



# Mark Scheme (Results)

## Summer 2014

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

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## General Marking Guidance

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

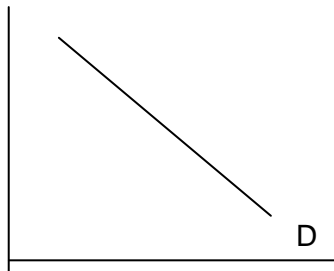
**NB: candidates may achieve up to 3 explanation marks even if incorrect option is selected.**


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

Question Number	Answer	Mark
Q1	<ul style="list-style-type: none"> <li>• Correct option C (1 mark)</li> <li>• Definition of production possibility frontier (maximum output combinations an economy can achieve when all resources are fully / efficiently employed). (1 mark)</li> <li>• Output / output potential has risen (1 mark) from 100 000 to 150 000 units. <b>NB: must refer to 000 here (1 mark)</b></li> <li>• Textile production may have become more efficient due to new technology / improved quality of machinery / increase in quality of labour. (1+1 marks).</li> </ul> <p style="text-align: center;"><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option A incorrect since the production possibility frontier shows the supply or output potential <b>NB: do not double award if definition mark already awarded</b> / a demand and supply diagram is required to show an increase in demand. (1 mark)</li> <li>➤ Option B incorrect as the potential maximum output of wheat remains at 100 thousand tonnes / we don't know where the economy is on the PPF, so how much wheat is being produced. (1 mark)</li> <li>➤ Option D incorrect since the opportunity cost of producing wheat has increased ( from 1 textile to 1.5 textiles) (1 mark)</li> </ul>	(4)

Question Number	Answer	Mark
Q2	<ul style="list-style-type: none"> <li>• Correct option <b>D (1 mark)</b></li>   <li>• Definition of division of labour (for example, production of a good is broken down into different tasks and labour allocated to each task / increase in specialisation of labour into particular tasks or goods). <b>(1 mark)</b></li>   <li>• Application to motor vehicle manufacturing (or example, worker putting in car engine, worker putting in windows, worker putting in car seats, a test driver). <b>(1 mark)</b></li>   <li>• Reason(s) for an increase in productivity: workers becoming more skilled in particular tasks through repetition / more efficient use of equipment / less time wasted moving from one job to another different job / less time taken for workers to get trained on a particular job or lower training costs / quicker at the job due to repetition). <b>(1 + 1 marks)</b></li>   <li>• Award for demand and supply diagram which shows an outward shift of the supply curve and a lower equilibrium price <b>(1 mark)</b>.</li>   <p style="text-align: center;"><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option A incorrect as an increase in cost of producing each vehicle would imply either reduced productivity (production costs increase) or no change in productivity (e.g. raw material costs increase). <b>(1 mark)</b></li>   <li>➤ Option B incorrect as a decrease in labour productivity is a likely outcome from boredom and monotony. <b>(1 mark)</b></li>   <li>➤ Option C incorrect since environmental regulations will increase production costs. <b>(1 mark)</b></li> </ul> </ul>	<b>(4)</b>

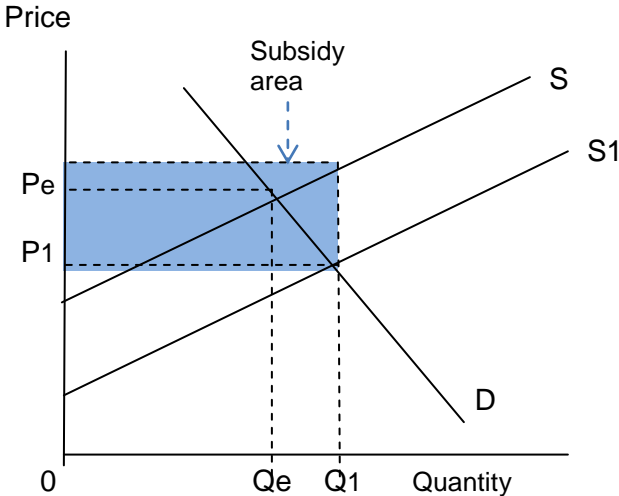
Question Number	Answer	Mark
Q3	<p data-bbox="507 280 916 315">Correct option <b>A</b> (1 mark)</p> <ul data-bbox="443 349 1286 842" style="list-style-type: none"><li data-bbox="443 349 1286 456">• Identification of an excess supply <math>Q_1Q_2</math> / surplus at price <math>P_2</math> (this may be annotated on to the diagram). (1 mark)</li><li data-bbox="443 495 1286 636">• As price falls quantity demanded extends or rises / quantity supplied contracts or falls (this may be shown by annotation of the diagram with arrows) (1 mark)</li><li data-bbox="443 669 1286 705">• The new equilibrium price of <math>P_e</math> is reached. (1 mark)</li><li data-bbox="443 739 1286 842">• Explanation of a competitive market e.g. the use of the price mechanism to allocate resources / use of demand and supply to allocate resources. (1 mark).</li></ul> <p data-bbox="491 913 759 949"><b>Rejection marks</b></p> <ul data-bbox="443 983 1294 1541" style="list-style-type: none"><li data-bbox="443 983 1294 1155">➤ Option B incorrect as a change in conditions of supply will cause it to shift inwards, for example, an increase in costs of production / there will be a contraction in supply as price falls. <b>NB: do not double award.</b> (1 mark)</li><li data-bbox="443 1227 1294 1361">➤ Option C incorrect as quantity demand will only fall if there is an increase in price / there will be an extension in demand as price falls. <b>NB: do not double award.</b> (1 mark)</li><li data-bbox="443 1433 1294 1541">➤ Option D incorrect as quantities demanded and supplied will only remain the same when the market is in equilibrium in the first place. (1 mark)</li></ul>	(4)

