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# **Mark Scheme (Results)**

Summer 2017

Pearson Edexcel GCE AS Level  
in Economics (6EC01)

Paper 01 Competitive Markets: How they  
work and why they fail

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## General Marking Guidance

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

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

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

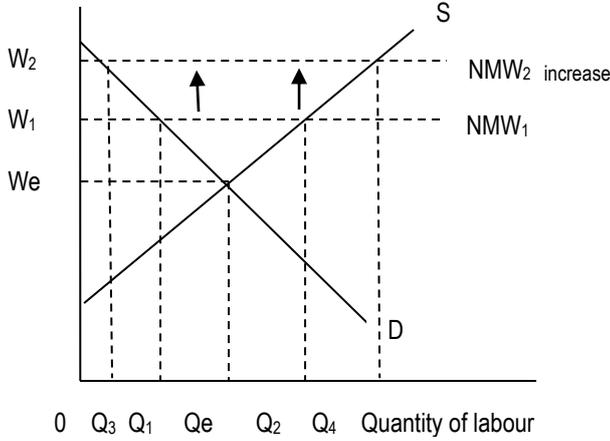
Question Number	Answer	Mark
<p><b>1</b></p>	<p><b>D (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of production possibility frontier (the maximum output an economy can achieve when all its resources are fully / efficiently employed) / an outward shift of the production possibility frontier represents economic growth. <b>(1 mark)</b></li> <li>• Diagram depicting an outward shift in the production possibility frontier with correctly labelled axes. <b>(1 mark)</b></li> <li>• An increase in immigration means more labour resources available for use in production / linked development e.g. an example. <b>(1+1 marks)</b></li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>➤ Option A incorrect since a decrease in unemployment would just move the actual output closer to the production possibility frontier and not shift it. <b>(1 mark)</b></li> <li>➤ Option B incorrect since an increase in demand for goods does not guarantee an increase in investment / outward shift in the production possibility frontier. <b>(1 mark)</b></li> <li>➤ Option C incorrect since an increase in unemployment benefits may reduce the incentive to work and could even decrease the production possibility frontier in the long run. <b>(1 mark)</b></li> </ul>	<p><b>(4)</b></p>

Question Number	Answer	Mark
2	<p style="text-align: center;"><b>C (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of a positive statement (assertion of a fact / it can be tested as true or false / a scientific approach to economics / objective). <b>(1 mark)</b></li> <li>• Definition of a normative statement (one that is based on a value judgement / it cannot be tested as true or false / a non-scientific approach to economics / subjective). <b>(1 mark)</b></li> <li>• Application: Statement 1 is positive as it can be tested by reference to government Budget report over the tax increase on tobacco. <b>(1 mark)</b></li> <li>• Application: Statement 2 is normative as it includes the word 'unjustified'. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

Question Number	Answer	Mark
3	<p><b>A (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition or formula for income elasticity of demand (responsiveness of demand for a good due to a change in income) (<b>1 mark</b>)</li> <li>• Both short haul and long haul flights are income elastic in demand due to figures being above 1 <b>OR</b> diagram depicting an income elastic demand for both types of flights. (<b>1 mark</b>)</li> </ul> <div data-bbox="555 607 994 1066" data-label="Figure"> <p>The graph illustrates income elasticity for short haul and long haul flights. The vertical axis is labeled 'Level of income' and the horizontal axis is labeled 'Quantity demand'. Two lines originate from the vertical axis, both sloping upwards. The steeper line is labeled 'Short haul' and the flatter line is labeled 'long haul'. This indicates that short haul flights have a higher income elasticity than long haul flights.</p> </div> <ul style="list-style-type: none"> <li>• Numerical application: for example, a 10% increase in income leads to a 16% increase in demand for short haul passenger flights and an 18% increase in demand for long haul passenger flights. (<b>1 mark</b>)</li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>• Option B / D incorrect as the information does not refer to cross elasticity of demand or price elasticity of supply. (<b>1 mark</b>)</li> <li>• Option C incorrect as inferior goods would have a negative income elasticity of demand / air travel is a normal good as it has a positive income elasticity of demand. (<b>1 mark</b>)</li> </ul>	(4)

