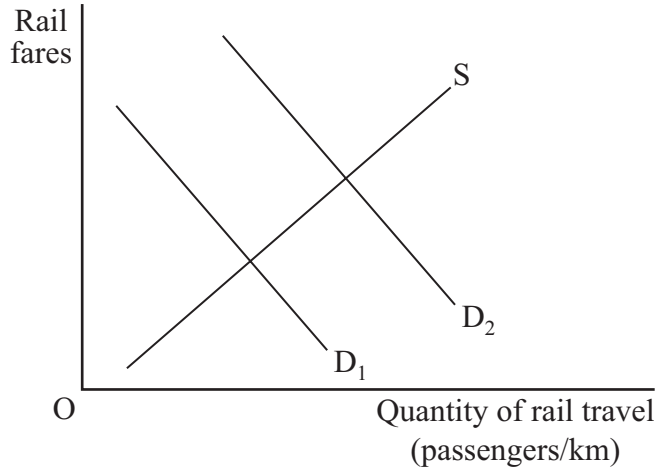
C there are barriers to entry.

D the firm is productively efficient.

Turn over for the next question

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12 The diagram below shows the demand for, and supply of, rail services.



The shift of the curve from D_1 to D_2 is most likely to result from

A a decision by government to impose a tax on workplace car-parking.

B a reduction in the tax imposed on the price of a litre of petrol.

C a planned expansion of the government's railway-track building programme.

D a government decision to increase subsidies for rail travel.

13 An economic good is one which

A has an opportunity cost in production.

B does not use up resources.

C is supplied competitively.

D makes a profit.

14 When money is used as a medium of exchange

A barter or swapping of goods is likely to become more common.

B trade is likely to increase.

C the relative prices of goods never change.

D specialisation and the division of labour are made more difficult.

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15 Which one of the following is most likely to lead to greater labour productivity in an industry?

A An increase in market demand

B A fall in wages

C An increase in the number of firms in the industry

D An increase in capital investment

16 The table below shows the distribution of total income in an economy in 2002 and 2008.

	Quintile groups of households				
Year	**Bottom fifth %**	**Next fifth %**	**Middle fifth %**	**Next fifth %**	**Top fifth %**
2002	10	14	18	23	35
2008	7	11	17	24	41

From the table it may be concluded that, over the period in question,

A there was an improvement in resource allocation.

B the distribution of income became more unequal.

C there was a decline in the productivity of low-income households.

D the distribution of wealth became more unequal.

17 Assuming the price elasticity of demand for a product is zero, any tax placed on the product will

A leave the position of the supply curve unchanged.

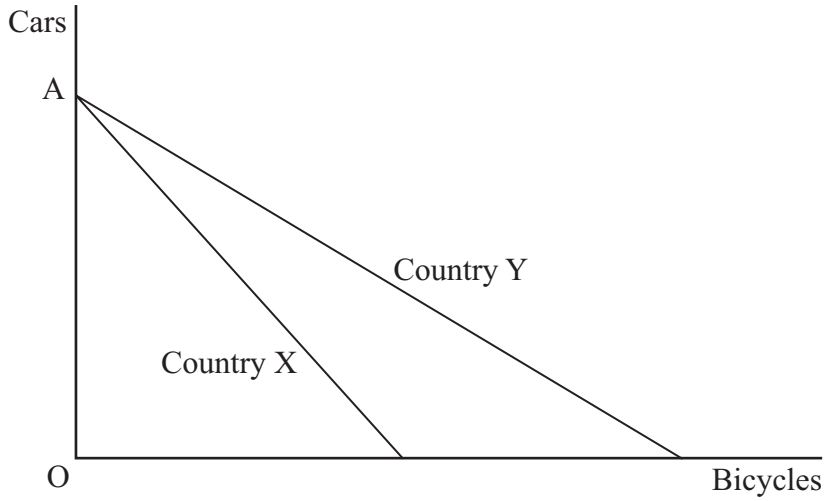
B be paid entirely by the producer.

C shift the demand curve to the left.

D raise the price of the product by the full amount of the tax.

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18 The diagram below shows the production possibility boundaries for Countries X and Y.



The opportunity cost of cars in terms of bicycles

A is greater for Country X than for Country Y.

B is greater for Country Y than for Country X.

C increases as more cars are produced.

D increases as more bicycles are produced.

19 Market failure arises when

A prices rise in response to excess demand.

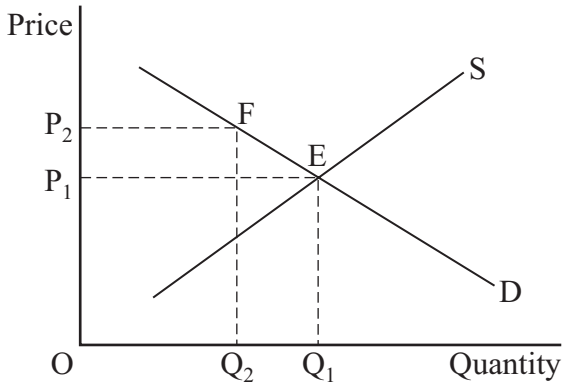
B positive externalities exist in consumption.

C firms make zero profits.

D costs increase as firms expand production.

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20 The diagram below illustrates the market for a good which has been the subject of government intervention. As a result, the market equilibrium has moved from point E to point F.



Which one of the following is most likely to be true?

The good is

A a demerit good which has been taxed.

B an agricultural good subject to a maximum price of OP_2.

C a public good which is in short supply and has been rationed by the government.

D an essential good which has been subsidised.

21 Cross elasticity of demand is defined as the

A responsiveness of the price of one good to a change in demand for another.

B responsiveness of demand for one good to a change in demand for another.

C responsiveness of demand for one good to a change in the price of another.

D responsiveness of the price of one good to a change in the price of another.

22 Merit goods are likely to be under-provided in a free market economy because their

A private benefits exceed their social benefits.

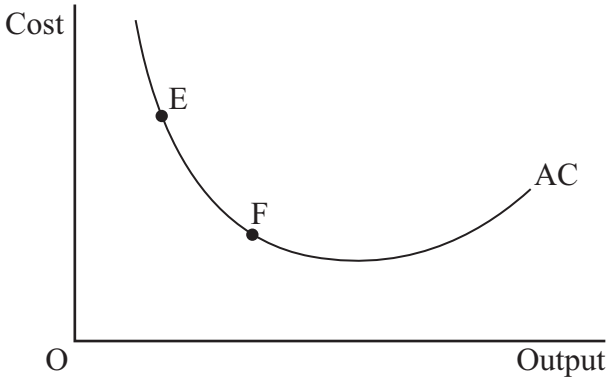
B social benefits exceed their social costs.

C private costs exceed their private benefits.

D social benefits exceed their private benefits.

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23 The diagram below shows the average cost (AC) curve of a firm.



The firm initially operates at point E. When the firm increases its size, it operates at point F. The change in the firm's average cost as it increases its output illustrates that the firm

A experiences more competition in its market.

B is productively efficient.

C benefits from economies of scale.

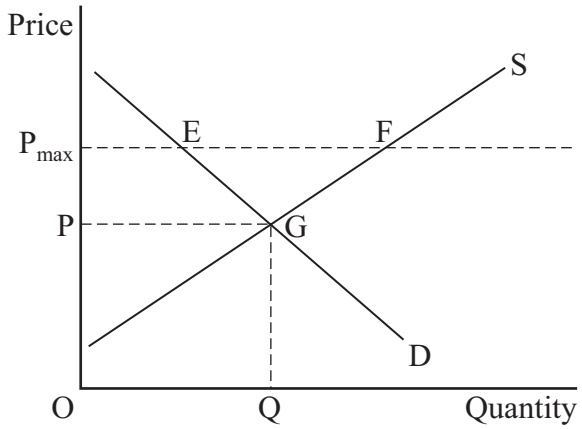
D is profitable.

24 Which one of the following, **A**, **B**, **C** or **D**, distinguishes merit goods from public goods?

	Merit goods	**Public goods**
A	Provided by governments	Provided by companies
B	Provided at a cost	Provided at no cost
C	Limited in supply	Have an infinite supply
D	Consumption reduces availability	Consumption does not reduce availability

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25 The diagram below shows the supply of, and demand for, wheat with market equilibrium at G. A government decides to impose a maximum price of P_{max}.



The most likely outcome would be

A an excess supply of wheat of EF.

B a shortage of wheat of EF.

C the equilibrium price OP being maintained.

D a reduction in price from P_{max} to P.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

TURN OVER FOR SECTION B

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SECTION B: DATA RESPONSE

Answer **EITHER** Question 26 **OR** Question 27.
You are advised to spend at least 50 minutes on **Section B**.

EITHER

Total for this question: 50 marks

26 MARKETS FOR AGRICULTURAL PRODUCTS

Study **Extracts A**, **B and C**, and then answer **all** parts of Question 26 which follows.

Extract A: Shares of world orange juice production

	Florida	Brazil	Rest of the world
Time period			
1970 – 1979	60.0%	26.2%	13.8%
1980 – 1989	36.6%	48.4%	15.0%
1990 – 1999	35.5%	50.0%	14.5%
2005	28.8%	55.0%	16.2%

Source: official statistics, 2006

Extract B: The price of orange juice

For people living in high-income countries, orange juice is a normal good. In 2006, the price of orange juice increased to its highest level for fourteen years. Speculators anticipated that supply would remain low throughout the year after hurricanes and dry weather had reduced the quantity of oranges harvested by the world's leading orange-producing regions.

The price increased by nearly a third between January and May 2006 following predictions of a heavy hurricane season in Florida. The US Department of Agriculture predicted that Florida would produce 153 million fewer boxes of orange juice in 2006, a fifth less than had earlier been predicted. Florida is one of the two largest orange-producing regions in the world, second only to Brazil, where production also fell in 2006.

Tropicana, the world's biggest orange juice seller, passed on some of the increased cost of production to customers, raising the price of orange juice by 7 per cent. A spokesman for the company said, "The profits on orange juice are so thin, we have had to raise prices."

The global consumption of orange juice increased by 6.8 per cent in 2006, which also contributed to the rising price of the commodity.

Source: news reports, 2007

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Extract C: Causes of recent food price increases

There are many reasons for the recent rapid rise in the price of food. Global demand for food products has been rising at 3.3% a year. Changes in diet in developing countries, population growth and the switching of agricultural land to the production of biofuel crops have all been contributing factors.

Supply constraints have also been important. Many experts believe that the fall in agricultural production that has resulted from bad weather and droughts is no accident. Rather, the underlying cause of falling production has been global warming.

What is undoubtedly true is that crop yields, which until recently rose rapidly, are now growing by less than demand. More chemical fertiliser has to be used to try to keep up yields, but fertiliser prices have risen rapidly, causing farmers to economise in their use.

Food hoarding has been another factor at work. People have bought more food than they need. They feared that supplies would run out and that food prices would then rise dramatically. In response to hoarding, various Asian governments restricted exports of agricultural goods in order to safeguard supplies for their own people.

In the United States, stores responded to the hoarding of foods such as rice by restricting the amount that customers could buy. However, there is no surer way of creating a buying panic than declaring a shortage. In such circumstances, prices can be driven well above their true long-term value.

Some say that higher prices are necessary to encourage people to economise and to be less wasteful. This reflects the rationing function of prices. However, others say that higher prices lead to much greater inequality between the world's rich and poor. Are rising food prices the result of markets working well, or do they reflect market failure? Should governments intervene? If so, how? And will this necessarily solve the problem?

Source: news reports, 2007/8

Question 26

26 (a) Define the term 'normal good' (**Extract B**, line 1). *(5 marks)*

(b) Using **Extract A**, identify **two** significant points of comparison between the world market shares of orange juice producers over the period shown. *(8 marks)*

(c) With the help of a demand and supply diagram, explain why the price of orange juice rose in 2006. *(12 marks)*

(d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** allowing market forces to determine food prices, without any intervention by governments. *(25 marks)*

Turn over ▶

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Do **not** answer Question 27 if you have answered Question 26.

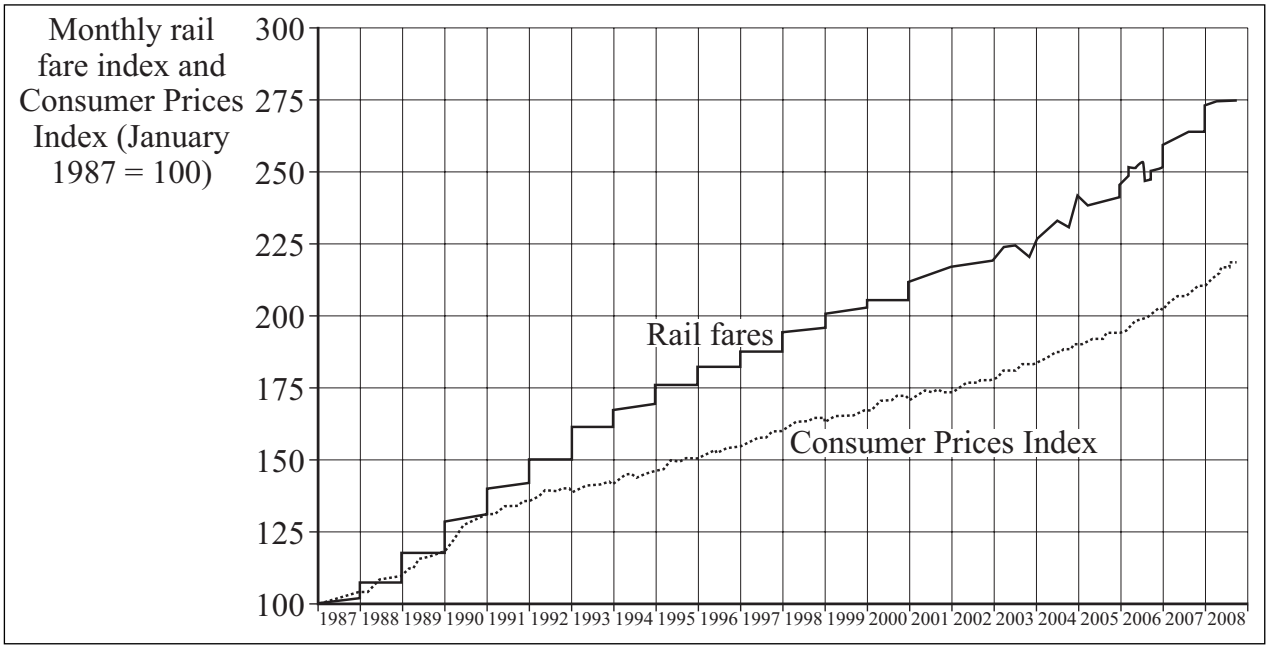
OR

Total for this question: 50 marks

27 THE PRICE OF RAIL TRAVEL

Study **Extracts D**, **E and F**, and then answer **all** parts of Question 27 which follows.

Extract D: Changes in average UK rail fares and in the average price of consumer goods and services



Source: official statistics, 2008

Note: The Consumer Prices Index (CPI) measures the average price of consumer goods and services.

Extract E: UK rail fares in 2009

Rail passengers face fare rises in the new year. Unregulated and regulated fares are to increase by, on average, 6% and 7% respectively from 2 January 2009. Train companies said the extra revenue of £800m would be spent on improving rail services. The *Association of Train Operating Companies*' (ATOC) chief executive, Michael Roberts, said passengers would benefit from this improvement, while taxpayers would receive better value.

The Government's policy is to increase fares above the general rise in prices and to reduce the contribution from taxation. The changes are in line with Government policy to reduce railway subsidies by 40% between 2006–07 and 2013–14.

Anthony Smith, chief executive of watchdog *Passenger Focus*, said: "We cannot simply go on dumping costs onto the passenger in this way." One opponent of the fare increases said: "Passengers are putting up with crisis levels of overcrowding as well as rising fares, with the most packed trains running at over 170% capacity."