Question Number	Answer	Mark
Q4	<ul style="list-style-type: none"> <li>• Correct option <b>B (1 mark)</b></li> <li>• Definition of cross elasticity of demand or correct formula (the responsiveness in demand for good B due to a change in price of good A, or, <math>\% \Delta QD \text{ good B} \div \% \Delta P \text{ good A}</math>). <b>(1 mark)</b></li> <li>• Goods which have a negative XED are complementary goods / joint demand. <b>(1 mark)</b></li> <li>• Application: a decrease in the price of motor vehicles is likely to cause an increase in demand for petrol (accept vice-versa) <b>(1 mark)</b></li> <li>• Correct diagram depicting a negative XED (motor vehicles and petrol - must be labelled on the axes). <b>(1 mark)</b></li> </ul> <div style="text-align: center;"> <p>Price of motor vehicles</p>  <p>Quantity demanded of petrol</p> </div> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Options A, C and D are incorrect since they are substitutes with a positive XED. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

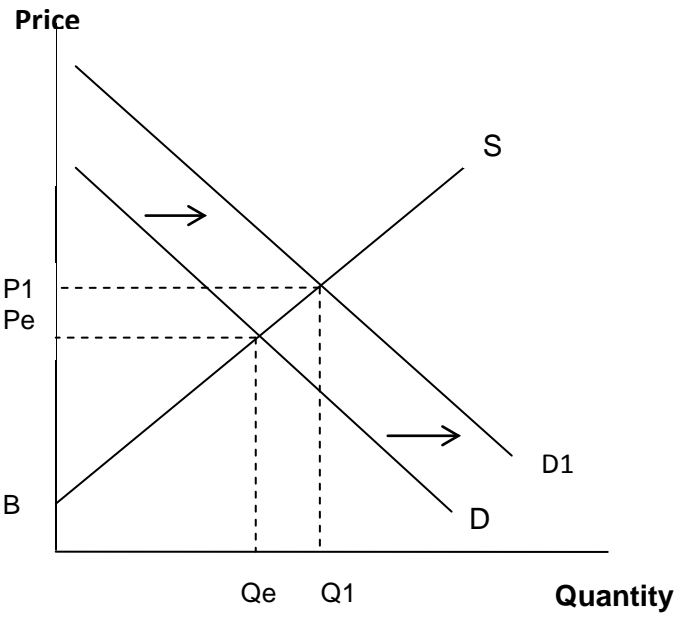
Question Number	Answer	Mark
Q5	<ul style="list-style-type: none"> <li>• Correct option <b>B (1 mark)</b></li> <li>• Definition of income elasticity of demand or correct formula (the responsiveness of demand for a good due to a change in income, or, <math>\% \Delta QD \div \% \Delta Y</math>). <b>(1 mark)</b></li> <li>• The demand for meat is income inelastic in both countries since their values are between 0 and 1 or less than 1, <b>OR</b>, definition of income inelastic demand (the percentage change in demand is less than the percentage change in income). <b>(1 mark)</b></li> <li>• Application: a 10% rise in income causes a 5% rise in demand for meat in Cyprus and an 8% rise in demand for meat in the Maldives. <b>(1 mark)</b></li> <li>• Diagram depicting a steep but positive income elasticity of demand for meat. <b>(1 mark)</b></li> </ul> <div style="text-align: center;">  <p>The diagram is a simple coordinate system. The vertical axis is labeled 'Real income' and the horizontal axis is labeled 'Quantity demanded of meat'. A straight line, labeled 'D', starts from a point on the horizontal axis and slopes upwards to the right, representing a positive relationship between real income and the quantity demanded of meat.</p> </div> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option A incorrect since the demand for tobacco is unitary income elastic in the Maldives <b>(1 mark)</b></li> <li>➤ Option C incorrect since cereals are an inferior good in Cyprus but a normal good in the Maldives. <b>(1 mark)</b></li> <li>➤ Option D incorrect since the income elasticity of demand for meat is nearer to 0 in both countries than the demand for tobacco. <b>(1 mark)</b></li> </ul>	<b>(4)</b>