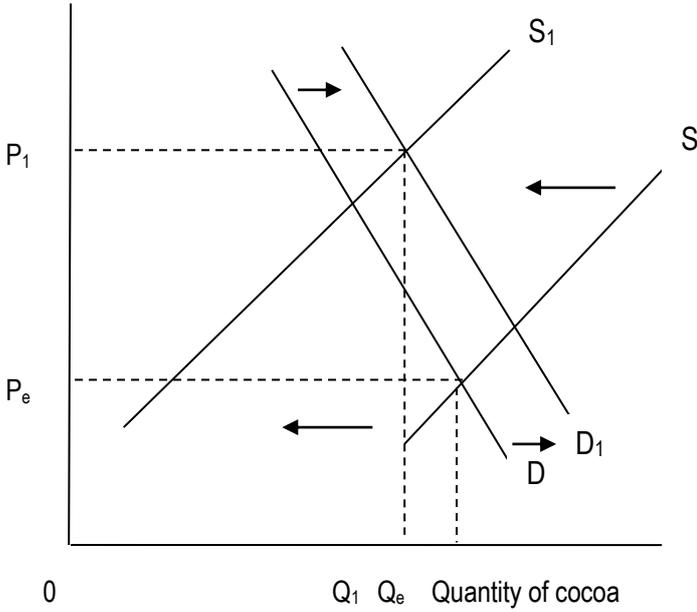
Question Number	Answer	Mark
4	<p><b>A (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of subsidy (government grant to firms to increase production and lower price of a good). <b>(1 mark)</b></li> <li>• The effects of the subsidy is to help reduce costs of production and so encourage firms to raise supply. <b>(1 mark)</b></li> <li>• Consumer subsidy is <math>(P_e P_1 XY)</math> and producer subsidy is <math>(P_e P_2 ZY)</math>. <b>(1 mark)</b></li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>• Option B incorrect since producer surplus is area <math>(P_0 P_1 X)</math> plus the subsidy area. <b>(1 mark)</b></li> <li>• Option C incorrect as the consumer subsidy <math>(P_e P_1 XY)</math> exceeds the producer subsidy of <math>(P_e P_2 ZY)</math>. <b>(1 mark)</b></li> <li>• Option D incorrect – candidate needs to show the increase in consumer surplus or the new level of consumer surplus. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

Question Number	Answer	Mark
5	<p><b>D (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of occupational mobility of labour (ability of labour to move from one occupation or job to another occupation or job / or definition of occupation immobility of labour). <b>(1 mark)</b></li> </ul> <p>Steel workers losing their jobs is an example of structural unemployment where there is a mismatch between the skills of labour and the skills required to fill available jobs. <b>(1 mark)</b></p> <ul style="list-style-type: none"> <li>• Retraining schemes offer the opportunity for develop new skills suitable for job vacancies available. <b>(1 mark)</b></li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>• Option A incorrect as this will improve capital mobility. <b>(1 mark)</b></li> <li>• Option B incorrect as higher benefits may act as a disincentive for the unemployed to work as there is less income differential compared to income from work. <b>(1 mark)</b></li> <li>• Option C incorrect as a relocation subsidy will increase the geographical mobility of labour. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

Question Number	Answer	Mark
6	<p><b>B (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of national minimum wage (a legal / floor wage below which the hourly wage rate cannot fall). <b>(1 mark)</b></li> <li>• Quantity supply of labour increase due to a greater financial incentive to work / the gap between benefits and a low paid job has increased. <b>(1+1 marks)</b></li> <li>• The opportunity cost of leisure time has risen <b>(1 mark)</b></li> <li>• Award for suitable diagrammatic analysis depicting the original and the new NMW / reference to an extension in supply of labour (from <math>Q_2</math> to <math>Q_4</math>) <b>(1+1 marks)</b></li> </ul> <p>Wage rate £</p>  <p>0 <math>Q_3</math> <math>Q_1</math> <math>Q_e</math> <math>Q_2</math> <math>Q_4</math> Quantity of labour</p> <p><b>Rejection marks</b>  <b>NB: Do not double award</b></p> <ul style="list-style-type: none"> <li>• Options A and C incorrect as labour aged 25 and over are relatively more expensive than younger workers. <b>(1 mark)</b></li> <li>• Option D incorrect as workers are more expensive to employ than machinery/capital. <b>(1 mark)</b></li> </ul>	(4)

