

**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.

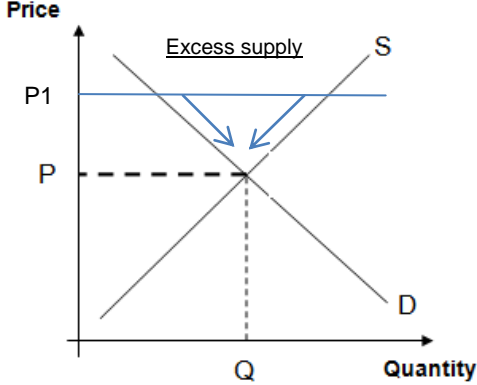
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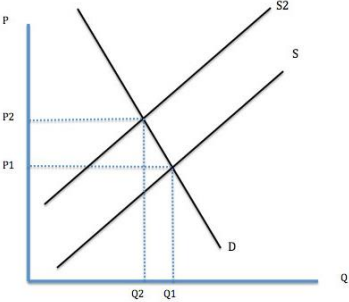
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1. These are the annotations, [including abbreviations], including those used in scoris, which are used when marking

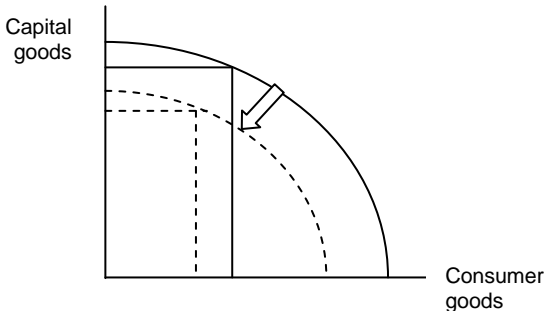
Annotation	Meaning
	<b>Blank Page – this annotation must be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.</b>
	Tick
	Cross
	Comment
	Benefit of doubt
	Level 1
	Level 2
	Level 3
	Level 4
	Effective evaluation
	Omission
	Not answered question
	Noted but no credit given
	Too vague
	Own figure rule

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

Question	Answer/Indicative content	Mark	Guidance
1(a)	<p><b>What is meant by the term 'the market mechanism'?</b></p> <p><b>Up to two marks</b> for a definition:                      Buyers/consumers and sellers/producers meet/come into contact [1] for the purpose of trading/exchanging [1].                      Demand and supply [1] arrive at a price/equilibrium [1].                      Allocates resources [1]</p>	2	
1(b)	<p><b>Describe how a competitive market would react to excess supply.</b></p> <p><b>Max one mark for knowledge</b> of competitive market OR excess supply [1]</p> <p><b>Up to three marks for application:</b>                      Price would fall/suppliers would cut prices [1]                      Demand would rise/extension [1]                      Supply would fall/contraction [1]                      New equilibrium reached [1]                      Suppliers might leave the market [1]                      Movement towards allocative efficiency [1]</p>	4	<p>For competitive market reward operation of the market mechanism/ high number of buyers and sellers/ no government restrictions</p> <p>For excess supply reward supply greater than demand</p> <p>Up to 3 Application marks can be awarded if this is presented on a diagram such as:</p>  <p>The diagram is a standard supply and demand graph. The vertical axis is labeled 'Price' and the horizontal axis is labeled 'Quantity'. A downward-sloping demand curve 'D' and an upward-sloping supply curve 'S' intersect at an equilibrium point. Dashed lines from this intersection point lead to 'P' on the price axis and 'Q' on the quantity axis. A horizontal line is drawn at a higher price level, labeled 'P1'. This line intersects the supply curve 'S' at a point to the left of the equilibrium and the demand curve 'D' at a point to the right. The horizontal distance between these two intersection points is labeled 'Excess supply'. Two blue arrows point from this 'Excess supply' area towards the equilibrium point, indicating the market's adjustment process.</p>

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

Question	Answer/Indicative content	Mark	Guidance												
2[c]	<p><b>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.</b></p> <p><b>Award a maximum of two marks for use of the data</b> using numbers or sign, e.g.                      Further calculation of PED [1] and/or YED[1]                      PED is positive in 2012-13 but negative in 2011 [1]                      YED is positive in all three years [1]</p> <p><b>Award up to four marks for Comment</b></p> <p>Domestic fuel is a normal good [1]                      Reference to elastic PED/YED in 2011 and 2012 [1] but inelastic in 2013 [1]                      Comment that positive PED is unusual [1]                      Changes in demand are inconsistent/no clear pattern [1]                      Changes in demand seem to be related more closely to changes in income than in price [2]                      The data may be <b>estimates</b> [1] and therefore may be unreliable/outdated [1]</p>	6	<table border="1" data-bbox="1305 277 2067 419"> <thead> <tr> <th>Year</th> <th>PED</th> <th>YED</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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</p> <p><b>Comment marks can only be credited if at least one mark has been awarded for use of the data.</b></p> <p>Comment marks may be found in the same sentence as statement using the data.</p> <p>Maximum of two comment marks relating to ‘estimates’</p> <p>Comments about ‘ceteris paribus’ should not be rewarded in the context of this question.</p>	Year	PED	YED	2011	-4.17 or -4.2	Already used	2012	+2.27 or +2.3	+13.89 or +13.9	2013	+0.02 or 0.0	+0.33 or +0.3
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2013	+0.02 or 0.0	+0.33 or +0.3													

