GCE

Economics

Unit **H060/01**: Themes in Microeconomics

Advanced Subsidiary GCE

Mark Scheme for June 2017

5. **Annotations**

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

Subject–specific Marking Instructions

INTRODUCTION
Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:
- the specification, especially the assessment objectives

- the question paper and its rubrics

- the mark scheme.

You should ensure that you have copies of these materials.
You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.
Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.
Rubric Infringement
Candidates may infringe the rubric in the following way:
- answering two questions from Section C.

If a candidate has written two answers for Section C, mark both answers and award the highest mark achieved.

USING THE MARK SCHEME

Please study this Mark Scheme carefully. The Mark Scheme is an integral part of the process that begins with the setting of the question paper and ends with the awarding of grades. Question papers and Mark Schemes are developed in association with each other so that issues of differentiation and positive achievement can be addressed from the very start.
This Mark Scheme is a working document; it is not exhaustive; it does not provide 'correct' answers. The Mark Scheme can only provide 'best guesses' about how the question will work out, and it is subject to revision after we have looked at a wide range of scripts.
The Examiners' Standardisation Meeting will ensure that the Mark Scheme covers the range of candidates' responses to the questions, and that all Examiners understand and apply the Mark Scheme in the same way. The Mark Scheme will be discussed and amended at the meeting, and administrative procedures will be confirmed. Co–ordination scripts will be issued at the meeting to exemplify aspects of candidates' responses and achievements; the co–ordination scripts then become part of this Mark Scheme.
Before the Standardisation Meeting, you should read and mark in pencil a number of scripts, in order to gain an impression of the range of responses and achievement that may be expected.

In your marking, you will encounter valid responses which are not covered by the Mark Scheme: these responses must be credited. You will encounter answers which fall outside the 'target range' of Bands for the paper which you are marking. Please mark these answers according to the marking criteria.

Please read carefully all the scripts in your allocation and make every effort to look positively for achievement throughout the ability range. Always be prepared to use the full range of marks.

Levels of response / Level descriptors	Knowledge and understanding/ Application	Analysis	Evaluation
Strong	Precision in the use of the terms in the question and applied in a focused way to the context of the question.	An explanation of causes and consequences, fully developing the links in the chain of argument.	A conclusion is drawn weighing up both sides, and reaches a supported judgement.
Good		An explanation of causes and consequences, developing most of the links in the chain of argument.	A conclusion is drawn weighing up both sides, but without reaching a supported judgement.
Reasonable	Awareness of the meaning of the terms in the question and applied to the context of the question.	An explanation of causes and consequences, which omit some key links in the chain of argument.	Some attempt to come to a conclusion, which shows some recognition of the influencing factors.
Limited	Awareness of the meaning of the terms in the question.	Simple statement(s) of cause and consequence.	An unsupported assertion.

Multiple Choice Questions	Answer
1	B
2	B
3	A
4	D
5	B
6	C
7	C
8	C
9	B
10	A
11	B
12	D
13	C
14	C
15	B

Q	Key	Rationale	A0	Quantitative Skills
1	B	**Rationale** **A.** This is not a function of money **B.Correct** **C.**This is not a function of money. **D.**This is not a function of money	1	
2	B	**Rationale** **A.**Factors of production are assumed to maximise income **B.***Correct:* It is assumed in economics that profit maximise (i.e. maximise the difference between total costs and total revenue) **C.**Firms may choose to Revenue maximise but this is not what is normally assumed **D.**Consumers are assumed to maximise their utility (satisfaction)	1	
3	A	**Rationale** **A.***Correct:* This will cause a movement along the demand curve (an extension) **B.**This will cause the demand curve to shift to the right (an increase) **C.**This will cause the demand curve to shift to the right (an increase)	2	