Question Number	Answer	Mark
7	<p><b>C (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of market failure (the price mechanism leads to an inefficient allocation of resources / net welfare loss). <b>(1 mark)</b></li> <li>• There is market failure since the social optimum output is <math>Q_1</math> or T but the free market equilibrium output is <math>Q_e</math> or Z, <b>OR</b> under-provision of <math>Q_e Q_1</math>. <b>(1 mark)</b></li> <li>• Welfare gain / loss triangle of MTZ by raising the quantity of bus journeys. <b>(1 mark)</b></li> <li>• Application: there are external benefits from bus journeys such as reduced road congestion and air pollution. <b>(1 mark)</b></li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>• Option A as it is an example of market failure. <b>(1 mark)</b></li> <li>• Option B incorrect as there is under-provision of <math>Q_e Q_1</math> bus travel. <b>(1 mark)</b></li> <li>• Option D incorrect as the welfare loss is MTZ. <b>(1 mark)</b></li> </ul> <p><b>NB: Do not double award for rejections and correct explanations.</b></p>	(4)

Question Number	Answer	Mark
8	<p><b>D (1 mark)</b></p> <ul style="list-style-type: none"> <li>• Definition of public good (non-rivalry and non-excludability characteristics). <b>(1 mark)</b></li> <li>• Explanation of free rider problem (once a public good is provided, it is difficult to make people pay for the consumption of it / so there is little financial incentive for firms to supply the good). <b>(1+1 marks)</b></li> <li>• Linked development: application to public goods such as street lighting, coastal defences, defence. <b>(1 mark)</b></li> </ul> <p><b>Rejection marks</b></p> <ul style="list-style-type: none"> <li>• Option A incorrect since the price mechanism tends to under-provide or not provide since there is no way of charging people for consumption of it / public goods have to be provided by the government from general taxation. <b>(1 mark)</b></li> <li>• Options B and/or C incorrect since there is an opportunity cost in the production of public goods as they require scarce resources to provide them e.g. land, labour and capital. <b>(1 mark)</b></li> </ul>	<b>(4)</b>

Question Number	Answer	Mark
<p><b>9(a)</b></p>	<p><b>KAA = 6 marks</b></p> <ul style="list-style-type: none"> <li>• Explicit data reference to the rise in price of cocoa (£1 840 to £2 230 a tonne / a rise of 21%) <b>(1 mark)</b></li> <li>• Supply has decreased due to very poor harvest in West Africa from the El Nino weather system. <b>(1 mark)</b></li> <li>• Demand has increased due to traders purchasing the crop in advance. <b>(1 mark)</b></li> <li>• Diagram <b>(up to 4 marks)</b></li> </ul> <p>Price per tonne</p>  <p>0                      <math>Q_1</math> <math>Q_e</math>      Quantity of cocoa</p> <ul style="list-style-type: none"> <li>➤ Original demand and supply curve with equilibrium price identified <b>(1)</b></li> <li>➤ Increase in demand curve <b>(1)</b></li> <li>➤ Decrease in supply curve <b>(1)</b></li> <li>➤ New equilibrium price identified <b>(1)</b></li> </ul> <p><b>NB: If just one curve shifted - award a maximum of 2 marks for diagram.</b>  <b>NB: If one curve shifted incorrectly - award a maximum of 2 marks for diagram.</b>  <b>NB: candidates must show a price increase on the diagram to achieve full marks</b>  <b>NB: If no diagram offered – award a maximum of 3 marks.</b></p>	<p><b>(6)</b></p>

