OCR A-LEVEL ECONOMICS

# ECONOMICS



EXAM QUESTION PACK

UNIT F581 OLD SPECIFICATION PAPERS

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Oxford Cambridge and RSA

# Monday 16 May 2016 – Morning

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used

**Duration:** 1 hour 30 minutes

* F 5 8 1 0 1 *

| Candidate forename | | Candidate surname | |
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| Centre number | | | | | | Candidate number | | | | |
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### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to the question labelled with an asterisk (*****).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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**Turn over**

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**2**

## Controlling Carbon Emissions

Emissions trading is a modern market-based approach to controlling pollution. Traditional methods to control pollution have been regulation, based on the threat of penalties, or taxation to increase the price of fuel. By creating tradable pollution permits, the new method combines regulation and the profit motive as an incentive for good performance.

Developed in the 1970s and 1980s, emissions trading was introduced initially to combat acid rain. More recently it has grown in prominence as a way of tackling greenhouse gas emissions linked to climate change.

The main form of emissions trading is known as 'cap and trade'. A cap on emissions is set and then permits are created up to the level of this limit. These permits are then allocated or sold by a central authority. The companies or other entities covered by the scheme need to buy one permit for every tonne of pollution they emit. The cap may be reduced year by year, reducing the availability of permits. Allowing a trade in these permits effectively puts a price on pollution. It creates flexibility as to how, and where, pollution is reduced by allowing producers to buy and sell permits.

In theory, setting a limit on pollution and allowing the market mechanism to decide how to stay within that limit is ideally suited to reducing carbon emissions. These carbon emissions come from almost all forms of economic activity and often have global effects. The market should ensure that the emissions cuts happen at the lowest possible cost. So the system works through the creation of incentives to reduce pollution in order to increase profits.

However, critics often emphasise the degree to which emissions trading has been weakened by inappropriate caps, free handouts of permits to the biggest polluters, and the purchase of 'offsets'. Offsets are carbon credits bought from outside the cap and trade system from carbon reduction projects in the developing world.

So far, carbon trading schemes have been aimed at producers. Policies to reduce domestic fuel consumption and therefore cut carbon emissions have focused on raising indirect taxes. However, the effectiveness of this policy has been questioned. In recent years, the relative impacts of fuel price increases and income changes on demand for domestic fuel are unclear.

| Year | Price of domestic fuel (gas and electricity) | Demand for domestic fuel | Average household income |
|---|---|---|---|
| **2011** | +4.8% | –20.0% | –5.0% |
| **2012** | +5.5% | +12.5% | +0.9% |
| **2013** | +5.7% | +0.1% | +0.3% |

**Fig. 1 Changes in European domestic energy prices, demand for domestic fuel and average household income, compared with previous year**

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Answer **all** questions.

**1** **(a)** What is meant by the term 'the market mechanism'? (line 15)

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..... **[2]**

**(b)** Describe how a competitive market would react to excess supply.

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..... **[4]**

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**(c)** Using a demand and supply diagram, explain how an increase in taxes on domestic fuel will affect the domestic fuel market.




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..... **[6]**

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**2** **(a)** Give the formula for income elasticity of demand.

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..... **[2]**

**(b)** Using information from Fig. 1, calculate the income elasticity of demand for domestic fuel in 2011.

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**(c)** With reference to Fig. 1, comment on the relative significance of household income and the price of domestic fuel as factors affecting the demand for domestic fuel.

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**3** **(a)** What is shown by a production possibility curve?

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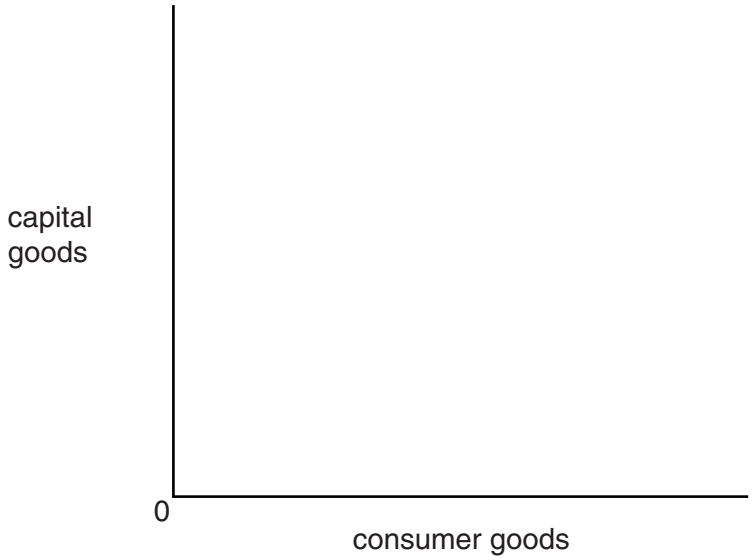
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..... **[2]**

**(b)** Using a diagram, show the impact on world output of the depletion in non-renewable resources, such as oil and gas. **[4]**




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**4** **(a)** What is meant by a 'negative externality'?

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**(b)** State and explain **two** ways in which domestic fuel consumption gives rise to negative externalities.

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**[6]**

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**5** Comment on the extent to which the problem of pollution caused by carbon emissions is a result of information failure.

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**6*** Discuss whether a pollution permit scheme, such as a cap and trade policy in which the cap is reduced each year, is the most effective way to reduce the market failure arising from negative externalities. **[18]**

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**END OF QUESTION PAPER**

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## ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

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# GCE

# Economics

Unit **F581:** Markets in Action

Advanced Subsidiary GCE

## Mark Scheme for June 2016



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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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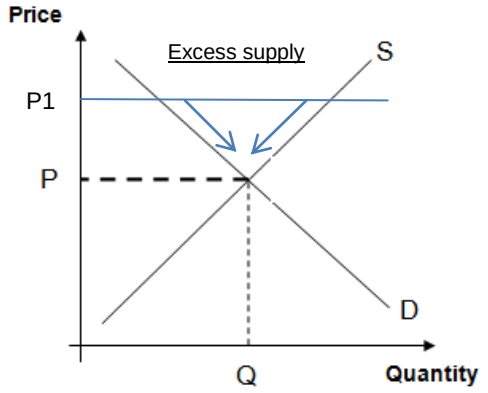
**1.** These are the annotations, [including abbreviations], including those used in scoris, which are used when marking

| Annotation | Meaning |
|---|---|
| BP | **Blank Page – this annotation must be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.** |
|  | **Tick** |
|  | **Cross** |
| C | **Comment** |
| BOD | **Benefit of doubt** |
| L1 | **Level 1** |
| L2 | **Level 2** |
| L3 | **Level 3** |
| L4 | **Level 4** |
| EE | **Effective evaluation** |
| ^ | **Omission** |
| NAQ | **Not answered question** |
| SEEN | **Noted but no credit given** |
| TV | **Too vague** |
| OFR | **Own figure rule** |

Highlighting is also available, to highlight any particular points on the script. 'BP' to be inserted on every blank page.

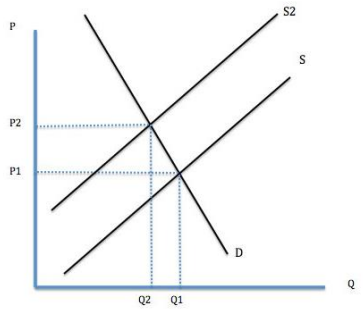


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| Question | | | Answer/Indicative content | Mark | Guidance |
|---|---|---|---|---|---|
| 1(a) | | | **What is meant by the term 'the market mechanism'?**<br><br>**Up to two marks** for a definition:<br>Buyers/consumers and sellers/producers meet/come into contact [1] for the purpose of trading/exchanging [1].<br>Demand and supply [1] arrive at a price/equilibrium [1]<br>Allocates resources [1] | 2 | |
| 1(b) | | | **Describe how a competitive market would react to excess supply.**<br><br>**Max one mark for knowledge** of competitive market OR excess supply [1]<br><br>**Up to three marks for application**:<br>Price would fall/suppliers would cut prices [1]<br>Demand would rise/extension [1]<br>Supply would fall/contraction [1]<br>New equilibrium reached [1]<br>Suppliers might leave the market [1]<br>Movement towards allocative efficiency [1] | 4 | For competitive market reward operation of the market mechanism/ high number of buyers and sellers/ no government restrictions<br><br>For excess supply reward supply greater than demand<br><br>Up to 3 Application marks can be awarded if this is presented on a diagram such as:<br>  <br> |



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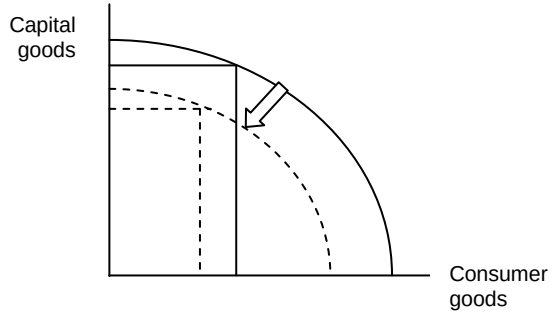
| Question | | | Answer/Indicative content | Mark | Guidance |
|---|---|---|---|---|---|
| 1[c] | | | **Using a demand and supply diagram, explain how an increase in taxes on domestic fuel will affect the domestic fuel market.**<br><br>Up to **four** marks for a correct diagram:<br>Labels for axes P & Q [1]<br>Original S, D and equilibrium PeQe [1]<br>Shift left of S [1]<br>New equilibrium P1Q1 [1]<br>Indication of higher price and lower quantity consumed [1]<br><br>Up to **two** marks for a written explanation:<br>Indirect tax raises producers' costs [1]<br>Price rises from P1 to P2 (must reference diagram) [1]<br>Quantity falls from Q1 to Q2 (must reference diagram) [1] | 6 | Indirect tax raises producers' costs [1] and shifts supply to the left [1] Price rises [1] Fall in consumer surplus [1] with explanation [+1]<br><br>Without labels P&Q maximum 3 marks. Do not reward "quantity demanded" on horizontal axis.<br><br>  |
| 2 [a] | | | **Give the formula for income elasticity of demand.**<br><br>**Two marks** for a correct formula:<br><br>$\frac{\%\text{ change in (quantity) demanded}}{\%\text{ change in income}}$ or $\frac{\%\Delta(Q)D}{\%\Delta Y}$ | 2 | No marks for "responsiveness of a CHANGE in demand/quantity demanded…"<br><br>Award 1 mark if the formula is presented without "%" but with "income" as the denominator.<br><br>Reward correct algebraic presentations. |
| 2[b] | | | **Using information from Fig. 1 calculate the income elasticity of demand for domestic fuel in 2011. (2)**<br><br>**Two marks** for a correct answer: | 2 | For correct method $\frac{-20\%}{-5\%}$<br>but incorrect answer, award 1 mark.<br><br>For 4% or -4 or -4% award zero. |



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<table>
<tr><th colspan="3">Question</th><th>Answer/Indicative content</th><th>Mark</th><th>Guidance</th></tr>
<tr><td>2[c]</td><td></td><td></td><td>With reference to Fig.1, comment on the relative significance of household income and the price of domestic fuel as factors affecting the demand for domestic fuel.<br><br>Award a maximum of two marks for use of the data<br>using numbers or sign, e.g.<br>Further calculation of PED [1] and/or YED[1]<br>PED is positive in 2012-13 but negative in 2011 [1]<br>YED is positive in all three years [1]<br><br>Award up to four marks for Comment<br><br>Domestic fuel is a normal good [1]<br>Reference to elastic PED/YED in 2011 and 2012 [1] but inelastic in 2013 [1]<br>Comment that positive PED is unusual [1]<br>Changes in demand are inconsistent/no clear pattern [1]<br>Changes in demand seem to be related more closely to changes in income than in price [2]<br>The data may be estimates [1] and therefore may be unreliable/outdated [1]</td><td>6</td><td><table><tr><td>Year</td><td>PED</td><td>YED</td></tr><tr><td>2011</td><td>-4.17 or -4.2</td><td>Already used</td></tr><tr><td>2012</td><td>+2.27 or +2.3</td><td>+13.89 or +13.9</td></tr><tr><td>2013</td><td>+0.02 or 0.0</td><td>+0.33 or +0.3</td></tr></table><br>Do not award marks for repetition of figures in the question paper table or a narrative of changes in price, income or demand. In using data candidates must calculate or interpret<br><br>Comment marks can only be credited if at least one mark has been awarded for use of the data.<br><br>Comment marks may be found in the same sentence as statement using the data.<br><br>Maximum of two comment marks relating to ‘estimates’<br><br>Comments about ‘ceteris paribus’ should not be rewarded in the context of this question.</td></tr>
</table>


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| Question | | | Answer/Indicative content | Mark | Guidance |
|---|---|---|---|---|---|
| 3[a] | | | **What is shown by a production possibility curve?**<br><br>**First Mark:** maximum quantity/output [1]<br><br>**Second Mark:**<br>given current resources or technology [1]<br>choosing between two goods [1]<br>when production is at maximum efficiency [1]<br>in the current time period / short term [1]<br>• showing scarcity [1] | 2 | Allow 'opportunity cost' explanations including "choice" up to 2 marks if correctly presented. |
| 3[b] | | | **Using a diagram, show the impact on world output of the depletion in non-renewable resources, such as oil and gas.**<br><br>Original PPC [1]<br>New PPC after inward shift [1]<br>Coordinates to axes from two points, one on each PPC, showing lower production of one or both goods [1]<br>Some dynamic indication, e.g. inward arrow between curves or on axes [1]<br>  <br> | 4 | If only one PPC is shown maximum mark is 1. |


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| Question | | | Answer/Indicative content | Mark | Guidance |
|---|---|---|---|---|---|
| 4[a] | | | **What is meant by a 'negative externality'?**<br>[Spillover] costs/harmful effects [1] affecting third parties [1]<br>**or** Costs outside the transaction [1] not accounted for in the supply/demand curve/original market equilibrium [1] | 2 | Social costs exceed private costs or MSC>MPC or MSC>MPB [1]<br><br>Do not award marks for examples of negative externalities. |
| 4[b] | | | **State and explain two ways in which domestic fuel consumption gives rise to negative externalities.**<br><br>Award a maximum of three marks as follows:<br>1 mark: stated example of a problem [1]<br>1 mark: application showing the negative effect/cost [1]<br>1 mark: explaining the third party affected [1] | 6 | Examples must relate to consumption of domestic fuel or generation/production of fuel.<br><br>**Emissions** from power stations [1] cause healthcare costs [1] for local residents/health authority [1]<br><br>Burning gas generates **CO2** [1] which may contribute to rising sea levels [1] destroying land in other countries. [1]<br><br>**Pollutants** [1] cause increasing health costs [1] which the taxpayer [1] has to meet.<br><br>**Reduction of non-renewable resources** [1] will lead to poorer quality of life [1] for future generations [1]<br><br>Allow one explanation relating to increased fuel consumption by motorists:<br><br>Increased use of cars causes **noise pollution** [1] requiring local residents [1] to pay for double glazing [1]<br><br>Do not accept “the environment” as a third party |


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| | | | Question | Answer/Indicative content | Mark |
|---|---|---|---|---|---|
| 5 | | | **Comment on the extent to which the problem of pollution caused by carbon emissions is a result of information failure.**<br><br>**Applied points [up to 2 marks]**<br>• Examples of information failure (but not of pollution) [1]<br>• Definition of information failure [1]<br>• Link to **demerit** good [1]<br>• Negative impact not realised [1]<br>• "**Asymmetric**" as definition [1]<br><br>**Analysis [up to 2 marks]**<br>• **Overconsumption/overproduction** [1] (can be a diagram)<br>• The market is **allocatively inefficient** [1]<br>• **lack of substitutes/alternatives** [1] so people unable to switch [1]<br>• good being consumed a **necessity** [1]<br>• Asymmetric as explanation of over consumption/overproduction [1]<br><br>**Comment [2 short or one developed]**<br>• People choose to **ignore** the information<br>• Other causes of failure compared (including Government failure)<br>• A judgement that information failure is/is not the main cause | 6 | The question relates **only to information failure existing now**, not to correcting this so do not reward analysis or comment about removing the information failure.<br><br>These Applied points address the "what" and "why" of information failure in the case of carbon emissions.<br><br>These Analysis points address "how" information failure leads to economic behaviour such as over consumption, but **NOT** addressing how the market failure could be corrected<br><br>Reward MPC to right of MSC or MPB to right of MSB and/or welfare loss analysis, though this is not required in the specification.<br><br>**Comment marks are only available once at least one application/analysis mark has been awarded.** |


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| Question | | | Answer/Indicative Content | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 6 | | | **Discuss whether a pollution permit scheme, such as a cap and trade policy in which the cap is reduced each year, is the most effective way to reduce the market failure arising from negative externalities.**<br><br>**EE**<br>**16-18 Marks**<br>The stated judgement must address the question<br>• Cap and trade is or is not the **most effective** way to reduce the market failure. Do not credit judgements which state that 'cap and trade is *an* effective way'.<br>• **Evaluation** of both the Permit market and the wider market | 18 | 18 marks: More thorough justification or elaboration of the judgement.<br><br>17 marks: Some justification or elaboration of the judgement.<br><br>**Use second EE annotation to indicate elaboration.**<br><br>16 marks: A judgement that pollution permits are or are not the most effective way to correct market failure.<br><br>**Use one EE to show where this statement appears in the answer.** | **Level 4 [13–18]**<br>**For a discussion of the effectiveness of cap and trade in reduce the market failure arising from negative externalities.**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>16–18 marks – There must be a supported judgment based on the preceding analysis and it should reflect the strength of the analysis and the evaluation. This may include comparison with other solutions |

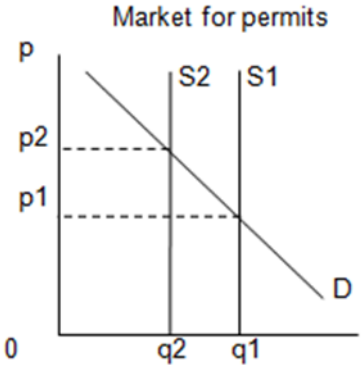

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| Question | | | Answer/Indicative Content | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 4**<br>**13-15 Marks**<br>Evaluation of the extent to which cap and trade may or may not correct market failure, which must be based on correct analysis of market failure:<br><br>• Cap and trade is positive because it incentivises firms to become greener.<br>• The policy is market-based and may therefore increase efficiency.<br>• The initial level of the cap may be set at an inappropriate level.<br>• The initial price of permits may be set wrongly.<br>• Some large firms may be more able to buy permits/afford the fines<br>• Not all countries/companies may be able to afford the cost of developing greener production.<br>• The policy may drive production offshore.<br>• If demand for the goods has inelastic PED any increase in costs may simply be passed on. | | Max. of three L4 annotations should appear on the script.<br><br>15 marks: Three evaluative points with some development.<br><br>14 marks: Two evaluative points with some development.<br><br>13 marks: One evaluative point with some development **OR** a number of evaluative statements lacking depth.<br><br>**Candidates cannot progress above 15 marks if the analysis or evaluation is limited or if only 10 marks at Level 3 Band have been achieved**<br><br>Explanations of alternative forms of correction to market failure in themselves **receive no credit.** An explicit and relevant **comparison between cap and trade and an alternative policy** can receive Level 4 marks. | 13–15 marks – There must be a discussion of points for and against cap and trade **or** on how effective cap and trade is in correcting a relevant market failure.<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* |


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| Question | | | Answer/Indicative Content | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Two strands of analysis 11-12 marks**<br>Analysis of **both** the market for permits **with the cap reduced each year and** the market for goods and services with reducing negative externalities<br><br>**Level 3 One strand of 9-10 marks**<br>Analysis of **either** the market for permits **with the cap reduced each year or** the market for goods and services with negative externalities<br><br>**Analysis of movement towards correction of market failure arising from negative externalities of production and consumption in the market for goods**<br><br>• S shifts to left through higher/external costs<br>• The market moves towards allocative efficiency<br>• Overconsumption/overproduction is reduced<br><br>*Reward but do not expect marginal social cost/benefit diagrams.* | | **Max. of two L3 annotations**<br>**Place second L3 annotation where 11-12 marks are awarded.**<br><br>12 marks: full explanation of second market<br><br>11 marks: some explanation of second market<br><br>**Place one L3 annotation where 9-10 marks are awarded.**<br><br>10 marks: full explanation of first market<br><br>9 marks: some explanation of first market | **Level 3 [9–12 marks]**<br>**For an analysis of the use of cap and trade to reduce the market failure arising from negative externalities.**<br><br>*Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.* |


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| Question | | | Answer/Indicative Content | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Analysis of the market for permits**<br><br>• Cap set and subsequently reduced from S1 to S2 with two or more supply curves – two marks.<br>• Analysis of fixed supply with changes in demand for and price of permits – one mark<br><br>**Level 2** responses may present an unexplained diagram or offer the pros and cons of cap and trade without analysis:<br><br>• Cap and trade creates a market for pollution permits.<br>• Cap and trade has minimal costs.<br>• Cap and trade works with the market mechanism.<br>• Cap and trade shifts supply to the left or sets a vertical supply curve (unexplained diagram) or stimulates more energy-efficient production<br>• Comparison of a relevant alternative policy with cap and trade[award a maximum of one L2 mark for this] | |  <br><br>Use one L2 per mark awarded<br><br>8 marks: Further L2 points with possible conclusion at applied level.<br><br>7 marks: Three applied points.<br><br>6 marks: Two applied points.<br><br>5 marks: Unexplained cap and trade or negative externalities diagram **OR** one point. | **Level 2 [5–8 marks]**<br>**For an application of knowledge and understanding of cap and trade.**<br><br>This sort of response will include unsupported/unsubstantiated statements as to how cap and trade can/cannot be used to the negative externalities of production or consumption.<br><br>*Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.* |


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| Question | | | Answer/Indicative Content | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 1** responses may demonstrate knowledge of the following:<br><br>3-4 marks: knowledge of cap and trade and market failure<br><br>1-2 marks: knowledge of cap and trade (in terms of the setting of a limit and issuing of permits) **or** of market failure | | **Place one L1 annotation per correct statement, up to a maximum of four (or until a higher level is awarded)** | **Level 1 [1–4 marks]**<br>**For knowledge only of cap and trade and/or the impact on consumers/producers.**<br><br>*Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility* |



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# Monday 11 May 2015 – Morning

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used

**Duration:** 1 hour 30 minutes

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
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### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to the question labelled with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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# The Po Valley – controversy in one of Europe's major agricultural areas over market-driven change

A change is taking place in agriculture in the Po Valley in northern Italy, the heartland of Italy's agricultural industry. This is partly because of the European Union's (EU) promotion of the use of energy from renewable resources. The EU subsidises farmers who grow biofuel crops which can be turned into fuel.

According to a survey carried out in 2011, 1.6% of the surface of the Po Valley was used for the production of biofuel crops. A local farmer commented, "Many farmers have stopped breeding pigs and cattle, growing rice and wheat and have begun to grow biofuel crops. But they have lost their ability to think in the long term. These biofuel crops will destroy the fertility of the soil within ten years and are also changing the landscape."

Some conservationists claim that this switch to biofuel crops, such as maize, has already changed the ecosystem of the Valley. A local conservationist commented, "We risk becoming a desert as biofuel crops need much more water than rice and wheat to grow. The natural water supply cannot satisfy this demand." It is claimed that there will not be enough water for the irrigation of the rice fields in the Po Valley. Another impact would be that open spaces, rivers and lakes, currently freely available for leisure activities will be reduced as more land is claimed for maize production.

Others, however, say that the changes in the region are a perfect example of market economics in action, with farmers switching to growing biofuel crops which will meet the consumer demand for affordable and sustainable energy. They argue that the extra revenue from growing biofuel crops has prevented many farmers from going out of business and that farmers are simply responding to market forces.

Since farmers can flood or drain fields within a few days, they can decide relatively quickly at the beginning of each growing season whether to grow rice, wheat or maize depending on the market price of each crop.

Other farmers in the Valley grow grapes for wine. Changes in the output of grapes are much slower as it takes seven years for a newly-planted grape vine to produce grapes that can be made into wine.

The price of agricultural products can change by significant amounts from year to year. Fig. 1 shows changes in the price and supply of some crops produced in the Po Valley in 2011 compared with 2010.

**Changes in the price and supply of wine grapes and rice produced in the Po Valley in 2011 compared with 2010**

| | 2011 |
|---|---|
| % change in price | |
| Wine grapes | 11.10 |
| Rice | 18.50 |
| % change in quantity supplied | |
| Wine grapes | 2.22 |
| Rice | 12.95 |

**Fig. 1**

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**1** With reference to the case study, describe what is meant by 'the economic problem'.

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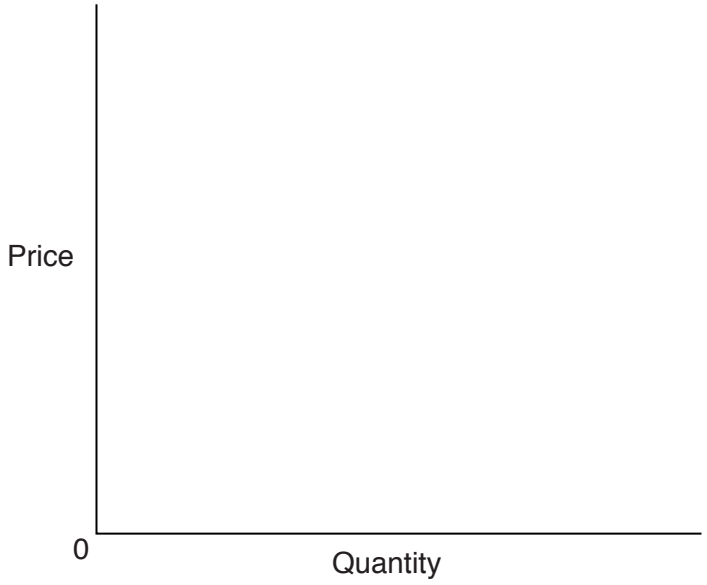
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..... **[4]**

**2** Using a demand and supply diagram, explain why the price of an agricultural product may increase by a significant amount.




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..... **[6]**

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**3** **(a)** What is meant by the term 'consumer surplus'?

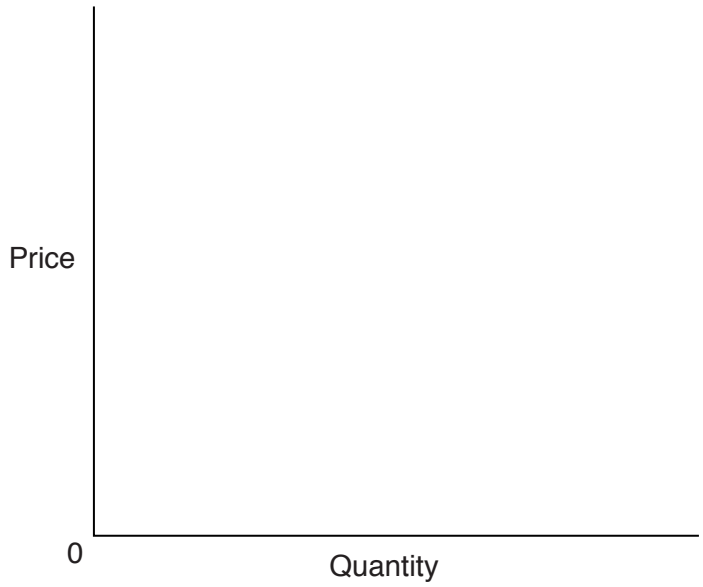
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..... **[2]**

**(b)** Using a supply and demand diagram, show how consumer surplus would change if the supply of a product decreased.




**[4]**

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**4** **(a)** What is meant by price elasticity of supply?

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..... **[2]**

**(b)** Calculate the price elasticity of supply of:

**(i)** wine grapes

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..... **[1]**

**(ii)** rice

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..... **[1]**

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**(c)** Comment on the significance of the figures which you have calculated in part **(b)**.

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**5** Explain **two** reasons why the demand for some agricultural products is more price elastic than other agricultural products.

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6 Comment on whether the agricultural market in the Po Valley is becoming more allocatively efficient.

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7 Comment on whether open spaces, rivers and lakes such as those in the Po Valley would always be considered to be a public good.

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**8*** Discuss whether subsidies to producers always correct market failure. **[18]**

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**END OF QUESTION PAPER**

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## ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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# GCE

# Economics

Unit **F581:** Markets in Action

Advanced Subsidiary GCE

## Mark Scheme for June 2015



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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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## Annotations

Please annotate **every** response, even if no credit is given.

| Annotation | Meaning |
|---|---|
| BP | Blank Page – this annotation must be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response. |
|  | Tick |
|  | Cross |
| C | Comment |
| BOD | Benefit of doubt |
| L1 | Level 1 |
| L2 | Level 2 |
| L3 | Level 3 |
| L4 | Level 4 |
| EE | Effective evaluation |
| ^ | Omission |
| NAQ | Not answered question |
| SEEN | Noted but no credit given |
| TV | Too vague |
| OFR | Own figure rule |

Highlighting is also available, to highlight any particular points on the script.

'BP' to be inserted on every blank page.