Source: news reports, 2008

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Extract F: The relative prices of road and rail travel in cities

Rail fares, relative to prices facing road users, are too high. Road users in cities pay substantially less than the costs they create. The greater the congestion, the truer this is. Wherever there is congestion, the marginal social cost of road use will be greater than the actual cost to the individual road user. This is because the cost to the motorist of using the road includes only vehicle costs and time. The motorist does not have to take into account the costs imposed on other road users, and on pedestrians. As a result, too many people travel by road.

On the other hand, if rail fares are set to cover costs, they end up being overpriced compared to the prices that motorists pay for use of the roads. Resource misallocation results. Too few people travel by rail.

One way of getting prices right would be to raise the price of urban road use until both public and private road transport covered their true cost. However, raising the cost of using roads to a level where marginal social costs are covered is likely to be politically difficult. In this case, it might be better to get the relative prices right by the opposite course of action: by subsidising rail fares.

Source: academic research

Question 27

27 (a) Define the term 'social cost' (**Extract F**, line 3). *(5 marks)*

(b) Using **Extract D**, identify **two** significant points of comparison between changes in average UK rail fares and changes in the average price of consumer goods and services over the period shown. *(8 marks)*

(c) With the help of an appropriate diagram, explain why 'too many people travel by road' (**Extract F**, lines 6–7). *(12 marks)*

(d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** governments subsidising rail fares. *(25 marks)*

END OF QUESTIONS

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There are no questions printed on this page

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Version 1.0 02/10

ASSESSMENT and QUALIFICATIONS ALLIANCE

General Certificate of Education

Economics

ECON1: Markets and Market Failure

Mark Scheme

2010 examination - January series

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Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper. Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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Dr Michael Cresswell Director General

January 2010 **ECON1**

Advance Subsidiary Economics Unit 1

Section A: Objective Test

January 2010

The following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

1.	**C**	**9.**	**B**	**17.**	**D**
2.	**A**	**10.**	**D**	**18.**	**B**
3.	**A**	**11.**	**C**	**19.**	**B**
4.	**B**	**12.**	**A**	**20.**	**A**
5.	**C**	**13.**	**A**	**21.**	**C**
6.	**C**	**14.**	**B**	**22.**	**D**
7.	**D**	**15.**	**D**	**23.**	**C**
8.	**B**	**16.**	**B**	**24.**	**D**
				25.	**C**

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Advanced Subsidiary Economics Unit 1

January 2010 **ECON1**

Section B: Data Response

Mark Scheme

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for parts (a), (b) and (c) of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

(ii) **A levels approach.** This approach is used for marking part (d) of the data response questions. The Levels Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (e.g. 14 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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THE LEVELS MARK SCHEME FOR AS

Level Descriptions

In part (d) of the data response questions, approximately half the marks are available to award to candidates who demonstrate that they can evaluate economic arguments and evidence, and make informed judgements. An answer showing no evidence of evaluation, however good the analysis, should be awarded a maximum of 13 marks (in Level 3). The quality of evaluation should be the sole distinction between a Level 4 and Level 5 answer. It is not necessary for the answer to identify a wide range of issues to score the top mark. As indicated below, the **Quality of Written Communication** used should be taken into account when awarding marks.

Level 1: A very weak answer
Few, if any, relevant issues are recognised. Economic concepts and principles are not adequately understood or applied to the question. No satisfactory analysis or evaluation. There might be some evidence of organisation in the answer but generally it fails to answer the question. Descriptions and explanations lack clarity. Spelling, punctuation and grammar may be poor. There is little use of economic terminology. **0 to 6 marks**

Mid-Point 4 marks

Level 2: A poor answer but some understanding is shown
One or more relevant issues are recognised. An attempt is made to use basic economic concepts to answer the question but the candidate's explanation may become confused and analysis will therefore be very limited. There may be some attempt to present alternative points of view but any attempt at evaluation is limited or superficial. There is some logic and coherence in the organisation of the answer. The candidate demonstrates some ability to spell commonly used words and to follow the standard conventions of punctuation and grammar. Some use of economic terminology is made but this is not always applied appropriately. **7 to 11 marks**

Mid-Point 9 marks

Level 3: An adequate answer with some correct analysis but very limited evaluation
Two or more relevant issues are recognised. The candidate has made a reasonable attempt to apply economic concepts and ideas. A satisfactory understanding of some basic economic concepts and theories is demonstrated and there is some evidence that the candidate can analyse issues. There will be some attempt to present alternative points of view and to evaluate the issues, arguments and/or data. There is some logic and coherence in the organisation of the answer. The candidate is generally able to spell commonly used words and usually follows the standard conventions of punctuation and grammar. Some descriptions and explanations are easy to understand, but the answer may not be expressed clearly throughout. There is some evidence of the correct use of relevant economic terminology.

12 to 16 marks

Mid-Point 14 marks

Level 4: Good analysis but limited evaluation
Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Some appreciation of alternative points of view is shown. Satisfactory use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology. **17 to 21 marks**

Mid-Point 19 marks

Level 5: Good analysis and evaluation
Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Clear understanding of alternative points of view is shown. Good use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. A clear final judgement is made. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology. **22 to 25 marks**

Mid-Point 24 marks

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THE KEY TO BE USED WHEN USING THE LEVELS MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I Where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

A Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

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EITHER

Total for this question: 50 marks

26 (a) Define the term 'normal good' (**Extract B**, line 1). *(5 marks)*

For an acceptable definition, e.g.

(i) a good for which demand increases as income increases
(ii) a good for which demand falls as income falls
(iii) a good with a positive income elasticity of demand

NB Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'normal good' even if the definition is not exactly the same as the three acceptable definitions quoted above. Equally, if this is shown in a diagram, full marks should be awarded. **5 marks**

If the definition is incomplete (or inaccurate), marks can be broken down, for example as follows:

Providing a numerical example of positive income elasticity of demand: **2 marks**

Comparing a positive income elasticity of demand of between zero and unity with a positive income elasticity of demand greater than unity: **2 marks**

Stating that a normal good is the opposite of an inferior good: **2 marks**

A good with a positive elasticity of demand (i.e. no mention of income): **2 marks**
(but no marks for a positive *price* or *cross price* elasticity of demand)

Providing an example of a normal good: **2 marks**
(to award the marks, look for a comparative example with an alleged Inferior good)

No marks for simply stating or defining income elasticity of demand.
The concept has to be linked to the concept of a normal good

Do not reward an answer that solely states that a normal good is a good that is normally consumed, a good with a downward-sloping price demand curve, or which confuses a normal good with normal profit.

This mark scheme does not allow examiners to award 1 mark for a point. Examiners must award either 0 or 2 for each point made by the candidate.

MAXIMUM FOR PART (a) 5 MARKS

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26 (b) Using **Extract A**, identify **two** significant points of comparison between the world market shares of orange juice producers over the period shown. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting references to the data). The valid points include:

- Over the whole period, Florida's market share fell 31.2% points whereas Brazil's market share rose 28.8% points, **or** fell by 52% and rose by 110%.
- Over the whole period, Florida's market share fell from 60% to 28.8%, whereas Brazil's market share rose from 26.2% to 55.0%.
- The percentage changes in market share in Florida and Brazil were greatest between the first two periods (24% points and 22.2% points) than between periods two and three (1.1% points and 1.6% points), or between period three and 2005 (6.7% points and 5.0% points).

Candidates may also compare, in a similar way, 'the rest of the world' with Florida and/or Brazil.

Only award **1 mark** rather than 2 marks for a supporting reference if the % signs are omitted.

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR PART (b) 8 MARKS

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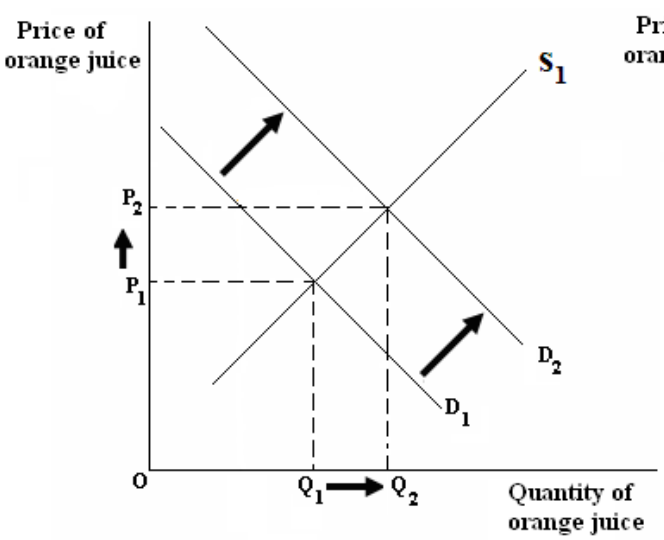
26 (c) With the help of a demand and supply diagram, explain why the price of orange juice rose in 2006. *(12 marks)*

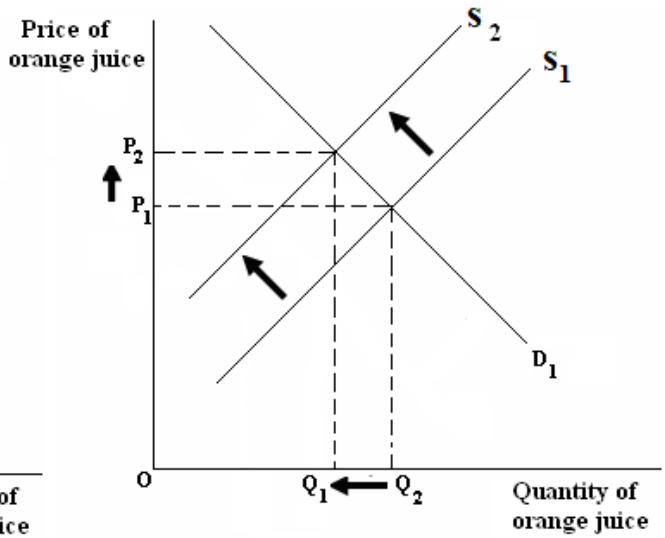
When awarding marks for the diagram, it is important to reward candidates who produce an economically valid response even if it is not one of the two that are shown below.

The anticipated response for the diagram:

Extract B mentions three factors that affect the positions of the demand and supply curves. These are:

- Global consumption increasing, possibly related to higher incomes via the normal good effect
- Speculative demand in response to hurricanes and dry weather shifting demand to the right
- Hurricanes and dry weather shifting the supply curve to the left





Breakdown of the marks for the left-hand diagram:

Axes labelled (price and quantity or P and Q will do)	**1 mark**
Original demand and supply curves correctly labelled	**1 mark**
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark**
Rightward shift of the demand curve	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium)	**1 mark per feature up to a maximum of 2 marks**

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Breakdown of the marks for the right-hand diagram:

Axes labelled (price and quantity or P and Q will do) **1 mark**

Original demand and supply curves correctly labelled **1 mark**

Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1 **1 mark**

Leftward shift of the supply curve **2 marks**

Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2 **1 mark**

Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium) **1 mark per feature up to a maximum of 2 marks**

Award marks as per the above for a combined diagram **Up to 6 marks for the diagram**

The anticipated written response:

For candidates who:

define demand and/or supply: **Up to 2 marks per definition**
Maximum of 2 marks for definitions

explain one of the causes of the rightward shift of the demand curve:
Up to 4 marks per cause

(e.g. identifying change of diet as a cause: **1 mark**; stating that incomes rise in developing countries: **1 mark**; drawing on the fact that orange juice is a normal good: **1 mark**; linking higher income to increased demand for orange juice: **1 mark**)

explain the cause of the leftward shift of the supply curve: **Up to 4 marks per cause**

(e.g. identifying bad weather as a cause: **1 mark**; stating that bad weather leads to lower agricultural yields: **1 mark**; which raises costs of production: **1 mark**; explaining that rising production costs shift the supply curve to the left: **1 mark**)

For explaining any other relevant point, e.g. how elasticity of supply may affect the outcome of a rightward shift of demand, e.g. why the emergence of excess demand results in a rising price: **Up to 4 marks per point**

Do not award marks for simply describing what the diagram shows, but award 2 marks for mentioning an increase of demand followed by an extension of supply (left-hand diagram) and 2 marks for mentioning a decrease of supply followed by a contraction of demand (right-hand diagram).

Up to a maximum of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

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26 (d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** allowing market forces to determine food prices, without any intervention by governments. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 13 marks**.

A maximum of **20 marks** should be awarded if there is no **explicit** reference to the data.

Candidates who make a genuine attempt at evaluation should be well rewarded.

Issues and areas for discussion:

Introductory:

- Definitions: markets, market forces;
- Describing different types of government intervention.

Developing the response to the question

Analysing:

- the roles of the various functions of prices in a competitive food market, signalling, creating incentives and rationing;
- the effect of hoarding and panic buying;
- the effect of different types of government intervention;
- the factors that have led to rising food prices;
- the effects of rising food prices on inequality.

Evaluation

Marks for evaluation might come from discussing the following:

- how changes in food prices affect market incentives and resource allocation;
- whether activities such as speculation and hoarding are part of the efficient functioning of markets, or whether they are a part of market failure;
- how price rises may be part of the rationing function of prices rather than evidence of market failure;
- the distributional consequences resulting from free market forces;
- the significance of the various factors that make up the cases for and against government intervention;
- the possible effects of different types of government intervention and the possibility of government failure;
- the extent to which unregulated market forces may lead to market failure;
- the roles of the various functions of prices in a competitive food market, signalling, creating incentives and rationing;
- the significance of the factors that have led to rising food prices;
- whether there is a role both for market forces and for some government intervention in the market

Other equally valid points may be discussed and should be given due credit

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Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Relevant use of diagram(s);
- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS

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OR

27 **Total for this question: 50 marks**

27 (a) Define the term 'social cost' (**Extract F**, line 3). *(5 marks)*

For candidates who

For an acceptable definition, e.g.:

(i) the whole of the cost resulting from any decision or choice, for example by a firm or by a consumer

(ii) the private cost plus external cost of any decision or action, for example by a firm or by a consumer

5 marks

If the definition is incomplete, marks may be broken down, for example as follows:

Defining a cost: **2 marks**

Defining an externality: **2 marks**

Understanding the difference between private and social, but without any reference to costs: **2 marks**

Providing an example, e.g. the social cost of motoring as the cost of fuel etc. plus the cost of pollution or congestion generated: **2 marks**
(No marks for providing an example of an externality on its own, without proper reference to social cost)

(Two marks only for examples, however many are given)

This mark scheme does not allow examiners to award 1 mark for a point. Examiners must award either 0 or 2 for each point made by the candidate.

MAXIMUM FOR PART (a) 5 MARKS

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27 (b) Using **Extract D**, identify **two** significant points of comparison between changes in average UK rail fares and changes in the average price of consumer goods and services over the period shown. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting references to the data). The valid points include:

- Both rail fares and the average price of consumer goods and services increased over the whole period. Rail fares increased from an index number of 100 to around 275; goods' prices from 100 to around 220
- The increase over the whole period was greatest for rail fares, 175% as against 120%
- From the beginning of 1991, the monthly rail fare index rose faster than the Consumer Prices Index, by about 145 index points compared to about 90 index points **or** the two data series diverged after 1990, e.g. there was about a 27 index point difference at the end of 1995, widening to about 52 index points at the end of the third quarter of 2008
- The two data series rose by similar amounts from 1987 to the beginning of 1991, from an index number of 100 to an index number of about 130
- The overall changes in both data series were not volatile, but it appears that until 2001, rail fares were increased just once at the beginning of the year, for example from the index of 150 at the end of 1993 to the index of about 162 in January 1994, but the prices of goods increased more continuously, for example, from the index of 152 to the index of 157 during 1997.
- There were some falls in rail fares from mid-2003 onward, for example from an index of about 225 to an index of about 221 late in 2003, compared to two small falls in the CPI, earlier in the period, for example from an index of about 174 to about 173 at the end of 2000

Allow a mark for an answer that states that the two data series show rail fares rose in real terms if this point is made in the absence of one of the two points of comparison

Only award 1 mark rather than 2 marks for a supporting reference if either 'index points', or 'index', or 'points' is/are omitted.