Question Number	Answer	Mark
Q6	<ul style="list-style-type: none"> <li>• Correct option <b>D (1 mark)</b></li> <li>• Definition consumer surplus (the difference between the price consumers are willing to pay for a good and the actual market price paid / the area above equilibrium price and below the demand curve). <b>(1 mark)</b></li> <li>• Annotation of diagram depicting an increase in supply and fall in equilibrium price <b>(1 mark)</b></li> <li>• The increase in consumer surplus identified on diagram or explained e.g. <math>PeXWP1</math> <b>(1 mark)</b></li> <li>• Identification of the original (<math>PeXZ</math>) and new consumer surplus areas (<math>P1WZ</math>). <b>NB: both must be identified. (1 mark)</b></li> </ul> <div style="text-align: center;"> </div> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option A incorrect since this requires an increase in production costs and an inward shift of the supply curve to cause consumer surplus to fall <b>(1 mark)</b></li> <li>➤ Option B incorrect since the lower production costs should increase producer surplus / this could be annotated on diagram. <b>(1 mark)</b></li> <li>➤ Option C incorrect since there is a change in condition of supply and so the supply curve will shift. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

Question Number	Answer	Mark
Q7	<ul style="list-style-type: none"> <li>• Correct option <b>A (1 mark)</b></li> <li>• Definition of a subsidy (government grant to firms to increase production and reduce price of a good) <b>(1 mark)</b></li> <li>• The effect of the subsidy is to act like a decrease in production costs. <b>(1 marks)</b></li> <li>• Also accept explanation of reason for the subsidy, for example, to reduce external costs associated with fossil fuels. <b>(1 mark)</b></li> <li>• Annotation of diagram to show a decrease in equilibrium price <b>and</b> a rise in output / the subsidy area or incidence of subsidy. <b>(1 + 1 marks)</b></li> </ul> <div style="text-align: center;">  <p>The diagram is a supply and demand graph. The vertical axis is labeled 'Price' and the horizontal axis is labeled 'Quantity'. The origin is marked '0'. A downward-sloping demand curve 'D' and two upward-sloping supply curves 'S' and 'S1' are shown. 'S1' is below 'S'. The initial equilibrium is at the intersection of 'D' and 'S', with price <math>P_e</math> and quantity <math>Q_e</math>. The new equilibrium is at the intersection of 'D' and 'S1', with price <math>P_1</math> and quantity <math>Q_1</math>. A blue shaded rectangle is drawn between <math>P_1</math> and <math>P_e</math> on the vertical axis and between <math>Q_e</math> and <math>Q_1</math> on the horizontal axis. A blue arrow points to this rectangle, which is labeled 'Subsidy area'.</p> </div> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option B incorrect since a unit subsidy leads to a parallel shift / not a pivotal movement in the supply curve. <b>(1 mark)</b>.</li> <li>➤ Option C incorrect since this shows an increase in the demand curve which would raise the price of biofuels in the market / changes in the conditions of demand are required to shift the demand curve, for example, a cut in income tax. <b>(1 mark)</b></li> <li>➤ Option D incorrect since this is the effect of a specific tax which causes market price to rise. <b>(1 mark)</b></li> </ul>	