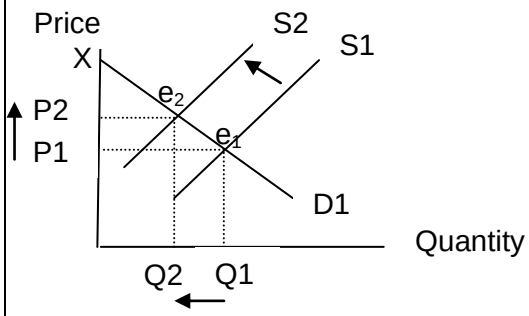
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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | | | **With reference to the case study, describe what is meant by 'the economic problem'.**<br><br>*Up to two marks for an understanding of the economic problem:*<br><br>Resources are scarce/limited (1) and wants are infinite (1) therefore choices have to be made over how to allocate these resources (1)<br><br>How to allocate scarce resources amongst alternative uses (2)<br><br>*Up to two marks for application:*<br><br>• Example of the limited/scarce resource (1)<br>• Example of the competing wants/choice that has to be made (1) | 4 | Wants exceed resources = 2 marks.<br>**Do not award** a mark for "unlimited demand" or "limited supply".<br><br>Examples of relevant application include:<br><br>○ There is insufficient water (1) to both irrigate the rice fields and grow biofuel crops (1)<br>○ Choices have to be made over how to allocate land (eg. For growing either maize for biofuel or rice) (1) because there is insufficient land (1) |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 2 | | | **Using a demand and supply diagram, explain why the price of an agricultural product may increase by a significant amount.**<br><br>Award up to **three marks** for a supply and demand diagram illustrating:<br>• Correct supply and demand curves, labelled (1)<br>• Shift of supply to left and/or demand to right (1)<br>• Price increases from p to p1 (1)<br><br>Award a further **one mark** for explaining the reason for the shift. For example:<br>• Costs of production increasing cause the supply curve to shift to the left (1)<br>• Income increasing causes the demand for agricultural products to increase. (1)<br><br>Reserve the final **two marks** for an application of why price may have increased by a 'significant amount'. For example:<br><br>• If demand/supply shifts by a significant amount there will be a significant increase in price (2)<br>• If there are shifts in both the supply and demand curve there is likely to be a significant increase in price (2)<br>• If the demand curve is inelastic when the supply curve shifts there will be a significant increase in price (2)<br>• If the supply curve is inelastic when the demand curve shifts there will be a significant increase in price (2) | 6 | Supply and demand curves must be labelled S and D. Award no credit for candidates using macro labels or QD and QS.<br><br>Note – the mark for the increase in price can still be accessed with incorrect labels on curves. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | **Define consumer surplus.**<br><br>Up to two marks for a clear definition such as:<br><br>The difference between the market price and the price that consumers are willing to pay. (2)<br><br>The extra amount a consumer is willing to pay for a product above the price that is actually paid. (2)<br><br>The difference between the value a consumer places on the good/service purchased and the equilibrium price in the market. (2) | 2 | Award one mark for an imprecise understanding that this is the area under the demand curve but above the market price. (1)<br><br>If there is no clear sense of the 'difference' no marks can be awarded – eg. "the price a consumer is willing to pay compared to the market price" or "the price a consumer pays and the market price" |
| | (b) | | **Using a supply and demand diagram, show how consumer surplus would change if the supply of a product decreased.**<br><br>• Supply and demand curves with shift left of supply (1)<br>• Area of original consumer surplus clearly labelled (1) e.g. (P1,$e_1$,X)<br>• Area of new consumer surplus clearly labelled (1) e.g. (P2,$e_2$,X)<br>• Consumer surplus has fallen (1) | 4 | Note – zero marks awarded to an answer where a demand curve is not labelled.<br><br>  |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **What is meant by price elasticity of supply?**<br><br>Up to two marks for a clear definition such as:<br><br>The responsiveness of (quantity) supplied to a change in the price of a product (2).<br><br>A measure of the sensitivity of (quantity) supplied of a good or service to a change in the price of that good or service (2).<br><br>Correct formula $\frac{\%\text{ change in (quantity) supplied}}{\%\text{ change in price}}$ or $\frac{\%\Delta(Q)S}{\%\Delta P}$ (2) | 2 | Accept 'supply' for 'quantity supplied'<br><br>For "the responsiveness **of a change** in supply" award zero. |
| | (b) | | Up to **two marks** for calculations of PES<br>**Wine PES** = 0.2 (1)<br>**Rice PES** = 0.7 (1) | 2 | PES expressed as a percentage e.g. 0.7% - award zero. |



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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (c) | **Comment on the significance of the figures you have calculated in part (b).**<br><br>Award up to **two marks** for analysis:<br>• Supply is (price) inelastic for rice and/or wine (1)<br>• Quantity supplied responds less than proportionally to a change in price (1)<br>• PES for wine is more inelastic (1) **or** PES for rice is more elastic (1)<br><br>Up to **four marks** for relevant comment based on explanation such as:<br>• These figures are only estimates (1) so may be inaccurate (1) or may be outdated (1) Max of 2 marks for estimates related points<br>• Both figures are positive as expected (1) because of the law of supply (1)<br>• Supply is inelastic because:<br>○ There are time lags involved (1)<br>○ It takes time to grow wine grapes (1)<br>• PES becomes more elastic in the long run (1)<br>• Other factors affect supply (1) example of how supply might respond differently (1) or ceteris paribus may not apply (1)<br>• Businesses aim to make PES as elastic as possible (1) so they can respond to price changes to maximise profits (1)<br>• Businesses may not take into account PES (1) as elasticities of demand are more useful (1) | 6 | OFR can be awarded if calculations to (a) and (b) are incorrect.<br><br>To be awarded comment marks candidates must have gained **at least one analysis mark**.<br><br>Use C for comment marks |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | | | **Explain two reasons why the demand for some agricultural products is more price elastic than other products.**<br><br>Award **one mark** for recognising a determinant of PED and **a further mark** for explaining why this means demand for **agricultural products** may be more price elastic/inelastic. Two marks maximum for each of two reasons. For example:<br><br>• Availability of substitutes (1) for example when there many substitute agricultural goods available demand will be price elastic (1)<br>• Proportion of disposable income the product accounts for (1) as rice takes up a low proportion of disposable income so demand is price inelastic (1)<br>• Time period (1) as in the long run demand for agricultural products will be more price elastic (1)<br>• If products are addictive/habit forming (1) then demand for the agricultural products will be price inelastic (1)<br>• The nature of the good<br>○ If products are luxury goods (1) for example strawberries demand will be price elastic (1)<br>**OR**<br>○ If products are necessity (essential) goods (1) for example wheat demand will be price inelastic (1) | | The explanation mark should not be awarded unless there is clear reference to agriculture.<br><br>Do not award marks to a second response which is the opposite of the first, e.g. if 1. many substitutes = price-elastic demand, then do not award 2. few substitutes = price-inelastic demand. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 6 | | | **Comment on whether the agricultural market in the Po Valley is becoming more allocatively efficient.**<br><br>Up to **four marks** for **explanation**:<br><br>• Demand for biofuels is increasing (1)<br>• Farmers are responding to this increase in demand by increasing supply (1)<br>• Meaning the market clears/supply equals demand (1)<br>• Ensuring there is no excess demand/supply (1)<br>• Resources are being reallocated to meet consumer wants (1)<br>• The fall in price satisfies consumers (1)<br><br>Award up to **two marks** for **comment, e.g.**<br><br>• Negative Externalities may apply (e.g. change to landscape, loss of leisure space, negative consequences for water supply)<br>• Some claim any gain is short-run – long-run negative consequences for the region will cancel out short-run gains<br>• The market is being distorted by EU incentives<br>• Less land available for leisure purposes, worsening consumer satisfaction<br>• Allocative efficiency will not be achieved immediately as it takes time for producers to respond to changes in demand | 6 | Only award one mark for '*farmers are switching to growing biofuels to meet consumer demand*' as this is a direct quote from the case study and does not clearly address the idea that supply/production is increasing.<br><br>Do not award 'and therefore consumer satisfaction is maximised' unless this is clearly linked to resources being reallocated (ie. Resources are now allocated in a way which means consumer wants).<br><br>Award up to two marks for an appropriately labelled diagram (demand curve shifting to the right and a new equilibrium being reached).<br><br>Candidates can only be awarded comment marks once one explanation mark has been awarded.<br><br>Use C for comment marks<br><br>Award up to two marks for a developed comment. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 7 | | | **Comment on whether open spaces, rivers and lakes such as those in the Po Valley would always be considered to be a public good.**<br><br>Award up to **two marks** for characteristics of a public good:<br>• Non-excludable (1)<br>• Non-rivalrous (1)<br>• Has free-riders (1) **or** the free-rider problem (1)<br><br>Award up to **two marks** for explanation of why open spaces are or are not a public good:<br>○ **It is non-excludable** because this is on open land which anyone can access (1)<br>○ **It is non-rival** because one person using the countryside does not stop someone else using it (1)<br>○ It is possible to free-ride as individuals can use open spaces without paying for it (1)<br>○ There are **elements of rivalry** because spaces can become congested/the land could be used for other things (1)<br>○ There are **elements of excludability** because land could be privately owned/there could be fences around it. (1)<br><br>Award up to **two marks** for comment, for example:<br>• A two sided approach (2)<br>• It is a quasi-public good (1) because it has elements of non-rivalry and non-excludability (1) | 6 | Also accept un-diminishable and collectively consumed.<br><br>Explanations must be clearly linked to non-rivalry, non-excludability, rivalry or excludability or free-riders to be awarded credit.<br><br>Candidates can only be awarded comment marks once one **explanation** mark has been awarded.<br><br>Use C for comment mark |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 8 | | | **Discuss whether subsidies to producers always correct market failure.**<br><br>**Level 4**<br>**16-18 Marks**<br>The stated judgement must address the question – ie. Subsidies do or do not correct market failure. Do not credit judgements which simply conclude that 'subsidies are an effective/ the most effective solution'.<br><br>**Level 4**<br>**13-15 Marks**<br>Evaluation of the extent to which subsidies may or may not correct market failure, which must be based on correct analysis of market failure:<br>• Subsidies do not solve market failure in the case of negative externalities or demerit goods.<br>• Subsidies may allow inefficiency to continue.<br>• The effectiveness will depend on PED.<br>• The opportunity cost of subsidies may outweigh the benefits.<br>• The financial cost of subsidies may be prohibitive.<br>• The effectiveness of subsidies applied to substitutes will depend on cross-price elasticity of demand. | 18 | 18 marks: More thorough justification or elaboration of the statement.<br><br>17 marks: Some justification or elaboration of the statement.<br><br>**Use second EE annotation to indicate elaboration.**<br><br>16 marks: A statement that subsidies do or do not always correct market failure.<br><br>**Use one EE to show where this statement appears in the answer.**<br><br>Max. of three L4 annotations should appear on the script.<br><br>15 marks: Three evaluative points with some development.<br><br>14 marks: Two evaluative points with some development.<br><br>13 marks: One evaluative point with some development **OR** a number of evaluative statements lacking depth.<br><br>**Candidates cannot progress above 13 marks if either the analysis or evaluation is limited.**<br><br>Explanations of alternative forms of correction to market failure in themselves **receive no credit.** | **Level 4 (13–18)**<br>**For a discussion of whether subsidies to producers correct market failure.**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>16–18 marks – There must be a supported judgment based on the preceding analysis and it should reflect the strength of the analysis and the evaluation. This is likely to address the fact that many market failures will not be corrected by subsidies to producers.<br><br>13–15 marks – There must be a discussion of points for and against the statement. There may be relevant comparison with how other methods are **more effective** than subsidies.<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Band 2**<br>**11-12 marks**<br>• This increases consumption and production which **either**<br>○ Solves the market failure of underconsumption or underproduction (in the positive externalities or merit good case)<br>**or**<br>○ Worsens the market failure of overconsumption or overproduction (in the negative externalities or demerit good case)<br>**or**<br>○ Solves the overconsumption or overproduction problem in a related market by encouraging consumers/producers to switch to a substitute<br>• The market becomes more allocatively efficient<br><br>*Reward but do not expect marginal social cost/benefit diagrams.*<br><br>**An answer cannot progress from L3 B1 to L3 B2 without explaining how a subsidy resolves market failure.** | | An explicit and relevant **comparison between subsidies and an alternative policy** can receive Level 4 marks.<br><br>**Max. of two L3 annotations**<br><br>**Place second L3 annotation where L3 B2 is awarded.**<br><br>12 marks: this makes the market more efficient.<br><br>11 marks: explanation of how the market failure is solved. | **Level 3 (9–12 marks)**<br>**For an analysis of the way in which the application of subsidies to producers can correct market failure**<br><br>11–12 marks – there is likely to be at least one developed analytical point.<br><br>9–10 marks – there are likely to be only one/two undeveloped analytical points, or one analytical point which is somewhat developed; such as an explanation of a subsidy leading to a fall in price – the impact upon the market is unclear.<br><br>*Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.* |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Band 1**<br>**9-10 marks**<br>• Quantity increases (from q to q1)<br>• Price falls (from p to p1) | | **Place one L3 annotation where L3 B1 is awarded.**<br><br>10 marks: more than one Band 1 point made.<br><br>9 marks: one Band 1 point made. | |
| | | | **Level 2** responses may present an unexplained diagram or offer the pros and cons of subsidies without sufficient analysis:<br><br>• Subsidies will increase supply<br>• Subsidies will reduce the market price<br>• Producer costs will decrease<br>• Subsidies make demands on government funds<br>• Subsidies may be used in the case of merit goods/positive externalities.<br>• Subsidies shift the supply curve to the right<br>• Comparison of a relevant alternative policy with a subsidy (award a maximum of one L2 mark for this) | | Use one L2 per mark awarded<br><br>8 marks: More than one well developed applied point.<br><br>7 marks: Several applied points.<br><br>6 marks: Two applied points.<br><br>5 marks: Unexplained subsidy diagram **OR** one point on subsidy. | **Level 2 (5–8 marks)**<br>**For an application of knowledge and understanding of subsidies.**<br><br>This sort of response will include unsupported/unsubstantiated statements as to how subsidies can/cannot be used to solve market failure.<br><br>*Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.* |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 1** responses may demonstrate knowledge of the following:<br><br>3-4 marks: knowledge of subsidy **and** of market failure<br><br>1-2 marks: knowledge of subsidy **or** of market failure<br><br>0 marks: no understanding of subsidy shown, even if knowledge of market failure is present. | | | **Level 1 (1–4 marks)**<br>**For knowledge only of a subsidy and/or the impact on market failure.**<br>*Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility.* |



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# Tuesday 13 May 2014 – Morning

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used

**Duration:** 1 hour 30 minutes

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to the question labelled with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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# Airfix – A UK firm making model kits in a competitive market

Airfix is a firm supplying plastic model kits of planes, vehicles and ships to customers who make and paint them. Its main customer type has changed significantly over the years. It has had to adapt to this in the most effective way. This has led the firm to consider very carefully the opportunity cost of its production choices. Fig. 1 below, for example, illustrates how the age profile of its customers has changed.

| | Aged 16 and under | Aged over 16 |
|---|---|---|
| **1972** | 77% | 23% |
| **2012** | 18% | 82% |

**Fig. 1 – Percentage of sales**

This change in demand for model kits has been caused by an increase in the number of substitutes available to those 'aged 16 and under' such as computer-based games and social media. However, the Airfix brand has also become more attractive to those 'aged over 16' as a result of advertising and television programmes, such as James May's 'Toy Stories', where the presenter built a full scale model of a World War 2 Spitfire plane. This resulted in a significant increase in the demand for Spitfire kits. During the 40-year period, 1972–2012, there have also been significant improvements in the quality of the products, due to technological innovations, which have strengthened the appeal of Airfix products to consumers 'aged over 16'.

The Marketing Director of Airfix has always taken a keen interest in how economic theory can be applied to the firm's model kits. He estimated that in the recent UK recession, despite average incomes falling by 10%, the demand for lower priced kits fell by only 2%. He also believes that the demand for these kits is price elastic. One reason for this is the growing number of other model kit manufacturers which operate in this market.

Airfix has seen the cost of producing its kits reduce significantly as manufacturing has moved from the UK to China, and the production process has become more efficient due to advances in technology. Despite this, Airfix can only produce a limited number of different kits and, therefore, it has had to make choices over which planes and other models it will produce in any year.

Increased production in China is creating a number of negative externalities including pollution. The Chinese government has been under pressure, both domestically and internationally, to reduce pollution. There are various policy measures available to the Chinese government to internalise the negative externalities and currently it is examining the likely impact of imposing a pollution tax. This could lead to Airfix increasing the price of its model kits.

Airfix has remained a successful firm by responding to changes in demand and regularly examining its production techniques. It is using many forms of advertising, such as Facebook, YouTube and Twitter, as well as running its own website. The Airfix Club makes special offers to members and the firm has recently started an Airfix magazine.

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Answer **all** questions.

**1** **(a)** Define the term 'opportunity cost'.

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..... **[2]**

**(b)** Explain how Airfix is influenced by opportunity cost when making production decisions.

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..... **[2]**

**2** State **two** factors of production.

1 .....

2 .....

**[2]**

**3** Explain **one** advantage and **one** disadvantage of specialisation to a firm such as Airfix.

Advantage .....

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Disadvantage .....

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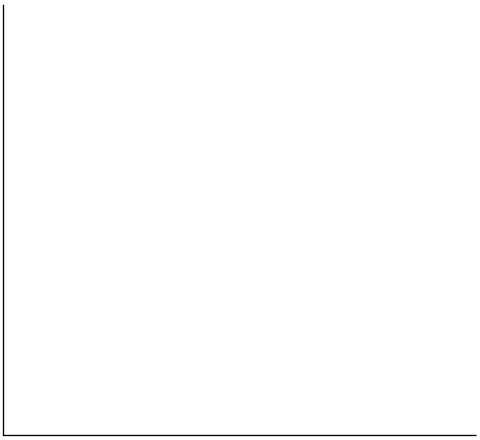
**[4]**

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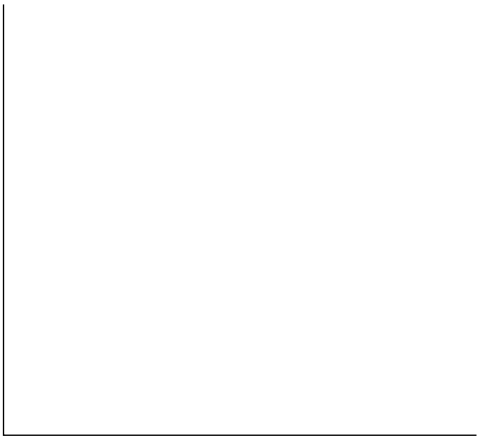
**4** **(a)** Using a diagram, show how the market price of model kits is determined.



**[3]**

**(b)** The success of the programme presented by James May and the move of production to China have each had an effect on the market equilibrium for Airfix Spitfire model kits.

Using **one** demand and supply diagram, explain the likely impact of these changes on the market equilibrium.



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..... **[6]**

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**(c)** Other than a change in taste and fashion, state and explain how **two** determinants of demand might shift the demand curve for Airfix model kits.

1 .....

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2 .....

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**[6]**

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**5** **(a)** Given the Marketing Director's figures as to how the demand for Airfix's model kits was affected by the recession:

**(i)** calculate the income elasticity of demand for the lower priced model kits.

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..... **[2]**

**(ii)** explain what the value you have calculated in part **5(a)(i)** indicates to Airfix.

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..... **[3]**

**(b)** The Marketing Director believes that the demand for low priced model kits is 'price elastic'.

Comment on how a knowledge of price elasticity of demand would be helpful when making business decisions.

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..... **[6]**

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6 **(a)** Comment on the extent to which the Chinese government should aim to reduce the negative externalities of pollution.

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..... **[6]**

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**(b)*** Discuss whether indirect taxation is the most effective policy measure to correct the market failure arising from the negative externalities of production. **[18]**

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**END OF QUESTION PAPER**

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## ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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# GCE

# Economics

Unit **F581:** Markets in Action

Advanced Subsidiary GCE

## Mark Scheme for June 2014



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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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**Annotations**

Please annotate **every** response, even if no credit is given.

| Annotation | Meaning |
|---|---|
| BP | Blank Page – this annotation must be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response. |
|  | Tick |
|  | Cross |
| C | Comment |
| BOD | Benefit of doubt |
| L1 | Level 1 |
| L2 | Level 2 |
| L3 | Level 3 |
| L4 | Level 4 |
| EE | Effective evaluation |
| ^ | Omission |
| NAQ | Not answered question |
| SEEN | Noted but no credit given |
| TV | Too vague |
| OFR | Own figure rule |

Highlighting is also available, to highlight any particular points on the script.



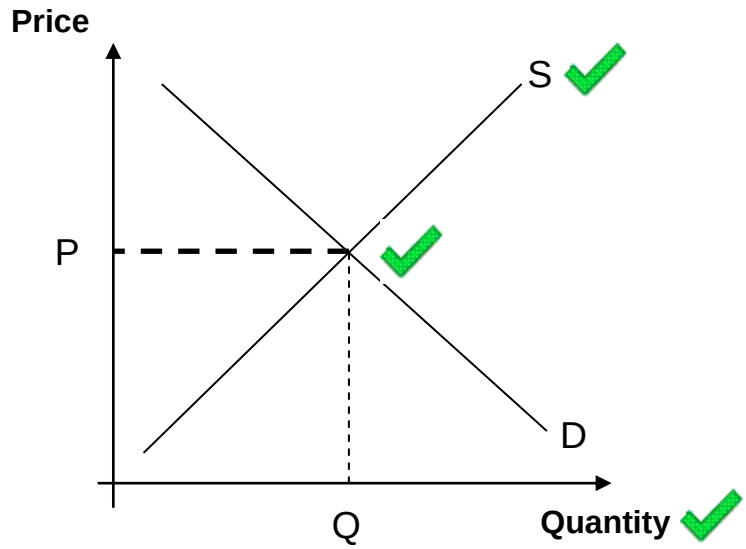
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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | (a) | | **Define the term 'opportunity cost'.**<br>For a clear definition which includes the (next) best alternative (1) foregone/given up (1).<br><br>One mark for a part definition. | 2 | One mark for the idea of benefit lost.<br><br>No mark for a response referring to 'price'.<br><br>Can be worded the other way around: the benefit forgone (1) of the (next) best alternative (1) |
| | (b) | | **Explain how Airfix is influenced by opportunity cost when making production decisions.**<br><br>One mark for application of opportunity cost to Airfix, e.g. **giving up** production of one model for another; **giving up** ship models to produce plane models<br><br>**Once this mark has been awarded:**<br><br>A further mark for **how** Airfix is influenced, e.g. Airfix has to make a choice/decision between making two products; Airfix has to sacrifice production of one model; etc. | 2 | Airfix production is clearly stated in the question, so reference to other opportunity costs unrelated to production is irrelevant.<br><br>Can be worded either way around. |
| 2 | | | **State two factors of production.**<br>land, labour, capital, enterprise | 2 | Up to two marks. One mark for each correctly stated factor of production.<br>Do **NOT** accept any examples.<br>Do **NOT** accept workers for Labour. |


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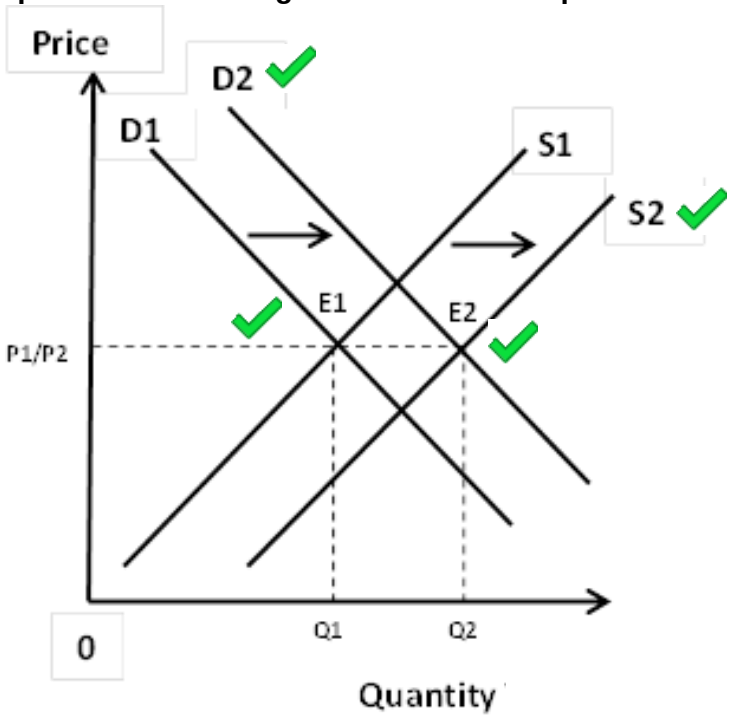
| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | | | **Explain one advantage and one disadvantage of specialisation to a firm such as Airfix.**<br>Advantages include:<br>• increased output<br>• more innovation<br>• improved quality<br>• increased productivity<br>• developing and maintaining a brand image<br>• economies of scale (see guidance)<br><br>Disadvantages include:<br>• reliance on a narrow range of products<br>• specialist factor inputs are more expensive per unit<br>• limited market size<br>• reliance on one specialist resources/suppliers or factor immobility<br>• reduced flexibility<br>• boredom of workers / demotivation | 4 | One mark for the correct identification of an advantage and one mark for the correct identification of a disadvantage, plus a further one mark for each of two explanations<br><br>For increased output as a result of specialisation leading to economies of scale (1)<br>A2 candidates may develop this further by stating a reduction in AC<br><br>Do **NOT** credit answers which relate to finite resources in general |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **Using a diagram, show how the market price of model kits is determined.**<br>Up to three marks for a correct answer:<br>• one mark for p+q<br>• one mark for s+d<br>• one mark for an indication of the equilibrium price<br><br>Place green ticks as shown below:<br><br>  <br> | 3 | Horizontal axis must be 'quantity', 'quantity traded' or 'quantity demanded and supplied'.<br><br>Vertical axis **must** be 'price'.<br><br>If horizontal axis is 'quantity demanded' or 'quantity supplied', do **NOT** award first mark but remaining marks can be accessed.<br><br>If axes are labelled in any other way, **NO** marks for diagram.<br><br>Ignore any shifts if original equilibrium is shown. |


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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (b) | **Using one demand and supply diagram, explain the likely impact of these changes on the market equilibrium.** | **6** | |




- old equilibrium (E1 or P1 – Q1) (1)
- shift to right of D (1)
- shift to the right of S (1)
- new equilibrium (E2 or P2 – Q2) or as appropriate (1).

Award up to **TWO** marks for the **explanation:**

- a change in price as appropriate (with specific reference to a diagram in terms of P1 to P2 – unless price is unchanged) (1)
- an increase in quantity (with specific reference to diagram in terms of Q1 to Q2) (1)

If axes or curves have macro labels, **NO** marks for entire question.

If axes are labelled incorrectly, marks can **only** be awarded for the correct shift in D and/or the correct shift in S (i.e. max 2 marks for whole question).

These marks can only be awarded with two correct shifts.

Price may rise, fall or remain the same – credit any new price which reflects correct shifts.