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR PART (b) 8 MARKS

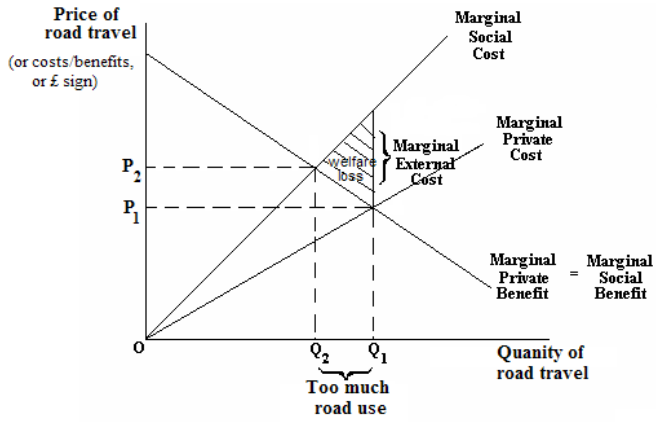
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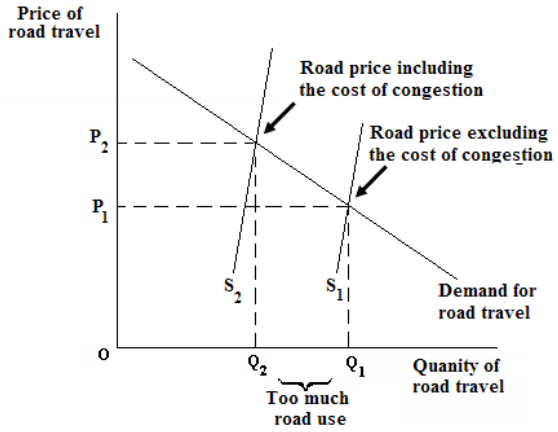
27 (c) With the help of an appropriate diagram, explain why 'too many people travel by road' (**Extract F**, lines 6-7). *(12 marks)*

When awarding marks for the diagram, it is important to reward candidates who produce an economically valid response even if it is not one of the two shown below.

The anticipated response for the diagram:

The expected diagram is one, such as the diagram below on the left, that shows road travel generating negative externalities. Alternatively, a diagram such as the one on the right may be used.





Breakdown of the marks for the left-hand diagram:

Axes labelled (price and quantity or P and Q will do;
(costs/benefits or the £ sign are acceptable on the vertical axis): **1 mark**

MPB = MSB curve (or demand curve) correctly labelled: **1 mark**
(also award the mark if the label is restricted to MSB or marginal benefit)

Co-ordinates drawn in for price and quantity, e.g. P_1 and Q_1: **1 mark**

MPC curve correctly labelled: **1 mark**

MSC curve correctly labelled: **1 mark**

Co-ordinates drawn for P_2 and Q_2: **1 mark**

Showing external cost : **1 mark**

Showing too much road use: **1 mark**

Any other relevant feature of the diagram, e.g. deadweight/welfare loss
1 mark per feature up to a maximum of 2 marks

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Breakdown of the marks for the right-hand diagram:

Axes labelled (price and quantity or P and Q will do): **1 mark**

Demand curve and supply curve (S_1) correctly labelled: **1 mark**

Co-ordinates drawn in for price and quantity, e.g. P_1 and Q_1: **1 mark**

Second supply curve (S_2) drawn to the left of S_1 and correctly labelled: **1 mark**

Co-ordinates drawn for P_2 and Q_2: **1 mark**

Showing external cost : **1 mark**

Showing too much road use: **1 mark**

Any other relevant feature of the diagram, e.g.excess demand at price P_1 following the shift of supply:
1 mark per feature up to a maximum of 2 marks

Up to 6 marks for the diagram

The anticipated written response:

For candidates who

define a relevant concept, e.g. MEC, MSC, demand, supply:
Up to 2 marks per definition

Maximum of 2 marks for definitions

explain why motorists only consider private costs and ignore the external costs they impose on other road users such as the cost of congestion: **Up to 4 marks**

(e.g. identifying a relevant private cost: **1 mark**; identifying a relevant external cost: **1 mark**; explaining why the external cost can be ignored: **2 marks**)

explain why there is overuse of roads: **Up to 4 marks**

(e.g. use of relevant marginalist analysis: **2 marks**; explanation of why the price being too low leads to overuse of roads: **2 marks**)

explain any other relevant point, e.g. the nature of the prices road users pay, deadweight or welfare losses: **Up to 4 marks per point**

Do not award marks for simply describing what the diagram shows, but award 2 marks for mentioning a decrease of supply followed by a contraction of demand in the right-hand diagram.

Up to a maximum of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

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27 (d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** governments subsidising rail fares. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 13 marks**.

A maximum of **20 marks** should be awarded if there is no **explicit** reference to the data.

Candidates who make a genuine attempt at evaluation should be well rewarded. Full marks can be earned without a mention of allocative efficiency or inefficiency. This concept is not in the AS specification

Issues and areas for discussion:

Introductory:

- Definitions: subsidy or subsidising;
- The meaning of resource allocation and misallocation
- The differences between private, external and social costs.

Developing the response to the question

Analysing:

- how a subsidy shifts the supply curve;
- how a subsidy affects the functions of prices, signalling, creating incentives and rationing;
- the effect of a subsidy in terms of the various elasticities of demand and supply;
- the effect of a subsidy on consumers;
- the effect of a subsidy on substitute forms of transport, especially road use;
- the opportunity cost of subsidies;
- why motorists, but not rail users, may generate congestion costs;
- the burden on taxpayers, or all tax payers pay but not all benefit.

Evaluation

Marks for evaluation might come from discussing the following:

- the implications of the assertion in Extract F that rail users pay for all the costs that rail use generates, but road users don't;
- the significance of the costs generated by road and rail use;
- the argument that if rail fares are subsidised, the prices of both road and rail may become too low compared to other prices in the economy;
- the extent to which resource misallocation is corrected if rail fares are subsidised;
- the significance of the various factors that make up the cases for and against a subsidy;
- a subsidy in relation to alternative forms of government intervention, e.g. measures to discourage road use;
- unintended consequences brought about by the subsidy;
- the opportunity cost of the subsidy;

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- the significance of pollution as well as the congestion mentioned in Extract F;
- the significance of market failure versus government failure arguments.

Other equally valid points may be discussed and should be given due credit.

Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS

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Version 1.1

General Certificate of Education
Advanced Subsidiary Examination
June 2009

Economics ECON1

Unit 1 Markets and Market Failure

Specimen paper for examinations in June 2010 onwards
This question paper uses the new numbering system and new AQA answer book

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Instructions
- In **Section A**, answer **all** questions on your objective test answer sheet.
- In **Section B**, answer **EITHER** Question 26 **OR** Question 27 in your answer book.
- For **Section A**, do all rough work in your answer book, **not** on your objective test answer sheet.

Section A (ECON1/1)
- Use a black ball-point pen. Do **not** use pencil.

Section B (ECON1/2)
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A** and 50 marks for **Section B**.
- In **Section A**, each question carries 1 mark. No deductions will be made for wrong answers.
- In **Section B**, the marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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Section A Objective Test

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

---

1 The central purpose of economic activity is

A to create maximum profit.

B to achieve economic efficiency.

C the satisfaction of needs and wants.

D to save scarce resources.

2 Positive externalities exist when

A production creates private benefits.

B private benefits are less than social benefits.

C private benefits are greater than private costs.

D social costs exceed private costs.

3 When demand is income inelastic, the percentage change in

A income is greater than the percentage change in quantity demanded.

B quantity demanded is greater than the percentage change in income.

C income is less than the percentage change in quantity demanded.

D quantity demanded is the same as the percentage change in income.

4 Which one of the following is classified as an economic resource?

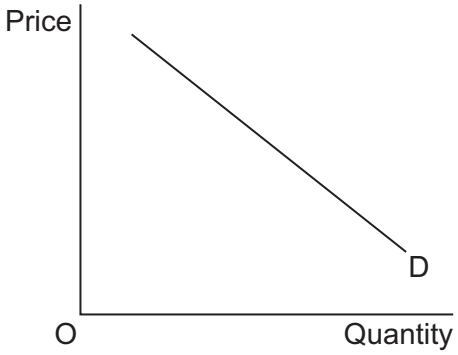
A Consumption

B Productivity

C Production

D Enterprise

5 The diagram below shows a demand curve for chicken.



The demand curve is drawn on the assumption that each of the following remains constant **except**

A the incomes of consumers.

B the price of chicken.

C advertising expenditure on chicken.

D the price of beef.

6 Which one of the following is the most likely determinant of the elasticity of supply of good X?

A The price of good X

B The price elasticity of demand of good X

C Total production of good X

D Spare capacity in the production of good X

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7 Government intervention in a market economy can lead to an increase in economic welfare if

A the market mechanism fails to allow for externalities.

B it leads to an increase in the consumption of demerit goods.

C the price elasticity of supply of private goods is high.

D the demand for inferior goods rises as incomes increase.

8 The table below indicates the average price of organic turkeys in price index number form.

Year	Price index
2004	100
2005	105
2006	120
2007	110
2008	125

Which one of the following can be deduced from the above data?

A The price of organic turkeys rose throughout the whole period 2004 to 2008.

B Compared with 2008, the price of organic turkeys was 20% cheaper in 2004.

C Revenue from the sale of organic turkeys fell in 2007.

D Between 2006 and 2007, the price of organic turkeys fell 10%.

9 A monopoly market will be less economically efficient than a competitive market if, under monopoly,

A the market demand curve is inelastic.

B the main objective of the firm is maximum profit.

C there are both economies of scale and diseconomies of scale.

D prices are higher and output is lower.

10 The demand curve for a good will shift to the left if

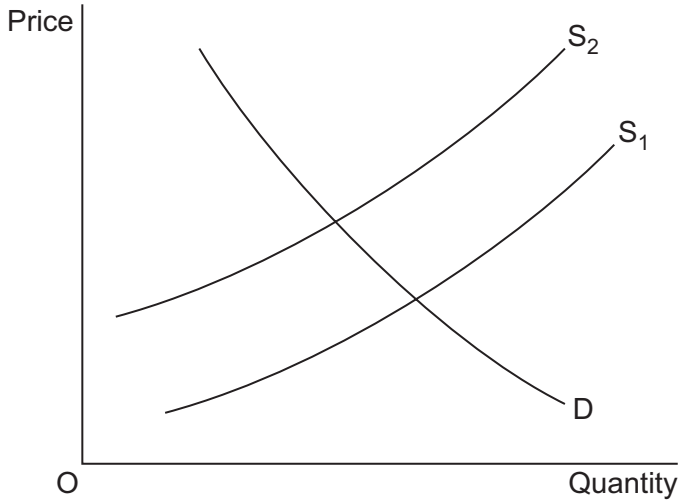
A there is a successful advertising campaign for the good.

B the price of the good increases.

C the price of a complementary good increases.

D the tax on the good increases.

11 The diagram below shows the demand and supply curves for tennis balls.



Which one of the following could explain the shift of the supply curve from S_1 to S_2?

A An improvement in the technology for making tennis balls

B The granting of a subsidy to tennis ball producers

C An increase in the price of a complementary good

D An increase in wages in the industry

Turn over for the next question

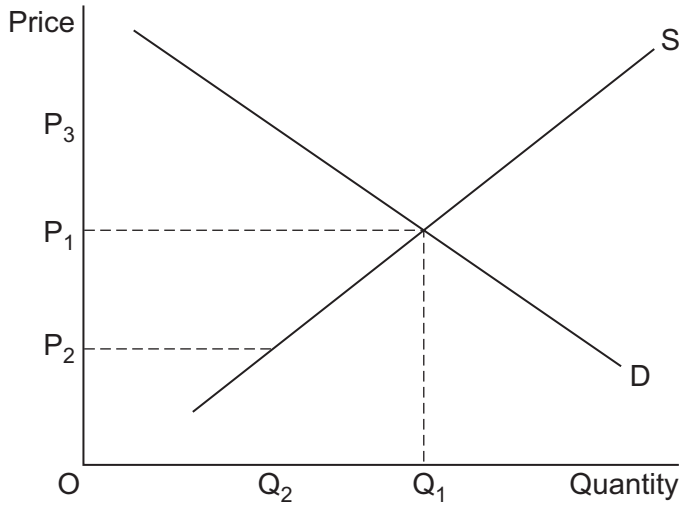
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12 The table below indicates various types of market failure, the consequences of such failure and examples of possible intervention strategies.

In which one of the situations, **A**, **B**, **C** or **D**, is the intervention **not** appropriate?

Situation	Type of market failure	Consequence of failure	Example of intervention
A	Factor immobility	Inefficient allocation of resources	Improved information flows
B	Public goods	Not provided	Government provision
C	Demerit goods	Over-consumed	Maximum price controls
D	Merit goods	Under-provided	Government subsidies

13 The diagram below illustrates the market demand and supply curves for a good. The production of the good creates a negative externality.



To reduce production and consumption of the good to OQ_2 the government could impose a

A price ceiling of OP_3.

B tax of P_2P_3.

C minimum price of OP_2.

D tax of P_2P_1.

14 The government wants to reduce the amount of air pollution arising from petrol and diesel used in transport. Which one of the following combinations of policies would be most likely to achieve this objective?

A Subsidise the production of fuel-efficient cars and subsidise the prices of petrol and diesel

B Increase new motorway building and the number of city centre car parks

C Tax the purchase of cars which are less fuel-efficient and use the receipts to subsidise the development of vehicles which are more fuel-efficient

D Tax cars going into town and city centres and use the receipts to lower taxes on petrol and diesel

15 Choice is a necessary part of the basic economic problem because

A wants are finite.

B economic decisions involve an opportunity cost.

C resources are infinite.

D consumption creates externalities.

16 The natural environment in the UK is under threat from urbanisation as more and more new houses are built on unspoilt countryside. It has been estimated that by 2050 a fifth of England could be urbanised.

From the passage above it can be inferred that

A the natural environment is an economic resource.

B the opportunity cost of land is zero.

C land is not an economic resource because it is free.

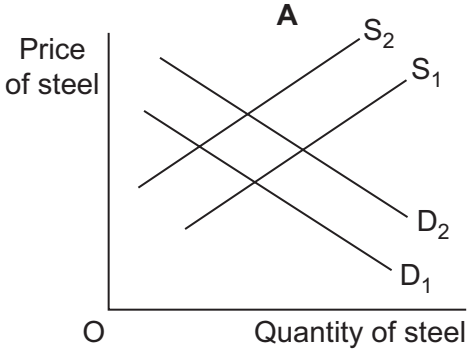
D the private cost of urbanisation is greater than its social cost.

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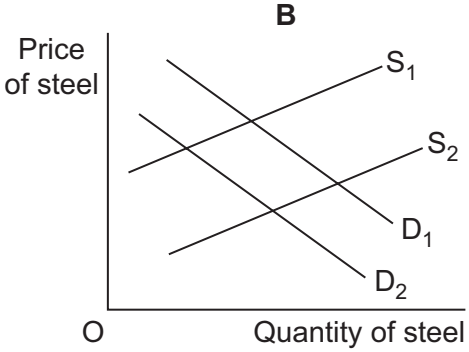
17 UK steel production declined last year following a big reduction in demand from UK manufacturers. They have been cutting their production of steel-containing goods due to tough global competition.

Which one of the following diagrams, **A**, **B**, **C** or **D**, best illustrates the reasons given for the decline in the production of steel in the UK?