		D.This will cause the demand curve to shift to the right (an increase)		
4	D	**Rationale** **A.**A rise in price will reduce consumer surplus **B.**A rise in price will reduce consumer surplus **C.**Consumer surplus falls but incorrect area. Area is new consumer surplus. **D.** *Correct:* the original surplus is P1xz. The new surplus is P2xy. P1P2yz represents the reduction in consumer surplus.	2	x
5	B	**Rationale** **A.**The payment to capital is interest **B.***Correct:* the payment to enterprise is profit **C.**The payment to labour is wages **D.**The payment to land is rent	1	
6	C	**Rationale** A.This will affect the demand at any given price B.This is also a determinant of demand C.*Correct:* Price and availability of substitutes determine the responsiveness of quantity demanded of a good to a change in its price	1	

			D.This is a determinant of price elasticity of supply		
7		C	**Rationale** **A.**This is an internal economy of scale (i.e. the result of an increase in the size of the firm) **B.**This is an internal economy of scale (i.e. the result of an increase in the size of the firm) **C.***Correct:* This will benefit all the firms in the area, irrespective of their size **D.**This is an internal economy of scale (i.e. the result of an increase in the size of the firm)	1	
8	C		**Rationale** **A.**Marginal social costs (MSC) is marginal external cost (MEC) plus marginal private cost (MPC) **B.**MSC is not directly related to marginal private benefit **C.***Correct*: MSC is made up of MEC and MPC **D.**MSC is not directly related to marginal social benefit	1	
9	B		**Rationale** **A.**Based on calculating change in demand is 20% (1950/9750) so that the change in income would be 8%.	2	x

		B.*Correct*: The rise in the quantity demanded of good X is 25% so the rise in income must be 10% **C.**A 25% change in income. **D.**Based on $\Delta Y/\Delta QD$ i.e. 62.5%/25%.		
10	A	**Rationale** **A.***Correct:* -10%/+ 25% = -0.4; price of X and demand for Y are inversely related, so the goods are complementary **B.**Incorrect XED **C.** Correct XED. Goods are complements **D.**Incorrect XED. Goods are complements	3	x
11	B	**Rationale** **A.**Consumers do not understand the benefits of consuming merit goods and this means that there is information failure in the market **B.***Correct:* There is information failure and merit goods may lead to positive externalities **C.**Merit goods will not create positive externalities and may be (under) provided by the private sector **D.**Merit goods may be underprovided by the private sector but may lead to positive externalities.	1	

| 12 | D | **Rationale** | | | | | | | 3 | x |

Rationale

Output per week (000's)	TFC	TVC	Total costs	AC	AFC	AVC
24000	100000	288000	388000	16.17	4.17	12
26000	100000	338000	438000	16.85	3.85	13
28000	100000	392000	492000	17.57	3.57	14
30000	100000	450000	550000	18.33	3.33	15
32000	100000	512000	612000	19.13	3.13	16

A. Average costs is £19.13 when output is 32 000

B. Average variable cost £14 is when output is 28,000

C. Incorrect.

D. *Correct:* Total variable cost is £450,000 when output per week is 30 000

| 13 | C | **Rationale** | 2 | |

A. This will tend to make the supply of the product less elastic (less than one)

B. This will make demand less price elastic

C. *Correct:* this will mean that supply can more easily be increased in response to a rise in price

D. This will tend to make the supply of the product less elastic (less than one)

| 14 | C | **Rationale**

A. This is the opportunity cost of good Y in country A

B. This is the opportunity cost of good X in country B

C. *Correct:* The ratio of X to Y in Country A is 1:2. If country A gives up 2 units of Y it can produce an extra unit of X