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | (c) | | **Other than a change in taste and fashion, state and explain how two determinants of demand might shift the demand curve for Airfix model kits.**<br>The question requires the candidates to use two demand determinants **other than taste and fashion** and relate each to Airfix.<br><br>Determinants accepted:<br>• income<br>• price and/or availability of substitutes<br>• price and/or availability of complements<br>• population size<br><br>Marks should be awarded as follows:<br>**one mark** for stating a correct determinant<br>**one mark** for explaining why the determinant affects demand plus **one mark** for the direction of the shift of the demand curve. | **6** | One mark for each correct identification, up to a maximum of **two** identifications, plus up to a **further two** marks for each of the two explanations.<br><br>As the question states do **NOT** accept taste and fashion there should be no reference to any of these examples such as the last paragraph of the text.<br><br>Examples:<br><br>Income (1). If income increases, consumers are more able to afford model kits (1), so the demand curve for Airfix will shift to the right (1).<br><br>Price of substitutes (1). If the price of substitute kits falls, consumers will switch to the cheaper product (1), shifting demand for Airfix kits to the left (1).<br><br>Population (1). If population rises there will be more people able and willing to buy Airfix kits (1), shifting demand to the right (1). |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | (a) | (i) | **Calculate the income elasticity of demand for the lower priced model kits.**<br>(+) 0.2 | 2 | Two marks for a correct calculation of YED.<br><br>One mark if correct working but incorrect answer:<br><br>$\frac{-2\%}{-10\%}$ or $\frac{-2}{-10}$ or $\frac{2}{10}$ or $\frac{2\%}{10\%}$ |
| | | (ii) | **Explain what the value you have calculated in part 5(a)(i) indicates to Airfix.**<br>A candidate should explain what the figure shows for three marks such as:<br><br>• YED is inelastic/demand is income inelastic (1)<br>• Demand is insensitive/responds less than proportionally to changes in income (1)<br>• Normal good (1)<br>• As income rises demand for the product will increase/ as income falls demand for the product will fall (1)<br>• An impact on demand for Airfix products e.g. Airfix products are relatively recession proof, as the economy grows demand for kits will grow (1) | 3 | OFR can apply in this part of the question if the candidate gets their calculation wrong, as the question requires the candidate to explain their own calculation.<br><br>Do **NOT** award a mark for 'product is inelastic', 'product is income inelastic' or 'demand is inelastic'. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | (b) | | **Comment on how a knowledge of price elasticity of demand would be helpful when making business decisions.**<br><br>Up to three marks for analysis:<br><br>• PED helps businesses when setting/making decisions on price (1)<br>• When demand is price elastic/PED is elastic firms should reduce prices (1)<br>• Quantity demanded rises more than proportionally when there is a fall in price/demand is responsive to a fall in price (1)<br>• When price is decreased, total revenue will increase (1).<br><br>Up to three marks for comments:<br><br>• Effect on revenue depends upon how price elastic demand is (1) – the more price elastic demand is the greater the increase in revenue for a given price reduction (1)<br>• TR may change but effect on profit is unknown (1) as no information on costs (1)<br>• PED calculations are estimates (1) which may be inaccurate/unreliable (1)<br>• PED is based on historical data (1) which may not hold true over time (1)<br>• PED varies along the demand curve (1)<br>• Other factors affect demand (1) meaning final change in revenue/demand uncertain (1) | **6** | This question is the first answer requiring evaluation but some analysis marks **MUST** be gained for the comment marks to be awarded.<br><br>**Nothing for an answer which assumes demand is price inelastic, as the stem of the question specifies 'price elastic'.**<br><br>**Use one C annotation for each comment mark**<br><br>One fully developed comment can be awarded up to three marks. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 6 | (a) | | **Comment on the extent to which the Chinese government should aim to reduce the negative externalities of pollution.**<br><br>**First**, a**ward up to three marks for an analysis** of the problems and their solution:<br><br>Overproduction or overconsumption (1), allocative inefficiency (1), economy not operating at social optimum (1), price at wrong level (1), China fails to consider external costs (1)<br><br>Intervening will reduce the welfare loss (1) **and** therefore correct/reduce the market failure (1), will improve allocative/economic efficiency (1), will move the economy towards the socially optimal allocation of resources (1)<br><br>**Second, IF fewer than three analysis marks have been awarded**, the candidate may be awarded up to two marks for examples:<br>• example of third party who is harmed (1) e.g. other nations are affected by Chinese pollution<br>• example of how third parties are harmed (1)<br>• example of how third parties might benefit from reduction in negative externalities (1) eg. cost to health service reduced<br><br>**Maximum of three marks for analysis/examples.**<br><br>**If at least one ANALYSIS mark has been awarded, award up to three comment marks**:<br>• intervention is valid if a net benefit of reduction in external costs is greater than the cost of intervention<br>• it is difficult to quantify the external cost<br>• intervention is valid only if Government Failure can be avoided | 6 | Up to three marks for analysis/examples and up to a further three marks for comment if at least one analysis mark has been awarded.<br><br>**No credit should be given for answers which approach the question by considering specific policy solutions e.g. pollution tax (since this is the subject matter of Q6b).**<br><br>Accept MSB=MSC (1) as the target for action.<br><br>The case study contains the statement "The Chinese government has been under pressure, both domestically and internationally, to reduce pollution." Award one mark if this is used as evidence that China should act.<br><br>**Use one C annotation for each comment mark** |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | | | • the extent of market failure may be too serious for successful intervention<br>• intervention seeks to reach socially/allocatively/economically efficient level of pollution, not remove it altogether | | |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | (b) | | **Discuss whether indirect taxation is the most effective policy measure to correct the market failure arising from the negative externalities of production.**<br>*The extract refers to the environmental damage occurring in China and that the manufacturing of (plastic and Airfix) products adds to this. The Chinese government is proposing a tax but questions arise as to whether this is the best approach.*<br><br>**Case for an indirect tax could include**<br>• reduces the volume of output and so reduces negative externalities<br>• deters production by raising costs of production<br>• it will lead to a shift to the left of S meaning that less is supplied and consumed at a higher price<br>• it has a greater effect if the PED is elastic<br><br>**Case against an indirect tax could include:**<br>• it would make Chinese firms less internationally competitive<br>• the correct value of the tax is difficult to determine<br>• costs of policing/collecting<br>• deters consumption<br>• may be absorbed by the firm rather than causing output to reduce | 18 | **Use second EE annotation to indicate elaboration.**<br><br>18 marks: More thorough justification or elaboration of the statement.<br>17 marks: Some justification or elaboration of the statement.<br><br>**Use one EE to show where this statement appears in the answer.**<br><br>16 marks: A statement that indirect taxation is or is not the **most** effective solution based on preceding evaluation.<br><br>Maximum of three L4 annotations should appear on the script.<br>(Put SEEN alongside further discussion points.)<br><br>15 marks: Two developed evaluative points or three or more evaluative points with at least one developed<br><br>14 marks: One developed evaluative point or two or more undeveloped evaluative points<br><br>13 marks: One evaluative point lacking development | **Level 4 (13–18)**<br>**For a discussion of policies which correct the market failure arising from the negative externalities of production.**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>16–18 marks – There must be a supported judgment based on the preceding analysis and it should reflect the strength of the analysis and the evaluation. This is likely to consider alternative solutions.<br><br>13–15 marks – There must be a discussion of points for and against indirect taxation **or** indirect taxation will have been compared with other methods of correcting market failure.<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | • will not reduce output by much if PED is inelastic<br>• may reduce positive externalities of production and consumption<br><br>**If included, effectiveness of alternative solutions must be compared with that of indirect tax:**<br>• outright ban<br>• output restrictions<br>• pollution permits<br><br>Do **not** credit information provision as this relates to a leftward shift in demand.<br><br>**Level 3 Band 2 (11-12 marks)**<br>• the market becomes more allocatively efficient<br>• this solves/reduces overproduction<br>• an explanation of how negative externalities are reduced<br>• connecting shift leftwards of supply with correcting "negative externalities of production" – how this works | | **Max. of two L3 annotations**<br><br>**Place second L3 annotation where L3 B2 is awarded.**<br><br>**Band 2 points:**<br><br>12 marks: two Band 2 points or one developed Band 2 point<br><br>11 marks: one Band 2 point | **Level 3 (9–12 marks)**<br><br>**For an analysis of the use of indirect taxation to reduce negative externalities**<br><br>This must refer to an analysis of the focus of the actual question posed – not to the question which the candidate would have liked to have been asked. It must also incorporate, towards the top end of Level 3 mark range, width and/or depth of analysis illustrating how indirect taxation affects the market.<br><br>11–12 marks – there are likely to be a number of undeveloped analytical points or a couple of analytical points which are well developed. This should include analysis of how imposing an indirect tax will lead to reduced supply through raising costs. A diagram is likely but not |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Band 1 (9-10 marks)**<br>• supply curve shifts to the left **because** indirect taxes effectively increase producer costs<br>• price rises from P to P1<br>• quantity falls from Q to Q1<br><br>Maximum of nine marks for a static answer which only identifies the new market equilibrium after a tax is imposed.<br><br>For **Level 2** marks to be awarded candidate must show application either to negative externalities of production, e.g. pollution, global warming, or to an indirect tax and its effect on the market.<br><br>Level 2 responses may offer an unexplained diagram or raise, but not analyse, some of the following:<br>• indirect tax will decrease supply<br>• statement that indirect taxation will shift supply to the left/inward/upward (or an unexplained taxation diagram showing this)<br>• indirect tax will raise the price of the products | | **Place one L3 annotation where L3 B1 is awarded.**<br><br>10 marks: more than one Band 1 point made.<br><br>9 marks: one Band 1 point made.<br><br>**Place one L2 annotation per applied point and a further L2 annotation for each development of the same point.**<br><br>**Max. of 4 L2 annotations**<br><br>8 marks: one fully developed applied point **and** at least one other applied point<br><br>7 marks: one fully developed applied point **or** three applied points<br><br>6 marks: one developed applied point **or** two applied points<br><br>5 marks: unexplained indirect taxation diagram (shifting supply to left) **or** one point on indirect taxation or on the | required.<br><br>9–10 marks – there are likely to be only one/two undeveloped analytical points, or one analytical point which is somewhat developed. Such as an explanation of an indirect tax leading to a rise in price – the impact upon the market is unclear.<br><br>*Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.*<br><br>**Level 2 (5–8 marks)**<br><br>**For an application of knowledge and understanding of indirect taxation** |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | • advantages or disadvantages of indirect taxation applied to a market failing due to negative externalities **where L3 B2 has not been attained**<br><br>**Level 1**<br>**1-4 marks**<br>• Example(s) of indirect tax, e.g. VAT<br>• Indirect tax raises the cost of production<br>• Market failure is where the free market fails to achieve allocative efficiency<br>• Non-applied market failure diagram<br>• Definition of negative externalities / indirect taxation | | impact of negative externalities **or** one example of a negative externality<br><br>**Place one L1 annotation per correct statement, up to a maximum of four (or until a higher level is awarded)** | This sort of response will include unsupported/unsubstantiated statements as to how indirect taxation can/cannot be used to solve market failure.<br><br>*Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.*<br><br>**Level 1 (1–4 marks)**<br>**For knowledge only of indirect taxation and/or the concept of market failure**<br><br>*Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility.* |


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RECOGNISING ACHIEVEMENT

# Friday 17 May 2013 – Afternoon

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used

**Duration:** 1 hour 30 minutes

* F 5 8 1 0 1 *

* F 5 3 0 0 8 0 6 1 3 *

| Candidate forename | | Candidate surname | |
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| Centre number | | | | | | Candidate number | | | | |
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### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to the question labelled with an asterisk (*****).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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**2**

## Starved of sunshine

It has been estimated that 42 million foreign holidays are taken every year by United Kingdom (UK) citizens. More recently, airlines, faced with tighter regulation, a sharp rise in the cost of fuel and an increase in green taxes, have been forced to increase prices and decrease the supply of flights. This sharp rise in the price of flights has led to a fall in the demand for foreign holidays.

The increase in the price of foreign holidays, a fall in disposable incomes and the promise of a hot summer in the UK has led many families to take a 'staycation' holiday within the UK (see Fig. 1). Traditional holiday areas such as Cornwall and Devon and major cities such as London and Edinburgh are all benefitting from an increase in the number of visitors. UK holiday destinations have responded to this increase in demand by raising the quality and quantity of their provision. This has included, for example, the development of more up-market campsites and a greater range of specialist leisure activities.

| Holiday type | Price elasticity of demand | Income elasticity of demand |
|---|---|---|
| **Foreign holidays** | –1.7 | 2.0 |
| **UK holidays (staycation)** | –0.8 | –1.6 |

**Fig. 1 – Elasticity of demand estimates for holidays**

The unreliability of the weather in the UK means, however, that holiday-makers may not return from their 'staycation' with a golden tan. Starved of sunshine, fashion-conscious UK citizens are turning to more reliable ways of gaining a tan. The use of sunbeds and sales of tan accelerating products have increased substantially in recent years.

The market for tanning products shows evidence of information failure. Tan accelerators, swallowed as pills or applied directly to the skin as creams, are promoted as a safer way to tan. However, the unfortunate side effects of using chemicals which make skin more sensitive to sunlight include permanent skin discolouration, high blood pressure and a raised risk of skin cancer. The danger is considered so great that many such products are banned in the European Union (EU). Tan addicts have now turned to the Internet to purchase supplies.

Sunbeds are not a safer alternative. Research has shown that there is a direct link between sunbed use and skin cancer. Experts have warned that 'using a sunbed before the age of 30 can increase the risk of skin cancer by 75%'.

With a noticeable rise in the number of people requiring treatment for skin cancers in the UK, the government has responded by introducing legislation. The Sunbeds (Regulation) Act 2010 bans the use of sunbeds in gyms, sports centres and tanning salons by under 18s. Although experts believe that this is 'a step in the right direction', they think that the legislation has not been properly thought out and that far more could be done to reduce this problem.

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Answer **all** questions.

**1** Using an example in each case, state **two** factors of production used in the provision of holidays.

1 .....

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**[4]**

**2** **(a)** Using information in the case study, identify and explain **two** reasons for the decrease in the supply of flights.

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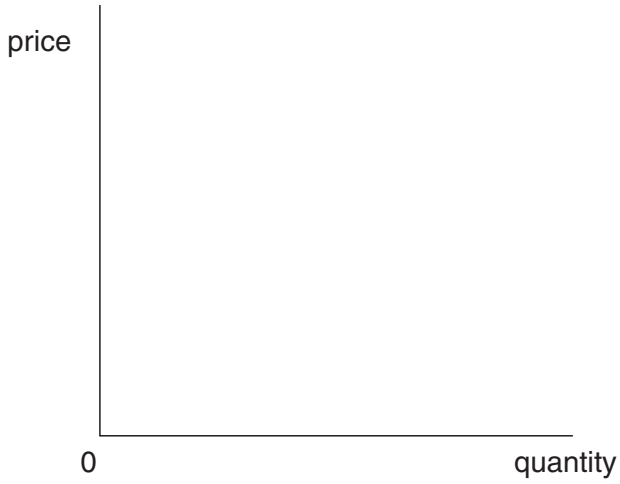
**[6]**

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**(b)** Using a demand and supply diagram, comment on the extent to which changes in the demand **and** supply of holidays mentioned in the case study may have affected the market equilibrium for foreign holidays.




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..... **[6]**

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**3** **(a)** Define the term 'consumer surplus'.

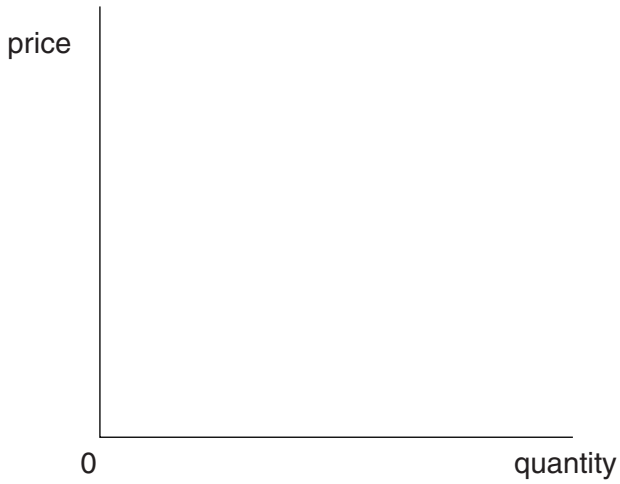
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..... **[2]**

**(b)** Using a diagram, show how consumer surplus changes with a rise in the price of flights.




**[4]**

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**4** **(a)** Define the term 'income elasticity of demand'.

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..... **[2]**

**(b)** There is expected to be a 10% fall in UK consumers' income in the next two years.

Using the information in Fig. 1, comment on the likely impact of this fall in income on the holiday market.

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5 **(a)** Define what is meant by the term 'allocative efficiency'.

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**(b)** Using information in the case study, explain whether the UK holiday market has become more allocatively efficient.

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..... **[4]**

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**6** Comment on the likely impact on consumers of information failure in the market for sun beds and tan accelerator products.

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**7*** Discuss whether regulation is the most effective solution to the market failure arising from information failure. **[18]**

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**END OF QUESTION PAPER**

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## ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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RECOGNISING ACHIEVEMENT

GCE

# Economics

Advanced Subsidiary GCE

Unit **F581:** Markets in Action

# Mark Scheme for June 2013



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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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| Annotation | Meaning |
|---|---|
|  | Tick |
|  | Cross |
|  | Comment |
|  | Benefit of doubt |
|  | Level 1 |
|  | Level 2 |
|  | Level 3 |
|  | Level 4 |
|  | Effective evaluation |
|  | Omission mark |
|  | Not answered question |
|  | Noted but no credit given |
|  | Too vague |
|  | Own figure rule |

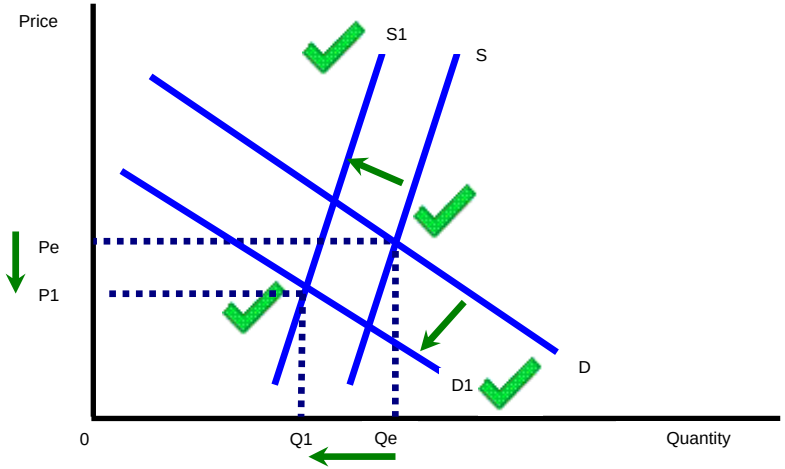


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | | | **Using an example in each case, state two factors of production used in the provision of holidays.**<br><br>One mark for each correctly stated factor plus a further mark for an appropriate example (2x2)<br>Possibilities include:<br>• land – site of airport/hotels/holiday resorts/parks, campsite, scenery, rivers, beaches, oil<br>• labour – holiday reps, tour guides, travel agents, pilots<br>• capital – transport such as trains/coaches, airports, hotel buildings, theme-park machinery<br>• enterprise – risk taking/organisation of factors of production/ decision making in offering the holidays | 4 | Do not accept illustrations that are not applied to the provision of holidays, i.e. no marks for 'natural resources', 'buildings'…<br><br>Do not accept "fuel" as an example of land.<br><br>No credit for 'workers' but one mark for 'workers in the holiday industry' or similar application. |
| 2 | (a) | | **Using information in the case study, identify and explain two reasons for the decrease in the supply of flights.**<br><br>One mark each for reasons for the shift of the supply curve to the left.<br>The case material gives:<br>• tighter regulation<br>• sharp rise in the cost of fuel<br>• increase in green taxes<br><br>eg<br>"Regulation (1) raises costs of production (1) meaning firms can make less profit (1)."<br><br>"A sharp rise in the cost of fuel (1) has increased production costs (1) and therefore firms are less willing to supply flights (1)."<br><br>"The increase in green taxes (1) has increased the cost of flying (1) thus resulting in fewer firms being able to supply flights. (1)" | 6 | One mark for each correct identification, up to a maximum of two identifications, plus up to a further two marks for each of two explanations.<br><br>An answer getting full marks is likely to follow the following pattern:<br>• identification of the reason (1)<br>• explanation that this increases costs **or** limits production (1)…<br>• …causing firms to be less willing or able to supply/earn less profit (1)<br><br>Do **NOT** credit "therefore supply will decrease" or "therefore the supply curve shifts to the left" with an explanation mark.<br><br>Do **NOT** accept demand side explanations or a price change causing a movement down the supply curve/contraction of supply. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | (b) | | **Using a demand and supply diagram, comment on the extent to which changes in the demand and supply of holidays mentioned in the case study may have affected the market equilibrium for foreign holidays.**<br>  <br><br>Award up to four marks for **a** correct diagram:<br>• original equilibrium (1)<br>• shift left of supply (1)<br>• shift left of demand (1)<br>• new equilibrium (1)<br><br>Up to two marks for a comment on how the overall impact depends upon:<br>• the extent to which supply and/or demand curves shift (1 only), elaborated with reference to effect on price or quantity (1)<br>• the elasticity of demand and/or supply (1) elaborated with reference to effect on price or quantity (1)<br>• other factors affecting demand or supply (up to 2) | 6 | If lines wrongly labelled (eg macro labels)/not labelled, no marks for diagram.<br><br>If only one shift is shown, or one shift is to the right, maximum two marks for the diagram.<br><br>Use annotation C in left margin for comments.<br><br>If both shifts are incorrect, no marks can be awarded for a comment.<br><br>If only one shift is correct, cap comment marks at 1. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | **Define the term 'consumer surplus'.**<br><br>Up to two marks for a clear definition such as:<br><br>The extra amount that a consumer is willing to pay for a product above the price that is actually paid. (2)<br><br>The difference between the value a consumer places on the good/service purchased and the equilibrium price in the market. (2)<br><br>The difference between the price that consumers are willing to pay and the market price. (2)<br><br>The value that consumers gain from consuming a good or service over and above the price paid. (2) | 2 | Accept 'amount paid' for 'price'.<br><br>If there is no clear sense of the 'difference' no marks can be awarded.<br><br>Award one mark for recognition of a difference between two prices. |
| | (b) | | **Using a diagram, show how consumer surplus changes with a rise in the price of flights.**<br><br>Up to four marks for a diagram which clearly illustrates a loss in consumer surplus and rise in price:<br><br>• correctly labelled, downward sloping demand curve (1)<br>• original consumer surplus identified (1)<br>• new consumer surplus identified (1)<br>• consumer surplus will decrease (1)<br>• area of consumer surplus **lost** indicated by letters or labels (1) | 4 | **If demand curve is not labelled, no marks can be awarded.**<br><br>Do **NOT** credit an area labelled 'consumer surplus' unless the candidate makes clear whether this is the **original**, **new** or **lost** consumer surplus.<br><br>Do **NOT** accept 'difference' or 'change' for loss/decrease. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **Define the term 'income elasticity of demand'.**<br><br>Two marks for a clear definition such as:<br><br>The responsiveness of demand/quantity demanded to a change in income (2).<br>The extent to which demand changes as a result of a change in income (2).<br>A measure of the sensitivity of quantity demanded to a change in consumer incomes (2).<br><br>OR<br>Correct formula: $\frac{\%\text{ change in quantity demanded}}{\%\text{ change in income}}$ or $\frac{\%\Delta QD}{\%\Delta Y}$ (2) | 2 | Award one mark for an understanding of a relationship between income and demand.<br><br>No marks for "responsiveness of a CHANGE in demand/quantity demanded…"<br><br>Award one mark if the formula omits "Q"<br><br>Do **NOT** award any marks if the formula is presented without "%" or "percentage" |
| | (b) | | **There is expected to be a 10% fall in UK consumers' income in the next two years. Using the information in Fig. 1, comment on the likely impact of this fall in income on the holiday market.**<br><br>Up to three marks for an analysis of the figures given:<br>• foreign holidays are normal/luxury/superior goods (1)<br>• UK holidays/staycations are inferior goods (1)<br>• both/either are income-elastic (1) **but only credit this once**<br>• there will be greater change in demand for foreign holidays than for UK holidays in response to a change in income (1)<br>• fall in income will lead to a fall in demand for foreign holidays (1)<br>• fall in income will lead to a rise in demand for UK holidays (1)<br>• relevant numerical example (1) **but only credit this once**<br><br>Up to three marks for relevant comments such as:<br>• UK holiday companies will benefit in the future from the falling incomes but foreign companies are likely to lose custom<br>• incomes may not fall in line with the 10% prediction – so future is uncertain<br>• assumes ceteris paribus which may not apply<br>• the figures are estimates (1) could be inaccurate (1) unreliable(1) change over time (1) **max 2 for estimates comments** | 6 | YED for foreign holidays = +2.0<br>YED for UK holidays/staycations = -1.6<br><br>Do **NOT** credit attempts to interpret the PED figures (-1.7, -0.8) given in the case study.<br><br>No OFR marks are available as candidates were not required to calculate estimates.<br><br>Do **NOT** credit 'fall in foreign holidays' or 'rise in UK holidays' without reference to demand.<br><br>Numerical examples – demand for foreign holidays falls by 20%, demand for UK holidays rises by 16%.<br><br>Comment marks can only be awarded where at least one analysis mark has been awarded.<br><br>Up to three marks for one well-developed comment. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | **Define what is meant by the term 'allocative efficiency'.**<br><br>Award two marks for a clear definition such as:<br>• when consumer satisfaction is maximised<br>• when welfare is maximised<br>• where quantity supplied is equal to the quantity demanded/S=D<br>• where the market is in equilibrium/market clears<br><br>Also accept:<br>• where P = MC<br>• where AR = MC | 2 | Award one mark for an incomplete definition which nonetheless relates to the concept, e.g. "where consumers are happy/more satisfied" or "where resources are allocated to meet demand". |
| | (b) | | **Using information in the case study, explain whether the UK holiday market has become more allocatively efficient.**<br><br>Award one mark for a statement that the market has become more allocatively efficient.<br><br>Award up to two marks for the use of evidence from the case study:<br><br>UK holiday companies have<br>• increased the **quantity** of UK holidays (1)<br>• improved the **quality** of UK holidays (1)<br><br>Award one mark for linking evidence in the case study to allocative efficiency, e.g. "consumer satisfaction is increased with better quality campsites", "a greater range of specialist leisure activities caters for an increasing breadth of consumer taste" or "increasing numbers of holidays means consumers can purchase the holiday they desire". | 4 | Award **max one** mark to candidates who use "more up-market campsites and a greater range of specialist leisure activities" as an example of greater quantity or quality.<br><br>A valid alternative approach is for candidates to argue that the market is **still** clearing and cannot become more efficient:<br><br>• the market has **not** become more efficient (1)<br>• quantity of holidays is increasing (1) and quality improving (1)<br>• therefore supply is still meeting (increased) demand (1) and the market is still clearing (1) |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 6 | | | **Comment on the likely impact on consumers of information failure in the market for sun beds and tan accelerator products.**<br><br>Up to two marks for **application** of the impact on consumers of sun bed/tan accelerators:<br>• excessive consumption increases the risk of cancer/death/ blood pressure issues/skin disorders (1)<br>• consumers lack awareness of harmful effects (1)<br>• these will reduce quality of life and life expectancy (1)<br><br>Up to two marks for an economic **analysis** of the impact on consumers of sun bed/tan accelerators. Points might include:<br>• these are demerit goods (1)<br>• leading to over-consumption (1)<br>• consumers may behave irrationally through lack of information (1)<br>• the industry demonstrates asymmetric information (1)<br>• consumers' decisions do not maximise their welfare (1)<br><br>Up to two marks for relevant **comment** on the impact on consumers:<br>• depends on the extent of information failure<br>• the evidence is still unclear<br>• other factors lead to the use of such products – it is easy to access them<br>• consumers may have the information but choose to ignore it<br>• difficult to judge the impact since illegal consumption is unrecorded | 6 | NB – only reward answers which deal with the impact **on consumers** of sun beds and tan accelerator products. Negative externalities are not relevant (eg skin cancer raising costs to the NHS is **not** an acceptable application, as this is not an impact on consumers).<br><br>"Unhealthy" or "risks to health" as an impact on consumers = too vague.<br><br>Comment marks can only be awarded where at least one **analysis** mark has been awarded.<br><br>One developed comment can gain both comment marks. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 7* | | | **Discuss whether regulation is the most effective solution to the market failure arising from information failure.**<br><br>**EE**<br>**16–18 marks**<br>Stated or elaborated judgement.<br><br>**Level 4**<br>**13–15 marks**<br>Responses may include, but are not limited to:<br>• Regulation may be difficult and/or costly to enforce.<br>• Opportunity cost of enforcement.<br>• Black markets may develop.<br>• Regulation may not be set at optimal level – government failure.<br>• People might choose to ignore regulation/break the rules.<br>• Consumers may not respond to the information provided.<br>• Alternatives may be more/less effective than regulation – **must be compared to regulation.**<br><br>The above points may be credited as L2 if answer has not progressed to L3 B2. | 18 | **18 marks**: More thorough justification or elaboration.<br><br>**17 marks**: Some justification or elaboration of the statement.<br>**Use second ≡ annotation.**<br><br>**16 marks**: Regulation is/is not the most/an effective solution.<br>**Use one - to show where this statement appears.**<br><br>**15 marks**: Three evaluative points or a well developed evaluative point.<br><br>**14 marks**: Two evaluative points or a partially developed evaluative point.<br><br>**13 marks**: One evaluative point **OR** a list of stated points.<br>**Use one ✓ annotation for each of the first three discussion points.** | **Level 4 (13–18 marks):**<br>**For a discussion as to whether regulation is the most effective solution to the market failure arising from information failure.**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>17–18 marks: There must be a supported judgment based on the preceding analysis which may consider alternative solutions.<br><br>16 Marks: There must be a stated judgement.<br><br>All answers at this level must be underpinned with appropriate analysis.<br><br>13–15 marks: There must be a discussion of points for and against regulation **or** a direct comparison with other methods of correcting market failure.<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Band 2**<br>**11–12 marks**<br>• This solves overconsumption/ reduces consumption which corrects market failure<br>• Moves market (closer) to allocative efficiency<br>• Welfare is increased<br><br>**Level 3 Band 1**<br>**9–10 marks**<br>• Diagram showing vertical supply curve imposed on market (to left of old equilibrium)<br>• Supply shifts to the left (because regulation may increase firms' costs)<br>• Demand shifts to the left (because regulation makes it more difficult for consumers to obtain the product)<br>• Price rises (from P to P1)<br>• Quantity falls (from Q to Q1) | | **12 marks**: more than one Band 2 point made **OR** a developed Band 2 point.<br><br>**11 marks**: one Band 2 point made<br>**Place second L3 annotation where L3 B2 is awarded.**<br><br>**10 marks**: more than one Band 1 point made **OR** a developed Band 1 point.<br><br>**9 marks**: one Band 1 point made<br>**Place one L3 annotation where L3 B1 is awarded.** | **Level 3 (9–12 marks):**<br>**For an analysis of the use of regulation to correct market failure.**<br><br>11–12 marks: For analysis of how moving to the new equilibrium solves the market failure arising from information failure.<br><br>9–10 marks: Analysis which demonstrates the new equilibrium position after the imposition of regulation.<br><br>*Relatively straight forward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning.* |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 2**<br>**5–8 marks**<br>• Application of regulation to any suitable market failure, eg sunbeds, cigarettes, alcohol<br>• Regulation could take the form of banning under 18s from using sunbeds<br>• Regulation could force firms to provide health warnings/ information<br>• Unexplained regulation diagram showing relevant shift of S or D<br>• Advantages or disadvantages of regulation applied to a market (where L3 B2 has not been attained).<br><br>**Level 1**<br>**1–4 marks**<br>• Regulation consists of laws/ restrictions imposed by the government<br>• Market failure is where the free market fails to achieve allocative efficiency<br>• Information failure occurs when a lack of information results in consumers and producers making decisions that do not maximise welfare.<br>• Non-applied market failure diagram | | **8 marks**: Four or more applied points.<br><br>**7 marks**: Three applied points.<br><br>**6 marks**: Two applied points **OR** unexplained diagram and one point applied to the market.<br><br>**5 marks**: One point on regulation applied to the market **OR** unexplained regulation diagram.<br><br>**3–4 marks**: knowledge of both regulation **AND** market failure.<br><br>**1–2 marks**: knowledge of either regulation **OR** market failure. | **Level 2 (5–8 marks):**<br>**For an application of knowledge and understanding of regulation.**<br><br>This sort of response will include unsupported/unsubstantiated statements as to how regulation works, and how it can/cannot be used to solve market failure.<br><br>*Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.*<br><br>**Level 1 (1–4 marks):**<br>**For knowledge only of a regulation and/or market failure (which may include information failure).**<br><br>*Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility.* |



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RECOGNISING ACHIEVEMENT

# Tuesday 15 January 2013 – Afternoon

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used

**Duration:** 1 hour 30 minutes

* F 5 8 1 0 1 *

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| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

**INSTRUCTIONS TO CANDIDATES**

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to the question labelled with an asterisk (*****).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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**Turn over**

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## The UK housing crisis in numbers

The UK is facing a severe housing shortage. A growing population combined with a rise in the number of households (because more people are living alone and more people have second properties) has meant that the UK is unable to build houses at the rate which they are needed. The government has estimated that the UK requires 240 000 houses to be built each year to meet growing demand. The current rate is only 125 000 per year. As a result the average price of new houses may rise and people on low incomes may struggle to buy (see Fig. 1).

| | % change in price of new houses | % change in quantity of new houses supplied |
|---|---|---|
| **2006** | 4.8% | 3.6% |
| **2007** | 1.2% | 2.4% |
| **2008** | –1.4% | –1.1% |
| **2009** | –9.9% | –21.6% |
| **2010** | 7.4% | –14.5% |

**Fig. 1 – Annual changes in the price and supply of new houses**

In response to this problem, the government has attempted to increase the supply of new houses by:

- relaxing planning regulations in order to allow increased numbers of houses to be built
- subsidising the building of 'affordable' houses.

In 2007, the government made a commitment to ensure that three million houses would be built by 2020. Where and how these new houses should be provided is causing further problems.

One suggestion is that new housing should be built in major developments on the edge of existing towns or villages. These Sustainable Urban Extensions (SUEs) would have their own schools, shops, and health and community facilities. This would, therefore, put less pressure on existing services than building lots of smaller housing estates. These SUEs would also generate employment and improve infrastructure in the area. Residents close to many of the proposed sites disagree. They believe that such substantial developments would destroy the countryside and reduce the value of existing houses.

An alternative to the building of new houses is to provide government grants to encourage the renovation and use of existing empty properties. In September 2010, the Homes and Communities Agency published data which estimated that there were 734 000 such vacant houses in the UK. Houses left empty are often the target for vandalism and litter. It has been argued that, on average, empty houses need only £10 000 of investment to prepare them for re-occupation, compared with £90 000 to build a new affordable house.

With limited government finance available, there is a difficult choice between funding the building of new houses and the renovation of old houses.