Question Number	Answer	Mark
<p><b>9(b)</b></p>	<p><b>KAA = 4 marks</b></p> <ul style="list-style-type: none"> <li>• Definition of price elasticity of supply (the responsiveness of supply of a good due to a change in its price or <math>\% \Delta QS \div \% \Delta P</math>). <b>(1 mark)</b></li>   <li>• Explanation of price inelastic supply (this may be defined) <b>OR</b> diagram depicting price inelastic supply curve for cocoa. <b>(1 mark)</b></li>   <li>• Reasons for supply being price inelastic may include: <ul style="list-style-type: none"> <li>➤ Fixed inputs in short run such as available land to plant trees / linked development. <b>(up to 2 marks)</b></li>   <li>➤ Takes up to 5 years to grow cocoa / linked development. <b>(up to 2 marks)</b></li>   <li>➤ Fluctuating price of cocoa may discourage farmers to grow the commodity / linked development. <b>(up to 2 marks)</b></li>   <li>➤ Perishability of cocoa – difficult to store / commodity / linked development. <b>(up to 2 marks)</b></li> </ul> </li>   <li>• Accept relevant explanation of why supply of cocoa may be more price elastic in the long run <b>(up to 2 marks)</b>.</li> </ul>	<p><b>(4)</b></p>

Question Number	Answer	Mark
<p><b>9(c)</b></p>	<p><b>KAA = 6 marks</b></p> <ul style="list-style-type: none"> <li>• An increase in price of cocoa will raise production costs for companies making chocolate (<b>1 mark</b>)</li> <li>• Chocolate companies might respond by increasing the price of chocolate bars / reducing supply of chocolate bars (<b>1 mark</b>)</li> <li>• NB: This may be shown by a diagram which shifts the supply curve inwards and raises price – it should be identified as chocolate market here (<b>1 mark</b>).</li> <li>• Extract 2 indicates that for standard chocolate brands the producers may simply keep price of chocolate the same and change size of bars or the mix of ingredients (<b>1 mark</b>).</li> </ul> <p><b>Up to 2 marks for any of the points below which have linked development.</b></p> <ul style="list-style-type: none"> <li>• Decrease in producer surplus / profits.</li> <li>• Decrease in share price / dividends for chocolate companies.</li> <li>• Decrease in employment in chocolate companies.</li> <li>• Decrease funds for investment into new chocolate products / examples of new products offered.</li> </ul>	

**Evaluation 4 marks (up to 4 marks for one or more points)**

- Consideration of relevance price elasticity of demand: if inelastic then chocolate firms can pass on the extra costs to consumers.
- Other things may not be equal e.g. there could be an decrease in milk and nut costs which offset the increase in cocoa prices / increase in efficiency.
- Consideration of the extent to which the increase in cocoa prices will remain / reference to Figure 1 trend in prices.
- Consideration of possibility of forward buying of cocoa by chocolate producers.

**(10)**

Question Number	Answer	Mark
<p><b>9(d)*</b></p>	<p><b>KAA = 8 marks (4+4 or 2+2+2+2 or 3+3+2)</b>            Fluctuating cocoa prices may lead to</p> <ul style="list-style-type: none"> <li>• Instability in income, employment and investment among cocoa farmers. (<b>1 mark</b>)</li> <li>• Fluctuations in price that may result in changes in revenue may be shown by diagrammatic analysis (<b>1+1 marks</b>).</li> </ul> <p><b>Up to 4 marks for development of the impact of high prices.</b></p> <ul style="list-style-type: none"> <li>• High prices may benefit cocoa farmers if they have enough crop to sell / linked development e.g. if demand is price inelastic then higher revenue and profits / increase investment to raise production e.g. fertilisers, new trees, irrigation, fencing.</li> <li>• Changes in cocoa prices e.g. an increase in prices may raise employment / reduce poverty / encourage new entrants to farming. Low cocoa prices may decrease employment / increase poverty / falling profits or losses made / exit from farming.</li> <li>• Uncertainty / fluctuating cocoa prices may reduce investment / encourage diversification into production of other crops.</li> </ul> <p><b>NB: Accept overlap between these points</b></p>	