D. This is the opportunity cost of 1.5 units of X in country A | 2 | X |
| 15 | B | **Rationale**

A. The NMW may actually increase unemployment

B. *Correct:* The aim of the NMW is to increase wages above their (low) market level

C. NMW will increase labour costs for most firms

D. Any NMW above the equilibrium wage will create an excess supply of labour | 2 | |
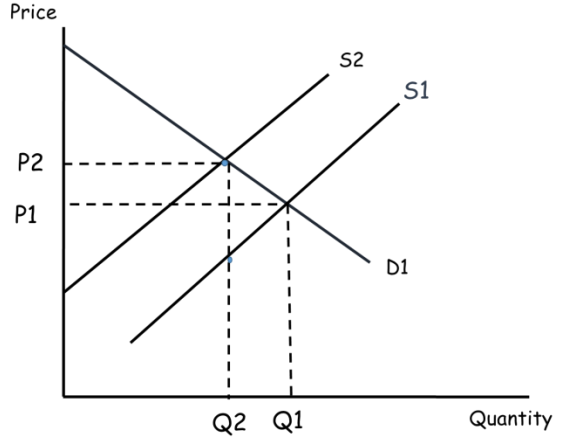
Question	Answer	Marks	Guidance
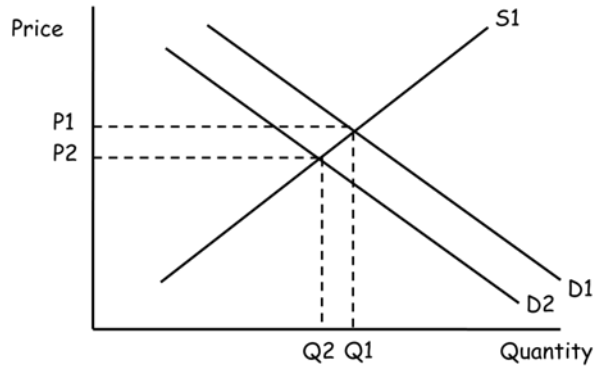
16	a		*What economic term is used to describe pollution and congestion?*		
			Negative externalities or Costs to third party	1 (AO1 x1)	Do not accept demerit goods.
16	b	i	*Explain what is meant by the term 'derived demand'*		
			Award two marks for: - When the demand for one product is dependent on \determined by the demand for another.(2) - Demanded not for its own sake but for what it produces.(2) Award one mark for: A factor of production to produce a good/ service (1) If no definition marks awarded one mark can be given for a correct example. (1) 0 marks for incorrect definition.	2 (AO1x2)	No marks for definitions or examples that refer to complementary goods.

16	b	ii	*Using information from the case study identify two factors that may have led to the increase in car travel over the period shown in Fig.1.*		
			Award 1 mark per point for: - increase in population - rise in GDP\ national income - increase in price of bus travel\ fall in subsidies for bus travel - rise in car ownership	2 (AO2x2)	Do NOT accept price of unleaded petrol as this would lead to a fall in demand. Answers must relate directly to factors in the case study.
16	c		*Explain what is meant by the 'income elasticity of demand'*		
			Responsiveness\sensitivity of **quantity demanded** to a change in income (2)	2 (AO1x2)	For 2 marks "quantity demanded" is required. Correct equation <u>Percentage change in **QD**</u> (1) Percentage change in income
16	d		*Using information from the case study, calculate the effect of a fall of 10% in bus fares on i) bus travel in the long run (2) ii) the demand for car travel (2)*		
		i	Correct calculation 7% (2) Correct method with incorrect answer. (1)	4 (AO1x2) (AO2x2)	<u>Percentage change in QD</u> = 0.7 (1) -10% 7 or -7% (1)
		ii	Correct calculation 1% (2) Correct method with incorrect answer. (1)		<u>Percentage change in QD of car travel</u> = - 0.1(1) -10% 1 or -1% (1)

			Using an appropriate diagram(s), explain the likely effect of an increase in the population on the market for bus travel		
16	e		Up to 3 marks for a correct diagram: Correct axis labels – price and quantity (1) Demand curve shifting to the right (1) Original and new equilibrium points. (1) Explanation (1) An increase in the population may increase demand for bus travel. **Or** Price and quantity has risen.	4 (AO1x1) (AO2 x3)	

Evaluate, using an appropriate diagram(s), whether regulation banning heavy lorries from town centres is a good way to reduce negative externalities.