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Answer **all** questions.

**1** Using the information in the case study, explain how the economic problem can be applied to the market for new houses in the UK.

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..... **[4]**

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**2** **(a)** Define the term 'opportunity cost'.

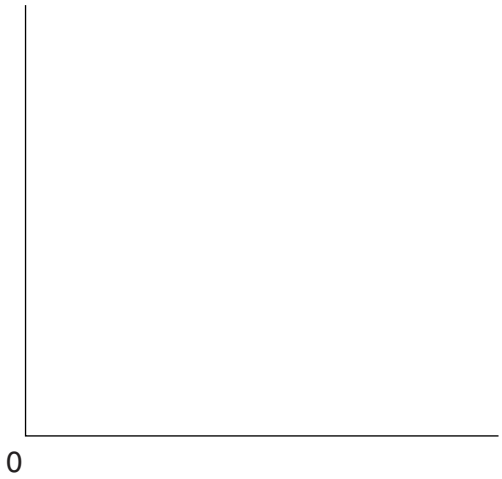
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..... **[2]**

**(b)** Using a production possibility curve diagram, illustrate and explain the opportunity cost described in the case study (lines 28–29).




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..... **[6]**

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**3** **(a)** What is meant by a market?

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..... **[2]**

**(b)** State and explain **two** likely determinants of an increase in the demand for houses in the UK.

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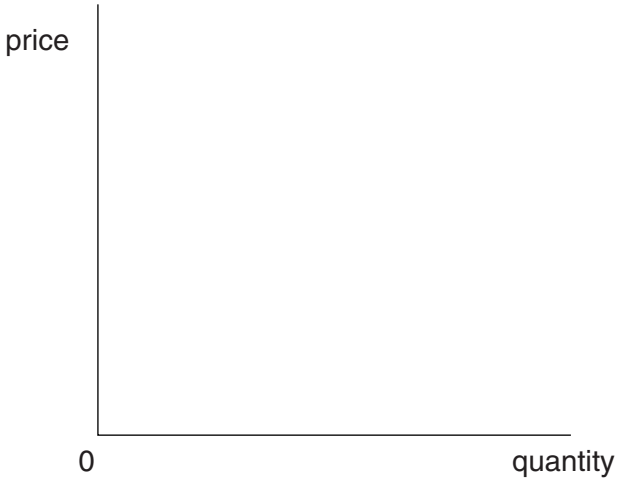
..... **[6]**

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**(c)** Using a demand and supply diagram, comment on the likely impact on the market for new houses of relaxing planning regulations.




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..... **[6]**

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4 **(a)** Define the term 'price elasticity of supply'.

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..... **[2]**

**(b)** Using the information in Fig. 1, comment on the significance of price elasticity of supply between 2006–10 on the market for new houses. (Your answer must include calculations of price elasticity of supply.)

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..... **[8]**

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**5** Using information in the case study:

**(a)** identify **one** negative externality arising from the building of Sustainable Urban Extensions (SUEs). Explain why it is a negative externality.

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..... **[3]**

**(b)** identify **one** positive externality arising from the building of Sustainable Urban Extensions (SUEs). Explain why it is a positive externality.

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..... **[3]**

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**6*** Discuss whether subsidising the building of affordable new houses is the most effective solution to a housing shortage. **[18]**

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**END OF QUESTION PAPER**

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## ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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GCE

# Economics

Advanced Subsidiary GCE

Unit **F581:** Markets in Action

# Mark Scheme for January 2013

Oxford Cambridge and RSA Examinations

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OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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## Annotations

The following annotations are available:

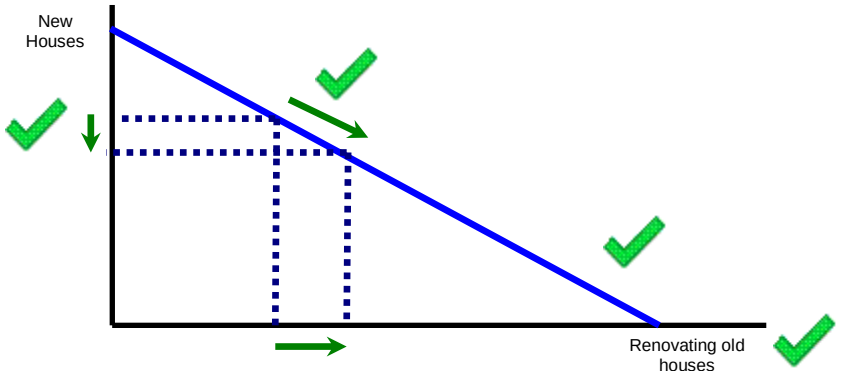
| Annotation | Meaning |
|---|---|
|  | Tick |
|  | Cross |
| C | Comment |
| BOD | Benefit of doubt |
| L1 | Level 1 |
| L2 | Level 2 |
| L3 | Level 3 |
| L4 | Level 4 |
| EE | Effective evaluation |
| ^ | Omission mark |
| NAQ | Not answered question |
| SEEN | Noted but no credit given |
| TV | Too vague |
| OFR | Own figure rule |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | | | Up to two marks for explanation of the economic problem:<br><br>Scarcity (1) and choice (1)<br>Limited resources (1) and unlimited wants (1)<br>How to allocate scarce resources among alternative uses (2).<br>What shall be produced, how and for whom (2)<br><br>Up to two marks for application:<br><br>There are insufficient houses (1) to meet (rising) demand (1).<br>People on low incomes (scarce resource) (1) have to decide whether they can afford to purchase/rent housing (1).<br>Government has insufficient finance (1) and must choose whether to finance housing or meet the other needs of the population (1).<br>Shortage of housing (1) against a growing population or growing number of households (1) | 4 | Wants exceed resources = two marks.<br><br>**Do not award** a mark for "unlimited demand" or "needs" in definition.<br><br>Award one mark where candidates use both figures from the case study (125,000 homes built a year, but demand rising by 240,000 a year) without development<br><br>The number of houses being built is 52% of the number needed. Award one mark for 52%.<br><br>Do not award answers saying supply is not enough to meet demand. |

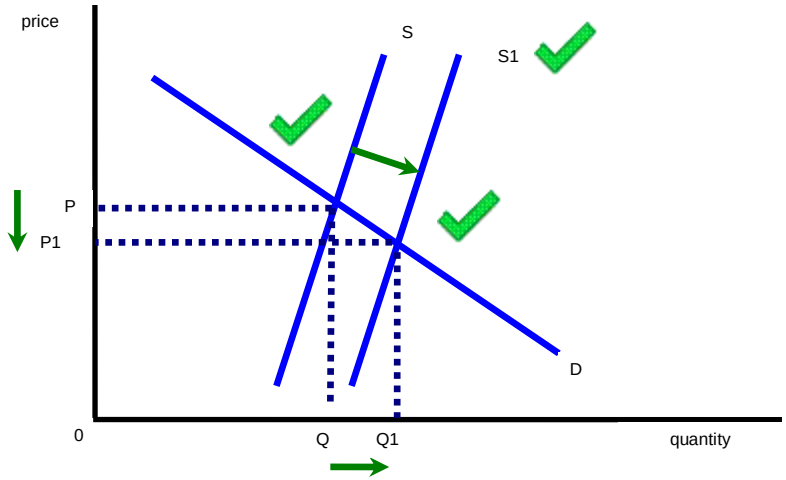

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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 2 | (a) | | Up to two marks for a definition:<br><br>The (next) best alternative (1) foregone/given up (1) | 2 | One mark for idea of (benefit) lost.<br><br>**Do not award** a mark for 'price' |
| | (b) | |  <br><br>**Up to four marks** for a correct diagram – one mark for each of:<br><br>• correctly labelled axes – maybe as above or funding for building new houses versus providing grants to renovate old properties.<br>• PPC – straight or curved<br>• indication of alternative points on line either through labels (e.g. A, B) on PPF or coordinates to points on PPC or arrow between points<br>• indication of opportunity cost on relevant axis through sequential labels or arrows.<br><br>**Up to two further marks** for an explanation of how opportunity cost can be used to explain the choices facing government:<br><br>Relevant opportunity cost identified (1) with valid reference to the diagram (1). | 6 | If axes labelled p&q – **no marks** for diagram.<br><br>If axes relate to two goods not in context, i.e. good A and good B style answer, **axes mark lost** but remaining three marks available.<br><br>Accept on axes old/new houses or anything similar which establishes the context (eg accept 'government grants' for renovating new houses).<br><br>A diagram and explanation of the opportunity cost of INCREASING production of new houses is equally acceptable.<br><br>**Do not credit** shaded rectangles as indication of opportunity cost.<br><br>A simple statement identifying the opportunity cost of renovating old houses in terms of new houses or vice-versa gains the first explanation mark<br><br>Explanation must be applied to case study to be credited. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | **Up to two marks** for a definition:<br>Where buyers and sellers meet/come into contact (1) for the purpose of trading (1).<br>Where producers and consumers meet (1) to buy and sell goods/exchange/trade (1)<br>A system by which price is determined (1)<br>The interaction of demand and supply or of buyers and sellers or of consumers and producers (1) | 2 | A correctly labelled demand and supply diagram, showing equilibrium = two marks.<br><br>Accept 'a set of arrangements that allows transactions to take place' = two marks. |
| | (b) | | **One mark for stating a determinant**, **one mark for explaining a greater need or willingness/ability to buy houses**, **one mark for linking the two.**<br><br>Determinants of an increase in demand for houses include:<br>• rise in income<br>• fall in interest rates/availability of credit<br>• price and availability of substitutes (rented property/houses abroad)<br>• taste & fashion<br>• rising population<br>• change in demographics –more households<br><br>The case study also identifies:<br>• more people living alone(fashion/demographics)<br>• more people having a second home (fashion). | 6 | Accept advertising as an example of taste & fashion.<br>**Do not accept** price or a change in price as this does not shift the demand curve.<br>Accept reference to government policy, if applied appropriately to demand.<br><br>**Illustrations of possible responses:**<br>*Incomes are rising ✓which means that couples can afford to a deposit on a house ✓leading to more people buying a house ✓. (3)*<br><br>*Rise in income. ✓As houses are a normal good ✓ increasing income leads to higher demand for houses ✓ (3) (standard explanation of normal good)*<br><br>*Higher divorce rates ✓mean that the number of households is increasing ✓and so people need to buy an additional house✓ (3)*<br><br>*Taste and fashion ✓ It has become popular to own a second home ✓ so demand rises (2)*<br><br>'Leading to an increase in demand' or 'so demand rises' should NOT normally be rewarded as explanation – reward the cause of this increase in demand. Two exceptions to this rule are that phrases may be credited in standard explanations of the impact of affordability and income elasticity. |


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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (c) |  <br>**Award up to three marks for diagram**:<br>• original equilibrium (1)<br>• right shift of supply curve (1)<br>• new equilibrium. (1)<br><br>**One mark for analysis of the impact:**<br>• quantity should increase (1)<br>• the price may fall (1).<br><br>**Award up to two marks for relevant comment such as**:<br>• decrease in price depends upon the extent of supply shift<br>• decrease in price depends upon elasticity of demand<br>• depends on how much the easing of regulation shifts the supply curve<br>• this assumes all other factors remain unchanged. | 6 | Three marks – application<br>One mark – analysis<br>Two marks – evaluation<br><br>Do not accept 'price level'<br><br>Equilibria must be shown by lines to the axes and labelled with P/P1, Q/Q1.<br><br>One developed comment can be awarded two marks.<br><br>Put [C] annotation in the left margin of line in which comment/development appears. Use two such annotations if awarding both comment marks. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **Up to two marks** for a clear definition such as:<br><br>The responsiveness of quantity supplied to a change in the price of a product (2).<br>A measure of the sensitivity of quantity supplied of a good or service to a change in the price of that good or service (2).<br><br>Correct formula $\frac{\%\text{ change in quantity supplied}}{\%\text{ change in price}}$ or $\frac{\%\Delta QS}{\%\Delta P}$ (2) | 2 | **Award one mark only** if the candidate has used 'supply' rather than 'quantity supplied' in the formula.<br><br>No marks for responsiveness of a CHANGE in quantity supplied.<br><br>$\frac{\%\Delta Q}{\%\Delta P}$ – No Marks |
| | (b) | | **Up to two marks** for calculations of PES<br>**2006** = 0.75<br>**2007** = 2<br>**2008** = 0.79<br>**2009** = 2.18<br>**2010** = -1.96<br><br>**Up to a further two marks** for interpretation:<br>• which ones are elastic (1) and inelastic (1)<br>• that elasticity varies over the period (1).<br><br>**Up to four marks** for relevant comment such as:<br>• These data are only estimates (1) we do not know the source/ they may therefore be inaccurate/unreliable (1) **MAX 2 on estimates.**<br>• Negative PES (2010) is unusual/unexpected (1) and therefore (particularly) likely to be wrong (1)<br>• The supply curve is likely to have shifted to the left (1) thus increasing prices but reducing quantity supplied and demanded (1) as 'other things being equal' does not apply (1)<br>• Supply would expected to be inelastic in the short run /usually tends to become price elastic in the long run - it takes time to build more houses. | 8 | To 4dp the PES figures are: As fractions:<br>2006 = 0.7500 3/4<br>2007 = 2.0000 2<br>2008 = 0.7857 11/14<br>2009 = 2.1818 24/11 or 2 2/11<br>2010 = -1.9595 -145/74 or 1 71/74<br><br>Inelastic 2006, 2008<br>Elastic 2007, 2009, 2010<br><br>PES expressed as a percentage e.g. 0.75% - award zero marks<br>Use C for comment marks<br><br>Interpretation and comment marks can not be awarded if there are no calculations.<br><br>However OFR marks can be awarded for correct interpretation of incorrect figures/calculations - place OFR annotation. |


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | **Award up to three marks** as follows:<br><br>**Identification of external cost** (1) such as:<br>• destruction of views<br>• fall in property prices<br><br>**Specifying a third party** (1) such as:<br><br>• existing residents/community, wider economy, nature lovers<br><br>**Clearly connecting** (1) the identified negative externality with the theory of external cost (falling on a third party) | | If answer does not identify an external cost, **award 0 marks**<br><br>Other acceptable costs should be credited such as:<br>• Damaging or ruining countryside.<br>• Noise pollution during building, visual pollution (pollution on its own is not credited).<br><br>Accept spillover effect on third party if clearly connected.<br><br>No mark for stand-alone definitions. |
| | (b) | | **Award up to three marks** as follows:<br><br>**Identification of external benefit**, such as:<br>• Higher employment<br>• Improved infrastructure<br>• Improved facilities (new services such as schools and shops)<br><br>**Specifying a third party** (1) such as<br><br>• existing residents/community, people who live in the area, local businesses (shops, cafes etc), people not living in a SUE, wider economy.<br><br>**Clearly connecting** (1) the identified positive externality with the theory of external benefits falling on a third party). | 3 | If answer does not identify an external benefit, **award 0 marks**<br><br>Other acceptable benefits should be credited such as:<br>• New roads<br>• Bigger population means more revenue/profit/trade<br>• Reduced pressure on existing services/facilities<br><br>Accept spillover effect on third party if clearly connected.<br><br>No mark for stand-alone definitions. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 6 | | | **Case for a subsidy with respect to supply could include:**<br>• incentive for producers to increase supply<br>• lowers the cost of housing - potentially lowering price<br>• helps people to get onto the property ladder.<br><br>**Case against a subsidy for could include:**<br>• difficult to decide on the quantity of subsidy/government failure<br>• opportunity cost to local authorities<br>• impact depends on suppliers' reactions<br>• other factors influence supply<br><br>Alternatives may also be compared with subsidies but do **not** credit information provision.<br><br>Typically, in explanation of a diagram, though a diagram is not required: | 18 | **Use second EE annotation to indicate elaboration.**<br><br>18 marks: More thorough justification or elaboration of the statement.<br>17 marks: Some justification or elaboration of the statement.<br><br>**Use one EE to show where this statement appears in the answer.**<br><br>16 marks: A statement that subsidising housing is or is not the most effective solution based on preceding evaluation.<br><br>Max. of three L4 annotations should appear on the script.<br>(Put SEEN alongside further discussion points.)<br><br>15 marks: Three evaluative points with some development.<br><br>14 marks: Two evaluative points with some development.<br><br>**Candidates cannot progress above 13 marks without sufficiently developed analysis to support further evaluation.**<br><br>13 marks: One evaluative point with some development **OR** a number of thin points lacking depth (but still placing one L4 tag by each valid point). | **Level 4 (13–18)**<br>**For a discussion of policies which encourage the supply of housing.**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>16–18 marks – There must be a supported judgment based on the preceding analysis and it should reflect the strength of the analysis and the evaluation. This is likely to consider alternative solutions.<br><br>13–15 marks – There must be a discussion of points for and against producer subsidies or subsidies will have been compared with other methods of correcting market failure.<br><br>Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar. |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Level 3 Band 2**<br>**11-12 marks**<br>• The subsidy increases quantity (from q to q1)<br>• This solves underproduction of affordable new housing<br>• Consumer surplus increases<br><br>**Level 3 Band 1**<br>**9-10 marks**<br>• Supply shifts to the right<br>• Subsidies effectively reduce producer costs<br>• Price falls (from P to P1)<br><br>Alternatively, max of 9 marks for an answer which identifies the new market equilibrium after a subsidy is provided.<br><br>**An answer cannot progress from L3 B1 to L3 B2 without analysing how a subsidy changes the QUANTITY of housing.** | | **Max. of two L3 annotations**<br>**Place second L3 annotation where L3 B2 is awarded.**<br><br>12 marks: Subsidy increases quantity plus one other B2 point.<br><br>11 marks: Subsidy increases quantity from Q to Q1.<br><br>**Place one L3 annotation where L3 B1 is awarded.**<br><br>10 marks: more than one Band 1 point made.<br><br>9 marks: one Band 1 point made. | **Level 3 (9–12 marks)**<br>**For an analysis of the use of subsidies which encourage the supply of housing.**<br><br>This must refer to an analysis of the focus of the actual question posed – not to the question which the candidate would have liked to have been asked. It must also incorporate, towards the top end of Level 3 mark range, width and/or depth of analysis illustrating how subsidies operate in a market.<br><br>11–12 marks – there are likely to be a number of undeveloped analytical points or a couple of analytical points which are well developed. This should include analysis of how providing a subsidy to suppliers will lead to increased supply through lowering of costs. A diagram is likely but not required.<br><br>9–10 marks – there are likely to be only one/two undeveloped analytical points, or one analytical point which is somewhat developed. Such as an explanation of a subsidy leading to a fall in price – the impact upon the market is unclear.<br><br>Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, |


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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **For Level 2** marks to be awarded candidate must refer to the housing market.<br><br>Level 2 responses may offer an unexplained diagram or raise, but not analyse, some of the following:<br>• Subsidies will increase supply…….<br>• Paying the developers will lead to a fall in price.<br>• Consumer surplus increases | | 8 marks: More than one well developed applied point applied to housing.<br><br>7 marks: Several applied points **OR** some development applied to housing.<br><br>6 marks: Two applied points **OR** unexplained diagram and one point applied to housing.<br><br>5 marks: Unexplained subsidy diagram **OR** one point on subsidy applied to housing.<br><br>3-4 marks: awareness of pros and cons to subsidies not applied to housing.<br><br>1-2 marks: knowledge of subsidy.<br><br>0 marks: no understanding of subsidy shown, even if knowledge of market failure is present. | though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.<br><br>**Level 2 (5–8 marks)**<br>**For an application of knowledge and understanding of subsidies.**<br><br>This sort of response will include unsupported/unsubstantiated statements as to how subsidies can/cannot be used to solve market failure.<br><br>Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.<br><br>**Level 1 (1–4 marks)**<br>**For knowledge only of a subsidy and/or the impact on consumers/producers.**<br>Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility. |


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# Friday 18 May 2012 – Afternoon

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used.

**Duration:** 1 hour 30 minutes

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your quality of written communication will be taken into account when marking your answer to the question labelled with an asterisk (*****).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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# The changing face of fast-food in the United States of America (USA)

For some time, fast-food businesses have been under threat from health experts who have regularly accused them of selling food which makes people fat. Critics also complain that it is wrong for McDonald's, whose golden arches symbolise calorie excess, to be allowed to sponsor sporting events such as the 2010 World Cup in South Africa and the 2012 London Olympics. Fast-food firms have learned to cope with such criticism … perhaps not for much longer though as they face growing pressure from government regulators and others who are concerned about global health issues.

Some fast-food chains have coped with recession better than others. The traditionally held view is that when consumers need to cut spending, they trade down to cheap meals such as Big Macs, Whoppers and KFC. Such outlets have been picking up business from more expensive restaurants. This has been particularly true in the USA, the home of fast-food, with discounts and promotions such as the $1 menu.

The recession has had different effects on fast-food chains in different countries. In the USA, where average incomes fell by 2% in 2009, sales of fast-food showed no change on their 2008 level. In some markets, sales of fast-food dropped in 2009. This was so in Japan where sales fell 2% at a time when incomes fell by 1%.

Not all fast-food companies have had the same experience. McDonald's in the USA, for example, increased its spend on advertising at a time when competitors were cutting back and as a result sales increased. One of the biggest losers has been its rival, Burger King. During the recession it kept some of its prices deliberately low hoping that customers would be persuaded to buy more expensive items once they reached the counter. Despite $1 promotions (such as burgers reduced to that price), demand for Burger King's products in the USA fell in 2009. More worrying for the company has been the fact that this so-called 'value' menu has accounted for an increasing percentage of sales.

Due to this experience, companies such as Burger King are rethinking their pricing policies by introducing higher priced items to entice customers away from the $1 specials. For example, the company has now introduced barbecue pork ribs which sell at $7 for eight ribs, a far cry from its $1 offerings in terms of both price and quality.

But what about America's growing waistlines? In 2010, the US government passed a law which requires all food chains with 20 or more outlets to put the calorie content of items they serve in a prominent place on the menu. Furthermore, a recent proposal from the state of California is to ban McDonald's from including plastic toys in its high calorie 'Happy Meals'. Fast-food companies are providing more healthy options, but all are very concerned about the growing range of regulations that are being forced upon them.

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Answer **all** questions.

**1** State and explain **three** factors of production which are necessary for the sale of fast-food.

1 .....

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2 .....

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3 .....

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..... **[6]**

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**2** **(a)** Define the term 'consumer surplus'.

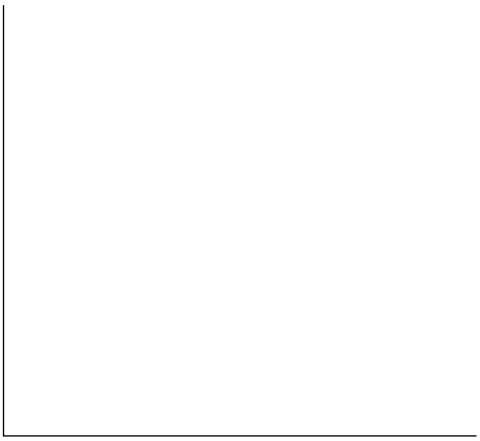
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..... **[2]**

**(b)** Using a diagram, explain how consumer surplus would have been affected by Burger King's decision to reduce the price of its burgers to just $1.



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..... **[4]**

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**3** **(a)** "Some fast-food chains have coped with recession better than others. The traditionally held view is that when consumers need to cut spending, they trade down to cheap meals such as Big Macs, Whoppers and KFC" (lines 8–10).

State and explain **two** possible reasons for the increase in demand for fast-food items at a time of recession.

1.....

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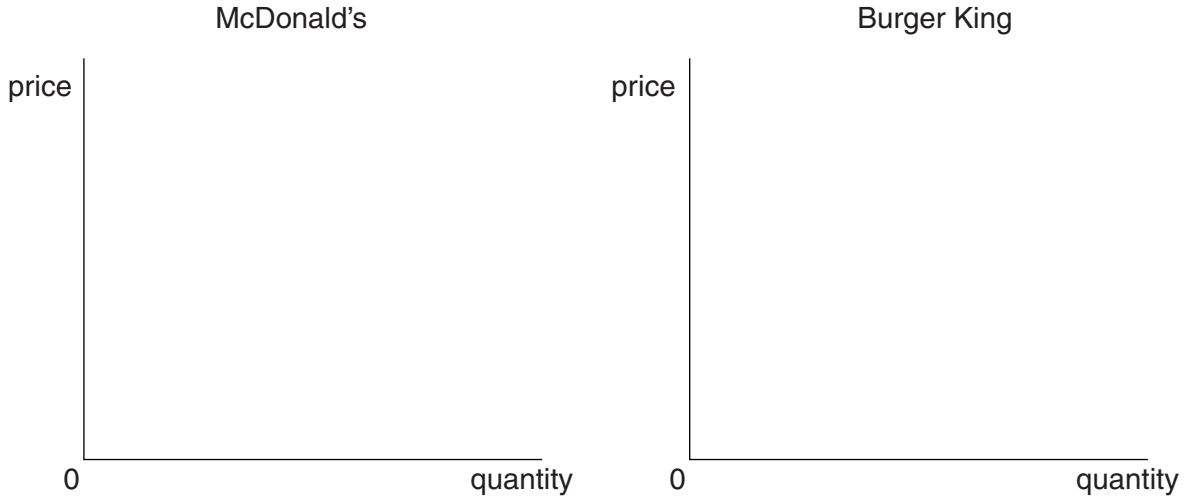
2 .....

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..... **[6]**

**(b)** Assuming no change in supply, use demand and supply diagrams to comment on the contrasting experiences of McDonald's and Burger King in the USA in 2009 (lines 17 to 24).




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..... **[8]**

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**4** **(a)** Define the term 'income elasticity of demand'.

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..... **[2]**

**(b)** Compare the income elasticity of demand for fast-food in the USA and Japan in 2009 (lines 13 to 16). (Your answer should include all relevant calculations).

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..... **[4]**

**(c)** Comment on the business significance of the figures you have calculated in part **(b)**.

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..... **[4]**

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**5** **(a)** What is meant by a 'demerit good'?

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..... **[2]**

**(b)** Explain why many fast-food items can be classed as 'demerit goods'.

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..... **[4]**

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**6*** Discuss the extent to which regulations **alone** can be used to correct the market failure associated with the sale of fast-food.

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[18]

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Additional answer space. If you use these lined pages, you must write the question number next to your answer.