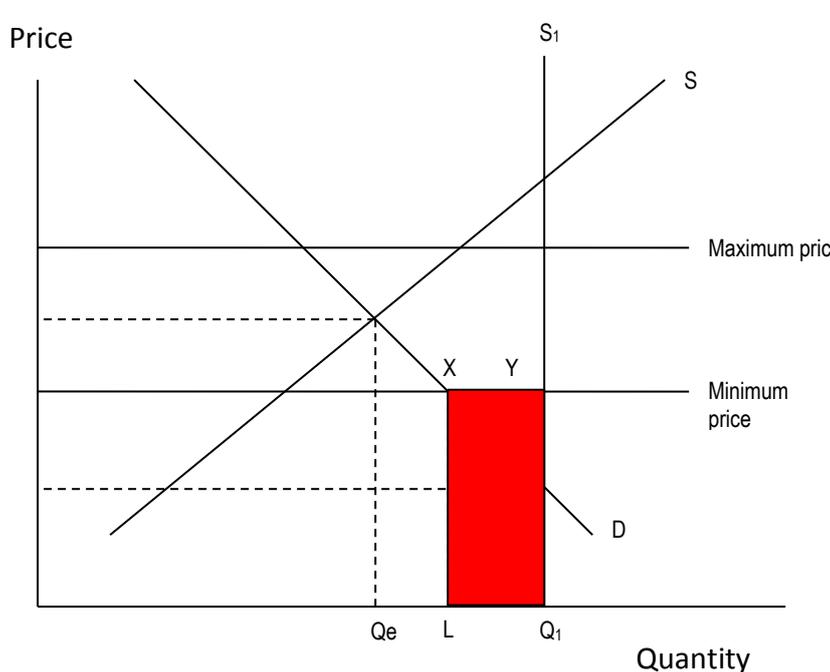
**Evaluation 6 marks (2+2+2 or 3+3)**

- Discussion of significance of price elasticity of supply of cocoa e.g. inelastic in short run / difficult for cocoa farmers to respond to rising or falling prices.
- Discussion of size of price fluctuations through explicit use of information provided / massive changes over a few months could destabilise whole market.
- Discussion of cyclical pattern of price fluctuations / application to Figure 1.
- Time factor: long term trend in commodity prices is upward due to rapid growth of emerging markets in China and India / changing tastes towards chocolate in these countries / can expect significant profits for cocoa farmers in the long run.
- Cocoa producers may attempt to hold on to stocks when prices fall / attempt to operate a buffer stocks scheme. **(up to 2 marks for explanation of buffer stocks linked to the question)**

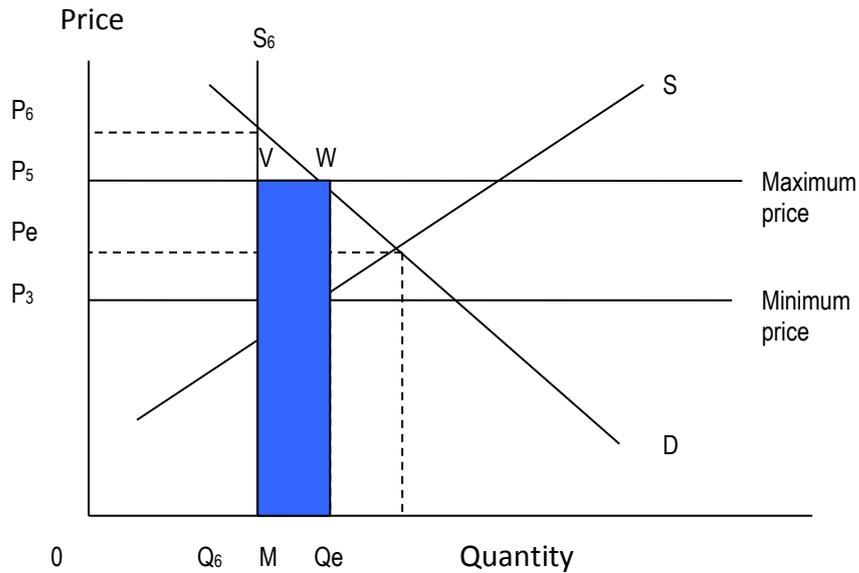
The quality of written communication will be assessed in this question based on the candidate's ability:

- 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.