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3[a]	<p><b>What is shown by a production possibility curve?</b></p> <p><b>First Mark:</b> maximum quantity/output [1]</p> <p><b>Second Mark:</b>                      given current resources or technology [1]                      choosing between two goods [1]                      when production is at maximum efficiency [1]                      in the current time period / short term [1]</p> <ul style="list-style-type: none"> <li>• showing scarcity [1]</li> </ul>	2	Allow 'opportunity cost' explanations including "choice" up to 2 marks if correctly presented.
3[b]	<p><b>Using a diagram, show the impact on world output of the depletion in non-renewable resources, such as oil and gas.</b></p> <p>Original PPC [1]                      New PPC after inward shift [1]                      Coordinates to axes from two points, one on each PPC, showing lower production of one or both goods [1]                      Some dynamic indication, e.g. inward arrow between curves or on axes [1]</p> 	4	If only one PPC is shown maximum mark is 1.

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

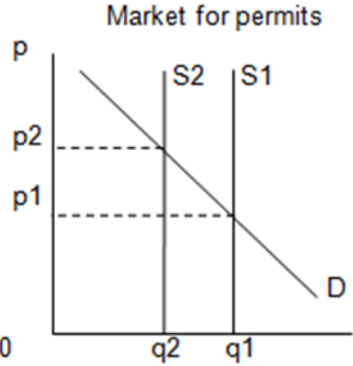


		Question	Answer/Indicative content	Mark
5		<p><b>Comment on the extent to which the problem of pollution caused by carbon emissions is a result of information failure.</b></p> <p><b>Applied points [up to 2 marks]</b></p> <ul style="list-style-type: none"> <li>• Examples of information failure (but not of pollution) [1]</li> <li>• Definition of information failure [1]</li> <li>• Link to <b>demerit</b> good [1]</li> <li>• Negative impact not realised [1]</li> <li>• <b>“Asymmetric”</b> as definition [1]</li> </ul> <p><b>Analysis [up to 2 marks]</b></p> <ul style="list-style-type: none"> <li>• <b>Overconsumption/overproduction</b> [1] (can be a diagram)</li> <li>• The market is <b>allocatively inefficient</b> [1]</li> <li>• <b>lack of substitutes/alternatives</b> [1] so people unable to switch [1]</li> <li>• good being consumed a <b>necessity</b> [1]</li> <li>• Asymmetric as explanation of over consumption/overproduction [1]</li> </ul> <p><b>Comment [2 short or one developed]</b></p> <ul style="list-style-type: none"> <li>• People choose to <b>ignore</b> the information</li> <li>• Other causes of failure compared (including Government failure)</li> <li>• A judgement that information failure is/is not the main cause</li> </ul>	6	<p>The question relates <b>only to information failure existing now</b>, not to correcting this so do not reward analysis or comment about removing the information failure.</p> <p>These Applied points address the “what” and “why” of information failure in the case of carbon emissions.</p> <p>These Analysis points address “how” information failure leads to economic behaviour such as over consumption, but <b>NOT</b> addressing how the market failure could be corrected</p> <p>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.</p> <p><b>Comment marks are only available once at least one application/analysis mark has been awarded.</b></p>

Question		Answer/Indicative Content	Marks	Guidance	
				Content	Levels of response
6		<p><b>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.</b></p> <p><b>EE</b>  <b>16-18 Marks</b>                      The stated judgement must address the question</p> <ul style="list-style-type: none"> <li>• Cap and trade is or is not the <b>most effective</b> way to reduce the market failure. Do not credit judgements which state that ‘cap and trade is <i>an</i> effective way’.</li> <li>• <b>Evaluation</b> of both the Permit market and the wider market</li> </ul>	18	<p>18 marks: More thorough justification or elaboration of the judgement.</p> <p>17 marks: Some justification or elaboration of the judgement.</p> <p><b>Use second <span style="border: 1px solid red; padding: 0 2px;">EE</span> annotation to indicate elaboration.</b></p> <p>16 marks: A judgement that pollution permits are or are not the most effective way to correct market failure.</p> <p><b>Use one <span style="border: 1px solid red; padding: 0 2px;">EE</span> to show where this statement appears in the answer.</b></p>	<p><b>Level 4 [13–18]</b>  <b>For a discussion of the effectiveness of cap and trade in reduce the market failure arising from negative externalities.</b></p> <p>All answers at this level must be underpinned with appropriate theoretical concepts.</p> <p>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</p>