Question Number	Answer	Mark
Q8	<ul style="list-style-type: none"><li>• Correct option <b>B (1 mark)</b></li> <li>• Definition of National Minimum Wage (for example, a legal floor wage below, which wages cannot fall). <b>(1 mark)</b></li> <li>• Wage rate and employment remains the same since the NMW increase is still well below the free market equilibrium wage. <b>(1 mark)</b></li> <li>• Annotation of diagram to show the new NMW level above the previous, but still well below the free market wage. <b>(1 mark)</b></li> <li>• Wages can be at any level above the NMW since it is not a maximum wage or wage cap <b>(1 mark)</b></li></ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"><li>➤ Option A incorrect since unemployment would only occur if the NMW was increased above the free market wage rate of £12.12 per hour. <b>(1 mark)</b></li> <li>➤ Option C incorrect since a shift in the supply curve for labour depends on the conditions of supply to change, for example, an increase in immigration. <b>(1 mark)</b></li> <li>➤ Option D incorrect since the market is in equilibrium where the demand for labour equals the supply of labour so no shortage. <b>(1 mark)</b></li></ul>	<b>(4)</b>

Question Number	Answer	Mark
<p>9(a)</p>	<p><b>4 KAA marks</b></p> <ul style="list-style-type: none"> <li>• Data reference to the increase in price between March 2010 and March 2012 (from around \$330 to \$500). (1 mark)</li>   <li>• Identification of an increase in demand for potash due to rising population / intensive farming methods. (1 mark)</li>   <li>• Diagram (<b>up to 3 marks</b>)                             <ul style="list-style-type: none"> <li>➤ Original demand and supply diagram with equilibrium price (1)</li> <li>➤ Outward shift of demand curve (1)</li> <li>➤ New equilibrium price identified (1)</li> </ul> </li> </ul> 	<p>(4)</p>

Question Number	Answer	Mark
9(b)	<p><b>6 KAA marks</b></p> <ul style="list-style-type: none"> <li>• Definition or formula for price elasticity of supply (the responsiveness of supply of a good due to a change in its price or the <math>\% \Delta QS \div \% \Delta P</math>). <b>(1 mark)</b></li> <li>• Explanation of low price elasticity of supply (the percentage change in supply is less than the percentage change in price / PES is less than 1 / supply of potash is price inelastic). <b>(1 mark)</b></li> <li>• Diagram depicting price inelastic supply <b>(1 mark)</b></li> <li>• In the short run, supply is likely to be price inelastic since: <ul style="list-style-type: none"> <li>• Time required to gain planning permission to build potash mine in National park <b>(1 mark)</b>.</li> <li>• Time required to build mine and put capital inputs in place e.g. underground pipeline to pipeline to Teesside / time taken to refine and process potash in production. <b>(1+1 marks)</b></li> <li>• Time taken to hire skilled labour / or train labour <b>(1 mark)</b></li> <li>• Only one potash mine currently operates in UK / but the shortfall is made up by imports from Germany and Canada. <b>(1+1 marks)</b></li> <li>• Discussion on availability of spare stocks of potash / stocks could be very low if the costs of storage are high / stocks could be high since non-perishable. <b>(1+1 marks)</b></li> </ul> </li> </ul> <p><b>NB: do not award for discussion of how PES may become more elastic in long run.</b></p>	<b>(6)</b>

Question Number	Answer	Mark
9(c)	<p><b>6 KAA marks</b></p> <p>Fluctuating potash prices may lead to:</p> <ul style="list-style-type: none"> <li>• Data reference of fluctuating price of potash. (1 mark)</li> <li>• Uncertainty about the future <b>OR</b> lower business confidence / may lead to less investment. (1+1 marks)</li> <li>• Unstable revenue or profits for firms / some development e.g. low prices may decrease revenue and profits whereas high prices may increase revenue and profits. (1+1 marks)</li> </ul> <p>NB: Fluctuations in price and revenue may be shown by diagrammatic analysis (<b>award up to 2 marks</b>)</p> <ul style="list-style-type: none"> <li>• Possibility of losses when potash prices low / some development e.g. firms exit the market. (1+1 marks)</li> <li>• Unstable employment / unstable wages for miners. (1+1 marks)</li> </ul> <p><b>NB: Accept overlap between these points</b></p> <p><b>Evaluation 4 marks (2+2 or 1+3 or 1+1+2)</b></p> <ul style="list-style-type: none"> <li>• Discussion of long term implications: the price of potash may be unstable / but the data suggests it is increasing over the long term / implications are that profits will continue to increase.</li> <li>• The cost per ton is just \$37 / so market price can fall substantially before losses made.</li> <li>• Discussion of significance of price elasticity of demand e.g. an inelastic demand will raise revenue when prices increase / but reduce revenue when prices decrease</li> <li>• Magnitude: discussion of size of price fluctuations through explicit use of information provided / massive changes over a few months could destabilise</li> </ul>	(10)