**(14)**

Question Number	Answer	Mark
<p><b>9(e)*</b></p>	<p><b>KAA maximum 8 marks</b></p> <ul style="list-style-type: none"> <li>• Explanation of how buffer stock scheme works: <ul style="list-style-type: none"> <li>➤ An agency intervenes in the market and holds stocks of cocoa / buys cocoa when good harvest and so add to stockpile and so reduce the price fall / sell cocoa from stockpile in times of bad harvests and so reduce the price rise. <b>(up to 2 marks)</b></li> </ul> </li> <li>• Diagram (s) <b>(up to 4 marks in total)</b></li> </ul> <p><b>NB: candidates may offer one or two diagrams to gain full marks.</b>  <b>NB: award for alternative relevant diagram depicting buffer stocks.</b></p> <p>Agency intervention with good harvest</p>  <ul style="list-style-type: none"> <li>➤ Identify free market price without intervention (<math>OP_1</math>) <b>(1)</b></li> <li>➤ Maximum and minimum prices identified <b>(1)</b></li> <li>➤ Quantity of cocoa purchased by agency (<math>LQ_1</math>) <b>(1)</b></li> <li>➤ Total expenditure by agency (<math>LQ_1YX</math>) <b>(1)</b></li> </ul>	

### Agency intervention with poor harvest



- Identify free market price without intervention ( $OP_e$ ) (1)
- Maximum and minimum prices identified (1)
- Quantity of cocoa sold by agency ( $Q_6M$ ) (1)
- Total revenue for agency ( $Q_6MWV$ ) (1)

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

**NB: candidates may develop the case for or against the success of buffer stocks scheme. One approach is KAA and the other is EV.**

- The scheme is unlikely to be successful due to failure of previous schemes: **(up to 4 marks for any one point well developed)**
  - Cocoa producers unwilling to join scheme which may cause prices to fall.
  - Costs involved in storing cocoa and holding back from market / opportunity cost of government funding the scheme.
  - Issue of perishability of cocoa.
  - Many thousands of cocoa farmers and so difficult to co-ordinate and manage scheme.

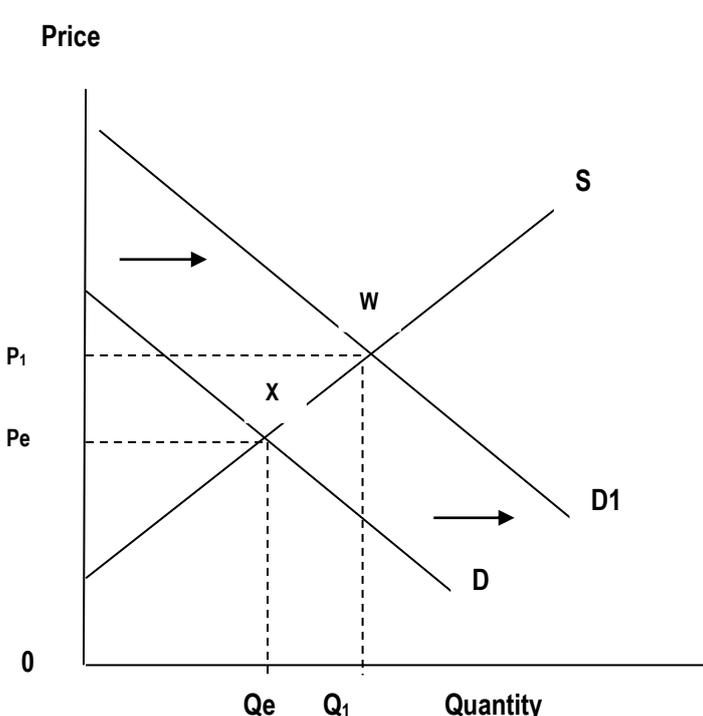
**Evaluation 6 marks (up to 4 marks for any one point well developed or 2+2+2 marks)**

- Scheme could be successful in the short run before stocks build up or stocks run out and so make unworkable / explicit data use / linked development.
- Cocoa can be stored for a fairly long period of time if kept cool and dry so not too perishable / linked development.
- It creates greater certainty in the market / create more stability of income / and so could lead to greater long term investment / linked 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.