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RECOGNISING ACHIEVEMENT

GCE

# Economics

Advanced Subsidiary GCE

Unit **F581:** Markets in Action

# Mark Scheme for June 2012

Oxford Cambridge and RSA Examinations

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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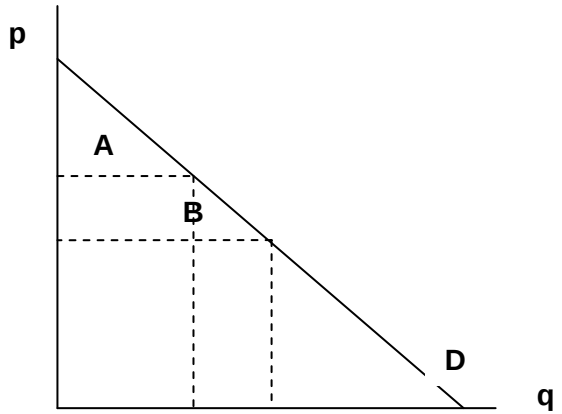
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| Annotation | Meaning |
|---|---|
|  | Tick |
|  | Cross |
|  | Comment |
|  | Benefit of Doubt |
|  | Level 1 |
|  | Level 2 |
|  | Level 3 |
|  | Level 4 |
|  | Effective Evaluation |
|  | Omission |
|  | Not answered question |
|  | Noted but no credit given |
|  | Too Vague |
|  | Own figure rule |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | | | The most likely explanations of factors of production are:<br>• Land – the site for a fast-food outlet; ingredients for fast-food<br>• Labour – staff to prepare fast-food and sell it<br>• Capital – building, items of equipment to cook the food, tills<br>• Entrepreneurship – someone prepared to take a risk and organise a fast-food business | 6 | For each factor, award identification (1) plus precise application, related to the sale of fast food (1)<br><br>Do **not** allow the buildings used as land.<br>Do **not** allow 'money' for capital |
| 2 | (a) | | For a correct definition such as<br>• the extra amount a consumer is willing to pay for a product above the price that is actually paid<br>• the difference between the price the consumer is willing to pay and the market price | 2 | Award (1) for recognition of a difference between two prices.<br><br>Allow "the value that consumers gain from consuming a good or service over and above the price paid" |
| | (b) | |  <br>**Marks the diagram:** Demand curve, p, q (1)<br><br>**Marks from the diagram labelled or referred to in explanation:** Old consumer surplus (1) New consumer surplus (1) Addition to consumer surplus.<br>**Up to (2) further marks for explanation:** Consumer surplus will increase (1) by area B (1) **or** from **A** to **A+B** (1);<br>increase is because the price difference has widened/increased (1) | 4 | **If no diagram, award (0) marks**<br><br>**If the** Demand curve, p, q (1) **mark is not awarded, give 0 for whole answer.**<br><br>**If 'Price level' on axis 0 for whole answer**<br><br>Labelled or shaded areas as long as candidate makes clear exactly what they are identifying:<br>**A** – Original Consumer Surplus<br>**A+B** – New Consumer Surplus<br>**B** – Additional Consumer Surplus |

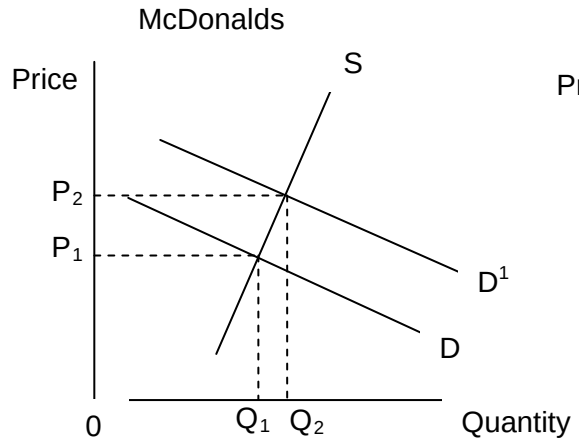
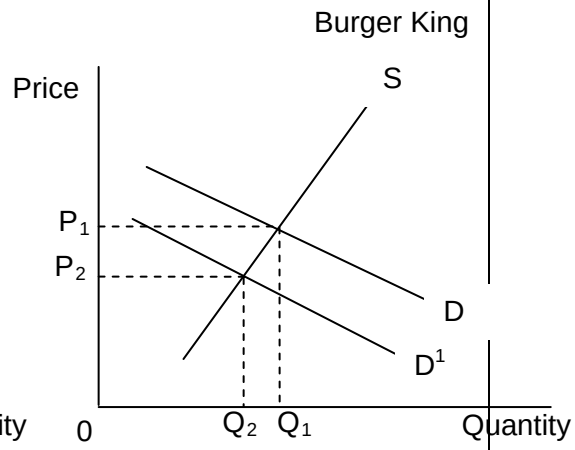


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | Award marks as follows:<br>For **identification** of a determinant of demand (1)<br>for **application of knowledge** to the situation eg recession, other use of case study (1)<br>for **explanation** of why 'demand increases' (1)<br><br>Allow only (1) application mark for special meal deals if analysed in terms of a fall in price **Do not credit** "a fall in price".<br><br>Do **not** award a mark for statements that demand increases as this is contained in the question.<br><br>Only credit each determinant of demand once, but allow 3 marks for taste and fashion (non-Advertising) and an additional application mark for Advertising.<br><br>Examples of three-mark answers:<br><br>Income falls during a recession (1 identification). Since burgers are an inferior good (1 application) as income falls consumption of burgers increases in accordance with YED (1 explanation)<br><br>Taste and fashion (1 identification). Fast-food has become more socially acceptable (1 application) therefore new types of customers will start buying fast food (1 explanation) | 6 | Various possibilities including<br>• a fall in income<br>• increase in price of substitutes such as restaurant meals<br>• increase in population<br>• Changing taste/fashion/consumer preference including<br>o special meal deals<br>o improved quality of burgers<br>o rebranding<br>o redesign of stores<br>o impact of advertising<br>o attractiveness of product<br><br>Do not award Macro-economic factors the determinants of demand mark, but application and explanation marks may be given |



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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (b) |  <br>(Total sales increase)<br>  <br>(Fall in total sales)<br><br>Award up to (4) marks for correct diagrams:<br>Shifts of D – McDonalds to right (1) Burger King to left (1)<br>correct new equilibrium (1) + (1)<br><br>Award up to (3) marks for each well developed relevant comment.<br>Two slightly developed comments may gain 4 marks | 8 | Possible **Comment** marks:<br>• McDonalds increase its advertising budget while Burger King cut back<br>• Burger King customers seem to be less loyal than McDonalds customers<br>• McDonalds and Burger King are substitutes so one firm's gain is another's loss<br>• Positive XED<br>• Different brand loyalty<br>• Burger King made an incorrect decision on value meals, losing additional revenue<br><br>Magnitude of effects will depend on actual size of shift in D (1) and on PES (1)<br><br>Use annotation  for each comment mark |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | For a correct definition such as 'the responsiveness of demand to a change in income' (2) **or** 'the extent to which demand changes as a result of a change in income' (2) or 'a measure of the sensitivity of quantity demanded to a change in consumer incomes' (2)<br><br>Or $\frac{\%\text{ change in quantity demanded}}{\%\text{ change in income}}$ (2) | 2 | Award only (1) mark if formula does not specify **quantity** demanded.<br><br>For "the responsiveness of a percentage change…" only (1) mark. |
| | (b) | | Award for each for correct result:<br><br>YED USA **0** (0 / -2.0) = 0 (1)<br>YED Japan **+ 2.0** (-2.0 / -1.0) (1)<br><br>Award up to (2) marks for development:<br><br>• In the USA there is no clear relationship (1)<br>• YED is inelastic in the USA/Demand in USA in income-inelastic (2)<br>• Positive YED indicates normal good (1)<br>• Fast-food is a normal /luxury/superior good in Japan (1)<br>• YED is elastic in Japan/Demand in Japan is income-elastic (2)<br>• Fast-food is more income elastic in Japan than in the USA (1) | 4 | Up to one OFR mark for a correct statement based on an incorrect calculation or YED figure expressed as a percentage % |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | (c) | | Award up to (3) marks for each well developed relevant comment.<br>Two slightly developed comments may gain 4 marks<br><br>• The zero estimate for the USA indicates that fast-food demand has not been particularly affected by recession<br>• in Japan if recession persists then this will be **bad** for the fast-food businesses or **better** if the economy moves out of recession<br>• Japanese firms may cut back on employment (1) causing unemployment (1)<br>• Ceteris paribus is assumed so there are other factors that may affect the estimates<br>• **Max 1 mark** for any comments relating to the reliability of data /data are estimates | 4 | Use annotation  for each comment mark |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | Award (2) marks for a definition of demerit goods such as<br>• a good whose consumption is more harmful than consumers actually realise<br>• A good that brings less private benefit / less benefit to consumers than they expect, such that too much will be consumed by individuals in a free market<br>• a good which is over-consumed (1) in a free market(1)<br><br>*Standard definitions relate only to a gap between actual and perceived PRIVATE benefit. Negative externalities MAY ARISE FROM the consumption of demerit goods* | 2 | In uncertain cases judge whether the response is addressing the private rather than the social effects – credit private |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| | (b) | | Up to (4) marks for an explanation of why fast-food is a demerit good.<br><br>One mark for identifying a reason/problem<br>One mark for how this fails to impact on the consumer<br>Up to two marks for explanation of the failure of this to impact on the consumer. (or of negative externalities caused by consumption of the demerit good). Candidates receive credit for one or the other of these pathways.<br><br>If no example of a problem is given = 0 marks for whole question<br><br>**Examples of problems:**<br>Obesity / Fatness / growing waistlines<br>Heart attack<br>Hospitalisation<br><br>**Examples of impact failure:**<br>Consumers are unaware of the risks/ consumers ignore the risks<br>Consumers fail to take in info<br><br>**Examples of explanation marks:**<br><br>Fast food causes obesity. Consumers do not realise this consequence. **There is a problem of information failure because companies do not communicate calorie and other info clearly**<br><br>Fast food causes obesity. Consumers do not receive sufficient information on menus. **The heart disease arising causes treatment costs for the NHS which create a welfare loss to society.** | 4 | This question requires answers which identify a problem which creates a demerit for the consumer. These responses will then explain how the consumer fails to recognise or factor in the demerit.<br><br>However, credit can be given (max 2 marks) for explanations of negative externalities arising from the consumption of demerit goods. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 6 | | | This question **requires** a discussion of the arguments for and against regulation as a means of changing the eating habits of US consumers. It **may include** discussion of alternative policies.<br><br>This may be from the point of view of producers or consumers and can be shown by a shift of supply and demand.<br><br>The use of regulation referred to in the extract includes:<br>• "The law requiring outlets to put the calorie content… on the menu."<br>• California banning McDonalds from including plastic toys in happy meals.<br><br>Arguments for the effectiveness of regulation could include:<br>• Easy and cheap to impose<br>• Sets a clear standard<br>• Has an instant effect<br>• Can be backed up by fines or other incentives to comply<br><br>Arguments against the effectiveness of regulation could include:<br>• Cost of enforcement<br>• Could be wrongly set by governments<br>• Consumers may ignore calorie information required to be displayed<br>• Banning toys in meals may not reduce fast-food consumption<br>• Regulation is a crude instrument | 18 | | |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | EE cannot be awarded where there is no mention of regulation in the conclusion.<br><br>**Candidates must attain 11 or 12 (L3) marks in order to progress through to L4**.<br><br>NB Discussion based on weak analysis of regulation and weak analysis of alternative policies is capped at 13 marks even where a judgement is stated. | | | **Level 4 (13 – 18 marks):**<br>For a discussion of the effectiveness of regulation in correcting this problem of market failure which may include comparison with other policies.<br><br>**(16 – 18) EE**<br>For a discussion that makes a final assessment of whether regulation is likely to be the most effective option based upon analytical underpinning.<br>**Stated judgement based on preceding discussion and analysis** (16), elaborated with further reasons or consequences (17-18).<br><br>**(13 – 15) L4**<br>For a discussion of the pros and cons of regulation or the relative merits of regulation as against other remedies.<br><br>All answers at this level must be underpinned with appropriate analysis.<br><br>Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar. |



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| Question | | | Answer | Marks | Guidance | |
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| | | | | | Content | Levels of response |
| | | | **Band 2 can only be awarded to candidates who have achieved Band 1**<br><br>Typical examples of responses in Level 3 Band 2:<br>For 11-12 Marks:<br>Deeper analysis of the explanation already credited with Band 1 or Explanation of how a contrasting policy achieves a reduction in quantity demanded and supplied<br><br>Examples include:<br>• Explanation of a vertical supply curve<br>• Explanation of why supply falls, e.g. increased costs reflected in supply curve<br>• Explanation of why demand falls, e.g. consumers made aware of harmful effects of consuming fast-food<br>• Development of how the fall from Qe to Q1 corrects the market failure in the fast-food industry<br><br>Typical examples of responses in Level 3 Band 1:<br>For 10 Marks:<br>A diagram showing a shift of D or S to the left and an explanation that this reduced quantity from Qe to Q1.<br><br>For 9 Marks:<br>Basic explanation that regulation will fix supply or set quantity produced and consumed at socially optimal level. | | | **Level 3 (9 – 12 marks):**<br>For an analysis of how **regulation** can be used to correct the market failure **(required)** associated with the sales of fast food. This may or may not be supported by analysis of alternative methods<br><br>**(11-12) Band 2**<br>For developed analysis explaining **how** the form of regulation influences producers and/or consumers or **how** the move from Q1 to Q2 achieves correction of the market failure<br>**OR**<br>For analysis of how **another method** to reduce the production and consumption of fast-food would operate.<br><br>**(9-10) Band 1**<br>Analysis of how **regulation** reduces the quantity of fast-food produced and consumed.<br><br>Relatively straight forward ideas have been expressed with clarity and fluency.<br>Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | **Answers not displaying analysis of the effects of regulation cannot progress beyond Level 2**<br><br>For 8 marks, at least one well developed point relating to regulation of fast food.<br>For 7 marks more than one applied point relating to regulation of fast food.<br>For 6 marks, one applied point relating to regulation of fast food.<br>For 5 marks, an example of regulation applied to fast food.<br><br>**NB – No Application Marks to be given for policies other than regulation.**<br><br>For 4 marks the candidate must show knowledge and understanding of regulation.<br><br>Typical examples of responses at L1 are:<br>• Definition of market failure<br>• Diagram showing market failure<br>• Diagram or statements of needing to change quantity or shift curves **without reference to regulation.**<br>• Examples of regulation not applied to fast food.<br>**NB Where candidates assert than an alternative method for correcting market failure (e.g. taxation, subsidy, information provision) IS REGULATION award no credit to this point.** | | | **Level 2 (5 – 8 marks):**<br>For an application of knowledge of the effects of regulation on the sales of fast-food<br><br>Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.<br><br>**Level 1 (1 – 4 marks)**<br>For a knowledge and understanding of regulation or market failure.<br><br>Some simple ideas have been expressed. There will be errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may lack legibility. |



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# Thursday 12 January 2012 – Morning

## AS GCE ECONOMICS

**F581/01** Markets in Action

Candidates answer on the Question Paper.

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used.

**Duration:** 1 hour 30 minutes

*F5301012*

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your quality of written communication will be taken into account when marking your answer to the question labelled with an asterisk (*****).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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# The chewing gum problem

In November 2010 the Peterborough Evening Telegraph reported that the City Council was stepping up its battle against so-called 'chewing gum louts' who were turning the city centre into a sticky eyesore. The problem of discarded gum was growing. In particular, there was anger over the way in which expensive new paving stones in the £12m revamped Cathedral Square had been damaged by the discarded gum which had been 'spat out and squashed' onto the ground.

Peterborough's problem with chewing gum is hardly unique. It is one which is faced by towns and cities throughout the UK and elsewhere. Cleaning one piece of discarded gum from UK streets costs 10 pence; it is estimated that local authorities spend over £150m a year removing gum, a figure which is increasing.

The manufacture of chewing gum is big business. Around 1000m packs are produced each year in the UK alone. Two types of gum are produced by Wrigleys and Kraft, the main manufacturers. These are traditional gum and therapeutic (medicinal) chewing gum which is used for health reasons such as to clean teeth or to stop smoking. Within the market, a growing proportion of the total gum sold is in this latter category.

Manufacturers of therapeutic gum have been quick to realise that this type of gum is one which consumers are prepared to buy in preference to traditional gum. Fig. 1 below shows how increases in its price might affect the sales of traditional gum.

**Fig. 1: Estimated changes in the price of therapeutic gum and the demand for traditional gum**

| % change in price of therapeutic gum | % change in quantity demanded of traditional gum |
|---|---|
| +5% | +0.5% |
| +10% | +2% |
| +20% | +4% |

What can cities such as Peterborough do to reduce the market failure caused by discarded gum? A remote possibility is that they might ban the sale of chewing gum as was the case in Singapore in 1992. This ban, which includes imports, still applies, although it was loosened in 2004 when therapeutic chewing gum was allowed following a free trade agreement with the United States of America. More feasible is that Peterborough could join forces with other towns, cities and pressure groups in order to make sure that those who chew gum are given the information to make them more aware of the serious problems which they are causing daily to the urban environment. A more radical way of doing this would be to put a new, high indirect tax on sales of all forms of gum, whilst introducing heavy fines for anyone who is caught discarding gum directly onto the streets.

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Answer **all** questions.

**1** **(a)** What is meant by the term 'scarcity'?

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..... **[2]**

**(b)** **(i)** Define the term 'opportunity cost'.

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..... **[2]**

**(ii)** Explain why the opportunity cost of removing waste chewing gum from Peterborough's streets is **not** zero.

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..... **[2]**

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**2** **(a)** Describe what is shown by a production possibility curve.

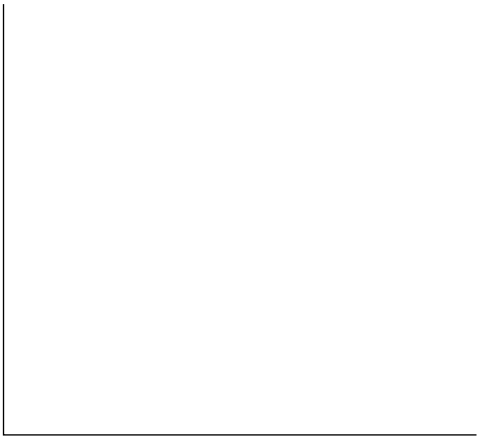
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..... **[2]**

**(b)** A manufacturer produces traditional and therapeutic chewing gum. Draw a production possibility curve to show how the manufacturer can increase production of therapeutic gum.



**[4]**

**3** Explain what is meant by producer surplus.

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..... **[2]**

**4** **(a)** Explain **two** reasons why a manufacturer might increase its production of chewing gum.

1. .....

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.....

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2. .....

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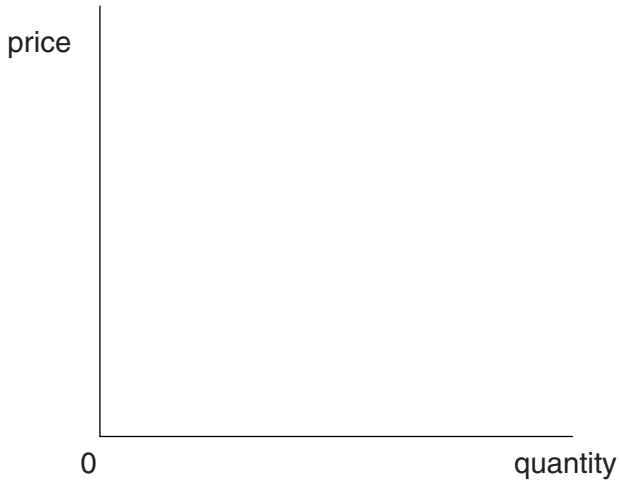
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..... **[4]**

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**(b)** Using a diagram, comment on the effects on the market for therapeutic chewing gum of a simultaneous increase in **both** its demand and supply.




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..... **[8]**

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5 **(a)** Define the term 'cross elasticity of demand.'

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..... **[2]**

**(b)** Using information in Fig. 1, comment on whether therapeutic chewing gum and traditional gum are substitutes. (Your answer should include all relevant calculations.)

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..... **[8]**

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6 **(a)** Define the term 'externality'.

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..... **[2]**

**(b)** Explain why the consumption of chewing gum can produce both negative and positive externalities.

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..... **[4]**

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**7*** Lines 19 to 28 give four ways in which the market failure arising from discarded chewing gum might be corrected. Discuss which of these ways might be the most effective in correcting this form of market failure.

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[18]

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Additional answer space. If you use these lined pages, you must write the question number next to your answer.

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GCE

# Economics

Advanced Subsidiary GCE

Unit **F581/01:** Markets in Action

# Mark Scheme for January 2012

Oxford Cambridge and RSA Examinations

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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**Annotations**

| Annotation | Meaning |
|---|---|
|  | Unclear |
|  | Benefit of Doubt |
|  | Cross |
|  | Effective Evaluation |
|  | Irrelevant |
|  | Level 1 |
|  | Level 2 |
|  | Level 3 |
|  | Level 4 |
|  | Not answered question |
|  | Noted, but no credit given |
|  | Too Vague |
|  | Tick |

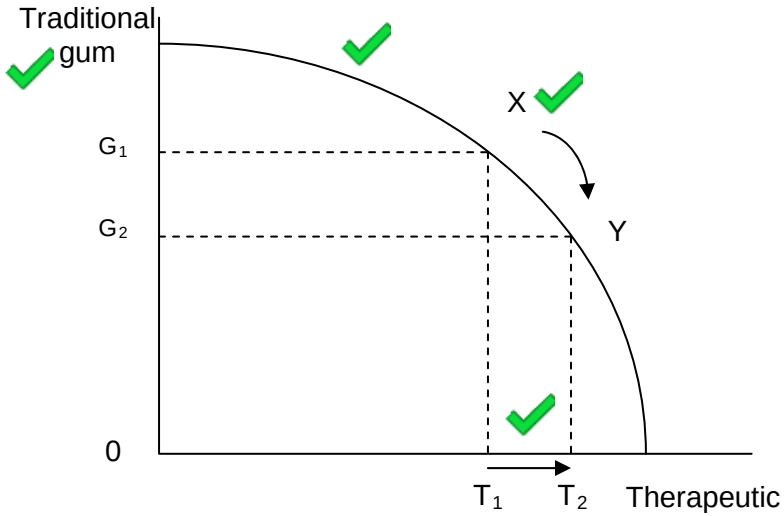
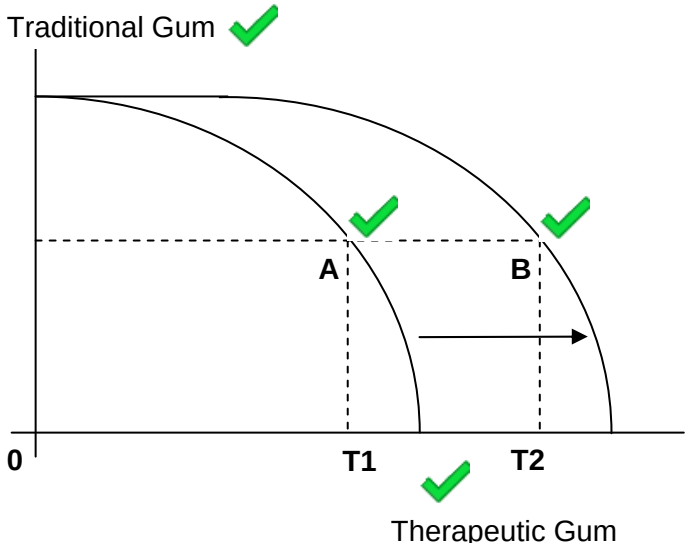


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 1 | (a) | | For a clear definition, including:<br><br>limited or finite resources (1) insufficient to meet wants (1) | 2 | Alternatively, up to two marks for a development of scarcity, e.g. resources are finite (1) because non-renewable (1)<br><br>**Do not accept** NEEDS, SUPPLY or DEMAND |
| | (b) | (i) | For a clear definition:<br><br>the next best alternative (1) foregone (1) | 2 | Award one mark for general understanding that a choice has to be made. |
| | | (ii) | Resources spent on removing chewing gum could be used to fund other services (1) such as social services or education (1). Each 10p/£150m saved (1) could have been redirected to another service (1). | 2 | Accept any valid service as example towards which funds could be redirected. |
| 2 | (a) | | First Mark:<br>• maximum quantity or output **of two goods OR combinations** of **goods** (1)<br><br>and THEN one from:<br>• given current resources or technology (1)<br>• at maximum efficiency (1)<br>• in the current time period / short term (1) | 2 | No marks to be awarded for opportunity cost.<br><br>No marks for answers which refer to actual output rather than potential output.<br><br>Accept Pareto efficiency (2)<br><br>'can produce' is acceptable for maximum output. |



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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (b) |  <br>Award one mark for each of:<br>• correctly labelled axes (1)<br>• correct shape of PPC (1)<br>• initial position and new position on curve (1)<br>• change to indicate increased production of therapeutic gum (annotated with arrows near axis or $T_1$ to $T_2$) (1)<br>• reference to trade-off (1). | 4 | Annotation on the diagram is acceptable. (4) max.<br><br>Pivoting of PPC is acceptable if shown as below and marked as ticked.<br><br>  |
| **3** | The difference between the price a producer is willing to accept and what it is actually paid (2)<br>**Or**<br>The difference between the price received by firms for a good and the price at which they would have been prepared to supply that good (2) | 2 | Accept an answer which uses a diagram or numerical example.<br><br>Be careful to notice any answers which refer to quantity, not price. (0) |

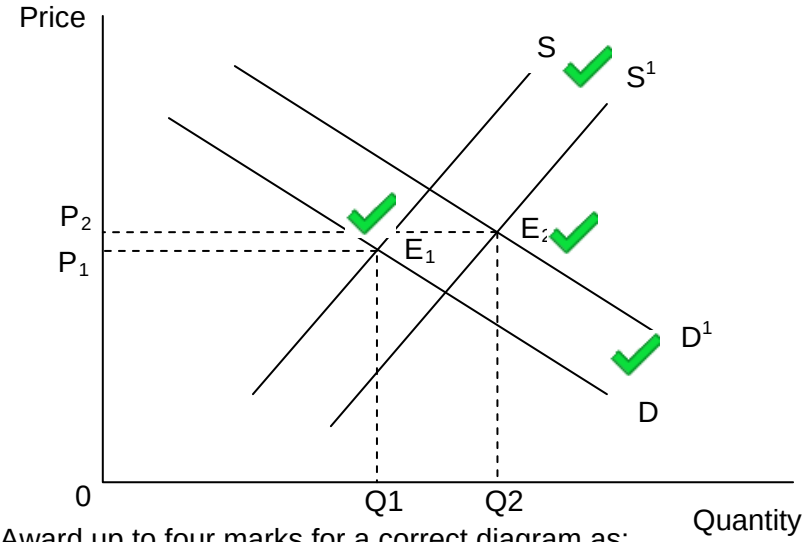


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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **Generally:**<br><br>Award one mark for **identification** of a reason (1)<br>A further mark for **elaboration** that makes clear how **PRODUCTION** has increased. (1)<br><br>**Note:**<br><br>Demand related answers (0) **UNLESS** related to **an increased price incentive** which **encourages** further quantity supplied. | 4 | Various possibilities including:<br><br>• a rise in the price of chewing gum<br>• a reduction in indirect taxation on chewing gum<br>• a subsidy on (therapeutic) chewing gum<br>• reduced regulation<br>• a reduction in the costs of producing chewing gum<br>• an improvement in efficiency of manufacturing<br>• an introduction of new technology<br>• business objectives such as in search of greater revenue or profit |



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| Question | Answer | Marks | Guidance |
|---|---|---|---|
| (b) |  <br>Award up to four marks for a correct diagram as:<br>• shift to right of D (1)<br>• shift to right of S (1)<br>• old equilibrium (1)<br>• new equilibrium (1).<br><br>Award up to two marks for the outcome which must be explained **in writing.**<br>• increase/decrease/no change in price as appropriate<br>• increase in quantity traded/supplied & demanded or specific reference to diagram in terms of Q1 to Q2<br><br>Up to two marks for a comment such as depending on:<br>• magnitude of shift of D<br>• magnitude of shift of S<br>• depends on price elasticity of demand<br>• depends on price elasticity of supply | 8 | **At least one mark for the diagram or explanation must be gained to access comment marks.**<br><br>If one curve only shifted then **max 2** for whole answer.<br><br>**No OFR**<br><br>Comment ticks should be shown in the left hand margin.<br><br>Show **breakdown of marks awarded** in item comment box e.g. 4+2+2. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | For correct definition such as 'the responsiveness of demand for one product to a change in the price of another product' (2).<br><br>Or formula $\frac{\%\text{ change in quantity demanded of good A}}{\%\text{ change in price of good B}}$ | 2 | Award one mark if the definition is not entirely correct but makes clear that two products are involved.<br><br>If formula refers only to "demand" (1). |
| | (b) | | The following calculations of XED to be awarded. For correct answer **one mark each**:<br><br>$\frac{0.5}{5} = 0.1$ $\frac{2}{10} = 0.2$ $\frac{4}{20} = 0.2$<br><br>Award up to two marks for interpretation<br>• positive XED indicates substitutes (1);<br>• readings are all inelastic (1);<br>• an increase in price of therapeutic gum leads to an increase in demand for traditional gum (1);<br>• they are all below 1… (1).<br><br>Award up to three marks for appropriate comment such as<br>• therefore they are weak substitutes (1);<br>• inelastic estimates indicate poor/weak substitutes (2);<br>• users of therapeutic gum are not very likely to switch to traditional gum (1) as quitting smoking is more of an influence than price in determining demand (1);<br>• the data are estimates (max 1);<br>• factors of demand may change these values (1);<br>• the figures may change over time (1);<br>• questioning the reliability of data (1). | 8 | At least ONE calculation or analysis mark **MUST BE** gained to access comment marks.<br><br>Do not award calculations if XED value includes a % sign.<br><br>Fractions 1/5 or 1/10 are acceptable.<br><br>Allow (1) OFR mark for apt comment on incorrect sign/complement or (1) for magnitude of XED/elastic.<br><br>Show **breakdown of marks awarded** in item comment box e.g. 3+2+3.<br><br>Comment ticks should be shown in the left hand margin. |



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| Question | | | Answer | Marks | Guidance |
|---|---|---|---|---|---|
| 6 | (a) | | For a clear definition:<br>An action taken by one economic agent (1) that has an effect on other people/third parties/those not directly involved spillover effect (1) | 2 | Award one mark for basic reference to third parties.<br><br>Accept Social Cost > Private Cost and Social Benefit > Private Benefit. **When presented together** (2). One of these on its own is (0) |
| | (b) | | For a **positive externality**: award **one** mark for an **action** from which a positive externality arises, and **one** mark for **how** this benefits the third party.<br><br>And<br><br>For a **negative externality**: award **one** mark for an **action** from which a negative externality arises, and **one** mark for **how** this disadvantages the third party.<br><br>Where an action only is identified, whether this can gain a mark depends on whether there is a clear spillover effect on a third party. | 4 | Some examples may be:<br>Positive externality:<br>• Reduce smoking-related strain on NHS<br>• Fresh breath for those around the consumer<br>A means to reduce passive smoking<br><br>Negative externality:<br>• Discarded chewing gum is an eyesore<br>• Cost of cleaning it up<br>• Stuck on the shoes of pedestrians<br><br>For example, if the response states “cleaner teeth” with no further development, no third party has been identified so this must be treated as a private benefit and gains 0 marks. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| 7* | | | The extract refers to four possible ways in which the damage from discarded gum might be reduced. These are<br>• Singapore-type ban or partial ban<br>• provision of information on the costs of cleaning up streets from discarded gum<br>• an increase in the indirect tax on chewing gum<br>• heavy fines for those discarding gum in an antisocial way (regulation).<br><br>The answer should contain an analysis of these approaches, followed by an evaluation and a final judgement on which might be the most appropriate.<br><br>Subject content could include:<br>information provision: designed to correct market failure arising from the provision of demerit goods. This should include information such as that provided in the second paragraph of the case study, making reference to the costs involved.<br><br>Indirect taxation: designed to discourage consumption of demerit goods. It will lead to a shift to the left of S, meaning that less is supplied and consumed at a higher price. **This is likely to reduce inappropriate disposal of gum.** | 18 | | **Level 4 (13 – 18 marks):**<br>For a discussion as to which means of intervention is likely to be most effective in correcting this problem of market failure.<br><br>**(16 – 18) EE**<br>For a discussion that makes a final assessment of which option is likely to be most effective based upon analytical underpinning.<br>**Stated judgement based on preceding discussion and analysis** (16), Elaborated with further reasons or consequences (17-18).<br><br>**(13 – 15)**<br>For a discussion of the pros and cons of the method(s) available.<br><br>All answers at this level must be underpinned with appropriate analysis.<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | Heavy fines/regulation: this must apply to consumers or the disposal of chewing gum. Evaluation may include problems of enforcement.<br><br>Ban: designed to stop all consumption. This is usually applied when the market failure involved is thought to be very significant.<br><br>Regulation or a ban may be shown as a shift to the left of S (if producers are being affected with a knock-on effect in lower consumption of gum and therefore disposal). Regulation, a ban or information provision may be shown as a shift to the left of demand when consumers change their behaviour in response to the policy being applied. | | | **Level 3 (9 – 12 marks):**<br>For an analysis of how this problem of market failure might be corrected.<br><br>**(11 – 12) Band 2**<br>For specific analysis of how a chosen method reduces the **quantity of gum inappropriately DISCARDED i.e. explicit relation to subject of question.**<br>**TRIGGER FOR possible L4**<br><br>**(9 – 10) Band 1**<br>For an analysis of how any one policy impacts upon a market **but which does not make the link** to discarded chewing gum.<br><br>*Relatively straight forward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning.*<br><br>**Level 2 (5 – 8 marks):**<br>For an application of knowledge as to **how the market failure arising from chewing gum might be corrected**. Can include unexplained diagram.<br><br>This application is likely to draw upon the case study and make assertions (not analysis) of the ways in which the problems of chewing gum might be corrected. |



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| Question | | | Answer | Marks | Guidance | |
|---|---|---|---|---|---|---|
| | | | | | Content | Levels of response |
| | | | | | | *Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.*<br><br>**Level 1 (1 – 4 marks)**<br>For a knowledge and understanding of market failure and / or possible remedies.<br><br>*This will be in theoretical terms or not in context. Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may lack legibility.* |



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**ADVANCED SUBSIDIARY GCE**

# ECONOMICS

Markets in Action

**F581**

Candidates answer on the question paper

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used.