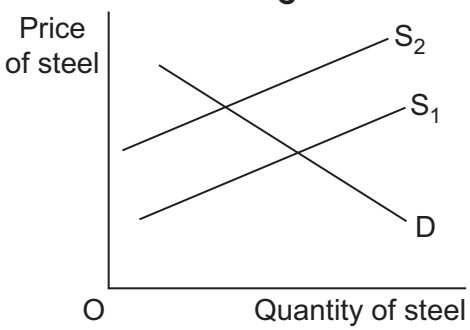
A



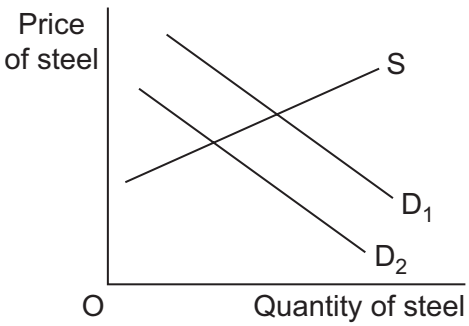
B



C



D



18 Which one of the following is an example of government failure?

A The government over-producing a merit good

B All government provision of national defence

C All subsidies given to private sector firms

D The government allowing free market forces to raise the price of oil

19 Which one of the following statements involves a value judgement?

A The government must devote more resources to health care.

B More of a good is demanded at a lower price.

C The provision of public goods involves an opportunity cost.

D The higher the income, the higher the demand for a normal good.

20 ‘The government is considering the building of three new runways in south-east England to cope with the boom in air travel. The proposal is bound to cause an outcry from environmentalists, but will be welcomed by business and tourism groups, which have warned that failure to build more runways would lead to higher prices and longer delays.’

If the three runways were built, all other things being equal, which one of the following is most likely to be true?

A The overall impact would necessarily create more positive externalities than negative externalities.

B The demand for air travel in the south-east would become price elastic.

C The supply curve for air travel in the south-east would shift to the right.

D The new runways would be examples of public goods.

21 The table below shows the price and quantity for two goods, **X** and **Y**.

Price of X	Quantity of X demanded	Quantity of Y demanded
£10	20	30
£9	24	42

The cross elasticity of demand for **Y** with respect to the price of **X** when the price of **X** falls from £10 to £9 is

A +4

B +2

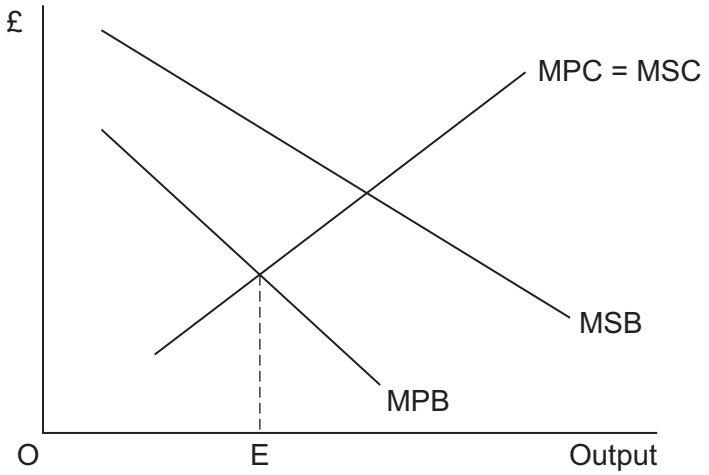
C –2

D –4

Turn over for the next question

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22 The diagram below shows a firm's marginal private benefit and social benefit (MPB and MSB) curves and marginal private cost and social cost (MPC and MSC) curves.



The firm produces at output level OE. As a result, there is likely to be

A a misallocation of resources.

B a positive externality in production.

C a negative externality in consumption.

D excess demand for the good.

23 Which one of the following illustrates diseconomies of scale?

A A firm expands but experiences management problems which increase its average costs.

B A firm scales down its activities but, as a result, its average costs rise.

C A larger firm is able to increase specialisation which reduces its average costs.

D Due to its growth, a firm is now operating at the lowest point of its average cost curve.

24 An economy has achieved productive efficiency if

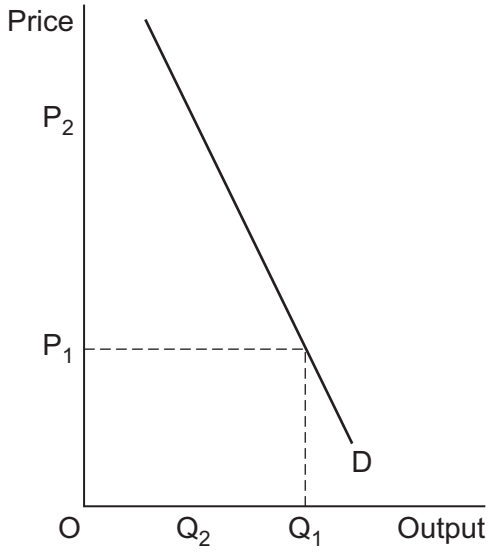
A it is self-sufficient in all products.

B it has eliminated all negative externalities.

C cost equals price in all its industries.

D it is unable to produce more of one good without producing less of another.

25 The diagram below shows a market demand curve.



The change in price from P_1 to P_2 and output from Q_1 to Q_2 could have been caused by

A the government subsidising production of a merit good.

B a shift of the demand curve.

C monopoly replacing competition in the market.

D economies of scale.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

Turn over for Section B

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Section B Data Response

Answer **EITHER** Question 26 **OR** Question 27.
You are advised to spend at least 50 minutes on **Section B**.

EITHER **Total for this question: 50 marks**

Question 26

MARKETS FOR ALCOHOLIC DRINKS

Study **Extracts A**, **B and C**, and then answer **all** parts of Question 26 which follows.

Extract A: The prices of alcoholic drinks, selected retail outlets in London, March 2008

	Pint of beer	Glass of wine	Measure of spirit (e.g. whisky)
Public house (Central London)	£3.00	£2.55	£2.40
Specialist shop (off-licence)	£1.33	£1.51	£0.45
Asda supermarket	£1.20	£1.27	£0.43
Tesco supermarket	£1.20	£1.27	£0.47

Note: supermarket and shop prices are based on the prices charged for a measure of the alcoholic drink in a public house (pub).

Extract B: Reducing the consumption of alcoholic drink

Along with tobacco and narcotic drugs such as heroin, alcoholic drink is classified by many economists as a demerit good. The *British Medical Association* (BMA), which is the main professional group representing doctors, recently said that more than a quarter of all drink-related deaths could be prevented by a 10 per cent rise in taxes on beer, wine and spirits. The BMA suggests tax increases should be linked to the alcoholic strength of drinks.

The BMA backed calls from Tesco for the Government to ban cut-price alcohol, including two-for-one offers and so-called 'loss-leaders', in which drinks are sold at prices below cost to attract people into bars and shops that sell alcohol. The BMA Ethics Committee stated: "We have a public health emergency and people need to be prepared to look at an increase in price. They may not want to pay more but they also don't want to see their children, their friends and their neighbours dying from liver failure in their 20s and 30s." The Committee went on to say that recent UK governments have worked too closely with the alcohol industry and have refused to intervene in the way that alcoholic drinks are priced.

In 2008, taxes on alcohol in Britain are already among the highest in Europe. Beer and wine are taxed at 33 pence a pint and around £1.50 a bottle respectively, and alcoholic drinks are also subject to Value Added Tax (VAT).

Source: news reports, 2008

Extract C: Is alcoholic drink too cheap?

In a free market, should we stop alcohol being cheap? We may wish to end the sale of lager that costs less than bottled water, but it is simplistic to assume that binge-drinking is price-sensitive. And it is wrong to allow drunken yobs to deprive ordinary consumers of the opportunity to buy wine, beer and spirits at a reasonable market price.

A change in behaviour, not pricing, is needed. There are laws against drunken behaviour and selling alcohol to under 18s, but they are not always enforced rigidly enough; they may also need to be made stricter. Most major supermarkets are careful not to sell alcohol to anyone under 18, but would 21 be a more sensible age limit? Meanwhile, some smaller shops are shockingly casual about the under-18 rule.

A Tesco spokesperson recently said: "We can't put up our prices because people will simply shop elsewhere. It could be commercial suicide, and supermarkets can't act together to put up prices because that would be against the law."

Source: news reports, 2008

Question 26

0 1 Define the term 'demerit good' (**Extract B**, line 2). *(5 marks)*

0 2 Using **Extract A**, identify **two** points of comparison between the prices charged for alcoholic drinks by different retail outlets in London in March 2008. *(8 marks)*

0 3 With the help of a demand and supply diagram, explain how an increase in the age limit to 21 might affect the market for alcoholic drinks. *(12 marks)*

0 4 Evaluate possible economic policies, **other than** increasing the age limit, that a government might use to reduce significantly the consumption of alcoholic drinks. *(25 marks)*

Turn over for the next question

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Do **not** answer Question 27 if you have answered Question 26.

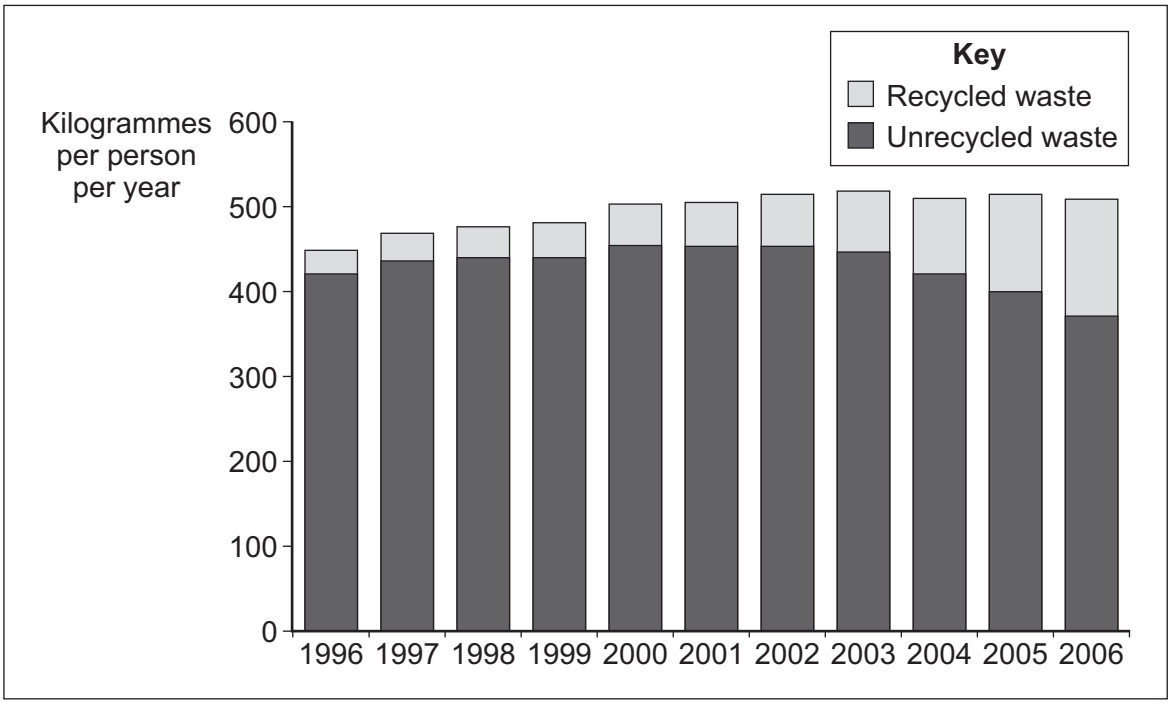
OR **Total for this question: 50 marks**

Question 27

PLASTIC BAGS AND HOUSEHOLD WASTE

Study **Extracts D**, **E and F**, and then answer **all** parts of Question 27 which follows.

Extract D: Household waste production and recycling, UK 1996 to 2006



Source: UK government statistics, 2007

Extract E: Plastic bags, paper bags and negative externalities

Disposing of a plastic bag creates a negative externality, whether the bag is thrown away as litter or carefully placed in a dustbin. With either method of disposal, future generations will be affected, as will people living today. Plastic bags can take up to 500 years to degrade.

In 2002, the Irish Government introduced a tax on plastic shopping bags to encourage people to use paper bags and cotton bags rather than plastic shopping bags. While paper bags degrade and are in some ways better for the environment, studies suggest that the manufacture, use and disposal of paper bags also create negative externalities.

More greenhouse gases are released in the manufacture and transportation of paper bags than in the production of plastic bags. And according to a spokesperson for the plastic bag industry, paper bags will one day rot away to give off CO_2 and methane, unlike plastic which eventually just crumbles to a fine non-poisonous powder.

Source: news reports, 2008

Extract F: Should people be charged for the disposal of waste?

Some economists argue that the plastic bag problem can be solved by the price mechanism. Prices can be charged when people acquire plastic bags, and also when they dispose of them.

People use plastic shopping bags because they appear to be free. When supermarkets and other shops charge their customers for the plastic bags they provide, shoppers economise and use fewer new bags.

In the United Kingdom, local governments effectively charge households an annual fee to empty dustbins through the Council Tax, however much rubbish is thrown away. When local authorities or councils have charged households per sack of waste collected or per kilo of waste in bins, the amount of waste collected has fallen. However, some people may simply dispose of their rubbish in other ways.

Source: news reports, 2008

Question 27

0 5 Define the term 'negative externality' (**Extract E**, line 1). *(5 marks)*

0 6 Compare **two** changes shown in **Extract D** in UK waste production and recycling over the period 1996 to 2006. *(8 marks)*

0 7 With the help of a demand and supply diagram, explain how a tax on the plastic bags distributed by shops and supermarkets might affect the use of plastic bags. *(12 marks)*

0 8 Assess the view that the environmental problems caused by the disposal of rubbish can best be dealt with by market forces rather than by government intervention. *(25 marks)*

END OF QUESTIONS

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Version 1.1



General Certificate of Education

Economics ECON1

Unit 1: Markets and Market Failure

Mark Scheme

2009 examination - June series

This mark scheme uses the new numbering system which is being introduced for examinations from June 2010

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Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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June 2009 **ECON1**

Advance Subsidiary Economics Unit 1

Section A: Objective Test

June 2009

The following list indicates the correct answers used in marking the candidates' responses.

1.	**C**	**9.**	**D**	**16.**	**A**
2.	**B**	**10.**	**C**	**17.**	**D**
3.	**A**	**11.**	**D**	**18.**	**A**
4.	**D**	**12.**	**C**	**19.**	**A**
5.	**B**	**13.**	**B**	**20.**	**C**
6.	**D**	**14.**	**C**	**21.**	**D**
7.	**A**	**15.**	**B**	**22.**	**A**
8.	**B**			**23.**	**A**
				24.	**D**
				25.	**C**

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Advanced Subsidiary Economics

June 2009 **ECON1**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for the first three elements of each data response question adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

(ii) **A levels approach.** This approach is used for marking the final element of each data response question. The Levels Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (e.g. 14 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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THE LEVELS MARK SCHEME FOR AS

Levels Descriptions

In the final element of the data response questions, approximately half the marks are available to award to candidates who demonstrate that they can evaluate economic arguments and evidence, and make informed judgements. An answer showing no evidence of evaluation, however good the analysis, should be awarded a maximum of 13 marks (in Level 3). The quality of the evaluation should be the sole distinction between a Level 4 and Level 5 answer. It is not necessary for the answer to identify a wide range of issues to score the top mark. As indicated below, the **Quality of Written Communication** used should be taken into account when awarding marks.

Level 1: A very weak answer
Few, if any, relevant issues are recognised. Economic concepts and principles are not adequately understood or applied to the question. No satisfactory analysis or evaluation. There might be some evidence of organisation in the answer but generally it fails to answer the question. Descriptions and explanations lack clarity. Spelling, punctuation and grammar may be poor. There is little use of economic terminology.