	<p>whole market.</p> <ul style="list-style-type: none"><li>• Possibility of new potash resources being discovered and extracted in other parts of the world / so could mean further price instability in long run.</li><li>• Discussion of possible impact of changes in demand on price of potash over time e.g. through development of substitutes.</li><li>• Discussion of measures to reduce price fluctuations e.g. buffer stocks or minimum pricing schemes. <b>(up to 2 marks)</b></li></ul>	
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Question Number	Answer	Mark
*9(d)	<p><b>8 KAA marks (2+2+2+2 or 3+3+2)</b></p> <p>Case for permitting the potash mine to be built (these points may overlap):</p> <ul style="list-style-type: none"> <li>• More than a thousand jobs created / increase income and expenditure in local communities via multiplier process. <b>(1+1 marks)</b></li> <li>• Many local land owners and people from local communities support scheme and set to gain profit / for example, landowners set to gain £1 billion in royalties. <b>(1+1 marks)</b></li> <li>• The mine is likely to be highly profitable since the current price per tonne exceeds \$400 and the cost per tonne is just \$37 / could lead to further investment and development of other businesses e.g. fertilizer plant. <b>(1+1 marks)</b></li> <li>• Discussion of the magnitude of mining activity in national park: appears relatively insignificant in area / most of the operations will be underground including pipeline to transport potash to Teesside / avoid road congestion through lorries. <b>(1+1 marks)</b></li> <li>• Accept macro argument: improve Britain's balance of payments / as it switches from an importer to an exporter of potash / become self-sufficient in production of important resource. <b>(1+1 marks)</b></li> </ul> <p style="text-align: center;"><b>Evaluation (2+2+2 or 3+3 or 3+2+1 marks)</b></p> <p>Limitations / case against the potash mine being built:</p> <ul style="list-style-type: none"> <li>• The mine proposals are located within a national park / could set precedent for more building developments in future / alternative sites are available.</li> <li>• Discussion of long term implications: uncertainty of outcome if price of potash falls very low / difficult to discount the costs into a present value over such a long time period.</li> <li>• External costs might arise: it may damage tourism to the national park / damage to wildlife / impact on local house prices / difficulty in quantifying the external costs.</li> </ul> <p><b>NB: External costs may be shown by diagram -</b></p>	<b>(14)</b>