**Friday 20 May 2011**
**Morning**

**Duration:** 1 hour 30 minutes

*F 5 8 1*

*F530520611*

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

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- Answer **all** the questions.
- Do **not** write in the bar codes.

## INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
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- Your quality of written communication will be taken into account when marking your answer to the question labelled with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

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## Tea market crash leaves a bitter taste

The Chinese are well known for their love of tea. A particularly popular type is pu'er, a pleasantly aromatic brew which is claimed to reduce cholesterol, aid weight loss and even cure hangovers. It is for these reasons that China's rich middle classes and tea drinkers worldwide have increased their demand for this wonder product. In summer 2007, top quality pu'er tea was selling for a massive US$150 a pound (lb) in weight.

So, why was the price so high? The main reason was on the supply side. For a good number of years the demand for top quality pu'er tea had increased at a slightly faster rate than supply. As a result, prices rose. Consequently, more and more farmers switched from growing rice and corn, their staple crop foods, to planting and producing pu'er tea. Other farmers dug up other types of tea bush and replaced them with pu'er. So, supply was increasing but not at quite as fast a rate as the increase in demand and price.

Also on the supply side of the market, irresponsible wholesalers hung onto their seemingly precious stocks of pu'er as they believed that prices could only increase further. After all, it is a simple principle of economics that if demand is increasing and supply is inelastic, prices should continue to rise. Fig. 1 below shows the results of research by economists at a local university.

**Fig. 1: Estimated annual change in the price and supply of pu'er tea**

| | % change in price | % change in supply |
|---|---|---|
| 2003 | 5 | 3 |
| 2004 | 20 | 15 |
| 2005 | 25 | 40 |
| 2006 | 30 | 60 |

At the beginning of 2009 the market crashed; wholesale merchants in the Menghai area of China, where most of this type of tea is grown, were grateful to get just US$40 per pound. So why did the market collapse? One reason was an increasing number of farmers adding to supply at a much faster rate than before 2004. The market situation was not helped either by stable demand, partly as a consequence of increasing doubts over the benefits of pu'er tea.

The fluctuations in the market continue to baffle farmers in Menghai. One farmer commented, 'Not long ago, everyone was wearing designer labels... a lot of people bought cars but now we cannot afford gas (petrol) so we just park them in front of our unfinished new houses'. In Menghai, hotels and restaurants are no longer packed with out-of-town tea buyers; once prosperous wholesalers have now had to resort to eating at cheap cafes and travelling by pedicab, a cheap form of motorised transport.

All is not lost. The Xishuangbanna provincial government has been encouraging pu'er tea farmers to destroy their bushes and revert to producing corn and rice. To encourage them to do this, generous subsidies have been made available for producing these crops. The objective of this policy has been to stabilise markets not only for pu'er tea but also for corn and rice, both of which remain central to the staple diet of the local population.

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Answer **all** questions.

**1** State **two** factors of production which are used to produce pu'er tea and give an example of each.

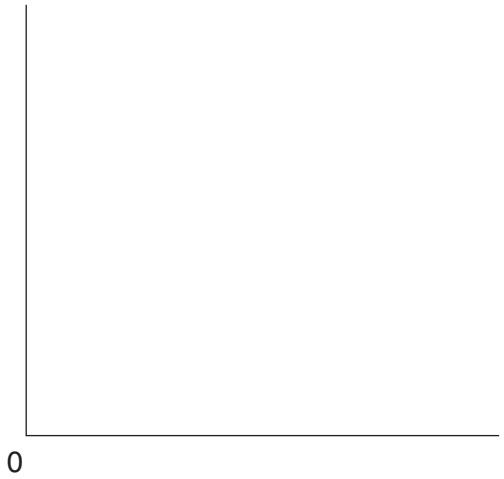
1 .....

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.....**[4]**

**2** **(a)** Draw a production possibility diagram to show the effect of moving resources from the production of staple foods such as rice and corn to the production of pu'er tea.




**[4]**

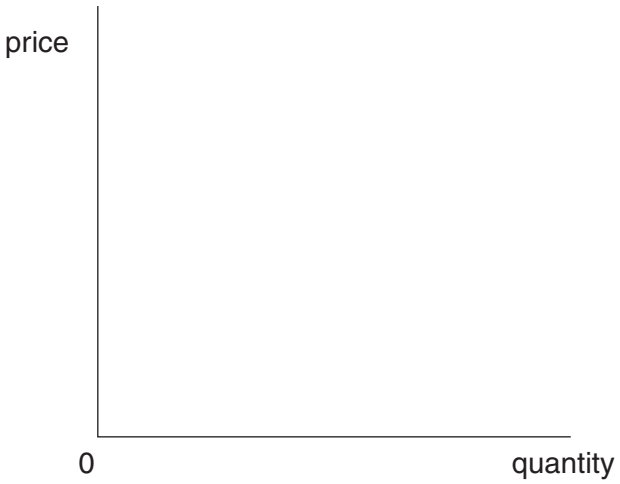
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**(b)** 'It is a simple principle of economics that if demand is increasing and supply is inelastic, prices should continue to rise' (lines 13–15).

With the aid of a demand and supply diagram, comment on the extent to which an increase in demand will cause prices to rise.




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3 **(a)** Define the term 'allocative efficiency'.

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.....**[2]**

**(b)** Using the information in the case study, explain whether the market for pu'er tea is working efficiently.

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.....**[4]**

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4 **(a)** Define the term 'price elasticity of supply'.

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**(b)** Using the information in Fig. 1, comment on the business relevance for pu'er tea farmers of the changes in the price elasticity of supply between 2003 and 2006. (Your answer must include calculations of price elasticity of supply.)

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**5** **(a)** Define the term 'producer surplus'.

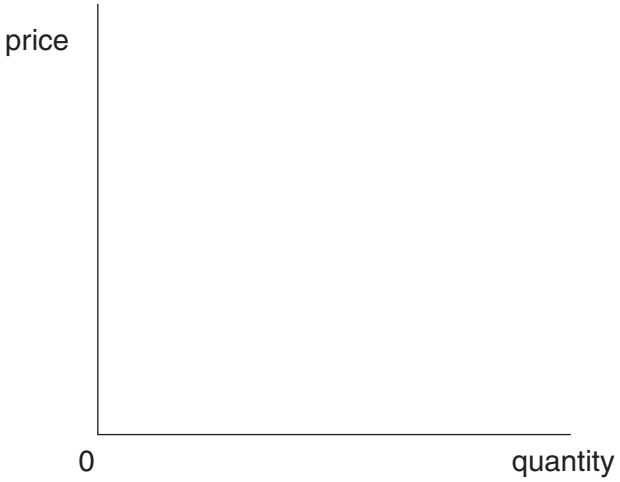
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.....**[2]**

**(b)** Using a diagram, show how producer surplus changes with a fall in the price of pu'er tea.




**[4]**

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6 **(a)** What is meant by the term 'positive externality'?

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.....**[2]**

**(b)** Using an example from the case study, explain **one** positive externality arising from the increasing production of pu'er tea.

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.....**[3]**

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**7*** Discuss the extent to which a subsidy given to producers might encourage an increase in the consumption of a product such as pu'er tea which generates positive externalities. **[18]**

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..............................................................................................................................[18]

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Additional answer space. If you use these lined pages, you must write the question number next to your answer.

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RECOGNISING ACHIEVEMENT

GCE

# Economics

Advanced Subsidiary GCE

Unit **F581:** Markets in Action

# Mark Scheme for June 2011

Oxford Cambridge and RSA Examinations

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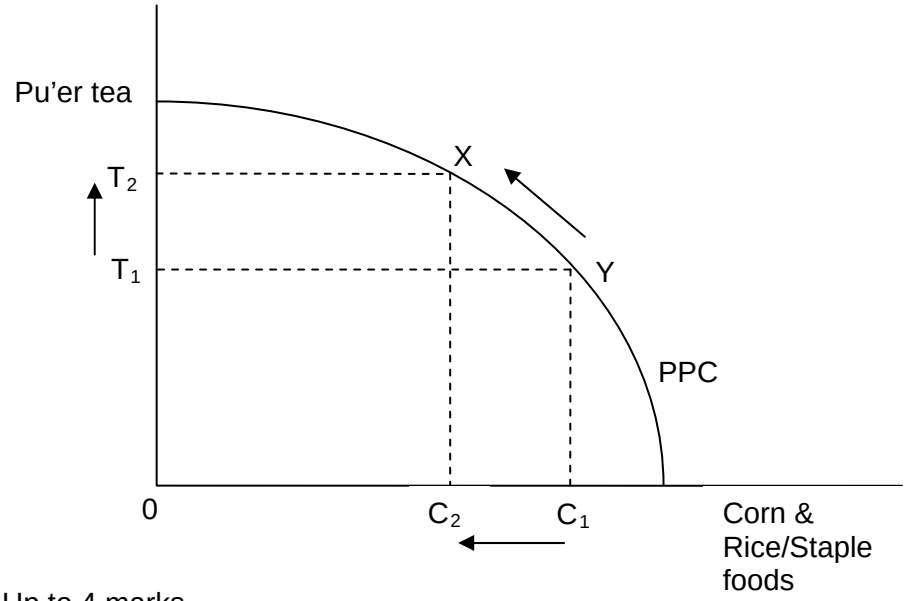
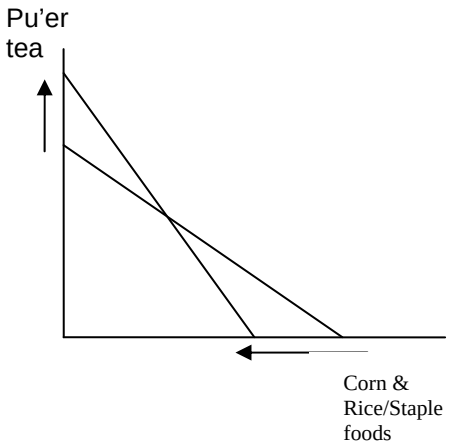
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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 1 | | | **State two factors of production that are used to produce pu'er tea and give an example of each.**<br><br>One mark for each correct factor stated up to a maximum of two factors, plus a further one mark for each of two appropriate examples.<br><br>Various possibilities including:<br><br>Land – natural resource of soil, leaves, tea plants<br>Labour – farmers/workers to cultivate tea bushes, pick tea leaves, harvest the tea<br>Capital – tractors, diggers, etc<br>Enterprise – risk-taking in deciding whether to plant tea or vegetables<br><br>Award one mark for correct identification plus one further mark for an appropriate example (x2). | **[4]** | Reference to tea leaves been 'grown' is acceptable as an example of land<br><br>Reference to 'farms' is acceptable as an example of land |

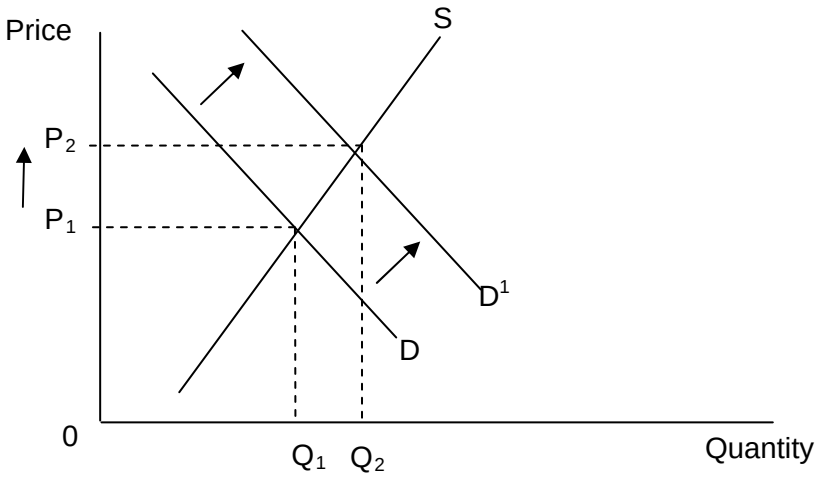


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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 2 | (a) | | **Draw a production possibility diagram to show the effect of moving resources from the production of staple foods to the production of pu'er tea.**<br>  <br><br>Up to 4 marks.<br><br>A diagram only is required. Award marks as follows<br>- correctly labelled axes (1)<br>- reduction in corn and rice produced, increase in tea production clearly shown on axes e.g. T1 to T2, C1 to C2(1)<br>- convex or straight line PPC (1)<br>- movement along PPC, eg Y to X or sequential lettering on the PPC (1) | **[4]** | Allow this diagram as an alternative<br>  <br><br>4 marks can be achieved here as long as reduction in corn & rice produced, increase in tea production clearly shown on axes e.g. T1 to T2, C1 to C2(1)<br><br>For full marks we are looking for correct annotation on the **axes** AND on the **PPC** |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 2 | (b) | | **It is a simple principle of economics that if demand is increasing and supply is inelastic, prices should continue to rise. Comment, using a demand and supply diagram, the extent to which an increase in demand will cause price to rise.**<br><br>Up to 4 marks for a diagram.<br><br>  <br><br><br>1 mark for inelastic S<br>1 mark for shift to right of D to $D^1$<br>1 mark for new equilibrium position, showing goods traded<br>1 mark for clearly showing increase in price, eg $P_2$ or arrow.<br><br>Up to four marks for relevant comment such as:<br>- increase in price depends on the elasticity of supply<br>- increase in price depends upon the extent of the shift of D<br>- It assumes all the other influences in the market remain unchanged<br>- the existence of a maximum or minimum price in the market will restrict the extent of charge.<br><br>One point, well argued can gain three marks. | **[8]** | Accept a diagram which has a completely inelastic short run supply curve.<br><br>The supply curve MUST be inelastic, this can be identified on the axes by ensuring that the price change is greater than quantity change/the curve must be steeper than 45º<br><br>Unlabelled/wrong curves cannot access marks for the diagram<br><br>Reference to change in determinants of demand such as income/subs/comps/fashion can be relevant explanations as to why price may not rise |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | **Define the term 'allocative efficiency'**<br><br>Up to 2 marks for a simple but clear definition such as 'where consumer satisfaction is maximised' or 'where consumer welfare is maximised' or 'where quantity supplied is equal to the quantity demanded' or 'where the market is in equilibrium'.<br><br>(A2 students may answer in terms of where 'price is equal to marginal cost'.)<br><br>Award 1 mark for an incomplete definition where consumers are happy/satisfied | **[2]** | Be careful not to accept 'equalised'<br><br>Reference to consumer 'wants' is (1 mark)<br>Do not accept 'needs'<br>Price helps to distribute scarce resources in the most efficient way (1 mark) |
| 3 | (b) | | **Using the information provided, explain whether the market for pu'er tea is working efficiently.**<br><br>Answers **should** draw upon the case material and be in terms of the above definition.<br><br>Award 1 mark for statement that the market was **not** working efficiently/allocatively inefficient<br><br>Award 1 mark for each relevant reference to the case material (x2) OR 1 mark for a development of inefficiency i.e. overproduction/scarcity<br><br>Award up to 1 mark for linking evidence in the case material to allocative **inefficiency**. For example, producers are hoarding sacks of tea, prices are rising faster than demand, the market is volatile for example reference to volatility. | **[4]** | For example:<br>'For a good number of years demand has increased at a slightly faster rate than supply' (lines 6-7)<br>'Supply was increasing but not at quite as fast a rate as the increase in demand.' (lines 10-11)<br>'Irresponsible wholesalers hung onto their seemingly precious stocks' (lines 12-13).<br>'one reason was an increasing number of farmers adding to supply at a much faster rate than before 2004' (lines 18-19)<br>Explicit or paraphrase |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 4 | (a) | | **Define the term 'price elasticity of supply'.**<br><br>Up to two marks<br>For a clear definition such as:<br>'the responsiveness of **quantity** supplied to a change in the price of a product' (2)<br>A correct formula is acceptable (2).<br><br>Award one mark for a general but less precise understanding eg supply rather than quantity supplied. | **[2]** | |
| 4 | (b) | | **Using the information in Fig 1, comment on the business relevance for farmers of the changes in the price elasticity of supply of pu'er tea between 2003 and 2006 (Your answer must include calculations of price elasticity of supply).**<br><br>Up to two marks can be awarded for calculations, any 2 from (0.6, 0.75, 1.6, 2.0) which show an increase in the price elasticity of supply over time.<br>Identification of which ones Inelastic (1 mark) and elastic (1)<br>MAX four marks for this first section<br><br>Up to three marks for comments such as<br>- supply tends to be price inelastic in the short term where it is difficult to switch production<br>- over time supply is becoming (more) price elastic<br>- the application of PES figures may be more or less useful depending on changes in other factors<br>- PES changes along the supply line<br>- Businesses do not usually consider PES<br>- Simple statement about figures being estimates (1 mark maximum), expansion with reference to other factors which affect the estimates e.g. cetaris paribus (+1 mark)<br><br>One comment elaborated can get 3 marks. Max 7 marks overall. | **[7]** | Fractions acceptable<br>Watch out for % after figures (0 marks)<br><br>Please show the marks as (2/2/3) |

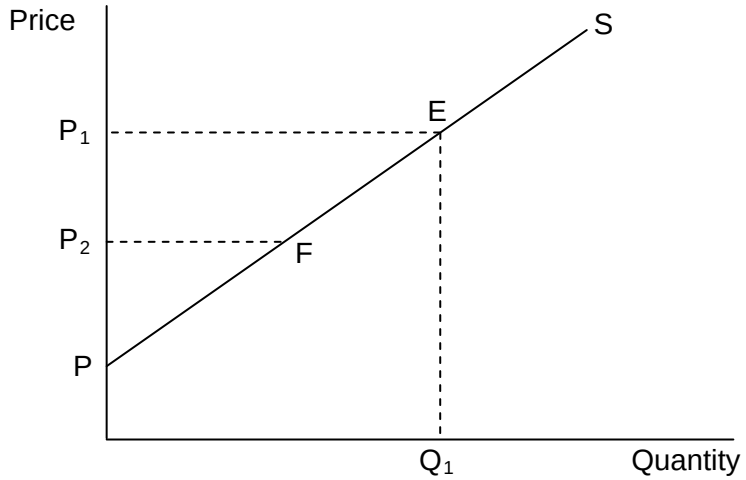


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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | **Define the term 'producer surplus'.**<br><br>Up to two marks<br>Award two marks for a clear definition such as:<br>'the additional revenue gained by a producer over that which is expected'<br>OR<br>'the difference between the market price and the price that producers are willing to accept.'<br>OR<br>'Price below the market/current price which producers are willing to accept'<br><br>Award one mark for a general understanding or statement that it is 'the area above the supply curve and below the price line.' | **[2]** | Needs to be price or revenue<br><br>must refer to *price* or *revenue* not a 'physical amount' = 0 marks |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 5 | (b) | | **Using a diagram, show how producer surplus changes with a fall in the price of pu'er tea.**<br><br>Up to four marks.<br><br>  <br><br><br>Original producer surplus is $P_1$ E P<br>New producer surplus is $P_2$ F P<br><br>Up to four marks for a correct diagram showing<br>- correctly sloping supply curve (1)<br>- original producer surplus P, P1, E (1)<br>- new producer surplus P2, F, P OR shaded area (1)<br>- reduced producer surplus P1, P2, F, E **OR** arrows, labels or annotation (1)<br><br>Accept alternative diagrams which show a fall in price, eg with a downward shift of D or with a shift to the right of S with D included (3 maximum) | **[4]** | No marks can be awarded if S not labelled<br><br>Areas need to be clearly identified either with a label or key<br><br>Watch out for new and reduced |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 6 | (a) | | **What is meant by the term 'positive externality'?**<br><br>Up to two marks<br>Award two marks for a definition to include a benefit (1) and to a third party/spill over effect/side effect (1)<br>Benefits not included in price (2 marks)<br>Where social benefit are greater than private benefits (2 marks) | **[2]** | Positive spill over effect (1 mark)<br>Positive does not constitute benefit |
| 6 | (b) | | **Using an example from the case study, explain one positive externality arising from the increasing production of pu'er tea.**<br><br>One mark for identification of correct third party example plus up to a further two marks for an explanation of how the positive externality has arisen<br><br>Various positive externalities referred to are:<br>- **Business benefits** to hotels and restaurants due to tea merchants visiting Menghai<br>- **National/community health system** benefit from lower health costs<br>- **Local business benefits** for designer clothing retailers and garages as a result local farmers becoming richer | **[3]** | Beware of answers which list several examples rather than developing ONE point<br><br>Mark this question by identifying the third party for the first mark, with the elaboration for the other two marks<br><br>i.e. Beware of answers listing PRIVATE benefits instead of external e.g. reduced cholesterol is a private benefit to the individual |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 7 | | | **Discuss the extent to which a subsidy given to producers might encourage an increase in the consumption of a product such as pu'er tea which generates positive externalities.**<br><br>**Content:**<br>A simple subsidy diagram, explained, can be expected to enhance the analytical content. Reference to merit goods is relevant. The effects of subsidies on consumers MUST be recognised.<br><br>**Case for subsidies with respect to consumption:**<br>Provide an incentive for producers; reallocate production in line with government policy; reduce the market price of products which generate positive externalities; assist poor families; external benefits to health and productivity<br><br>**Case against subsidies with respect to consumption:**<br>An answer here MUST focus on the consumption aspect:<br>Points might include:<br>• Price elasticity of demand<br>• Size of the subsidy<br>• Whether producers pass it on<br>• Other factors than price which determine demand for the product<br>Some groups in the community could afford to pay more<br>• Subsidy is not easy to determine<br>• Opportunity cost<br>• Not easy to determine effectiveness<br>• Information failure<br>• Government failure | | NB the question is about **positive externalities** and **subsidies** and therefore no credit should be given to answers which focus on negative externalities and indirect taxation NAQ<br><br>**You may need to read the question in full before annotating as some answers are not logically structured and have L4 material before making clear both aspects of L3**<br><br>***Be careful not to expect content which is beyond the scope of the AS specification.*** |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| | | | **L4 For a discussion of policies which encourage the production and consumption of products that generate positive externalities. (13–18)**<br><br>All answers at this level must be underpinned with appropriate theoretical concepts.<br><br>For 16–18 marks, the answer should form some overall assessment. This is likely to consider alternatives and/or make an overall judgement about the extent to which subsidies will increase consumption<br><br>For 13-15 marks, the answer will include a discussion of points for and against subsidies on consumption<br><br>*Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.* | | **EE** top band of L4, 16-18, here the candidate will consider alternatives and/or show judgement |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| | | | **L3 For an analysis of the use of subsidies which encourage the production and consumption of products that generate positive externalities. (9–12)**<br><br>Such answers must have relevant analytical underpinning of how policies, eg subsidies, can address this problem of market failure.<br><br>For 11-12 marks Analysis of how giving the subsidy to producers = **lower costs** = fall in price = **increase in consumption/demand** (with or without a diagram)<br>*Annotate with second L3*<br><br>For 9-10 marks Analytical explanation of a subsidy leading to a fall in price and increase in quantity (with or without a diagram)<br>OR Positive externality diagram explained<br>**No mention of consumption**<br>*Annotate with first L3*<br><br>*Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.*<br><br>**L2 For an application of knowledge of subsidies. (5–8)**<br><br>Answers at the top of this level are likely to be largely framed around a series of examples as to how subsidies can/cannot be used to solve market failure.<br>For 7–8 marks several correct assertions<br>For 5–6 marks simple assertions of applied knowledge<br><br>*Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.* | | (MAX two L3 annotations) |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| | | | **L1 For a knowledge and understanding of a subsidy. (1–4)**<br><br>Such answers will be shallow in terms of knowledge of policies. For 3–4 marks it will be necessary to understand the simple impact on consumers as well as producers.<br><br>*Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility.* | **[18]** | |



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**ADVANCED SUBSIDIARY GCE**

# ECONOMICS

Markets in Action

**F581**

Candidates answer on the question paper

**OCR supplied materials:**
None

**Other materials required:**
- Calculators may be used.

**Wednesday 12 January 2011**
**Afternoon**

**Duration:** 1 hour 30 minutes

*F581*

*OCE/23638*

| Candidate forename | | Candidate surname | |
|---|---|---|---|

| Centre number | | | | | | Candidate number | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

## INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Answer **all** the questions.
- Do **not** write in the bar codes.

## INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your quality of written communication will be taken into account when marking your answer to the question labelled with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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**2**

## The Maldives targets mass tourism... before it sinks

The Maldives is a group of over 1000 islands in the Indian Ocean. It has the resources which many tourists find difficult to resist, such as uncluttered sandy beaches, coral reefs, a warm climate and the opportunity for a couple of weeks peace and quiet. Having said this, the Maldives has a major problem – much of the land mass is no more than four or five feet above sea level. As the newly elected President, Mohamed Nasheed, knows all too well, the islands could well be submerged by the end of the century, if predictions about climate change and projected rising sea levels materialise.

The Maldives though has a more immediate problem, a decline in tourists visiting the islands. British visitors, for example, were down by 25 per cent in early 2009. This has prompted tour operators and hoteliers to slash the prices of luxury beach breaks. Whilst this is an obvious market response, the President, rather controversially, said that he is prepared to allow the construction of dozens of mid-range hotels and guest houses in an attempt to stem the downturn in tourism. He firmly believes that an increase in tourist numbers can only be achieved if the Maldives is price competitive compared with other similar placed resorts such as Goa, a state of India, which also attracts British visitors.

Fig. 1 shows some estimates of how reductions in the price of holidays to the Maldives might affect the number of holidays taken in Goa.

**Fig. 1: Estimated changes in the price of holidays in the Maldives and the demand for holidays to Goa**

| % change in price of holidays in the Maldives | % change in quantity demanded of holidays to Goa |
|---|---|
| –10% | –5% |
| –20% | –22% |
| –30% | –40% |

By attracting more tourists to the Maldives, the President hopes to build up sufficient funds for what many observers believe to be a wild idea... to move his 300,000 people to safer territory. At a recent reception for foreign journalists he named India, Sri Lanka and even Australia as possible destinations. Revenue from tourism would be used to buy a new country, or at least part of one, in the future.

Al Gore, the former US Vice-President and now fervent environmental campaigner has urged the US government to pass new regulations to reduce carbon emissions. He cited the case of the sinking Maldives as just one example of what could happen if America and other leading countries failed to respond to what many consider is the most important challenge of the 21st century.

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Answer **all** questions.

**1** Define the 'economic problem' and explain how it can be applied to a family deciding whether to take a holiday in the Maldives.

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**2** **(a)** What is meant by a market?

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**(b)** How is the market price of holidays in the Maldives determined?

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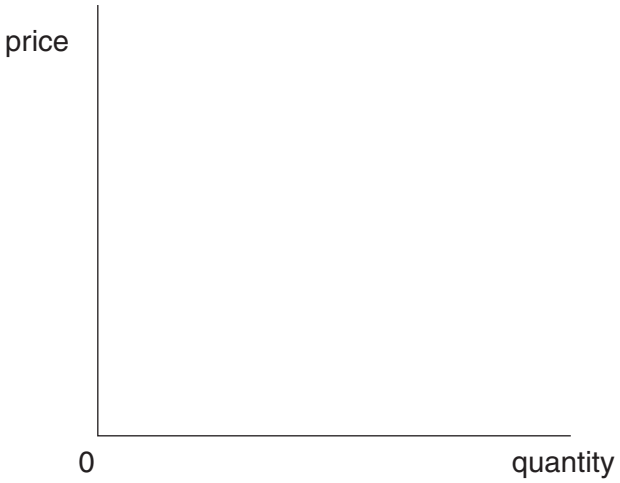
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**3** **(a)** Using a demand and supply diagram, show the effects on the market for holidays in the Maldives of a fall in British visitors in early 2009.




**[4]**

**(b)** Explain **two** likely determinants of this fall in demand for holidays in the Maldives taken by British tourists.

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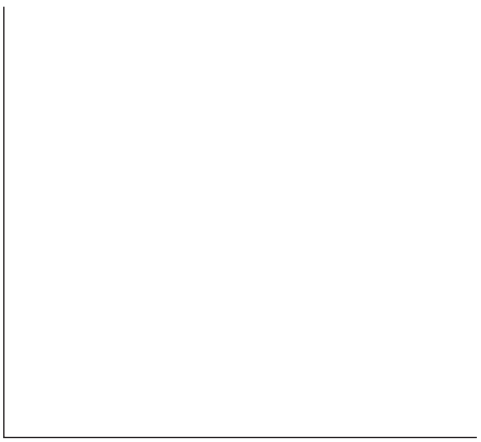
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**4** Assume that the policy of the Maldives' President to construct more hotels and guest houses goes ahead. Using a demand and supply diagram, comment on how this might affect the market for holidays in the Maldives.



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5 **(a)** Define the term 'cross elasticity of demand'.

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**(b)** Using the information in Fig. 1, comment on whether the Maldives is likely to attract tourists who are considering taking holidays in Goa. (Your answer must include calculations of cross elasticity of demand.)

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.....**[8]**

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6 **(a)** Give **two** characteristics of a public good.

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**(b)** Explain whether sandy beaches such as those in the Maldives are a public good.

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**7*** Discuss whether regulation is the most effective way of correcting market failure such as those arising from increasing carbon emissions. **[18]**

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[18]

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Additional answer space. If you use these lined pages, you must write the question number next to your answer.