0 to 6 marks
Mid-Point 4 marks

Level 2: A poor answer but some understanding is shown
One or more relevant issues are recognised. An attempt is made to use basic economic concepts to answer the question but the candidate's explanation may become confused and analysis will therefore be very limited. There may be some attempt to present alternative points of view but any attempt at evaluation is limited or superficial. There is some logic and coherence in the organisation of the answer. The candidate demonstrates some ability to spell commonly used words and to follow the standard conventions of punctuation and grammar. Some use of economic terminology is made but this is not always applied appropriately.

7 to 11 marks
Mid-Point 9 marks

Level 3: An adequate answer with some correct analysis but very limited evaluation
Two or more relevant issues are recognised. The candidate has made a reasonable attempt to apply economic concepts and ideas. A satisfactory understanding of some basic economic concepts and theories is demonstrated and there is some evidence that the candidate can analyse issues. There will be some attempt to present alternative points of view and to evaluate the issues, arguments and/or data. There is some logic and coherence in the organisation of the answer. The candidate is generally able to spell commonly used words and usually follows the standard conventions of punctuation and grammar. Some descriptions and explanations are easy to understand, but the answer may not be expressed clearly throughout. There is some evidence of the correct use of relevant economic terminology.

12 to 16 marks
Mid-Point 14 marks

Level 4: Good analysis but limited evaluation
Two or more relevant issues are identified. Good understanding of some basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Some appreciation of alternative points of view is shown. Satisfactory use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are usually clearly expressed. Appropriate use is made of relevant economic terminology

17 to 21 marks
Mid-Point 19 marks

Level 5: Good analysis and evaluation
Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Clear understanding of alternative points of view is shown. Good use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. A clear final judgement is made. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology.

22 to 25 marks
Mid-Point 24 marks

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THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I Where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

A Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

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EITHER

Question 26 **Total for this question: 50 marks**

01 Define the term 'demerit good' (**Extract B**, line 2). *(5 marks)*

There are two acceptable ways of defining a demerit good, first in terms of negative externalities generated in consumption and unwillingly received by third parties, and second in terms of informational problems associated with the long-term *private* costs of consumption exceeding the short-term *private* costs of consumption. Either definition accurately stated can earn all five marks. It is also possible to earn marks through the use of both approaches.

For an acceptable definition, eg:

(i) a good which generates negative externalities when consumed
(ii) a good for which the socially-optimal level of consumption is less than the privately-optimal level of consumption
(iii) a good for which the social cost of consumption > private cost of consumption; (or when the social benefit of consumption < private benefit of consumption)

Alternative approach:

(iv) a good for which the long-term private costs of consumption exceed the short-term private costs of consumption

NB Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'demerit good' even if the definition isn't exactly the same as the four acceptable definitions quoted above. Equally, if this is shown in a diagram, full marks should be awarded. **5 marks**

If the definition is incomplete (or inaccurate), marks can be broken down, for example as follows:

Defining a demerit good as a good that the government or society deems to be bad for the consumer: **2 marks**

Correct distinction between external and private costs (or social costs and private costs):**2 marks**

Correct distinction between short-term and long-term private costs: **2 marks**

Defining a demerit good as a good which generates negative externalities (but with no mention that these are consumption externalities): **2 marks**

Defining a demerit good as a good which is over-consumed/over-provided: **2 marks**

Providing an example: **2 marks**
(Two marks only for examples, including those mentioned in the text, however many are given)

MAXIMUM FOR 01 = 5 MARKS

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02 Using **Extract A**, identify **two** points of comparison between the prices charged for alcoholic drinks by different retail outlets in London in March 2008. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting references to the data). The valid points include:

- All three drinks were more expensive in public houses than in the other three retail outlets (see below)
- The price charged by the public house for beer was over twice the price charged by any of the other three retail outlets (£3.00 in a pub but £1.20 in other outlets)
- The price charged by the public house for a glass of wine was over twice the price charged by the two supermarkets but less than twice the price charged by the off-licence (£2.55 in a pub but £1.51-£1.27 in other outlets)
- The price charged by the public house for a measure of spirit was over five times the price charged by any of the other three retail outlets (£2.40 in a pub but £0.43-£0.47 in other outlets)
- The prices charged by the two supermarkets were the same (£1.20 and £1.27) for beer and wine but slightly different for a measure of spirit (Asda £0.43, Tesco £0.47)
- The prices of beer and wine charged by the off-licence were more expensive than the supermarket prices (beer £1.33 compared to £1.20; wine £1.51 compared to £1.27)
- The price charged for a measure of spirit by the off-licence lay between the prices charged by the two supermarkets (£0.45 between £0.43 and £0.47)
- comparison across products

Award only **1 mark** for each supporting reference to the data if there is no reference to the unit of measurement (£s).

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR 02 = 8 MARKS

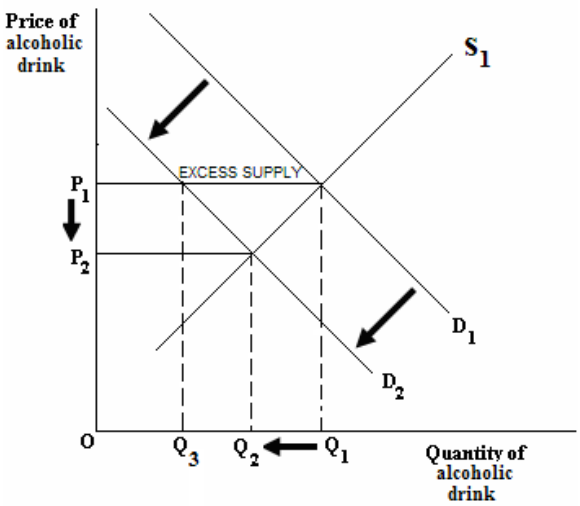
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03	With the help of a demand and supply diagram, explain how an increase in the age limit to 21 might affect the market for alcoholic drinks. *(12 marks)*

When awarding marks for the diagram, it is important to reward candidates who produce a valid response even if it is not the one which is shown below.

The anticipated response for the diagram:

An increase in the age limit to 21 reduces demand for alcoholic drink and hence the diagram should show a leftward shift of the demand curve, leading to a fall in the equilibrium output and price. The supply curve should slope upward, or possibly be vertical.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	**1 mark**
Original demand and supply curves correctly labelled	**1 mark**
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark**
Leftward shift of the demand curve	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess supply at the original equilibrium)	**1 mark per feature up to a maximum of 2 marks**

Up to 6 marks for the diagram

The anticipated written response:

For candidates who

define demand, supply, a market, or any other relevant concept: **Up to 2 marks per definition**

Maximum of 2 marks for definitions

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Explain why the raising of the age limit shifts the demand curve leftward: **Up to 2 marks**

explain why the shift might not be very great, e.g. because removing a 3 year age group has little effect on total demand: **Up to 4 marks**

explain the adjustment to the new equilibrium price, in terms of the response to excess supply in the market: **Up to 4 marks**

For explaining any other relevant point, e.g. different effects on different sub-markets such as bars and supermarkets, illegal under age drinking, impact of elasticities:
Up to 4 marks per point

Up to a MAXIMUM of 8 marks for a written explanation

MAXIMUM FOR 03 = 12 MARKS

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04 Evaluate possible economic policies, **other than** increasing the age limit, that a government might use to reduce significantly the consumption of alcoholic drinks. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 13 marks**.

Candidates who make a genuine attempt at evaluation should be well rewarded. *For this question they are likely to discuss the issue of whether different policies complement each other or are substitutes for each other; and what is a significant reduction in consumption; whether there is a need to reduce consumption for the whole population or just for some groups within the population. Candidates may also discuss the implications of the fact that alcohol is already more expensive in the UK than in many other similar countries; the issue of whether the problem results from culture rather than from price; implications resulting from the categorising of alcoholic drink as a demerit good which markets under-price; long-term versus short-term considerations; the issue of whether government economic policies (or intervention) can be successful; improving versus replacing the market.*

Issues and areas for discussion:

It is anticipated that candidates will draw on the ideas given in Extract B, which discusses taxation and regulation, and in Extract C which draws attention to a need for a change in behaviour. Other relevant policies, such as advertising the adverse effects of alcohol consumption and limiting the number of bars in town centres, and not mentioned in the Extracts. However, they are relevant for discussion.

- Consumption of alcohol as a cause of market failure;
- Alcohol as a demerit good;
- Regulation versus taxation;
- The importance of education and providing drinkers with accurate information;
- Applying the concept of elasticity;
- Government failure arguments;
- Economic policies, e.g. advertising, restriction of availability.

Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Relevant use of diagram(s)
- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR 04 = 25 MARKS

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OR

Question 27 **Total for this question: 50 marks**

05 Define the term 'negative externality' (**Extract E**, line 1). *(5 marks)*

For an acceptable definition e.g.

(i) an adverse consequence of an economic activity that is experienced by third parties
(ii) an adverse spin-off effect resulting from an economic activity
(iii) the effect produced when the social cost of an activity > private cost of the activity, (or when the social benefit of the activity < private benefit of the activity)
(iv) the effect produced when the socially-optimal level of consumption or production > than the privately-optimal level of consumption
(v) the effect produced when social costs are greater than private costs
(vi) an accurate definition of either a production externality, a consumption externality, or a mixed externality

NB Full marks should be awarded to a candidate who demonstrates a clear understanding of the term 'negative externality' even if the definition isn't exactly the same as the six acceptable definitions quoted above. Equally, if this is shown in a diagram, full marks should be awarded. **5 marks**

If the definition is incomplete (or inaccurate), marks can be broken down, for example as follows:

Stating that an externality is generated and received outside the market: **2 marks**

Correctly defining an externality without reference to the word *negative*: **2 marks**

Solely defining a positive externality: **2 marks**

Defining a negative externality as a demerit good: **2 marks**

Providing an example: **2 marks**
(Two marks only for examples, including the example given in the text, however many are given. No marks for examples of positive externalities, unless for some recipients the externality could be positive, but for others, negative, e.g. loud music)

MAXIMUM FOR 05 = 5 MARKS

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06 Compare **two** changes shown in **Extract D** in UK waste production and recycling over the period 1996 to 2006. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting references to the data). The valid points include:

- The total quantity of waste produced increased over the whole of the data period (from approx 450 kilos to approx. 485 kilos)
- The total quantity of waste produced increased in each year between 1996 and 2003 (from approx. 450 kilos to approx. 490 kilos)
- Though in some years the increase was very small (20 kilos in 1996)
- The total quantity of waste produced fell between 2003 and 2006, though in 2005 it rose slightly (overall from approx. 490 kilos to approx 485 kilos)
- The total quantity of un-recycled waste increased every year from 1996 to 2001 or 2002 (from approx. 420 kilos to approx. 430 kilos)
- The total quantity of un-recycled waste decreased every year from 2002 until 2006 (from approx. 420 kilos to 390 kilos)
- The total quantity of recycled waste increased every year from 1996 to 2006 (from approx. 30 kilos to approx. 150 kilos)
- Recycled waste grew as a proportion of the total in each year (from approx. 7% in 1996 to approx. 26% in 2006)

Award only **1 mark** for each supporting reference to the data if there is no reference to the unit of measurement (kilos).

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR 06 = 8 MARKS

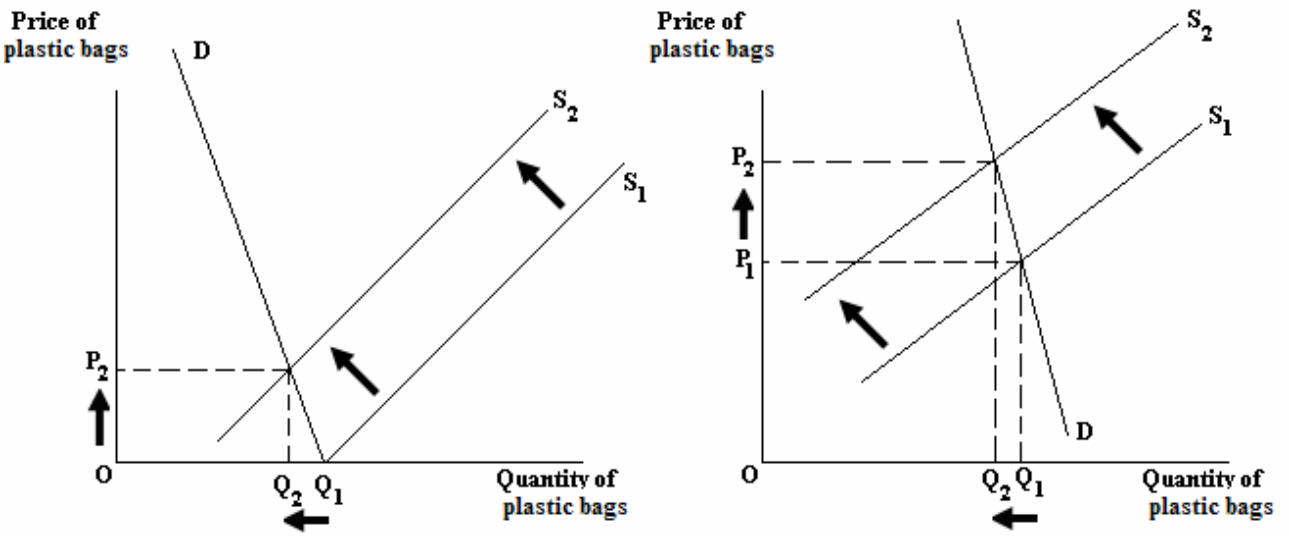
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07 With the help of a demand and supply diagram, explain how a tax on the plastic bags distributed by shops and supermarkets might affect the use of plastic bags. *(12 marks)*

When awarding marks for the diagram, it is important to reward candidates who produce a valid response even if it is not the one of the two that are shown below.

The anticipated response for the diagram:

Two possible diagrams are shown below. In both cases the tax shifts the supply curve leftward or upward. The left-hand diagram assumes that plastic bags were given away free by supermarkets but that the tax leads to a price being charged for the bags. The right-hand diagram assumes that a price was already charged for plastic bags before the tax was imposed. Both diagrams illustrate a unit or specific tax on plastic bag. However a diagram showing an ad valorem tax is also possible.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	**1 mark**
Original demand and supply curves correctly labelled	**1 mark**
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark**
Leftward shift of the supply curve	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	**1 mark**
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium)	**1 mark per feature up to a maximum of 2 marks**

Up to 6 marks for the diagram

The anticipated written response:

For candidates who:

define demand, supply, tax, or any other relevant concept: **Up to 2 marks per definition**

Maximum of 2 marks for definitions

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explain why imposing the tax shifts the supply curve leftward: **Up to 2 marks**

explain why the shift might not be very great, e.g. because the tax may be small: **Up to 4 marks**

explain the adjustment to the new equilibrium price, in terms of the response to excess demand in the market: **Up to 4 marks**

explain any other relevant point, e.g. the willingness of supermarkets to absorb all the tax; supermarkets selling 'bags for life to replace the use of plastic bags'; the growth of home delivery replacing shopping at stores: **Up to 4 marks per point**

Up to a MAXIMUM of 8 marks for a written explanation

MAXIMUM FOR 07 = 12 MARKS

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08 Assess the view that the environmental problems caused by the disposal of rubbish can best be dealt with by market forces rather than by government intervention. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 13 marks**.

Candidates who make a genuine attempt at evaluation should be well rewarded. *For this question they are likely to discuss whether or not people rather than 'disposed of rubbish' are the cause of environmental problems. They may also discuss different methods of disposing of rubbish, who creates the problem, shops or consumers; methods of packaging, designing products that are too expensive to repair, short-run versus long-run considerations; the effects of unintended consequences. Candidates may also discuss the particular problems posed by disposing of plastic bags; whether government controls provide an effective solution; taxation/subsidy as alternatives to controls.*

Issues and areas for discussion:

It is anticipated that candidates will draw on the ideas given in Extract E, which mentions the Irish tax on plastic bags, and in Extract F which also mentions the use of the price mechanism.