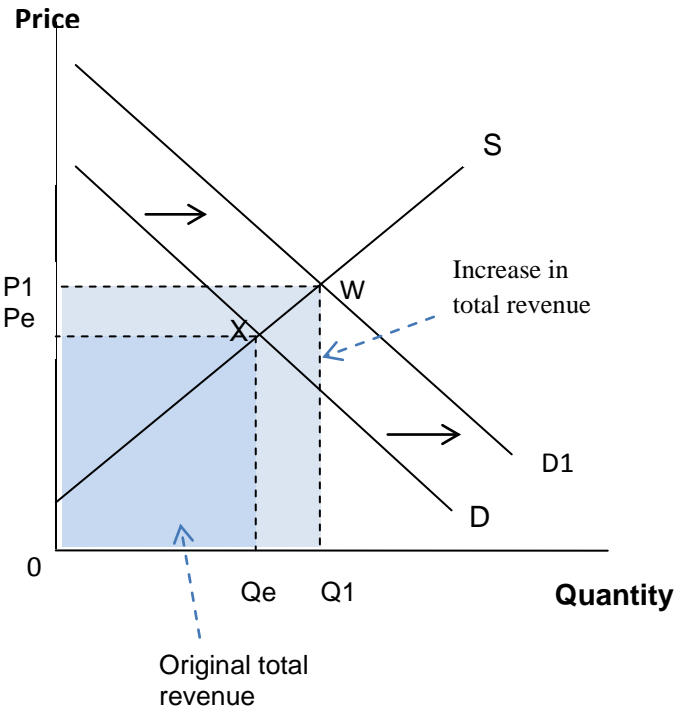


	<p style="text-align: center;"><b>award up to 2 marks.</b></p> <ul style="list-style-type: none"><li>• Employment benefits are quite limited.</li></ul> <p>The quality of written communication will be assessed in this question based on the candidate's ability:</p> <ul style="list-style-type: none"><li>• To present an argument and conclude on the basis of that argument.</li><li>• To organise information clearly and coherently.</li><li>• To use economics vocabulary appropriately.</li><li>• To use grammar, spelling and punctuation appropriately.</li></ul>	
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Question Number	Answer	Mark
*9(e)	<p><b>8 KAA marks (2+2+2+2 or 3+3+2)</b></p> <p><b>NB: allow application to any industry</b></p> <ul style="list-style-type: none"> <li>• Factors influencing the supply of labour include:</li> <li>• The wage rate or earnings: as the wage rate rises then so too will the supply of labour / since greater financial incentive to work longer hours. <b>(1+1 marks)</b></li> <li>• Net advantages in mining: these may include bonuses / dangerous working conditions and potential for long term illnesses / sick pay and paid holidays / job satisfaction. <b>(1+1+1 marks)</b></li> <li>• The level of training, qualifications, skills or work experience required: varied skills required but some jobs may be highly specialised and limit the supply of labour. <b>(1+1 marks)</b></li> <li>• Size of local workforce: the national park is an area with a small population / the town of Whitby is quite small / depends on geographical mobility of labour. <b>(1+1+1 marks)</b></li> <li>• Income tax or National Insurance Contributions: the lower the rate of income tax then the greater the disposable income / the greater the incentive to work or supply of labour. <b>(1+1 marks)</b></li> <li>• Government social security benefits: cuts in the Job seekers' Allowance and Housing Benefits / may increase incentive to work or supply of labour / especially for low skilled areas of mining work. <b>(1+1+1 marks)</b></li> <li>• Discussion of the National Minimum Wage: an increase in NMW may raise incentive to work / so more supply of labour / many mineworkers earn well above NMW so little impact. <b>(1+1+1 marks)</b></li> </ul>	<b>(14)</b>

	<ul style="list-style-type: none"><li>• The raising of school leaving age or retirement age: / may increase supply of labour for the project. <b>(1+1 marks)</b></li><li>• Net migration inflows to UK / the Single European Market have increased net migration flow of labour to UK. <b>(1+1 marks)</b></li><li>• Trade Unions may affect rate of pay or other working conditions / e.g. more job security or safety at work. <b>(1+1 marks)</b></li><li>• Accept factors which may affect the regional or local supply of labour e.g. local house rental prices / local facilities such as public transport. <b>(1+1 marks)</b></li></ul> <p><b>NB: cap at 6 out of 8 KAA marks if no reference to any industry</b></p> <p><b>Evaluation 6 marks (2+2+2 or 3+3 marks or 3+2+1)</b></p> <ul style="list-style-type: none"><li>• Prioritisation of factors e.g. availability and rental price of local housing likely to be very important compared to a change in NMW.</li><li>• Discussion of type of mining work and variety of skills required: some work is highly skilled and so this may limit the supply of labour / e.g. engineers to build mine shafts.</li><li>• Supply of labour may increase over time / more knowledge of job vacancies or time to gain skills for the work.</li><li>• Discussion of state of economy: a recession may mean high level of local unemployment / so plentiful supply of labour.</li><li>• Accept discussion of government measures which could change supply of labour e.g. employment legislation, changes to migration laws <b>(up to 4 marks)</b>.</li></ul> <p>The quality of written communication will be assessed in this question based on the candidate's ability:</p> <ul style="list-style-type: none"><li>• To present an argument and conclude on the basis of that argument.</li></ul>	
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	<ul style="list-style-type: none"><li>• To organise information clearly and coherently.</li><li>• To use economics vocabulary appropriately.</li><li>• To use grammar, spelling and punctuation appropriately.</li></ul>	
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Question Number	Answer	Mark
10(a)	<p><b>6 KAA marks</b></p> <ul style="list-style-type: none"> <li>• Explicit reference to the data in Figure 1, for example, total revenue increased from £1360 million in 2008 to £1610 million in 2012 / increased by £250 million. (1 mark). <b>NB: data reference must be to total revenue.</b></li> <li>• Definition of total revenue, for example, the total amount of money received by firms from selling bottled water / it is the average price multiplied by the total quantity (1 mark).</li> <li>• Diagram (up to 4 marks): <ul style="list-style-type: none"> <li>➤ Original supply and demand diagram with equilibrium price and quantity (1)</li> <li>➤ Increase in demand curve (1)</li> <li>➤ Original total revenue area identified, for example, <math>0PeXQ_e</math> (1)</li> <li>➤ New total revenue area identified, for example, <math>0P_1WQ_1</math> (1)</li> </ul> </li> </ul> <p>Also accept the change in total revenue area shown (1+1)</p> 	(6)