**(14)**

Question Number	Answer	Mark
<p><b>10(a)</b></p>	<p><b>KAA = 6 marks</b></p> <ul style="list-style-type: none"> <li>• Explicit reference to the data in Figure 1, for example, total revenue increased from £1380 million in 2008 to £1960 million in 2014 / increased by £580 million or 42%. <b>(1 mark)</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 <b>(1 mark)</b>.</li> <li>• Diagram <b>(up to 4 marks)</b> <ul style="list-style-type: none"> <li>➤ Original supply and demand diagram with equilibrium price and quantity <b>(1)</b></li> <li>➤ Increase in demand curve <b>(1)</b></li> <li>➤ Original total revenue area identified, for example, <math>OP_eXQ_e</math> <b>(1)</b></li> <li>➤ New total revenue area identified, for example, <math>OP_1WQ_1</math> <b>(1)</b></li> </ul> </li> </ul> <p>Also accept change in total revenue area shown <b>(1+1)</b></p> 	<p><b>(6)</b></p>

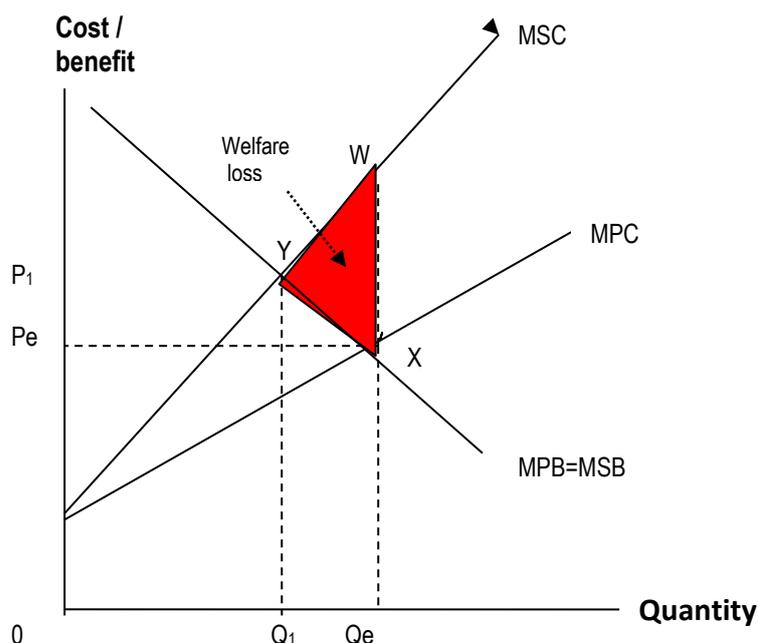
Question Number	Answer	Mark
<p><b>10(b)</b></p>	<p><b>KAA = 4 marks (2+2)</b>  Consumption of bottled water has increased due to:</p> <ul style="list-style-type: none"> <li>• Increased health awareness or trend to healthier lifestyle on the benefits of consuming water / rehydration effects can assist recovery or improve mental alertness. <b>(1+1 marks)</b></li> <li>• 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 marks)</b></li> <li>• Increased promotions of bottled water such as advertising / packaging / shop displays / availability to purchase. <b>(1+1 marks)</b></li> <li>• 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><b>(4)</b></p>

Question Number	Answer	Mark
<p><b>10(c)</b></p>	<p><b>KAA = 6 marks and Evaluation = 4 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>• Explanation of price inelastic demand or price elastic demand in candidate explanation (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><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 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><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 improved market knowledge on the quality of bottled water and tap water. <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> </ul>	

	<ul style="list-style-type: none"> <li>• Consideration of time period e.g. price elasticity of demand of bottled water may vary over time due to increased knowledge / linked development (<b>1+1 marks</b>).</li> <li>• Narrow definition of bottled water more likely to be price elastic and broader definition price inelastic / linked development (<b>1+1 marks</b>).</li> </ul>	<b>(10)</b>
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Question Number	Answer	Mark
<b>10(d)*</b>	<p><b>KAA = 8 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 / 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 / increase in litter pollution which may kill sea life and birds. (<b>1+1 marks</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> </ul> <p><b>Accept explanation of other costs (up to 2 marks)</b></p> <ul style="list-style-type: none"> <li>• Using up of a non-renewable resource in production of plastic bottles such as oil.</li> <li>• The private cost or price of bottled water for consumers can be up to 10 000 times the price of tap water.</li> <li>• It may take up to 3 litres of water to create 1 litre of bottled water.</li> <li>• Plastic bottles may take thousands of years to decompose – a long term cost to society.</li> </ul>	