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GCE

# Economics

Advanced Subsidiary GCE

Unit **F581:** Markets in Action

# Mark Scheme for January 2011

Oxford Cambridge and RSA Examinations

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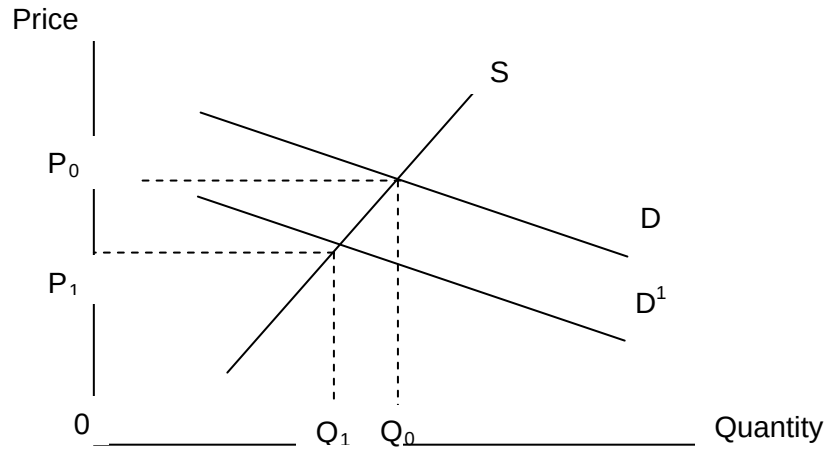
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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 1 | | | **Define the 'economic problem' and explain how it can be applied to a family deciding whether to take a holiday in the Maldives.**<br><br>Up to two marks<br>The 'economic problem' can be described in terms of scarcity (1) and choice (1); or scarce resources and unlimited wants (2); alternatively, how to allocate scarce resources among alternative uses (2).<br><br>Up to two marks<br>The application is in terms of whether the family has sufficient income (1) what alternative holiday destinations might be possible (1) or whether they should go on a holiday at all, in which case resources could be used for something else (1) Any two. | **[4]** | **For Questions 1-6 use one ✓ per mark awarded.**<br><br>Do not credit "needs". Only credit "wants".<br><br>Scarcity must be related to the family and not to anything else. |
| 2 | (a) | | **What is meant by a market?**<br><br>Up to two marks<br>Bringing **buyers and sellers** into contact (1) for the purpose of **trading** or **exchanging** goods or **purchasing goods and services** (1). A system by which **price** is determined (1). | **[2]** | Do not reward examples – answer must be theoretical.<br>Accept consumers and producers as an alternative to buyers and sellers. |
| 2 | (b) | | **How is the market price of holidays in the Maldives determined?**<br><br>Up to two marks<br>Where demand and supply are equal (2); where the market clears (2). Award 1 mark only for a statement of demand and supply only without reference to them being equal or clearing. | **[2]** | A diagram is acceptable showing at least supply, demand and equilibrium price.<br>Price mechanism insufficient (0) |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 3 | (a) | | **Using a demand and supply diagram, show the effects on the market for holidays in the Maldives of the fall in British visitors in early 2009.**<br>  <br><br>Up to four marks<br>Award 1 mark for each of<br>- correct labelling of D and S<br>- downward/left shift of D<br>- old equilibrium price and quantity<br>- new equilibrium price and quantity | **[4]** | If curves are not labelled or are incorrectly labelled, no marks to be awarded.<br>Accept E1 and E2 for equilibrium even if no links to axes. |

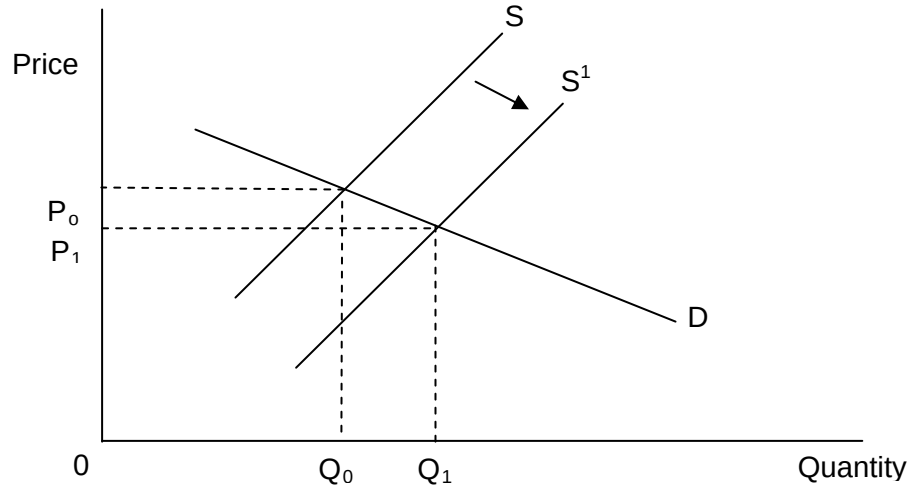


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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 3 | (b) | | **Explain two likely determinants of this fall in demand for holidays in the Maldives taken by British tourists.**<br><br>Likely reasons for the fall in demand are:<br>- **fall in income** – lower real/disposable income due to recession<br>- price or availability of **substitutes** incl. holidays in the UK<br>- **fashion and taste** – negative publicity in the media following the comments climate change (fashion/taste)<br>- **complements** – increased price of air travel to the Maldives<br><br>Award a mark for a valid determinant of the fall in demand, 1 mark for its elaboration and 1 mark for how this will lead to a fall in demand. (2x3) | **[6]** | Do not accept change in price as this is not a determinant of demand.<br>Do not accept seasonal variation as a determinant of demand<br>Credit advertising as an explanation of the taste and fashion determinant.<br>Credit as explanation low consumer confidence, weak expectations as macro determinants with an impact on the demand for holidays. |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 4 | | | **Assume that the policy of the Maldives' President to construct more hotels and guest houses goes ahead. Using a demand and supply diagram, comment on how this might affect the market for holidays in the Maldives.**<br>  <br><br>Up to eight marks<br>Up to 3 marks for a diagram<br>- shift to right of S (1)<br>- old equilibrium (1)<br>- new equilibrium (1)<br><br>Up to 2 marks for an analysis in terms of, for example, an increase in quantity traded **or** an increase in quantity from Q1 to Q2 **or** an increase in quantity demanded and supplied from Q1 to Q2 (1) and a fall in price (1).<br><br>Up to 3 marks for comments such as<br>- it depends on the extent of the increase in supply<br>- the increase in supply will take time<br>- it depends on the slope of D/price elasticity of demand<br>- consumer surplus increases<br>One comment which is well elaborated can get all 3 marks. | **[8]** | Incorrectly labelled axes – no marks for diagram.<br>Accept E1 and E2 for equilibrium even if no links to axes.<br>No credit for "increase in quantity" alone or for extension of demand.<br>Do not accept externalities or macro comments. |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 5 | (a) | | **Define the term 'cross elasticity of demand'.**<br><br>Up to two marks<br>2 marks for a definition such as 'the responsiveness of quantity demanded for one product in relation to a change in the price of another product'; or 2 marks for a correct formula.<br><br>Award 1 mark for a general understanding that two products are involved. | **[2]** | Candidates need to refer to change in both quantity of Good A and price of Good B for 2 marks. |
| 5 | (b) | | **Using the information in Fig 1, comment on whether the Maldives is likely to attract tourists who are considering taking holidays in Goa. (Your answer must include calculations of cross elasticity of demand).**<br><br>Up to 3 marks for calculating the cross elasticity of demand for holidays to Goa due to a fall in price of holidays to the Maldives. From Fig 1, these estimates are 0.5, 1.1 and 1.33.<br><br>Up to 2 marks for an explanation of what these estimates mean:<br>• holidays to Maldives are substitutes (1)<br>• decrease in price of Maldives holiday causes fall in demand for holidays in Goa (1)<br>• stating 0.5 = inelastic (not close/weak substitute) (1) **or** 1.1= elastic (close/strong substitute) (1) **or** 1.3 = elastic (close/strong substitute) (1)<br>• explaining cross-elastic or cross-inelastic (1).<br><br>Up to 3 marks for comments such as<br>- a 30% fall in holiday prices in the Maldives is most likely to meet the President's objective (see example on right)<br>- the data are estimates (1) and could change over time (1)<br>- it assumes no change in holiday prices in Goa<br>- the degree of substitutability depends on the extent of price cut<br>- it assumes a price change is the only reason why tourists might switch from Goa to the Maldives.<br>One comment which is well elaborated can get all 3 marks. | **[8]** | Correct calculations:<br>-5%/-10% = 0.5<br>-22% / -20% = 1.1<br>-40% / -30% = 1.33 allow 1.3<br><br>No marks for calculations of XED with '%' in final figure (eg 0.5%).<br>No marks for price elasticity.<br>Negative elasticities are incorrect – no marks.<br><br>No marks for numerical examples – figures already given in table.<br><br>Example of 3-mark comment:<br>"There would have to be a significant fall in price of holidays in the Maldives (1) of at least 20% (1) but a 30% fall would be more likely to achieve the President's objective (1)" .<br><br>Show mark allocation as (3 + 2 + 3). |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 6 | (a) | | **Give two characteristics of a public good.**<br><br>One mark for each of two characteristics identified.<br>Non-excludability (1) Non-rivalry (1) Non-rejectability (1) zero MC (1)<br>**encourages** free riders (1)<br>Accept a description of each as an alternative way of awarding marks. | **[2]** | Non-rejectability: the good is provided for all regardless of whether they wish it (eg defence).<br>Accept non diminishable for non rivalrous.<br>Examples gain no marks. |
| 6 | (b) | | **Explain whether a sandy beach such as those in the Maldives is a public good.**<br><br>**Up to three marks:**<br>Explanation of non-excludability (1)<br>Explanation of non-rivalry (1)<br>Application of either characteristic to beaches (2x1)<br>A beach could be a private good if a charge is made (1).<br><br>**Reserve final mark for taking an explained position:**<br>A sandy beach is a public good because it has both characteristics (1) or<br>A sandy beach is not a public good, or is a quasi public good, because it lacks one or more characteristics (1). | **[4]** | Examples of characteristics:<br>**Non-excludability**: anyone can use it<br>**Excludability**: Beaches may be fenced off<br>**Non-rivalry**: beaches have plenty of space<br>**Rivalry**: when a beach becomes congested not everyone who wants to is able to use it.<br><br>Do not accept argument that because beaches are free they are public goods. |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 7 | | | **Discuss whether regulation is the most effective way of correcting market failure such as those arising from increasing carbon emissions.**<br><br>Although the stem refers to the context of the article, this is a more general question on the merits of regulations as a means of correcting market failure where there are negative externalities.<br><br>Regulations (standards and legal controls) can take many forms. In this context, relevant ideas would include:<br>• legislation relating to the maximum levels of carbon emissions from transport, power generation or industry<br>• market failure arises where demand and supply are not equal (or the marginal social cost of an activity exceeds the marginal private cost)<br>• the purpose of legislation is rather blunt but aims to result in an optimum scale of use<br>• by passing regulations, it is clear what the level of control is.<br>• Regulations are widely used and have brought considerable benefits in many varied contexts as regulations are backed by law.<br><br>Against regulation: Many arguments including:<br>- cost and problems of enforcement<br>- how to set appropriate standards<br>- no incentive for improvement once standards have been set<br>- obtaining international agreement<br>- policy may not raise revenue<br>- may lead to a black market<br>- government failure. | | **Do not accept Pollution Permits as a form of regulation – treat as an alternative method.** |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 7 | | | **Continued**<br><br>**L4 For a discussion of the case for and against regulations as a means of correcting market failure (13–18)**<br><br>(17-18) Final judgement on the extent to which regulations are effective when compared with other methods to correct market failure.<br>Stated judgement (16)<br><br>(13-15) **Discussion of:**<br>Pros & Cons of Regulation **or** Regulations compared with other methods of correcting market failure<br><br>**All answers at this level must be underpinned with appropriate analysis of how regulation corrects market failure, ie to access L4 requires 11-12 marks to have been awarded.**<br><br>Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar. | | Use L1 L2 L3 L4 and EE when marking this question.<br><br>Use L4 when awarding 13-15 marks at Level 4 and<br>EE when judgement made.<br><br>A stated judgement can be simple and brief, eg "Regulation is more effective than tradable permits". |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 7 | | | **Continued**<br><br>**L3 For an analysis of market failure and the use of regulation for correcting market failure (9–12)**<br><br>Band 2 (11-12)<br>Analysis of how regulations correct market failure **by reducing quantity produced/consumed (text or diagram of Q2 ←Q1)**<br><br>Band 1 (9-10)<br>Analysis:<br>• of Market Failure and/or<br>• Methods for correcting market failure and/or<br>• Simple analysis of regulation and/or<br>• Drawbacks of regulation<br><br>Relatively straight forward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning. | | This can be achieved by use of text on the reduction of quantity produced/consumed or a diagram showing a fall from Q2 to Q1<br><br>Award 9-10 marks for:<br>Analysis of market failure<br>• positive externalities<br>• negative externalities<br>• merit goods<br>• demerit goods<br>• information failure.<br>**or**<br>Analysis of methods to correct this other than regulation (eg tradable permits).<br>**or**<br>Simple analysis of regulation (eg how the regulatory system operates) without explaining how this corrects market failure.<br><br>An unexplained diagram would fall in Level 2. |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
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| | | | **Continued**<br><br>**L2 For an application of knowledge of market failure or of how regulations are used to correct market failure (5–8)**<br><br>Application<br>• of market failure and/or<br>• methods of correction of market failure and/or<br>• how regulations are used/applied in practice<br><br>For stating that regulation limits quantity – 5 marks<br><br>Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. | | Examples of material gaining L2:<br>• Illustrations of market failure<br>• Descriptions of a method of correction of market failure in operation<br>• Relevant diagrams presented but without being used in analytical explanation |



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| Question | | | Expected Answer | Mark | Rationale/Additional Guidance |
|---|---|---|---|---|---|
| 7 | | | **Continued**<br><br>**L1 For a knowledge and understanding of regulations and market failure (1–4)**<br><br>Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may lack legibility. | **[18]** | Brief definitions of regulation or of market failure gain L1 |



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# ADVANCED SUBSIDIARY GCE
# ECONOMICS
Markets in Action

**F581**

Candidates answer on the Question Paper

**OCR Supplied Materials:**
None

**Other Materials Required:**
- Calculators may be used.

**Friday 28 May 2010**
**Afternoon**

**Duration:** 1 hour 30 minutes

*OCE/13469*

*F581*

| Candidate Forename | | Candidate Surname | |
|---|---|---|---|

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

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- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided. If additional space is required you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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**2**

## Saudi Arabia's Oil Policy Unresolved

Saudi Arabia's oil policy is a strong influence on price trends in the highly volatile world oil market. Since the price of oil began its relentless rise in 2007 – reaching US$147 per barrel in June 2008 – there has been speculation as to what are the future intentions of Saudi Arabian oil producers and the government.

Until about 2003 Saudi Arabia's oil policy was to encourage reasonably low prices (US$25 per barrel maximum) and to maintain price stability by holding a cushion of excess productive capacity. This was to provide quickly available supplies to counteract any political events that might otherwise lead to sudden price increases.

Since 2003, this policy has come under increasing pressure for two reasons. These are:

- a need to expand Saudi Arabia's public sector, particularly the provision of education, and to create more jobs for the local population. This clearly requires additional revenue to be generated from oil sales.
- a concern that Saudi Arabia's price stability policy was being undermined by the growing tendency of governments in oil consuming countries to use oil products as a means of raising additional tax revenue.

Consequently, Saudi Arabia's oil policy is now one of achieving higher revenue through higher prices... but just how high this should be, is still unresolved. This uncertainty has not been good news for millions of road users in the UK.

In June 2008, the International Energy Agency (IEA) published revealing statistics on how British motorists were clearly driving less following a doubling in the price of oil. According to the IEA's survey, from March 2007 to March 2008, the price of unleaded petrol increased from 92.8 pence to 106.8 pence per litre. Over the same period, petrol stations saw a fall in sales from 445 000 to 350 000 barrels a day. This amounted to an approximate 15% increase in price and a 21% fall in daily sales.

By August 2008, the price of diesel reached 135 pence per litre, with some analysts forecasting a price of 200 pence per litre by the end of 2009. At the same time, OPEC, the oil producers' association, was forecasting a fall in oil demand for 2009.

Rocketing diesel prices have been particularly bad news for the UK's thousands of truck operators and bus companies. These heavy users of diesel fuel have been adversely affected by the rising price of diesel and have repeatedly urged the government to make a substantial cut in the indirect taxes on fuel. They claim that some companies are being driven out of business. The basis of the claim is that truck operators, especially, can no longer compete with companies in the rest of the European Union. Customers and jobs were being lost whilst the government was raking in many billions of pounds of additional tax revenue.

These claims are not supported by environmental pressure groups which believe that high fuel prices are having a positive effect in getting road users to think more about whether their journeys are necessary or whether they should use public transport instead of a car. The reduction in $CO_2$ emissions due to less vehicle use is particularly welcomed by such pressure groups.

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1 **(a)** Describe what is shown by a production possibility curve.

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**(b)** Using a production possibility curve diagram, show how Saudi Arabia could expand its provision of education, whilst cutting back on the resources it allocates to oil production.

**[4]**

2 **(a)** Using information from the case study, state and explain the **two** factors which have affected the supply of Saudi Arabian oil.

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**(b)** Use a diagram to show how the producer surplus of Saudi Arabian oil producers changes with an increase in the price of oil.



**[4]**

**(c)** Comment on whether Saudi Arabian oil producers increasing supply is likely to reduce world oil prices.

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**3** OPEC has forecast that in 2009 there will be a fall in world demand for oil.

Using a demand and supply diagram, analyse the likely effects of this on the market for oil.



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4 **(a)** Define the term 'price elasticity of demand.'

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**(b)** Using the information in the case study (lines 19–24), comment on the price elasticity of demand for unleaded petrol from March 2007 to March 2008.

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**5** Explain why the price of petrol and diesel fuel may not reflect the true costs of their use.

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6 Discuss whether indirect taxes on petrol and diesel fuel in the UK should be **reduced**. **[18]**

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[18]

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GCE

# Economics

Advanced GCE **F581**

Markets in Action

# Mark Scheme for June 2010

Oxford Cambridge and RSA Examinations

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by Examiners. It does not indicate the details of the discussions which took place at an Examiners' meeting before marking commenced.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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**Subject-specific Instructions**

1 The paper is to be marked to AS standard.

2 Marking should be positive: marks should not be subtracted for errors or inaccuracies.

3 In assessing quantitative answers, the 'own figure rule' (OFR) must be applied, ie a candidate must be given credit for calculations which, though wrong, are consistent with an earlier error.

4 The mark scheme refers to possible issues/content that candidates might use. These suggestions are neither exhaustive nor necessarily required. Further guidance is provided on the right hand side of the mark scheme.

A set number of marks for written communication is not a requirement. However, where a levels of response mark scheme is used, the following general criteria for assessing the quality of written communication will apply. These criteria are integrated within the more specific levels of response shown in the individual mark schemes for each appropriate question.

Level 4

Complex ideas have been expressed clearly and fluently using a style of writing appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using specialist technical terminology where appropriate. There may be few, if any, errors of spelling, punctuation and grammar.

Levels 2 and 3

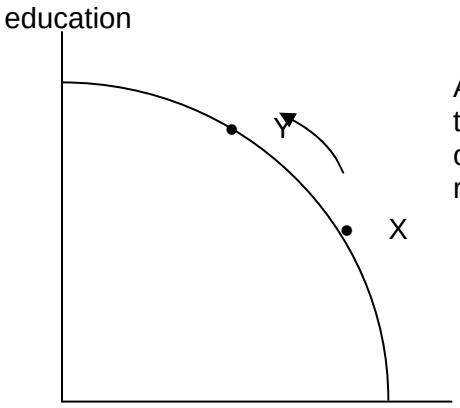
Relatively straightforward ideas have been expressed clearly and quite fluently, using an appropriate style of writing. Arguments are generally relevant, though may occasionally stray from the point and are broadly logical and coherent. There will be some errors of spelling, punctuation and grammar, but these will not be intrusive or totally obscure the meaning.

Level 1

Simple ideas have been expressed, generally in a style lacking clarity and fluency. Arguments will have limited coherence and structure, often being of doubtful relevance to the main focus of the question. There are errors of spelling, punctuation and grammar, which will be noticeable and intrusive. Writing may lack legibility.

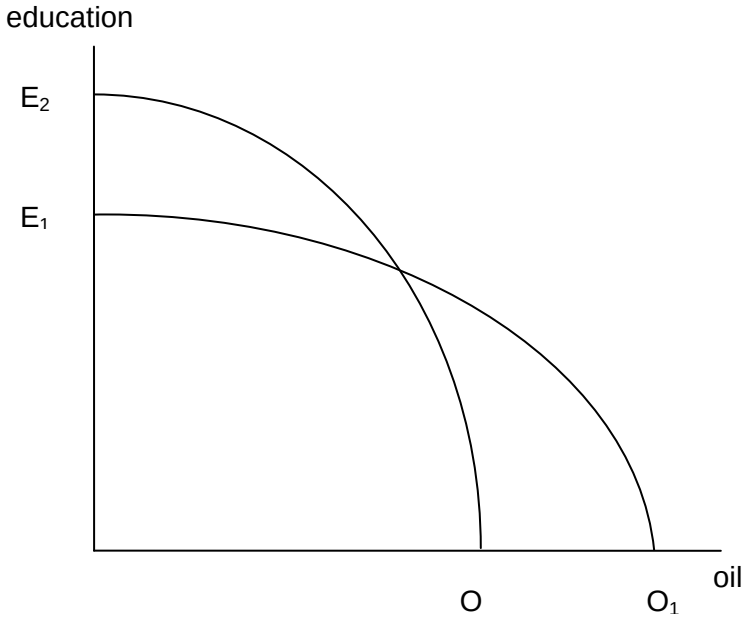


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| | | Expected Answer | Mark | Rationale |
|---|---|---|---|---|
| 1 | (a) | **Describe what is shown by a production possibility curve.**<br><br>A production possibility curve shows:<br><br>– maximum quantities, output or combinations of output (1)<br>– for different combinations of output of two products (1)<br>– productive efficiency when on PPC (1)<br>– given current level of resources (1)<br>– factor mobility/diminishing returns (1)<br><br>Output potential at optimum efficiency (2 marks)<br>Opportunity cost involving <u>choice</u> between two products, stated or exemplified (1 mark) | [2] | Accept an example as an <u>alternative</u> description of different combinations of two products (1) |
| | (b) | **Using a production possibility curve diagram, show how Saudi Arabia could expand its provision of education, whilst cutting back on the resources it allocates to oil production.**<br><br>  <br><br><br>A movement from X to Y along the PPC increases the output of the public sector and reduces oil production | [4] | |



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| | | | | |
|---|---|---|---|---|
| **1** | **(b)** | Correct diagram – 4 marks consisting of:<br><br>- axes – 1 mark (must be education and oil production/oil)<br>- correct PPC – 1 mark<br>- X and Y – 1 mark (can be data on vertical or horizontal axes)<br>- correct change – 1 mark (accept correct numerical interpretation of change)<br><br>Also accept a diagram that shows a change from a point inside the PPC, with movement up and towards education.<br><br>Alternative diagram:<br><br>  <br> | | If axes are labelled as 'price and quantity' – no marks at all.<br><br>If axes are not education and oil, 2 maximum (i.e. for correct PPC, X and Y)<br><br>New PPC changes in favour of education with less oil produced. |

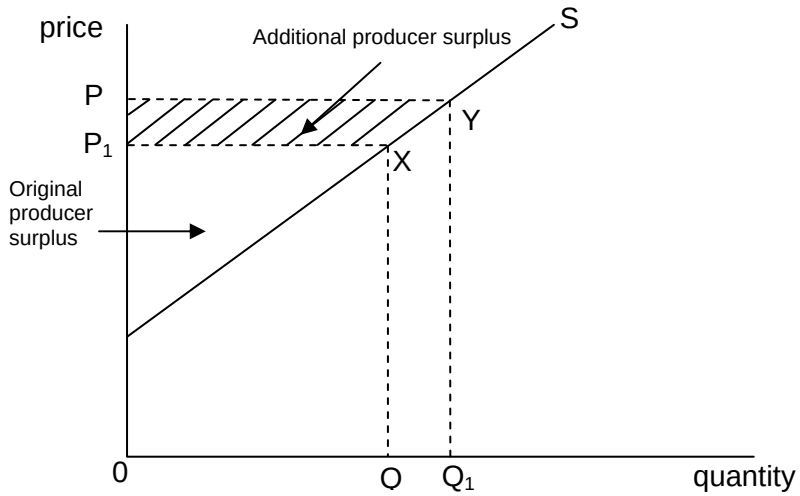


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| Question | | Expected Answer | Mark | Rationale |
|---|---|---|---|---|
| 2 | (a) | **Using information from the case study, state and explain the <u>two</u> factors which have affected the supply of Saudi Arabian oil.**<br><br>The information provided contains two factors. These are:<br><br>– the price of oil<br>– Saudi government policy to expand public sector and create more local jobs from additional oil revenue or reallocation of resources from oil to education<br>– earlier policies to control supply in order to maintain price stability<br>– need for higher revenue from oil supply.<br><br>Award 1 mark for recognition plus one further mark for elaboration as to <u>how it has affected supply</u>. (x2)<br><br>$Q_1$ | **[4]** | Must draw upon case study. So, increased costs, technology, weather etc. are not acceptable.<br><br>Watch out for demand side factors such as change in indirect tax unless there is a clear elaboration of how this might affect price and supply. Otherwise no marks.<br><br>For your guidance, the case study contains the following:<br><br>- 'price of oil began its relentless rise'<br>- 'encourage reasonably low prices'<br>- 'maintain price stability'<br>- 'need to expand Saudi Arabia's public sector'<br>- 'additional revenue to be generated from oil'<br>- 'Saudi Arabia's oil pricing is a now one of achieving high revenue through high prices'<br><br>These prompts can generate recognition marks; how supply has been affected can generate further marks (2 + 2). |



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| | | | | |
|---|---|---|---|---|
| 2 | (b) | **Use a diagram to show how the producer surplus of Saudi Arabian oil producers changes with an increase in the price of oil.**<br><br>  <br><br><br>1 mark for upward sloping S (labelled)<br>1 mark for original producer surplus<br>1 mark for additional producer surplus (e.g. shaded area)<br>1 mark for increased producer surplus (e.g. arrows, labels or annotation) | **[4]** | Watch out for confusion between 'new' and 'additional' – these are not the same. |

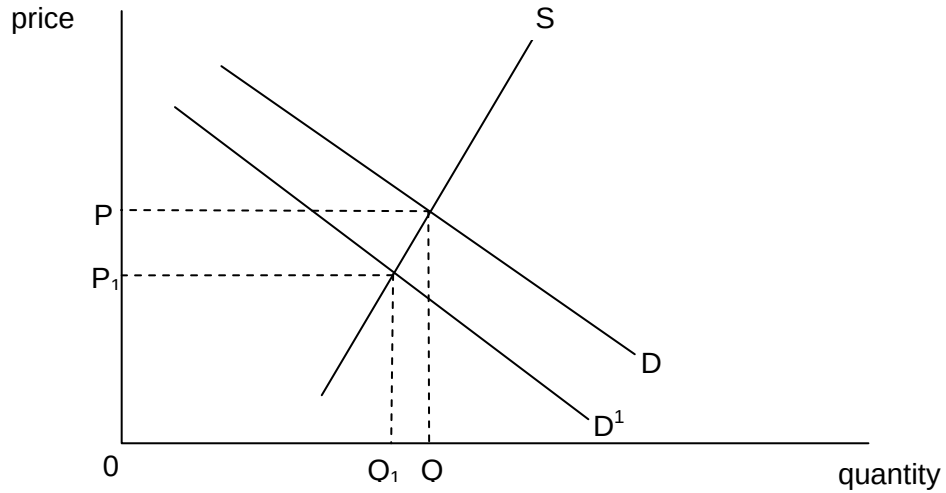


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| Question | | Expected Answer | Mark | Rationale |
|---|---|---|---|---|
| 2 | (c) | **Comment on whether Saudi Arabian oil producers increasing supply is likely to reduce world oil prices.**<br><br>The increase in supply is shown by a shift to the right(2); as a consequence world oil prices will fall(1); supply of oil bought/produced will increase(1).<br><br>This assumes that there is no change in demand(1); or supply from other producers(1); likely to only be short term(1); depends on how much supply has increased (1), depend upon price elasticity of demand (1), 2 maximum.<br><br>Alternatively, any one point that contains a mature commentary can get 2 marks. | **[6]** | Although not required, a diagram could be used to show the shift of S.<br><br>Watch out for:<br><br>- answers that lack application to oil<br>- conditional answers e.g. if or may as part of comment<br><br>Such answers can only get 2 marks maximum for the comment aspect of the question. |



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| Question | | Expected Answer | Mark | Rationale |
|---|---|---|---|---|
| 3 | | **OPEC has forecast that in 2009 there will be a fall in world demand for oil. Using a demand and supply diagram, analyse the likely effects of this on the market for oil.**<br>  <br><br>Up to 4 marks for a correct diagram:<br><br>S and D curves – 1 mark<br>old equilibrium – 1 mark<br>new equilibrium – 1 mark<br>shift of D – 1 mark<br><br>The outcome is that the world price will fall(1) and the quantity produced and demanded/consumed will also fall(1); contraction of supply (1)<br>Clear reference to effect of elasticity of supply(2). Loss of producer surplus elaborated (2). | **[6]** | No diagram marks if:<br><br>- axes wrongly labelled<br>- S and D reversed<br>- S and D shown as AS and AD<br><br>But accept P and Q points for axes labels.<br><br>No marks for quantity alone will fall.<br>Quantity falling from Q to $Q_1$ is acceptable. |



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| Question | | Expected Answer | Mark | Rationale |
|---|---|---|---|---|
| 4 | (a) | **Define the term 'price elasticity of demand.'**<br><br>2 marks for a correct definition such as 'the responsiveness of quantity demanded or quantity following a change in the price of a product'/'measure of demand response to a price change'.<br><br>Accept correct formula as alternative.<br>Award 1 mark where the change in price is not clearly recognised or where quantity or demand rather than quantity demanded is used in a formula. | **[2]** | |
| | (b) | **Using the information in the case study (lines 19-24), comment on the price elasticity of demand for unleaded petrol from March 2007 to March 2008.**<br><br>An obvious starting point is to calculate the price of elasticity of demand for unleaded petrol from March 2007 to March 2008. This is 21/15 = 1.4 (2). The estimate is elastic (1) elaboration of what this means (1) confirming the IEA's survey findings that motorists are driving less (1) and spending less on petrol (1) numerical example (2) – 4 maximum<br><br>In some respects this is surprising (1). It is normally assumed that the demand for petrol is price inelastic (1) since it is an essential product with no substitutes (1). The data are estimates (1), depends on extent of price change; revenue implications. It could mean that more people are using public transport; walking or just not making the trips they would normally take (2). Change in factors affecting demand e.g. environmental, attitudinal (2)<br><br>Any of the above points well elaborated – 4 max but estimate comment a maximum of 2. | **[8]** | Give 1 mark for 21/15 with wrong calculation<br><br>Can get OFR comment marks even if calculation of PED is wrong. |



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| Question | Expected Answer | Mark | Rationale |
|---|---|---|---|
| 5 | **Explain why the price of petrol and diesel fuel may not reflect the true costs of their use.**<br><br>The price of petrol is determined to some extent by the market forces of supply and demand. The retail price in the UK is inflated by the way in which indirect taxes on fuel are determined. The true costs of its use are the social costs which include private costs and external costs. These latter costs which include the pollution from vehicle use and congestion costs are invariably not paid for by the user of petrol and diesel powered vehicles. This can lead to over-consumption.<br><br>Up to 4 marks for an understanding of private costs/social costs/external costs/externalities and for an application of these costs to consumption of petrol and diesel.<br>Up to 2 marks for an analysis of why externalities are not considered, problems of estimation and measurement, to curb over consumption, information failure and excess resource allocation. | **[6]** | A diagram is an acceptable alternative. Examples of application include $CO_2$ emissions, pollution, health risks. |



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| Question | Expected Answer | Mark | Rationale |
|---|---|---|---|
| 6 | **Discuss whether indirect taxes on petrol and diesel fuel in the UK should be <u>reduced</u>.**<br><br>This question requires a balanced discussion of the arguments for and against a reduction in the indirect takes on fuel. Answers should be in context, although theoretical principles need to be included at all levels.<br><br>*The issue is a controversial one. The usual view of economists is that, by increasing indirect taxes, it is producing a situation whereby the private costs are becoming much closer to social costs (Recent research has confirmed this was reached when diesel prices topped 120 pence per litre but we cannot expect candidates to know this.) Historically also, the taxes on fuel have been a very substantial source of revenue for governments.*<br><br>*A reduction in taxation is demanded by the industry lobby which is concerned about competitiveness and being squeezed as a source of huge amounts of revenue collected by the government. If accepted, this would be contrary to previous government policies towards the negative externalities of vehicle use. It would also anger environmental groups. The big increase in government revenue from fuel taxation could be used to fund other forms of government spending. On the other hand, a cut in fuel taxes is likely to reduce government revenue.* | **[18]** | |



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| Question | Expected Answer | Mark | Rationale |
|---|---|---|---|
| 6 cont | **L4 For a discussion of whether indirect takes on fuel should be reduced (13-18)**<br><br>A balanced answer is required, with discussion of some of the points stated above.<br>For 16+ marks, the controversial nature of a cut in fuel taxes should be clearly recognised and there should be a judgement on whether the industry or the environmental case has more substance, in which case fuel prices should be increased.<br><br>Complex ideas have been expressed clearly and fluently in a style of writing appropriate to subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.<br><br>**L3 For an analysis of the case for a reduction in the indirect taxes on fuel. (9-12)**<br><br>Answers should contain relevant analysis of the effects of a reduction; a diagram seems appropriate but is not essential for full marks.<br><br>For 11+ marks, the analysis should have depth and is likely to contain a correctly drawn diagram.<br><br>Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning. | | Relevant analysis must underpin this level. This analysis can be in the form of a correct diagram, explained, or in a written format.<br><br>Analysis of an increase in indirect tax is not answering the question, use NAQ annotation<br><br>Relevant diagrams are:<br>- shift of S to right<br>- negative externality case, consumption or production situations.<br><br>Possible analytical diagrams might include:<br>- competitiveness<br>- consumer and producer surplus<br>- XED and PED<br>- complementary goods<br>- regressive nature of tax |



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| Question | Expected Answer | Mark | Rationale |
|---|---|---|---|
| **6 cont** | **L2 For an application of knowledge of the effects of a reduction in the indirect taxes on fuel (5-8)**<br><br>These answers will essentially summarise the case material in context, using some economic terminology.<br><br>Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.<br><br>**L1 For a knowledge and understanding of indirect taxes (1-4)**<br><br>These answers will be descriptive, shallow and include just a few simply made points.<br><br>Some simple ideas have been expressed. There will be errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility. | **[18]** | This can include a series of assertions about the argument for and against a reduction in indirect taxes on fuel e.g. benefits/costs of fuel taxation without any analysis of the reduction.<br>One side only 5-6 marks.<br>A diagram showing a shift to the left of supply can also be L2 but explanation of increase in tax is not answering the question, 6 marks maximum. |



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# ADVANCED SUBSIDIARY GCE
# ECONOMICS
Markets in Action

**F581**

Candidates answer on the Question Paper

**OCR Supplied Materials:**
None

**Other Materials Required:**
- Calculators may be used.

**Wednesday 13 January 2010**
**Afternoon**

**Duration:** 1 hour 30 minutes

*OCE/13472*

| Candidate Forename | | Candidate Surname | |
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| Centre Number | | | | | | Candidate Number | | | | |
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**INSTRUCTIONS TO CANDIDATES**

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- The spaces should be sufficient for your answers but if you require more space use the lined pages at the end of this booklet and number your answers carefully.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.
- This document consists of **16** pages. Any blank pages are indicated.