Question Number	Answer	Mark
10(b)	<p data-bbox="391 280 606 313"><b>4 KAA marks</b></p> <p data-bbox="391 353 1273 432">Consumption of bottled water has increased and other soft drinks decreased due to: <b>(2+2 or 3+1)</b></p> <ul data-bbox="438 465 1305 1030" style="list-style-type: none"><li data-bbox="438 465 1305 712">• Increased health awareness or trend to healthier lifestyle on the benefits of consuming water / rehydration effects can assist recovery or improve mental alertness / increased awareness of the unhealthy effects of consuming other soft drinks such as fizzy colas / could lead to obesity or diabetes or dental decay. <b>(1+1+1 marks)</b></li><li data-bbox="438 745 1305 857">• Increased promotions of bottled water such as advertising / packaging / shop displays / availability to purchase. <b>(1+1+1 marks)</b></li><li data-bbox="438 925 1305 1030">• Price of fizzy drinks may have increased at a faster rate compared to the price of bottled water / substitutes <b>(1+1 marks)</b></li></ul> <p data-bbox="391 1064 1281 1137"><b>NB: if more than two reasons offered, award the best two only.</b></p>	<b>(4)</b>

Question Number	Answer	Mark
10(c)	<p><b>6 KAA marks and 4 Evaluation marks</b></p> <ul style="list-style-type: none"> <li>• Definition of price elasticity of demand (the responsiveness of demand for a good due to a change in its price) or formula (<math>\% \Delta QD \div \% \Delta P</math>). <b>(1 mark)</b></li> <li>• Understanding of price inelastic demand (percentage change in demand is less than percentage change in price or PED is between 0 and 1 (this may be shown by diagram). <b>(1 mark)</b></li> </ul> <p><b>NB: Accept one view on price elasticity of demand as KAA and the other view as Evaluation</b></p> <p style="text-align: center;"><b>Price inelastic in demand:</b></p> <ul style="list-style-type: none"> <li>• Promotions such as advertising, celebrity endorsement or branding / has created customer loyalty / real world example from bottled water. <b>(1+1+1 marks)</b></li> <li>• Bottled water comprises a small proportion of total income / so a change in price is unlikely to have much effect on demand. <b>(1+1 marks)</b></li> <li>• Consideration of water as being a necessity good which is essential for good health / so consumers more likely to still buy bottled water even as price increases. <b>(1+1 marks)</b></li> <li>• Consideration of habit forming for some consumers to have bottled water / such as place of work or at a leisure event. <b>(1+1 marks)</b></li> </ul> <p style="text-align: center;"><b>Price elastic in demand</b></p> <ul style="list-style-type: none"> <li>• There are many close substitutes / such as tap water or milk or flavoured drinks / consideration of availability of substitutes <b>(1+1 marks)</b>.</li> <li>• Bottled water is considered as a luxury good by many / not regarded as offering value for money. <b>(1+1 marks)</b></li> <li>• Discussion of magnitude of price increases on bottled water and how it might affect price elasticity. <b>(up to 2 marks)</b></li> </ul>	<b>(10)</b>

Question Number	Answer	Mark
*10(d)	<p><b>8 KAA marks</b></p> <ul style="list-style-type: none"> <li>• Definition of external costs: Negative third party effects / costs external to a market transaction or exchange / costs the price mechanism fail to take into account / negative spillover effects / difference between social costs and private costs (<b>1+1 marks</b>).</li> <li>• Explanation of external costs from consuming bottled water as increase in waste at landfill sites / damage to oceans and fish and bird life. (<b>1 mark</b>)</li> <li>• Explanation of external costs from producing bottled water as increase in carbon emissions by transporting the good. (<b>1 mark</b>)</li> <li>• Accept other costs (<b>1+1 marks</b>)             <ul style="list-style-type: none"> <li>➤ Using up a non-renewable resource in producing plastic bottles.</li> <li>➤ Private costs of bottled water can be 10 0000 times the price of tap water.</li> <li>➤ Bottled water appears a waste or misallocation of resources.</li> </ul> </li> <li>• Diagram (<b>up to 4 marks</b>)</li> </ul> <div data-bbox="507 1323 1233 1980" style="text-align: center;"> <p>The diagram illustrates the impact of external costs on market equilibrium. The vertical axis represents Price, and the horizontal axis represents Quantity. A downward-sloping line represents Marginal Private Benefit (MPB) = Marginal Social Benefit (MSB). Two upward-sloping lines represent Marginal Private Cost (MPC) and Marginal Social Cost (MSC), with MSC above MPC. The equilibrium quantity is <math>Q_e</math> where <math>MPC = MSB</math>, and the equilibrium price is <math>P_e</math>. A socially optimal quantity is <math>Q_1</math> where <math>MSC = MSB</math>, and the price is <math>P_1</math>. A red shaded triangle between <math>Q_1</math> and <math>Q_e</math>, bounded by the MSB and MSC curves, is labeled 'Welfare loss' with a blue dashed arrow pointing to it.</p> </div>	<b>(14)</b>