- Identification of particular environmental problems, e.g. resource degradation (pollution) and resource depletion (using up scarce resources);
- A general understanding of the meaning of a free market, i.e. a competitive market;
- Understanding and application of the three functions of prices (signalling and rationing/allocative, as well as the incentive function);
- How people's economic behaviour responds to prices;
- Different methods of rubbish disposal;
- Different possible government controls;
- Regulation as a government control;
- Taxation and subsidy as alternatives to controls or regulation;
- How people's economic behaviour responds to government controls;
- Market failure and/or government failure.

Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR 08 = 25 MARKS

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General Certificate of Education
Advanced Subsidiary Examination
January 2009

Economics ECON1

Unit 1 Markets and Market Failure

Friday 16 January 2009 9.00 am to 10.15 am

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Instructions
- In **Section A**, answer **all** questions on your objective test answer sheet.
- In **Section B**, answer **EITHER** Question 26 **OR** Question 27 in your answer book.
- Do all rough work in your answer book, **not** on your objective test answer sheet.

Section A
- Use a black ball-point pen. Do **not** use pencil.

Section B
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A** and 50 marks for **Section B**.
- In **Section A**, each question carries 1 mark. No deductions will be made for wrong answers.
- In **Section B**, the marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

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SECTION A: OBJECTIVE TEST

Answer **all** questions in **Section A**.
Each question carries 1 mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1 Choice is an important element in the basic economic problem because

A wants increase with income.

B incomes are distributed unequally.

C high demand leads to high prices.

D limited resources have alternative uses.

2 A misallocation of resources is most likely to occur in monopoly if

A other firms enter the industry.

B higher prices are charged than under competitive conditions.

C market output increases.

D there are economies of scale.

3 An economy is always productively efficient if it

A continually increases its average standard of living.

B maximises investment in capital goods.

C is operating with full employment of labour.

D can only produce more of one good by producing less of another.

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4 Which one of the following would shift the supply curve for a good to the left?

A decrease in

A demand for the good

B subsidies granted to producers

C the rate of growth of labour productivity

D the elasticity of supply of the good

5 Negative externalities exist in a market for a good giving rise to a misallocation of resources. This misallocation is most likely to have resulted from

A the product being over-priced.

B over-production of the product.

C too little consumption of the product.

D too few resources devoted to producing the product.

6 In a buffer-stock scheme

A an organisation might buy in the open market to maintain a minimum price in the market for a product.

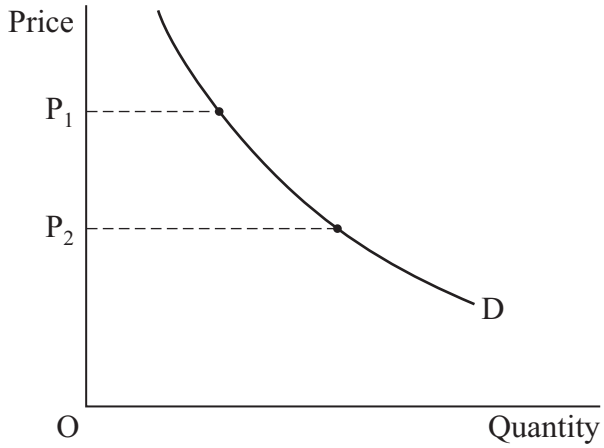
B governments restrict supplies of a product coming onto an open market in order to lower prices of the product.

C buffer stocks are kept to sell if the price of a product starts to fall.

D buffer stocks are sold when there are surpluses in the market.

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7 The diagram below shows the market demand curve for apples.



Assuming OP_1 to be the original equilibrium price, a decrease in price to OP_2 could have been caused by a decrease in

A the wages of apple pickers.

B real incomes in the economy.

C the price of substitutes.

D the popularity of apples.

8 The table below shows estimates of UK consumers' income elasticity of demand for holidays in four different countries.

Country	Income elasticity of demand
China	0.8
Peru	1.0
Italy	1.4
Spain	2.0

From the data it may be concluded that a 10% rise in real incomes would lead to

A a fall in demand for holidays in China.

B no change in demand for holidays in Peru.

C a 14% increase in demand for holidays in Italy.

D a 2% increase in demand for holidays in Spain.

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9 Which one of the following situations would lead to an increase in equilibrium price?

A Demand is perfectly inelastic and a firm's labour costs fall.

B Demand is perfectly elastic and a firm's labour costs rise.

C Supply is perfectly elastic and the price of a substitute good falls.

D Demand is perfectly inelastic and a firm's labour costs rise.

10 Which one of the following is true?

A A positive statement is one which can be tested against the facts.

B A positive statement is one which never contains words such as 'could' or 'should'.

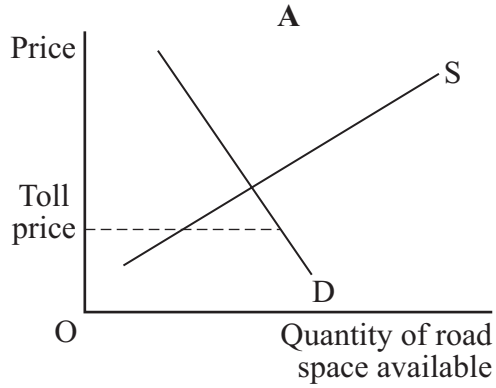
C A normative statement is one which can be scientifically proven to be true or false.

D A normative statement is one which never contains words such as 'is' or 'will' or 'always'.

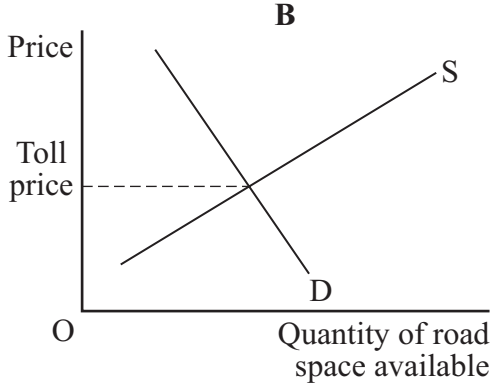
11 In 2003, a new motorway, the M6 Toll Road, was opened to the east of Birmingham. To use this motorway, drivers are currently charged a fee of up to £9 per vehicle. The price has led to there being considerable excess capacity on the motorway.

Which one of the following diagrams, **A**, **B**, **C** or **D**, shows that there is 'excess capacity on the motorway'?

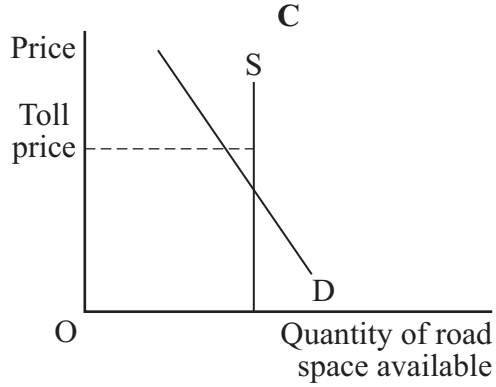
A



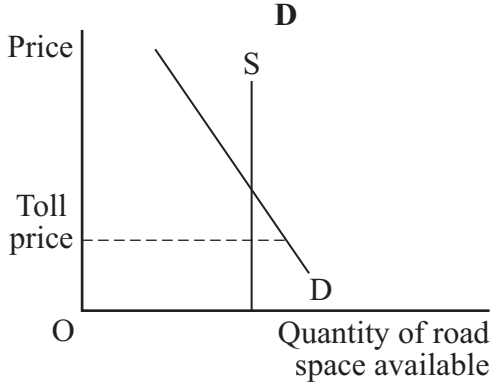
B



C



D



Turn over ▸

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12 The price mechanism helps to allocate resources efficiently because

A it results in lower rewards being paid to factors of production when demand for the output they produce increases.

B it will lead to a distribution of output amongst individuals on the basis of greatest need.

C the prices of non-renewable resources will tend to rise as the stock of such resources nears depletion.

D it will always ensure that competition between firms prevents high profits being earned.

13 The cross elasticity of demand between two complementary products is always

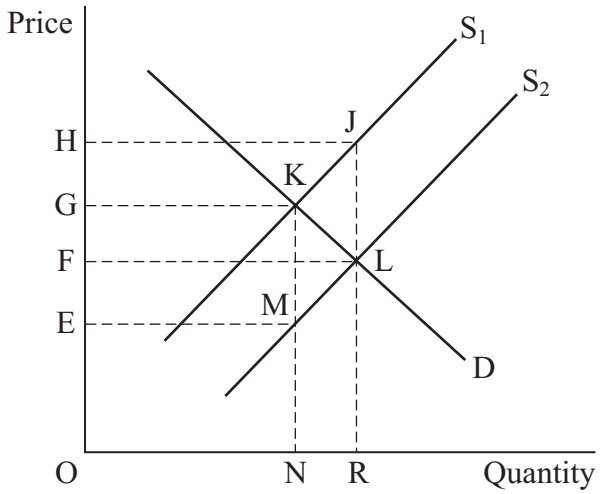
A negative.

B positive.

C zero.

D greater than 1.

14 In the diagram below, the government grants a subsidy to manufacturers of loft insulation. This shifts the market supply curve from S_1 to S_2.



The total amount spent by the government on subsidies is represented by the area

A OHJR.

B FHJL.

C OFLR.

D EGKM.

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15 Which one of the following is an appropriate form of government intervention for the problem identified?

A The introduction of pollution permits to limit positive externalities

B The use of a buffer-stock scheme to stabilise the price of a public good

C The imposition of a maximum price for a merit good

D The provision of a subsidy for a product which generates negative externalities

16 Which one of the following is associated with a missing market?

A A monopoly restricting output

B The production of a negative externality

C A firm deciding to produce a private good

D A government subsidising agricultural production

17 At current levels of output, the marginal social benefit of a good is greater than its marginal private benefit. As a result, there are likely to be

A positive externalities in consumption.

B positive externalities in production.

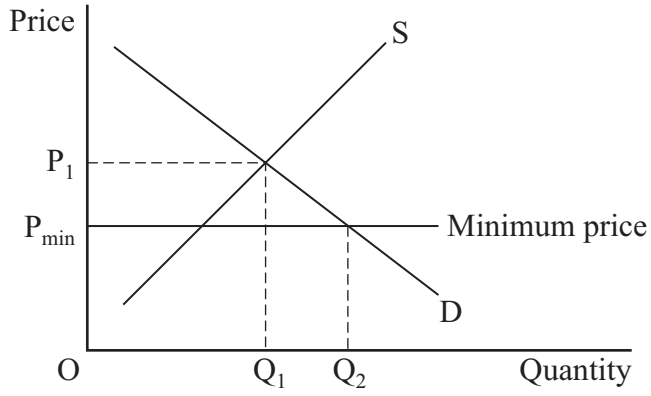
C negative externalities in consumption.

D negative externalities in production.

Turn over for the next question

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18 The diagram below shows the supply and demand curves for sugar.



Price is initially at P_1. If the producers now set a minimum price of OP_{min}, what effect would this have?

A Equilibrium price and quantity would remain at OP_1 and OQ_1.

B It would encourage suppliers to increase production from OQ_1 to OQ_2.

C The amount sold would increase from OQ_1 to OQ_2.

D The market price would fall from OP_1 to OP_{min}.

19 An airline announces that it is 'slashing fares on all of its flights'. Given a fare reduction of 35%, what would be the expected percentage rise in demand for those flights if the company has estimated their price elasticity of demand is -2.0?

A 17.5

B 175.0

C 7.0

D 70.0

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20 'Electricity suppliers are required to buy a growing amount of electricity from renewable energy generators. By 2010, this must amount to at least 10 per cent of total electricity bought from all generators. Green energy generators are paid more for their electricity because there is a scarcity of supply of electricity generated from renewable resources.'

It can be deduced from the data above that

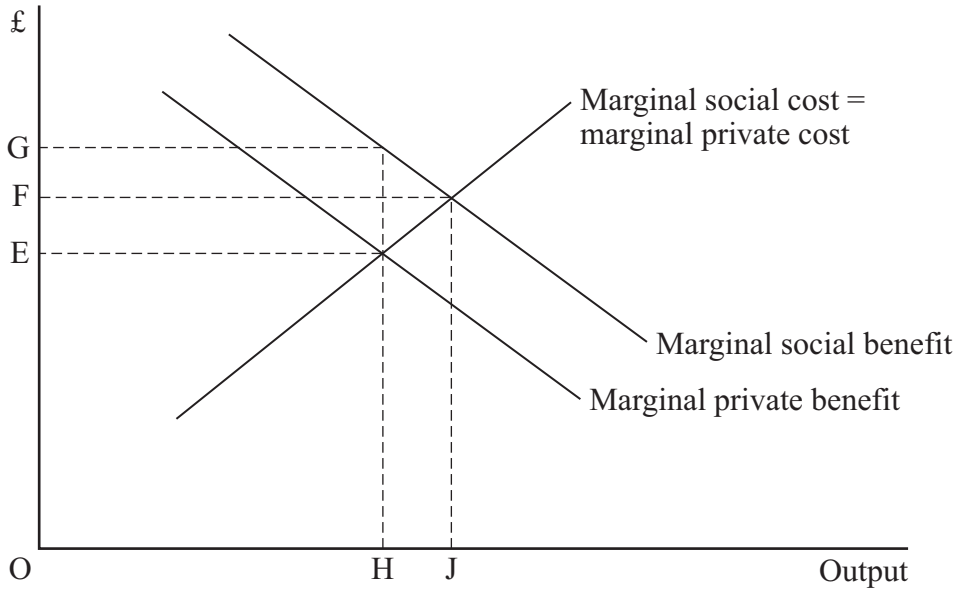
A the government is subsidising the production of renewable energy.

B the social cost of electricity generated from renewable resources is greater than the private cost.

C the government is subsidising the negative externalities arising from the production of 'green energy'.

D electricity suppliers are paying higher average prices for their electricity because some of the electricity is generated from 'green sources'.

21 The diagram below shows the market for a merit good.



In the absence of government intervention in this market, a misallocation of resources is likely to occur because

A the free market price will be too high.

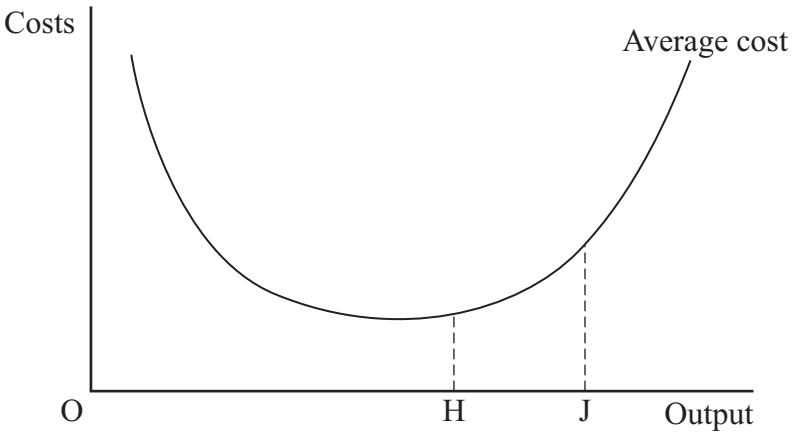
B there will be over-production of the good of HJ.

C the free market output will be too high.

D there will be under-consumption of the good of HJ.

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22 The diagram below shows how a firm's average costs change as it employs more of all its factors of production, including capital and labour.



As the firm increases its output from OH to OJ, the diagram illustrates

A the benefits of monopoly power.

B the benefits of increased specialisation.

C diseconomies of scale.

D increased productive efficiency.

23 The table below gives information on the supply of, and demand for, potatoes over a range of market prices. The market is managed through a buffer-stock scheme.

Price £/kilo	**Quantity demanded 000 kilos per week**	**Quantity supplied 000 kilos per week**
6	6	3
9	4	4
12	3	5

If the manager of the buffer-stock scheme for potatoes decided to establish a minimum price of £12 per kilo, this would require that

A the production of potatoes be subsidised.