- Diagram (up to 4 marks)



- Original MPB / MSB and MPC curves (1)
- MSC curve (accept a parallel shift of the MSC curve) (1)
- Identification of market equilibrium and socially efficient quantity (1)
- Identification of triangle of welfare loss (1)

**NB: Accept diagram depicting external costs in production as shown above, OR, one depicting external costs in consumption**

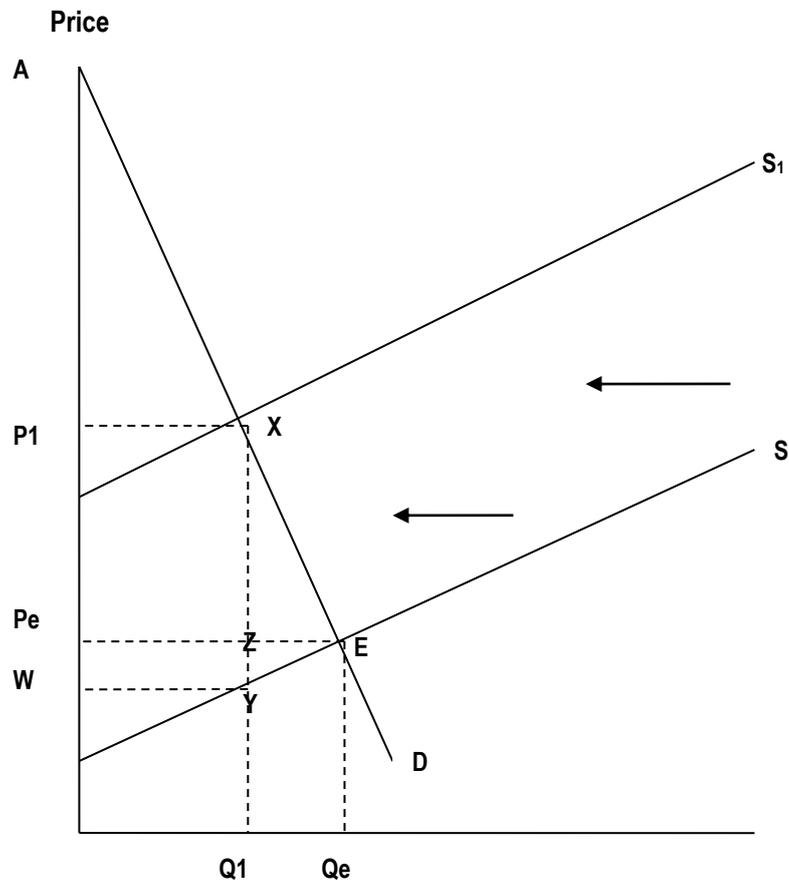
**NB: If no diagram then award a maximum of 6 KAA marks.**

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

- Increase in recycling of plastic and glass bottles has reduced the external costs / linked development.
- 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.
- Difficulty in quantifying external costs and attaching monetary value / linked development.

**(14)**

Question Number	Answer	Mark
<p><b>10(e)*</b></p>	<p><b>KAA = 8 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 (P<sub>1</sub>XZPe) and producers (PeZYW) 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 externalities.</b></p>	



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

- Explanation that the tax causes price to rise **and** output to fall / employment implications. **(1+1 marks)**
- The tax will reduce consumer surplus or producer surplus / reduce profits / application to diagram. **(1+1 marks)**
- The tax will improve government finances / the tax funds could be used to reduce the external costs associated with bottled water / good for the environment if it reduces consumption of bottled water. **(1+1 marks)**

**Evaluation 6 marks (up to 4 marks or 2+2+2)**

- Discussion of price elasticity of demand for bottled water / the more price inelastic then the greater the tax revenue and burden on consumers.

	<ul style="list-style-type: none"><li>• Discussion of consumers switching to substitutes such as fizzy flavoured drinks / could be more harmful to consumers.</li> <li>• The tax could internalise the external costs of production / eliminate the triangle of welfare loss and so lead to social optimum equilibrium position.</li> <li>• Discussion on impact on affordability of an essential resource / implications for consumers on low incomes.</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>	<b>(14)</b>
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