**A calculator may be used for this paper**

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## The Problem of Health Care

The UK has had a National Health Service (NHS) for over 60 years. Around 98% of the funding to cover the cost of the NHS comes from general tax revenue; the remaining 2% comes from charges for prescriptions, eye examinations and dental work paid for by those groups which are not exempt from such charges. Traditionally, health care has been provided free and available to all UK citizens who need it. In Economics, this type of health care provision is called a merit good.

Issues relating to health care never seem to be out of the news. Typical headlines are:

> 'East Sussex NHS Trust is faced with the closure of its maternity unit in either Eastbourne or Hastings'. (Hansard, 10 January 2007)

> 'Funding cancer drugs makes no sense... the money is best spent on improving surgical techniques'. (Daily Telegraph, 8 August, 2008)

The problem we face is that there will never be enough money for the NHS to provide the quantity and quality of health care that we would all like. Consequently, choices, often difficult ones, have to be made. This should be clear from the above headlines.

Not all forms of health care are provided free of charge by the NHS. A good example is the case of dental implants, whereby a new tooth is drilled into a patient's jawbone. Demand for this cosmetic treatment has increased substantially in recent years. Adults are prepared to pay well over £1000 for each implant. This is due to the high cost of raw materials and the limited supply of dentists who are able to do this type of work. Dental implants are just one example of a growing number of situations where the private sector is providing a service in response to market demand. Other examples are private hospitals, private GP services and a wide range of alternative therapies.

The health care market fails to produce the best allocation of resources due partly to problems of information failure. Over the past few years, there has been an increase in the number of patients requiring treatment for bowel cancer. Recent research has found that there is a link between the consumption of processed meat and the incidence of this type of cancer. Experts have warned that 'eating one sausage or three rashers of bacon a day can increase the risk of bowel cancer by a fifth'.

According to the researchers, people should eat less than 500g of cooked red meat a week and avoid all processed meat products such as hot dogs, burgers and sausages. They also believe that more could be done to get the message across – that those who eat only moderate amounts of red meat and especially processed red meat, are putting their lives at risk, as well as stacking up future problems for our already over-stretched NHS.

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1 **(a)** Using information from the case study, explain how the 'economic problem' can be applied to the health care market in the UK.

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**(b)** In December 2007, the East Sussex NHS Trust decided to concentrate its maternity services at Hastings. Describe **one** likely economic advantage of specialisation.

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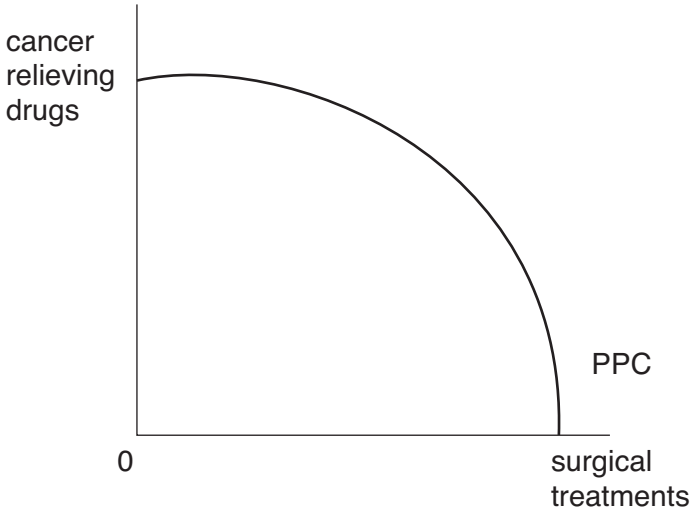
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**2** The NHS has to decide how to allocate resources between paying for cancer-relieving drugs and surgical treatments. Assuming no other choices have to be made, this problem can be represented by the production possibility curve below.




**(a)** **On the diagram**, indicate a point where there is an efficient allocation of resources (label this X) and a point where there is an inefficient allocation of resources (label this Y). **[2]**

**(b)** Explain why point X is efficient and point Y is inefficient.

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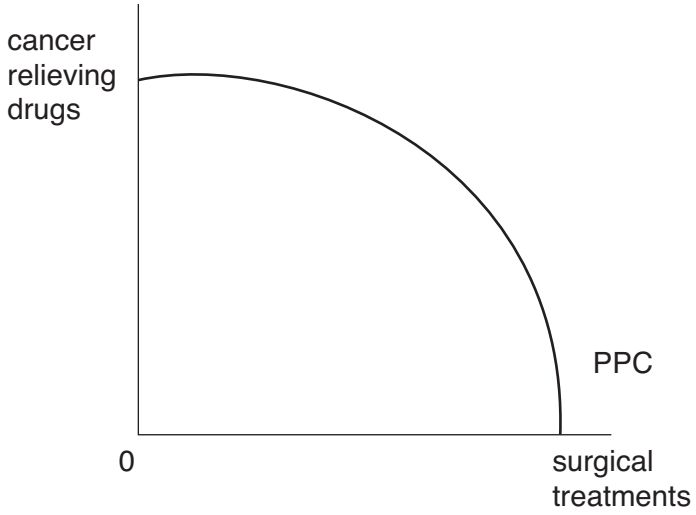
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**(c)** Show on the diagram below how more surgical treatments can be provided. Explain your answer.




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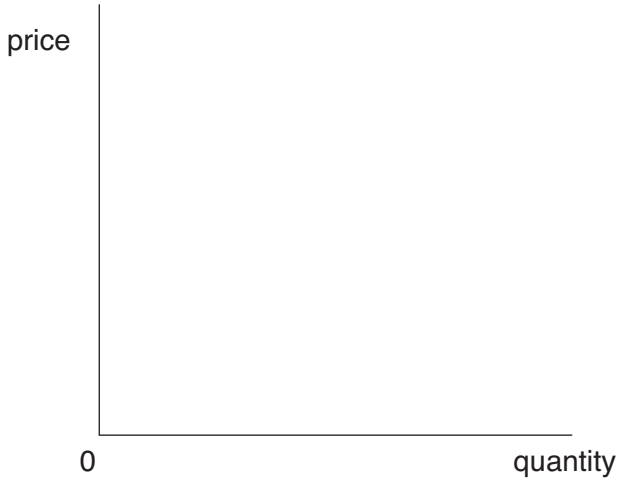
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**3** **(a)** Use a demand and supply diagram to show how the price of private dental implants is determined.




**[3]**

**(b)** State and explain **two** possible reasons for the increase in demand for such implants.

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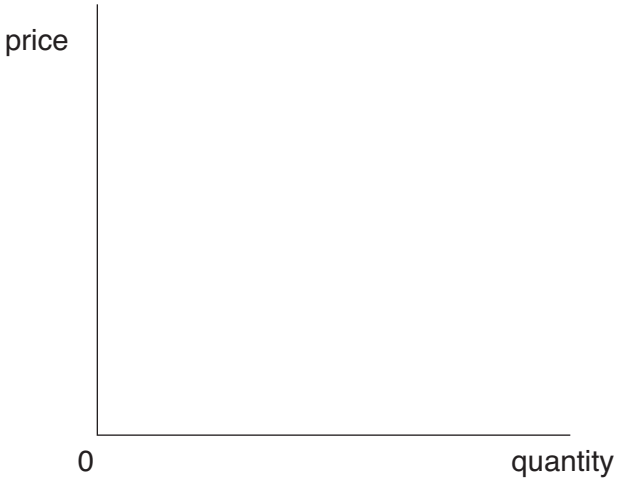
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**(c)** Using a demand and supply diagram, analyse the likely effects on the market for such implants of an increase in the number of dentists who are capable of carrying out this work.




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.....**[5]**

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**4** The estimated income elasticity of demand for private dental implants is shown below for three groups of consumers.

| | |
|---|---|
| Low income earners | 0.02 |
| Average income earners | 0.40 |
| Above average income earners | 1.65 |

Explain what these estimates mean and comment on their usefulness for dentists who carry out implants.

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**5** Comment on why there is likely to be information failure amongst consumers of processed red meat products.

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..... **[6]**

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6 Discuss whether health care in the UK should be provided by the government or the private sector. **[18]**

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[18]

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Additional answer space .....

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GCE

# Economics

Advanced GCE **A2 H461**

Advanced Subsidiary GCE **AS H061**

# Mark Schemes for the Units

# January 2010

**HX61/MS/R/10J**



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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by Examiners. It does not indicate the details of the discussions which took place at an Examiners' meeting before marking commenced.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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Any enquiries about publications should be addressed to:

OCR Publications
PO Box 5050
Annesley
NOTTINGHAM
NG15 0DL

Telephone: 0870 770 6622
Facsimile: 01223 552610
E-mail: publications@ocr.org.uk

# F581 Markets in Action

**Subject-specific Instructions**

1 The paper is to be marked to AS standard.

2 Marking should be positive: marks should not be subtracted for errors or inaccuracies.

3 In assessing quantitative answers, the 'own figure rule' (OFR) must be applied, ie a candidate must be given credit for calculations which, though wrong, are consistent with an earlier error.

4 The Mark Scheme refers to possible issues/content that candidates might use. These suggestions are neither exhaustive nor necessarily required.

5 The quality of written communication will be assessed in the answer to the final part question.

A set number of marks for written communication is not a requirement. However, where a levels of response mark scheme is used, the following general criteria for assessing the quality of written communication will apply. These criteria are integrated within the more specific levels of response shown in the individual mark schemes for each appropriate question.

Level 4

Complex ideas have been expressed clearly and fluently using a style of writing appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using specialist technical terminology where appropriate. There may be few, if any, errors of spelling, punctuation and grammar.

Levels 2 and 3

Relatively straightforward ideas have been expressed clearly and quite fluently, using an appropriate style of writing. Arguments are generally relevant, though may occasionally stray from the point and are broadly logical and coherent. There will be some errors of spelling, punctuation and grammar, but these will not be intrusive or totally obscure the meaning.

Level 1

Simple ideas have been expressed, generally in a style lacking clarity and fluency. Arguments will have limited coherence and structure, often being of doubtful relevance to the main focus of the question. There are errors of spelling, punctuation and grammar, which will be noticeable and intrusive. Writing may lack legibility.

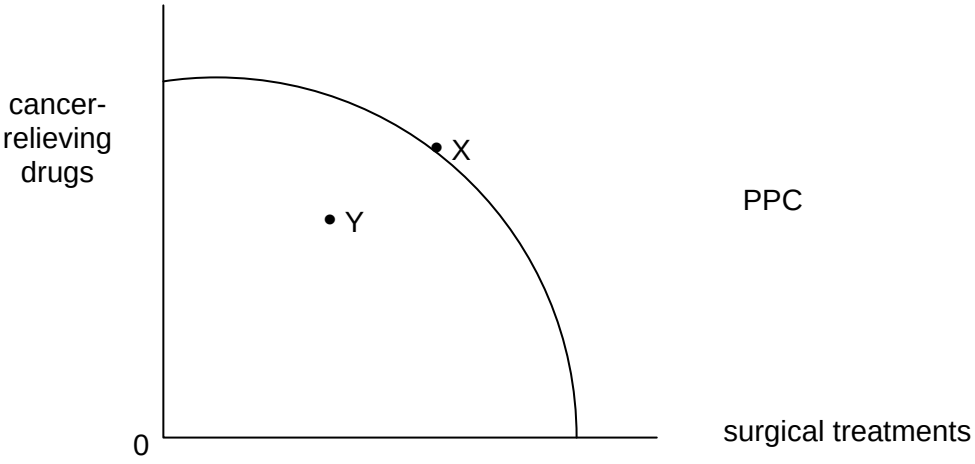
Exceptionally, answers which are assessed as L1, L2 or L3 from the individual unit mark scheme criteria may be awarded an additional mark for the quality of their written communication in any particular and appropriate question.


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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| 1 | (a) | Up to 2 marks for a correct definition of the economic problem such as 'how to allocate scare *resources* among alternative uses.'<br><br>Award 1 mark for a statement of scarcity or choice only.<br><br>Up to 2 marks for application to health care - limited resources, choice and unlimited wants.<br><br>Award 1 mark where this application is only that of scarcity or choice. | **[4]** | Use a green tick to identify<br><br>- limited resources/scarcity<br>- unlimited wants/choice<br><br>Watch out for 'need' – not the same as 'want'.<br>Only one side of the economic problem has been addressed.<br>Use green ticks again to indicate where both aspects are applied.<br>Application can be either from the case or more widely with respect to health care.<br>Accept 'quantity and quality' as application of choice.<br>Watch out for demand and supply answers – not relevant. |
| | (b) | Various possibilities including:<br>• an increase in throughput/output<br>• a wider range of services become available<br>• an increase in efficiency<br>• better use of labour which increases productivity.<br>• Improvement in quality<br><br>NB: The question does not ask for a definition of specialisation. | **[2]** | The question is a general one and not in context. Although reference to maternity services can be credited.<br>Accept economies of scale and reduced costs as this may be given by A2 candidates.<br><br>A typical 1 mark answer might be 'more efficient' (1); for 2 marks 'the decision to concentrate resources means there is a larger unit so more patients can be treated more efficiently'.(2) |

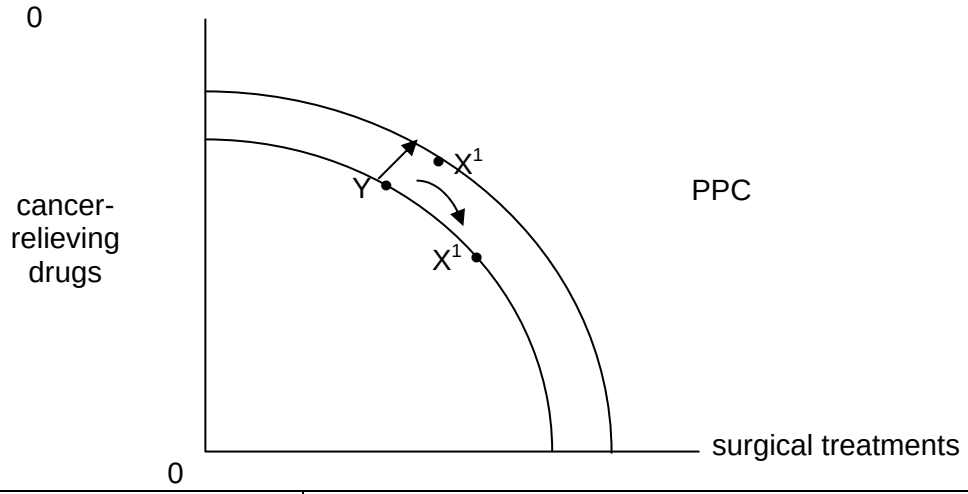


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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| 2 | (a) | For example:<br>  <br> | [2] | Use a green tick to identify whether the points inserted are correct.<br><br>One mark for each correct point label.<br><br>Y can be anywhere inside the PPC, with or without a point.<br><br>X must specifically be on the PPC. |
| | (b) | X which is on the PPC (1) represents a point of maximum output or productive efficiency (1).<br><br>All resources are being fully used (1)<br><br>Y which is inside the PPC (1) since it is possible to produce more drugs without sacrificing surgical treatments (2)<br><br>No opportunity cost (1) of producing more output (1)<br><br>(No marks for efficiency) | [4] | OFR might apply exceptionally if X and Y in part a are the wrong way round. |

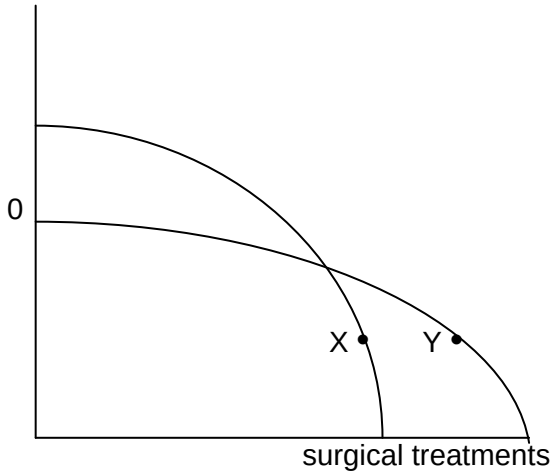


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| Question | | Expected Answer | | Marks | Guidance |
|---|---|---|---|---|---|
| | (c) |  | | | NB Accept a pivot diagram also. |
| | | Various possibilities | • a movement along the PPC Y to $X^1$ towards the maximum number of surgical treatments<br>• a shift outwards of the PPC to coincide with an overall increase in resources available for both treatments<br>• a pivot from the original point on the cancer relieving drugs axis, indicative of an increase in efficiency of surgical treatments (not shown above)<br>• a movement from a point within the PPC to one where there are more surgical treatments<br>• a re-allocation of potential output (see guidance) | **[4]** | Diagram – award 1 mark for original position plus 1 mark for position indicating more surgical treatments; 1 mark only for change of PPC showing potential for producing more surgical treatments.<br><br>No marks if only one position indicated. |

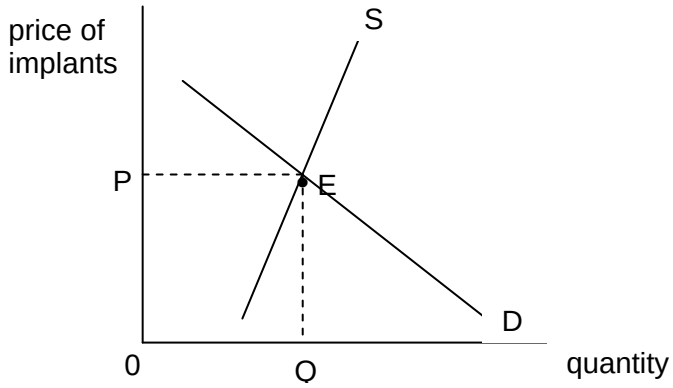


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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| | | Award 2 marks for correct new diagram.<br>Award up to 2 marks for an appropriate explanation.<br>Give 1 mark for a less than clear explanation.<br><br>(1 mark if pivot only with new position not indicated) | | Explanation for 1 mark should make clear that the outcome is more surgical treatments.<br><br>1 mark for explaining why; impact on quantity of cancer relieving drugs (1) re-allocating resources (1).<br><br>  <br> |

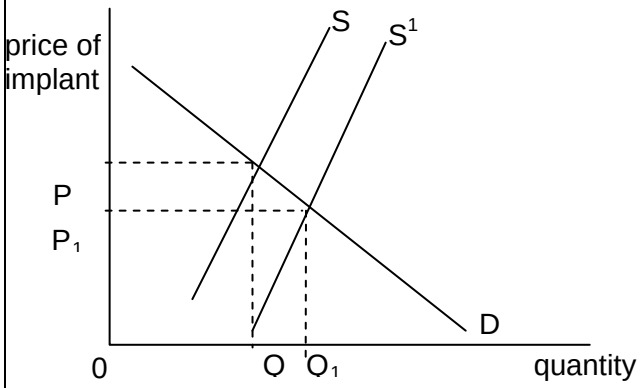


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| Question | | Expected Answer | | Marks | Guidance |
|---|---|---|---|---|---|
| 3 | (a) |  | | | |
| | | Award 1 mark each for | • downward sloping D<br>• upward sloping S<br>• correct equilibrium point/position, labelled. | [3] | Accept diagram with shift of D if original equilibrium position is OK.<br><br>Use a green tick in each case to identify each of the adjacent points.<br><br>If S and D are wrong way round, then award 1 mark for correct equilibrium position. |
| | | | | | |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| | **(b)** | Various possibilities including:<br>• a fall in their price<br>• an increase in real income of consumers<br>• an increase in fashion awareness or taste<br>• an increase in the price of alternatives/availability of alternatives<br>• an increase in population/market<br><br>Award 1 mark for a valid reason; 1 mark for some elaboration such as:<br>• implants are now more affordable<br>• discretionary income has increased<br>• benefit of implants now better known and understood<br>• increase in price of dentures. | **[4]** | The determinant should broadly coincide with what is to be found in text books.<br><br>Do not accept 'lower cost'.<br><br>Advertising can be an appropriate explanation of the fashion/taste factor.<br><br>Beware of 'quality' explanations – 0 marks.<br><br>Use a green tick to identify each correct point. |
| | **(c)** |  <br>2 marks for new diagram showing shift of S and new equilibrium position.<br><br>Up to 3 marks for an analysis. An increase in the number of dentists leads to a shift to the right of S (1); this results in a fall in price (1) and an increase in the quantity (1). | **[5]** | Use a green tick to show where the diagram marks have been awarded.<br><br>Accept reference back to diagram for increase in supply; no marks for simple 'increase in supply'. |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| 4 | | Award up to 4 marks for an understanding of income elasticity and interpretation of the data. These marks can be awarded for :<br><br>• correct definition (2) or formula (2)<br>• normal goods (1) superior goods (1)<br>• elastic (1) inelastic (1)<br>• numerical interpretation of data (2)<br>• interpretation of elasticity or type of good (1x2)<br><br>Up to 4 marks for a relevant comment such as the high positive estimate for above average income earners is good news for implant dentists. They can expect the demand for implants to increase in the future, assuming real incomes increase. Maybe not as strong a market at the time of a recession. Dentists could target their services to the above average income group. It should be remembered that the data are only estimates and that given the sensitive nature of both income and health issues, there is likely to be some misreporting from respondents to the survey. | **[8]** | A typical explanation of income elasticity of demand is 'the response of demand to a change in income'. Give 1 mark where the change aspect is not made clear.<br><br>Two comment points are required for full marks. Likely to consist of a comment on the use of the data and its accuracy.<br><br>One comment point well done can get 3 marks.<br><br>Use green ticks throughout to indicate all marks awarded.<br><br>Watch out for answers in terms of price elasticity of demand, for example in the comment part of the answer – 0 marks. |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| 5 | | Award 2 marks for a clear understanding of information failure (the lack of information only 1 mark) to include some reference to the effects of this form of market failure in terms of not maximising welfare.<br><br>Award up to 2 marks for application to the case of sausages, bacon and other red meat and why consumers are not aware of the dangers of over consumption or where advertising of these products is not necessarily in the best interests of consumers. Reference to de-merit goods (1), explanation with respect to information failure (1).<br>Examples of why consumers are not fully aware; e.g. complexity of labelling, lack of nutritional education (2).<br><br>Award 2 marks for an appropriate comment either in terms of the inequality of information between producers and consumers or why many consumers do not bother to find out or are not even bothered about the health properties of what they eat. Time to transmit information. Lack or inadequacy of government provision (2), confusing or limited evidence (2), how information failure might be reduced (2).<br>Award 1 mark if these points are just a hint. | **[6]** | First time of asking so try to be generous on the comment aspect especially.<br>Accept asymmetric information in the definition.<br><br>Either of these two instances of information failure can get 2 marks – 1 mark for the context, 1 mark for the effect on consumers.<br><br>Accept answers that say it is because of market failure or an inefficient allocation of resources. |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| 6 | | This question requires a discussion of the arguments for and against the provision of health care by the government or the private sector. Answers should be in context, although some theoretical principles, particularly with respect to merit goods, need to be included at all levels.<br><br>*The case for providing health care in the UK as a merit good is well established and stems from the view that a national system of health care provides more private benefits for consumers than they actually realise. Merit goods such as health care also have positive externalities for the economy in terms of increased output and for the community as a whole. (It is not in anyone's interest to have a lot of sick people around.) The problem for the government is that it has to make various judgements on the information available to it – this information is not available to the same degree to the vast majority of the population. Reference the opportunity cost of government spending on health is relevant.*<br><br>*A very good answer is likely to question whether there really is such a thing as a merit good, arguing that for a personal thing such as health care, individuals should be left to decide what is best for them. In many other countries, this controversially is the case – private health insurance is absolutely essential in such 'pay as you consume' situations. In the absence of such insurance, certain groups in the population will go without certain types of health care as they are unable to afford it. This has wider macroeconomic implications on the supply side.*<br><br>*A very relevant point is that increasingly in the UK the private sector is providing for some what the NHS is unable to provide for all. So, in some respects, health care is already provided by a combination of the public and private sectors.* | **[18]** | Weaker answers that do not answer in terms of merit goods are unlikely to get beyond L2.<br><br>Discussion on the opportunity cost of government spending is relevant. |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| | | **L4 For a <u>discussion</u> of whether health care should be provided by the government or the private sector. (13-18)**<br><br>A balanced answer is required, with a discussion of some of the points stated above.<br><br>Complex ideas have been expressed clearly and fluently using a style of writing appropriate to complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured using appropriate terminology. There may be few, if any, errors of spelling, punctuation and grammar.<br><br>**L3 For an <u>analysis</u> of why health care may be provided by the government or the private sector. (9-12)**<br><br>Answers should be underpinned with relevant analysis.<br><br>For 11+ marks, the analysis should have some depth and are likely to include an explained diagram showing under consumption or positive externalities.<br><br>Relatively straightforward ideas have been expressed with clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar but these are unlikely to be intrusive or obscure meaning. | | **Band 3 17-18 marks**<br>For a two sided discussion which makes clear whether health care is best provided by the government or by the private sector. A second case is where the answer questions whether health care is really a merit good.<br><br>**Band 2 15-16 marks**<br>A good balanced discussion but not reaching that bit further.<br><br>**Band 1 13-14 marks**<br>An unbalanced discussion or one that is a weak discussion.<br><br>**Band 2 11-12 marks**<br>Must include relevant theory of merit goods and/or efficiency case for private sector.<br><br>**Band 1 9-10 marks**<br>Weak analysis of merit goods and/or relative efficiency of private sector. |



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| Question | | Expected Answer | Marks | Guidance |
|---|---|---|---|---|
| | | **L2 For an <u>application</u> of knowledge as to why some healthcare is provided by the government. (5-8)**<br><br>These answers will consider the various reasons why, in the UK, health care has traditionally been provided by the government.<br><br>Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. | | **Band 2 7-8 marks**<br>Simple explanation e.g. merit goods and some application to healthcare or why healthcare is provided by the government.<br><br>**Band 1 5-6 marks**<br>Application of benefits of healthcare. |
| | | **L1 For a <u>knowledge and understanding</u> of the government and private sector. (1-4)**<br><br>These answers will be shallow in scope and depth, containing a few simply made points.<br><br>Some simple ideas have been expressed. There will be errors of spelling, punctuation and grammar that will be noticeable and intrusive. Writing may also lack legibility. | | **Band 2 3-4 marks**<br>Clearer understanding of government and private sector.<br><br>**Band 1 1-2 marks**<br>Limited understanding of government or private sector. |



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