	<ul style="list-style-type: none"><li>➤ Original MPB / MSB and MPC curves (1)</li><li>➤ MSC curve (accept a parallel shift of the MSC curve) (1)</li><li>➤ Identification of market equilibrium and socially efficient quantity (1)</li><li>➤ Identification of triangle of welfare loss (1)</li></ul> <p><b>6 Evaluation marks (2+2+2 or 3+3 or 1+2+3)</b></p> <ul style="list-style-type: none"><li>• Increase in recycling of plastic and glass bottles has reduced the external costs.</li><li>• There are benefits from bottled water e.g. employment and incomes / price mechanism meeting the demand of consumers / health benefits from consuming it / tax revenue collected improves government finances.</li><li>• Difficulty in quantifying external costs and attaching monetary value.</li><li>• Discussion of measures to reduce external costs (e.g. subsidies / minimum pricing). <b>NB: do not award for increase in taxes.</b></li><li>• Discussion of magnitude of the costs / with development.</li><li>• Prioritising among external costs.</li></ul> <p>The quality of written communication will be assessed in this question based on the candidate's ability:</p> <ul style="list-style-type: none"><li>• To present an argument and conclude on the basis of that argument.</li><li>• To organise information clearly and coherently.</li><li>• To use economics vocabulary appropriately.</li><li>• To use grammar, spelling and punctuation appropriately.</li></ul>	
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Question Number	Answer	Mark
*10(e)	<p><b>8 KAA marks</b></p> <ul style="list-style-type: none"> <li>• Definition of indirect tax (a compulsory charge or levy on the expenditure of a good). <b>(1 mark)</b></li> <li>• The tax acts as if there is an increase in costs of production. <b>(1 mark)</b></li> <li>• Indirect tax diagram <b>(up to 4 marks)</b>: <ul style="list-style-type: none"> <li>➤ Original demand and supply curve with equilibrium price and quantity <b>(1)</b></li> <li>➤ Inward shift of supply curve to S1 with new equilibrium price and quantity <b>(1)</b></li> <li>➤ Tax area identified <b>(1)</b></li> <li>➤ Tax areas for consumers and producers identified <b>(1)</b></li> </ul> </li> </ul> <p><b>NB: accept ad valorem tax which shows a pivotal movement of the supply curve.</b></p> <p><b>NB: accept diagram showing the tax being placed on marginal private costs to internalise the external costs.</b></p> <div data-bbox="507 1146 1104 1720" data-label="Figure"> <p>The diagram illustrates the effect of an indirect tax on a market. 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 equilibrium price <math>P_e</math> and quantity <math>Q_e</math>. An inward shift of the supply curve to <math>S_1</math> is shown with an arrow. The new equilibrium is at price <math>P_1</math> and quantity <math>Q_1</math>. A red shaded rectangle between <math>P_1</math> and <math>P_e</math> from <math>Q=0</math> to <math>Q_1</math> is labeled 'Consumer tax'. A pink shaded triangle between <math>P_e</math> and the price on <math>S_1</math> at <math>Q_1</math> is labeled 'Producer tax'.</p> </div> <ul style="list-style-type: none"> <li>• Explanation that the tax causes price to rise and output to fall / employment implications / labour costs. <b>(1+1 marks)</b></li> <li>• Explanation of impact on profits or revenue of producers / possible exit from industry. <b>(1+1 marks)</b></li> </ul>	<b>(14)</b>

- The tax will reduce consumer surplus or producer surplus / application to diagram. **(1+1 marks)**
- The tax could internalise the external costs of production / eliminate the triangle of welfare loss and so lead to social optimum equilibrium position / less pollution overall. **(1+1 marks)**
- The tax will improve government finances / the tax funds could be used to reduce the external costs associated with bottled water. **(1+1 marks)**

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

- Discussion of price elasticity of demand for bottled water / the more price inelastic then the greater the tax revenue and burden on consumers.
- Discussion of consumers switching to substitutes such as fizzy flavoured drinks / could be more harmful to consumers
- Discussion on impact on affordability of an essential resource / implications for consumers on low incomes.
- Discussion of magnitude of tax / with development.

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

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