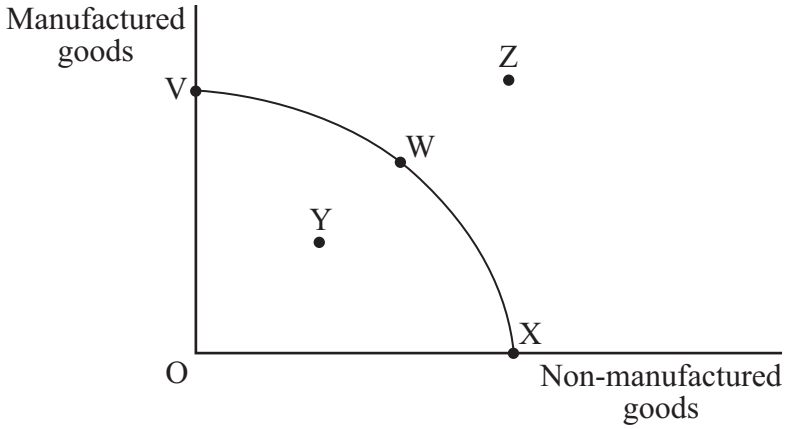
B a tax be imposed on consumers of potatoes.

C potatoes be released from the buffer stock.

D potatoes be purchased for the buffer stock.

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24 The diagram below shows a country's production possibility curve.



Which one of the following combinations of manufactured and non-manufactured goods could currently be produced?

A Only W and Y

B Only V, W and X

C Only V, W, X and Y

D V, W, X, Y and Z

25 One reason why specialisation raises labour productivity is because

A specialisation shifts the production possibility boundary to the left.

B labour replaces capital to produce goods and services.

C specialisation requires an economy to produce on its production possibility boundary.

D the division of labour makes it cost-effective to provide workers with specialist equipment.

QUESTION 25 IS THE LAST QUESTION IN SECTION A

On your answer sheet ignore rows 26 to 50

TURN OVER FOR SECTION B

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SECTION B: DATA RESPONSE

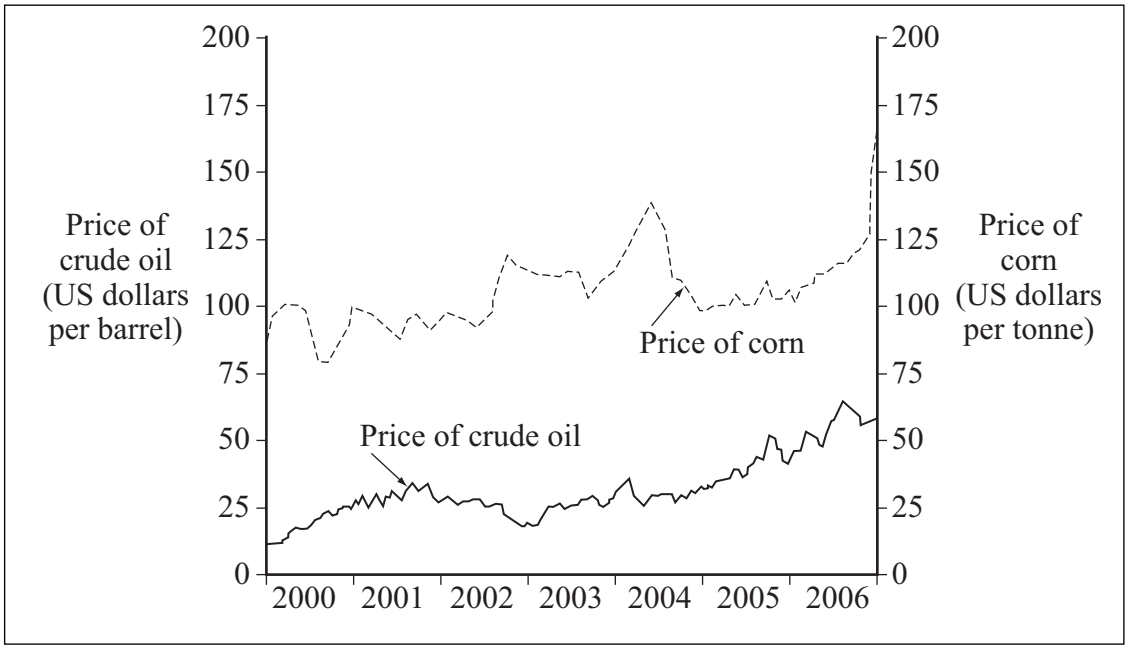
Answer **EITHER** Question 26 **OR** Question 27.
You are advised to spend at least 50 minutes on **Section B**.

EITHER

Total for this question: 50 marks

26 Study **Extracts A**, **B and C**, and then answer **all** parts of Question 26 which follows.

Extract A: Changes in the prices of crude oil and corn, 2000-2006



Extract B: Grain prices go the way of the oil price

In 2007, the prices of grains and crude oil hit ten-year highs. The rising price of oil stems partly from the fact that world oil supplies are running out. But why should grain prices continue to increase? Farmers should be able to meet increased demand for grains such as corn (maize) and wheat simply by growing more. Indeed, more grains are being grown, but demand has grown even faster.

Grains are used as food, both for people and for livestock. In countries such as China incomes are rising. As incomes rise, people eat more meat. This in turn leads to an increase in demand for grains that are used for animal feed. It is also worth noting that the income elasticity of demand for grains is probably positive.

A second reason for rising grain prices lies in increased demand for bio-fuels such as ethanol. Bio-fuels made from corn, wheat, and from other crops are substitutes for petrol and diesel fuel. Since 2000, demand for corn used to make ethanol has risen by over 300 per cent in the USA. Over 20 per cent of US corn is now used as the raw material for ethanol. Governments in forty other countries are promoting the use of bio-fuels to reduce dependency on oil imported from countries such as Iran and Venezuela.

Source: news reports

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Extract C: Italians urged to go on pasta strike

Pasta is made from wheat. An increase in the price of wheat in recent months has forced pasta manufacturers to increase the prices they charge for pasta products such as spaghetti. Italian supermarkets may increase the price of pasta by 20 per cent by the end of 2007.

Pasta is a national dish in Italy, with each Italian eating on average 28kg of pasta every year. According to Furio Bragagnolo, vice president of the Italian Pasta Manufacturers' Association, a plate of pasta 'probably costs less than an apple'. However, the big Italian pasta manufacturers have been accused of using their monopoly power to force up the price of pasta.

Italian consumer associations have asked the Italian government to intervene in the pasta market to reduce the prices of goods such as spaghetti. The groups have also asked people to refrain from buying or eating pasta products for a day, in protest against the recent price increases.

Global warming and the growing use of wheat as a bio-fuel are blamed for the steep rise in pasta prices.

Source: news reports

Question 26

26 (a) Define the term 'income elasticity of demand' (**Extract B**, line 9). *(5 marks)*

(b) Using **Extract A**, compare the changes in the prices of crude oil and corn over the period shown. *(8 marks)*

(c) With the help of a demand and supply diagram and using the information in **Extract B**, explain why the prices of grains such as corn and wheat were rising in 2007. *(12 marks)*

(d) 'Italian consumer associations have asked the Italian government to intervene in the pasta market to reduce the prices of goods such as spaghetti' (**Extract C**, lines 10-11).

Using the data and your economic knowledge, evaluate the economic case **for** and **against** the Italian government intervening in the pasta market to try to reduce pasta prices. *(25 marks)*

Turn over for the next question

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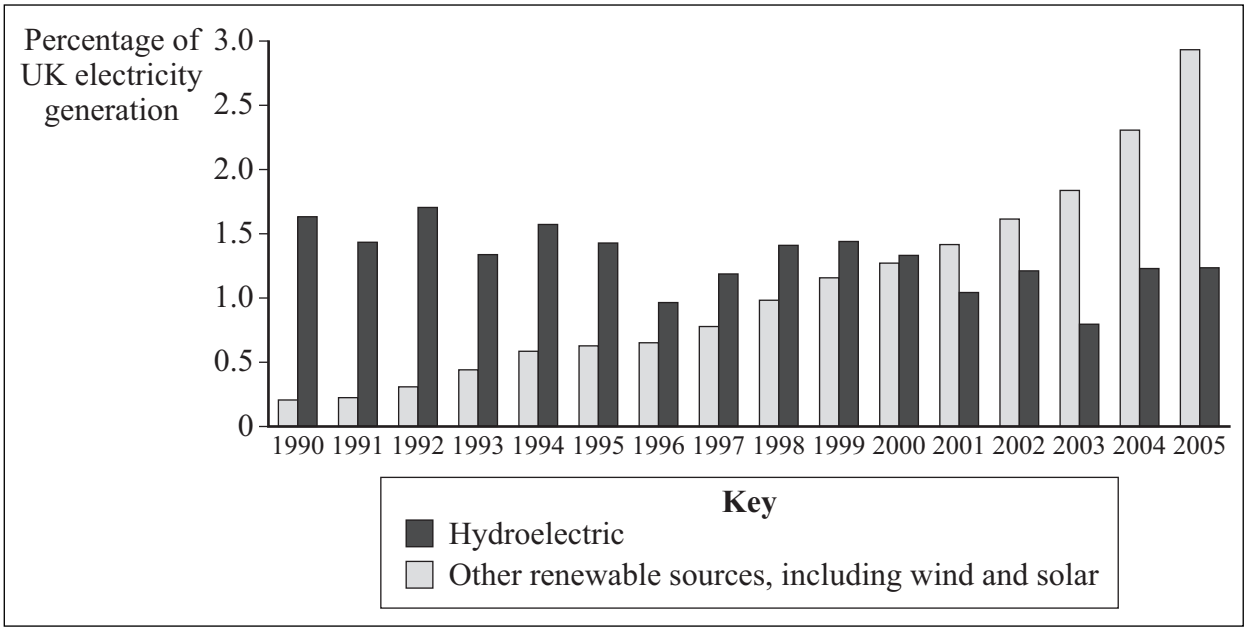
Do **not** answer Question 27 if you have answered Question 26.

OR

Total for this question: 50 marks

27 Study **Extracts D, E and F**, and then answer **all** parts of Question 27 which follows.

Extract D: Changes in electricity generation from renewable sources, as a percentage of total UK electricity generation, 1990-2005



Source: *Meeting the Energy Challenge*, Department for Business, Enterprise and Regulatory Reform, 2007

Extract E: Generating electricity from wind and solar power

Wind farms cost more to build than power stations of similar capacity that burn fossil fuels. However, once wind turbines have been built, generating electricity from wind energy does not require the purchase of fuel. The lack of future fuel costs will probably significantly outweigh the extra initial investment cost. Generating electricity from wind energy has become commercially viable. There is no need for the government to grant a subsidy, provided that fossil-fuel prices continue to remain high, and provided also that the 'wind potential' of a prospective turbine site is adequate.

Nevertheless, four problems have had to be overcome to make wind power attractive as a commercial venture which markets, rather than the government, can provide. The first is wind variability. The second is turbine size. The third is the cost of transmitting electricity from Scotland, where the best sites are located, to the main market in England. Lastly, there is the negative externality of 'eyesore' or visual pollution.

Solar power is another source of renewable energy. At present, electricity produced from solar power is at least two to three times as expensive as electricity produced from conventional sources. This means that solar power is not as yet a practical source of energy for power station companies.

Source: news reports, 2007/8

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Extract F: The UK should be investing much more in renewable energy

Britain has a huge potential for wind, wave and tidal power. These sources of renewable energy could meet all the United Kingdom's energy needs several times over. Because of this potential, the UK ought to be a world leader in the development and use of renewable energy. The country would benefit from sources of energy that use no fuel and never run out. Local production of renewable energy would also reduce the need to import oil from countries that may not always wish the UK well. The UK could also gain an economic advantage from being at the forefront of fast-growing new technologies.

But instead, the UK lies near the bottom of the EU league table for developing sources of renewable energy. Is this the fault of markets or the government? According to environmental pressure groups such as Greenpeace, the UK government has been a follower rather than a leader, held back by policy indecision and by its attraction to nuclear power.

Source: news reports, 2007/8

Question 27

27 (a) Define the term 'subsidy' (**Extract E**, line 6). *(5 marks)*

(b) Using **Extract D**, compare the changes in electricity generation from hydroelectric and other renewable sources as proportions of total UK electricity generation over the period 1990 to 2005. *(8 marks)*

(c) **Extract E** (line 12) states that wind turbines lead to the "negative externality of 'eyesore' or visual pollution".

With the use of a diagram, explain how the building of wind turbines may affect house prices in the area in which the wind turbines are located. *(12 marks)*

(d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** leaving the provision of renewable energy to market forces. *(25 marks)*

END OF QUESTIONS

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There are no questions printed on this page

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Version 1.0:2/2009



General Certificate of Education

Economics 1141

ECON1: Markets and Market Failure

Mark Scheme

2009 examination - January series

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Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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Dr Michael Cresswell Director General

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Advance Subsidiary Economics Unit 1

Section A: Objective Test

January 2009

The following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

1.	**D**	**11.**	**C**	**21**	**D**
2.	**B**	**12.**	**C**	**22**	**C**
3.	**D**	**13.**	**A**	**23**	**D**
4.	**B**	**14.**	**B**	**24**	**C**
5.	**B**	**15.**	**C**	**25**	**D**
6.	**A**	**16.**	**B**		
7.	**A**	**17.**	**A**		
8.	**C**	**18.**	**A**		
9.	**D**	**19.**	**D**		
10.	**A**	**20.**	**D**		

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Advanced Subsidiary Economics Unit 1

Section B: Data Response

January 2009

General Instructions

Marks awarded to candidates should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the candidate to score full marks in a variety of ways. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

Two approaches have been used in the construction of the mark scheme:

(i) **An issue based approach.** The mark scheme for parts (a), (b) and (c) of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the candidate might include in the answer.

(ii) **A levels approach.** This approach is used for marking part (d) of the data response questions. The Levels Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (e.g. 14 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

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THE LEVELS MARK SCHEME FOR AS

Level Descriptions

In part (d) of the data response questions, approximately half the marks are available to award to candidates who demonstrate that they can evaluate economic arguments and evidence, and make informed judgements. An answer showing no evidence of evaluation, however good the analysis, should be awarded a maximum of 13 marks (in Level 3). The quality of evaluation should be the sole distinction between a Level 4 and Level 5 answer. It is not necessary for the answer to identify a wide range of issues to score the top mark. As indicated below, the **Quality of Written Communication** used should be taken into account when awarding marks.

Level 1: A very weak answer

Few, if any, relevant issues are recognised. Economic concepts and principles are not adequately understood or applied to the question. No satisfactory analysis or evaluation. There might be some evidence of organisation in the answer but generally it fails to answer the question. Descriptions and explanations lack clarity. Spelling, punctuation and grammar may be poor. There is little use of economic terminology. **0 to 6 marks**

Mid-Point 4 marks

Level 2: A poor answer but some understanding is shown

One or more relevant issues are recognised. An attempt is made to use basic economic concepts to answer the question but the candidate's explanation may become confused and analysis will therefore be very limited. There may be some attempt to present alternative points of view but any attempt at evaluation is limited or superficial. There is some logic and coherence in the organisation of the answer. The candidate demonstrates some ability to spell commonly used words and to follow the standard conventions of punctuation and grammar. Some use of economic terminology is made but this is not always applied appropriately. **7 to 11 marks**

Mid-Point 9 marks

Level 3: An adequate answer with some correct analysis but very limited evaluation

Two or more relevant issues are recognised. The candidate has made a reasonable attempt to apply economic concepts and ideas. A satisfactory understanding of some basic economic concepts and theories is demonstrated and there is some evidence that the candidate can analyse issues. There will be some attempt to present alternative points of view and to evaluate the issues, arguments and/or data. There is some logic and coherence in the organisation of the answer. The candidate is generally able to spell commonly used words and usually follows the standard conventions of punctuation and grammar. Some descriptions and explanations are easy to understand, but the answer may not be expressed clearly throughout. There is some evidence of the correct use of relevant economic terminology. **12 to 16 marks**

Mid-Point 14 marks

Level 4: Good analysis but limited evaluation

Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Some appreciation of alternative points of view is shown. Satisfactory use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology. **17 to 21 marks**

Mid-Point 19 marks

Level 5: Good analysis and evaluation

Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Clear understanding of alternative points of view is shown. Good use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. A clear final judgement is made. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology. **22 to 25 marks**

Mid-Point 24 marks

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THE KEY TO BE USED WHEN USING THE LEVELS MARK SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the candidate to answer the question properly.