Question	Answer/Indicative Content	Marks	Guidance	
			Content	Levels of response
	<p><b>Level 4</b> <b>13-15 Marks</b> 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:</p> <ul style="list-style-type: none"> <li>• Cap and trade is positive because it incentivises firms to become greener.</li> <li>• The policy is market-based and may therefore increase efficiency.</li> <li>• The initial level of the cap may be set at an inappropriate level.</li> <li>• The initial price of permits may be set wrongly.</li> <li>• Some large firms may be more able to buy permits/afford the fines</li> <li>• Not all countries/companies may be able to afford the cost of developing greener production.</li> <li>• The policy may drive production offshore.</li> <li>• If demand for the goods has inelastic PED any increase in costs may simply be passed on.</li> </ul>		<p>Max. of three <b>L4</b> annotations should appear on the script.</p> <p>15 marks: Three evaluative points with some development.</p> <p>14 marks: Two evaluative points with some development.</p> <p>13 marks: One evaluative point with some development <b>OR</b> a number of evaluative statements lacking depth.</p> <p><b>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</b></p> <p>Explanations of alternative forms of correction to market failure in themselves <b>receive no credit</b>. An explicit and relevant <b>comparison between cap and trade and an alternative policy</b> can receive Level 4 marks.</p>	<p>13–15 marks – There must be a discussion of points for and against cap and trade <b>or</b> on how effective cap and trade is in correcting a relevant market failure.</p> <p><i>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.</i></p>

Question	Answer/Indicative Content	Marks	Guidance	
			Content	Levels of response
	<p><b>Level 3 Two strands of analysis 11-12 marks</b> Analysis of <b>both</b> the market for permits <b>with the cap reduced each year and</b> the market for goods and services with reducing negative externalities</p> <p><b>Level 3 One strand of 9-10 marks</b> Analysis of <b>either</b> the market for permits <b>with the cap reduced each year or</b> the market for goods and services with negative externalities</p> <p><b>Analysis of movement towards correction of market failure arising from negative externalities of production and consumption in the market for goods</b></p> <ul style="list-style-type: none"> <li>• S shifts to left through higher/external costs</li> <li>• The market moves towards allocative efficiency</li> <li>• Overconsumption/overproduction is reduced</li> </ul> <p><i>Reward but do not expect marginal social cost/benefit diagrams.</i></p>		<p>Max. of two <b>L3</b> annotations Place second <b>L3</b> annotation where 11-12 marks are awarded.</p> <p>12 marks: full explanation of second market</p> <p>11 marks: some explanation of second market</p> <p>Place one <b>L3</b> annotation where 9-10 marks are awarded.</p> <p>10 marks: full explanation of first market</p> <p>9 marks: some explanation of first market</p>	<p><b>Level 3 [9–12 marks]</b> <b>For an analysis of the use of cap and trade to reduce the market failure arising from negative externalities.</b></p> <p><i>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.</i></p>

Question	Answer/Indicative Content	Marks	Guidance	
			Content	Levels of response
	<p><b>Analysis of the market for permits</b></p> <ul style="list-style-type: none"> <li>• Cap set and subsequently reduced from S1 to S2 with two or more supply curves – two marks.</li> <li>• Analysis of fixed supply with changes in demand for and price of permits – one mark</li> </ul> <p><b>Level 2</b> responses may present an unexplained diagram or offer the pros and cons of cap and trade without analysis:</p> <ul style="list-style-type: none"> <li>• Cap and trade creates a market for pollution permits.</li> <li>• Cap and trade has minimal costs.</li> <li>• Cap and trade works with the market mechanism.</li> <li>• Cap and trade shifts supply to the left or sets a vertical supply curve (unexplained diagram) or stimulates more energy-efficient production</li> <li>• Comparison of a relevant alternative policy with cap and trade [award a maximum of one L2 mark for this]</li> </ul>		<p style="text-align: center;"><b>Market for permits</b></p>  <p>Use one <span style="border: 1px solid red; padding: 2px;">L2</span> per mark awarded</p> <p>8 marks: Further L2 points with possible conclusion at applied level.</p> <p>7 marks: Three applied points.</p> <p>6 marks: Two applied points.</p> <p>5 marks: Unexplained cap and trade or negative externalities diagram <b>OR</b> one point.</p>	<p><b>Level 2 [5–8 marks]</b>  <b>For an application of knowledge and understanding of cap and trade.</b></p> <p>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.</p> <p><i>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.</i></p>

Question		Answer/Indicative Content	Marks	Guidance	
				Content	Levels of response
		<p><b>Level 1</b> responses may demonstrate knowledge of the following:</p> <p>3-4 marks: knowledge of cap and trade and market failure</p> <p>1-2 marks: knowledge of cap and trade (in terms of the setting of a limit and issuing of permits) <b>or</b> of market failure</p>		<p>Place one <b>L1</b> annotation per correct statement, up to a maximum of four (or until a higher level is awarded)</p>	<p><b>Level 1 [1–4 marks]</b>  <b>For knowledge only of cap and trade and/or the impact on consumers/producers.</b></p> <p><i>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</i></p>

**OCR (Oxford Cambridge and RSA Examinations)**  
**1 Hills Road**  
**Cambridge**  
**CB1 2EU**

**OCR Customer Contact Centre**

**Education and Learning**

Telephone: 01223 553998

Facsimile: 01223 552627

Email: [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk)

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**OCR (Oxford Cambridge and RSA Examinations)**  
**Head office**  
**Telephone: 01223 552552**  
**Facsimile: 01223 552553**

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