I Where a relevant **ISSUE** is raised by the candidate.

K Where the candidate demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.

Ap Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

A Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

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26 **Total for this question: 50 marks**

26 (a) Define the term 'income elasticity of demand' (**Extract B**, line 9). *(5 marks)*

For an acceptable definition (e.g. correct formula, or a sentence stating the income elasticity of demand measures the proportionate or percentage change in quantity demanded following an initial change in income, or a sentence stating that income elasticity of demand measures the responsiveness of demand following an initial change in income): **5 marks**

Correct formula is:

$$\text{Income elasticity of demand} = \frac{\text{proportionate or percentage change in quantity demanded}}{\text{proportionate or percentage change in income}}$$

If the definition is incomplete, marks may be broken down, for example as follows:

Formula correct **except** refers to absolute rather than percentage (proportionate) changes in income and demand: **2 marks**

Correct formula for **one** of the other elasticities: **2 marks**

No marks for an 'upside – down' formula, or for a statement that elasticity measures how demand affects income.

This mark scheme does not allow examiners to award 1 mark for a point. Examiners must award either 0 or 2 for each point made by the candidate.

MAXIMUM FOR PART (a) 5 MARKS

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26 (b) Using **Extract A**, compare the changes in the prices of crude oil and corn over the period shown. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting reference(s) to the data). The valid points include:

- The prices of both crude oil and corn increased over the whole period, e.g. from $11 to $60 a barrel in the case of oil, and from about $90 to about $162 dollars a tonne in the case of corn
- The prices of both crude oil and corn fluctuated up and down during the whole period
- The price of both crude oil and corn reached their peaks in 2006
- The price of both goods reached their lowest points at roughly the same time in 2000, though the price of corn fell and rose significantly in 2000
- The price of crude oil ranged from a high of about $68 a barrel to a low of about $11 a barrel whereas the price of corn ranged from a high of just over $165 a tonne to a low of about $77 a tonne
- Both prices were rising towards the end of the period, though the crude oil price dipped for a time in 2006

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

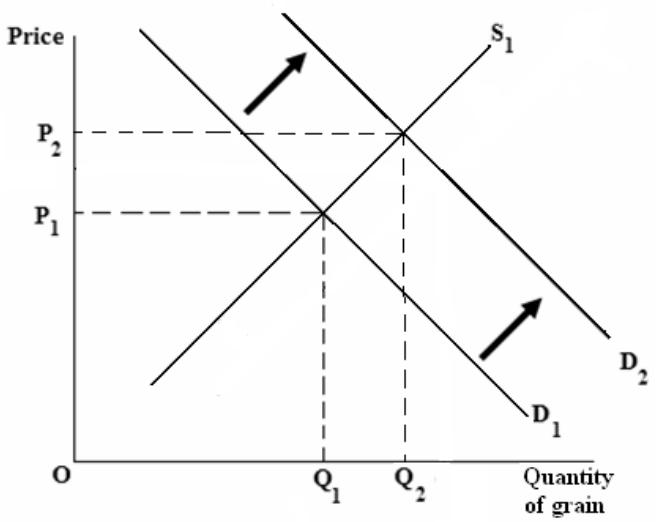
MAXIMUM FOR PART (b) 8 MARKS

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26 (c) With the help of a demand and supply diagram and using the information in **Extract B**, explain why the prices of grains such as corn and wheat were rising in 2007. *(12 marks)*

The anticipated response for the diagram:

Candidates may draw a diagram similar to the one below. The diagram shows a rightward shift in the demand curve for grain.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	**1 mark**
Original demand and supply curves correctly labelled	**1 mark**
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark**
Rightward shift of the demand curve	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	**1 mark**

Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium *after* the demand curve has shifted)

1 mark per feature up to a maximum of 2 marks

Up to 6 marks for the diagram

Up to 6 marks for the diagram

Note: some candidates may draw a diagram showing demand for, and supply of, grain solely as a foodstuff. In such a diagram, the supply curve could shift leftward as supply is diverted away from food and into biofuel production. Reward such an approach with a maximum of 6 marks for the diagram

Also, since Extract B states *'Farmers should be able to meet increased demand for grains such as corn (maize) and wheat simply by growing more'*, some candidates may draw diagrams in which both the demand and supply curves shift rightward, but with the shift of supply being less than the shift of demand'. Reward such diagrams.

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The anticipated written response:

For candidates who

define demand and/or supply: **Up to 2 marks per definition**
Maximum of 2 marks for definitions

explain why the demand curve for grains shifts rightward because of the increased use of grain in biofuel **Up to 4 marks**

explain why the demand curve for grains shifts rightward because richer consumers eating more food: **Up to 4 marks**

explain why the demand curve for grains shifts rightward because of richer consumers eating more meat which requires increased use of grain as an animal feed: **Up to 4 marks**

explain the adjustment to the new equilibrium price: **Up to 4 marks**

explain any other relevant point, e.g. the rightward shift of demand must have been greater than the rightward shift of supply for the prices of grains to rise:
Up to 4 marks per point

Up to a MAXIMUM of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

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26 (d) 'Italian consumer associations have asked the Italian government to intervene in the pasta market to reduce the prices of goods such as spaghetti' (**Extract C**, lines 10-11).

Using the data and your economic knowledge, evaluate the economic case **for** and **against** the Italian government intervening in the pasta market to try to reduce pasta prices. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 13 marks**.

Examples of evaluation include: considering the effectiveness of different forms of intervention; debating whether the increase in pasta prices results from short-lived or more permanent underlying causes; assessing the opportunity cost of intervention; considering the effect on economic efficiency.

A maximum of **21 marks** should be awarded if there is no **explicit** reference to the data.

Issues and areas for discussion include:

- Methods of intervention such as subsidy and price ceilings;
- Effect on relative prices in Italy;
- Effect on pasta producers and farmers in Italy and elsewhere;
- Effect on economic efficiency and resource allocation;
- Opportunity cost arguments;
- Distributional effects;
- Short-term versus long-term considerations;
- Market failure considerations
- Government failure considerations

The issues identified above are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these issues in the time available.

Also give credit for:

- Use of diagrams
- Relevant use of the data
- Reference to the UK and/or other economies
- Real world examples

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS

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27 **Total for this question: 50 marks**

27 (a) Define the term 'subsidy' (**Extract E**, line 6). *(5 marks)*

For an acceptable definition (e.g. a payment that reduces the cost or price of a good or service) **5 marks**

Note: Many answers will define a subsidy paid by the government to a firm, but a correct definition of a cross-subsidy through which profit on one good subsides the price of a second good, or of a subsidy paid to consumers can also earn 5 marks.

If the definition is incomplete, marks may be broken down, for example as follows:

As the cause of a rightward or downward shift of a supply curve, or an accurate diagram: **2 marks**

A payment of money: **2 marks**

As the opposite of a tax: **2 marks**

This mark scheme does not allow examiners to award a total of 1 mark. Examiners must award either 0 or 2 etc.

MAXIMUM FOR PART (a) 5 MARKS

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27 (b) Using **Extract D**, compare the changes in electricity generation from hydroelectric and other renewable sources as proportions of total UK electricity generation over the period 1990 to 2005. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting reference(s) to the data). The valid points include:

- Hydro power's contribution to total UK electricity generation fell over the period, from about 1.7% to about 1.3%, whereas the contribution of other renewable energy sources rose from about 0.25% to about 2.9%
- In all the years, other renewable resources' contribution rose, e.g. from about 2.25% to about 2.9% between 2004 and 2005, whereas hydro's contribution fluctuated, e.g. falling from about 1.25% to about 0.7% between 2002 and 2003, which was followed by an increase to back to about 1.25% in 2004
- Other renewable resources' contribution was below that of hydro between 1990 and 2000, but overtook hydro power's contribution in 2001
- The range between the highest and lowest contribution for hydro was about 1.7% minus about 1.3%, or 0.4%, whereas that for other sources of energy was greater at about 2.9% minus 0.25%, or 2.65%

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR PART (b) 8 MARKS

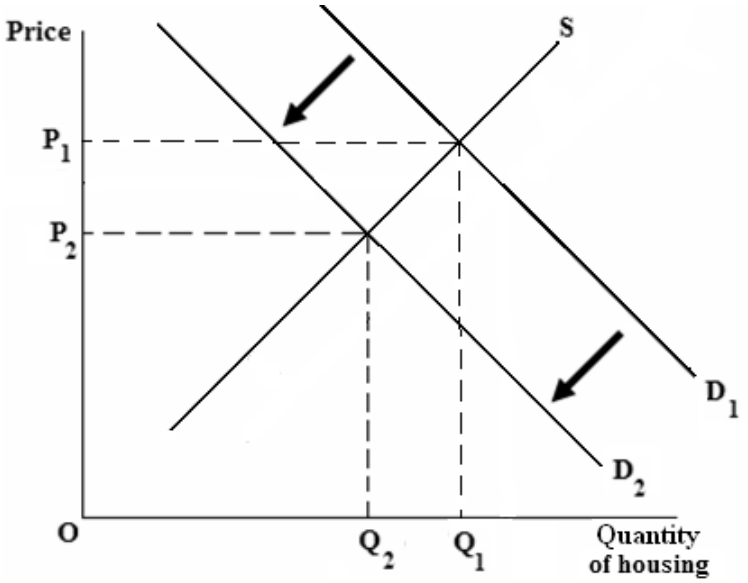
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27 (c) **Extract E** (lines 12) states that wind turbines lead to the "negative externality of 'eyesore' or visual pollution".

With the use of a diagram, explain how the building of wind turbines may affect house prices in the area in which the wind turbines are located. *(12 marks)*

The anticipated response for the diagram:

Candidates may draw a diagram similar to the one below. The diagram shows a leftward shift in the demand curve for housing.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	**1 mark**
Original demand and supply curves correctly labelled	**1 mark**
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	**1 mark**
Leftward shift of the demand curve	**2 marks**
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	**1 mark**

Any other relevant feature of the diagram (e.g. the amount of excess supply at the original equilibrium *after* the demand curve has shifted)

1 mark per feature up to a maximum of 2 marks

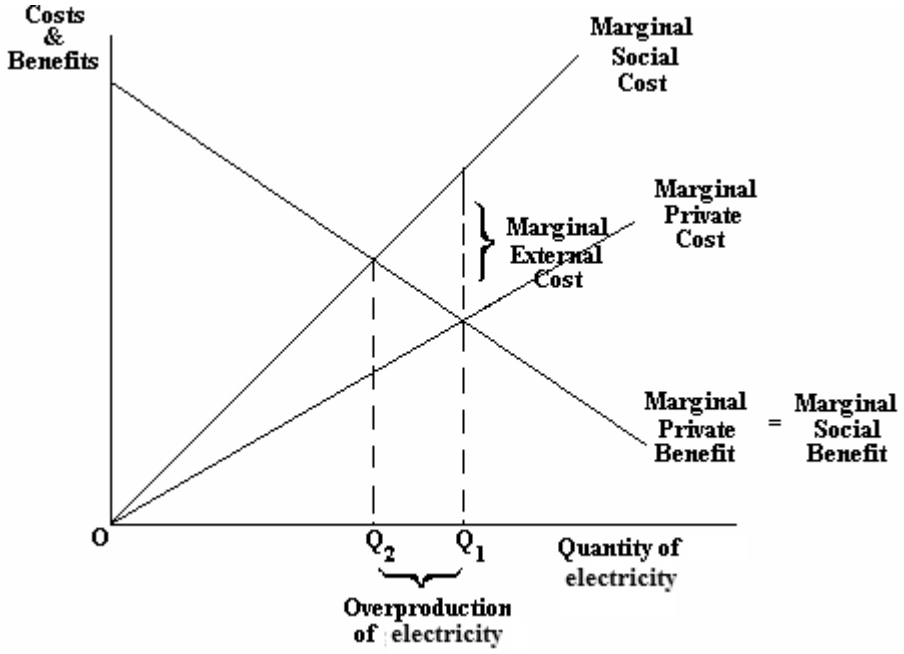
Up to 6 marks for the diagram

Note: some candidates may draw a diagram based on the assumption that the demand curve for housing shifts rightward, because houses are needed for workers building and/or maintaining the wind turbines, and/or because the wind turbines become a tourist attraction. Allow marks for such a diagram provided the diagram is consistent with the written explanation provided.

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Some candidates may use a marginal cost and benefit diagram, such as the diagram below, rather than a demand and supply diagram. An appropriate diagram should show the marginal external cost of producing electricity (from wind turbines). The diagram should *not* have labels relating to the housing market on the axes of the diagram.

The diagram shows the marginal private costs, the marginal external costs, and the marginal social costs incurred when producing electricity (from wind turbines).



Breakdown of the marks for the diagram:

Axes labelled (quantity or output, costs and benefits, Q and £ will do)	**1 mark**
MPB and MPC curves correctly labelled	**1 mark**
Clear indication of MSC being above MPC:	**1 mark**
Quantity co-ordinate drawn in where MPB = MPC	**1 mark**
Quantity co-ordinate drawn in where MSB = MSC	**1 mark**
Indication of marginal external cost:	**1 mark**
Indication of overproduction of the good (or explicit indication of privately optimal and socially optimal levels of production:	**2 marks**

Up to 6 marks for the diagram

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The anticipated written response:

For candidates who

define externality/or negative externality: **Up to 2 marks per definition**
Maximum of 2 marks for definitions

For candidates who, for the written explanation:

explain why the demand curve for housing shifts leftward because 'eyesore' pollution makes it less attractive to live in the area where the turbines are located: **Up to 4 marks**

explain why the demand curve for housing shifts leftward because of a decline in the demand for workers in tourist industries: **Up to 4 marks**

explain why the demand curve for housing may shift rightward because construction and/or maintenance workers for the turbines need housing: **Up to 4 marks**

explain the adjustment to the new equilibrium price: **Up to 4 marks**

explain any other relevant point, e.g. the possible effect of the price elasticity of supply of housing; **Up to 4 marks per point**

Maximum of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

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27 (d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** leaving the provision of renewable energy to market forces. *(25 marks)*

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 13 marks**.

Examples of evaluation include: arguing that market forces can effectively supply wind energy but not other forms of renewable energy such as wave energy; arguing that markets are prone to take account only of short-term and not long-term considerations; the 'level playing field' argument that non-renewable energy sources may be, or are, subsidised so renewable energy should also be subsidised; debating what 'market forces' means, i.e. does the question relate to non-market provision or to subsidised market provision?

A maximum of **21 marks** should be awarded if there is no **explicit** reference to the data.

Issues and areas for discussion include:

- The world's and the UK's future energy crisis when non-renewable fuels run out;
- The negative externalities discharged by both renewable and non-renewable fuels;
- The ability of the market to provide renewable energy;
- How the market mechanism can, in principle, lead to the development and use of alternative, clean, energy sources, through changes in relative prices, incentive effects and the profit motive;
- Discussion of whether the market mechanism can produce *sufficient* renewable energy;
- The market is likely to be better at producing *some* renewable energy, e.g. wind energy, but *not others*, e.g. wave energy;
- Nuclear energy as an alternative, and/or is nuclear energy renewable?
- Short-term versus long-term considerations;
- Market failure considerations;
- Government failure considerations.

The issues identified above are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these issues in the time available.

Also give credit for:

- Use of diagrams
- Relevant use of the data
- Reference to the UK and/or other economies
- Real world examples

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS

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