Question			Answer	Marks	Guidance
16	f		**Level 3 (7-10 marks)** **Good – strong** analysis of the effect of a ban on HGVs (heavy lorries) in reducing negative externalities **Good analysis** will be in the form of developed links. These links are developed through a chain of reasoning which addresses the question. Any relevant diagram(s) are predominantly correct and linked to the analysis. **Strong** analysis will have **consistently** well-developed links through a **coherent** chain of reasoning which addresses the question. Any relevant diagram(s) are predominantly correct with no significant errors that affect the validity of the analysis. Any diagrams must be integral to the analysis. **Good - Strong** evaluation of the effect of a ban on HGVs in reducing negative externalities weighing up both sides/comparing alternatives. **Strong evaluation** should include a supported judgement. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (4-6 marks)** **Reasonable** analysis of the effect of a ban on HGVs in reducing negative externalities. There is correct analysis largely in the form of single links. These address the question **but** are not developed into a clear chain of reasoning. Any relevant diagram(s) may be imperfectly	10 (AO2x1) (AO2x4) (AO3x5)	 The effect of regulation will be to increase the costs of firms. This will shift the supply curve to the left leading to a rise in price, a contraction in demand and a lower equilibrium quantity of HGV use. This will move the market equilibrium of HGV use closer to the social optimum and hence help reduce the negative externalities (pollution associated with HGVs)

labelled or not linked to the analysis.

Reasonable evaluation of the effect of a ban on HGVs in reducing negative externalities considering both sides. *There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.*

Level 1 (1-3 marks)

Limited analysis based on application of knowledge and understanding of the effect of a ban on HGVs in reducing negative externalities. There is little evidence of reasoning that addresses the question asked. There is a lack of a clear structure. Any relevant diagram(s) may not be present or are incorrectly labelled

Limited evaluation in the form of an unsupported assertion **or no** evaluation

Information is basic and communicated in an unstructured way. The information is supported by limited evidence. The relationship to the evidence may not be clear.

0 marks no response worthy of credit

Accept a falling demand for HGV transport, as consumers switch to relatively cheaper substitutes.

Regulation will have a number of advantages; it can be quickly introduced and implemented and will be legally binding. It will reduce the number of HGVs on urban roads and so reduce noise and air pollution and hence remove the market failure. Fines can be used to help improve other aspects of transport infrastructure.
However it may be costly to introduce and enforce (an opportunity cost in terms of resources that might be used to improve other areas of transport). It may create congestion on roads not included in the ban or at other times and there is danger of non-compliance (avoidance/evasion). Firms may pass on higher costs to consumers as higher prices and this will may mean that the ban is difficult to enforce or unpopular.

Descriptor	Award mark
Consistently meets the criteria for this level	At top of level
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)

| | | | Just enough achievement on balance for this level | Above bottom and either below middle or at middle of level (depending on number of marks available) |
| | | | On the borderline of this level and the one below | At bottom of level |

Question	Answer	Marks	Guidance
	Since gaining its independence in 1991 Estonia has moved from a centrally planned to a free market economy with an increasing reliance on the price mechanism to allocate resources. Evaluate, using an appropriate diagram(s) the impact on an economy of moving from a centrally planned to a free market system.(20)		
17	**Level 4 (16-20 marks)** **Good** knowledge and understanding of the economic effects of moving from a planned (state controlled) economic system to a free market system. **Strong** analysis of the effect on (allocative) efficiency and consumer welfare. **Strong** analysis will have **consistently** well-developed links through a **coherent** chain of reasoning which addresses the question. Any relevant diagram(s) are predominantly correct with no significant errors that affect the validity of the analysis. Any diagrams must be integral to the analysis. **Strong** evaluation of the effect of increased reliance on the price mechanism to allocate resources and a conclusion drawn weighing up both sides\comparing alternatives and reaching a supported judgement *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 3 (11-15 marks)** **Good** knowledge and understanding of the effect of increasing use of the price mechanism to allocate resources. **Good** analysis of the effect of the increased use of the price	20 (AO1x3) (AO2x4) (AO3x6) (AO4x7)	Candidates may argue that a move towards a (free) market system is likely to see higher levels of efficiency because firms are producing what consumers want. However there needs to be some recognition that markets and the price mechanism have limitations and may not result in an efficient allocation of resources, without some government intervention. It is possible though not necessary for candidates to consider the disadvantages of a planned economy in terms of costly bureaucracy; failure to respond to changes in tastes and preferences; unacceptable levels of state intervention. There may be a clear illustration of how the price mechanism works to signal, ration and provide incentives for producers to provide the goods and services that consumers want. Arguments against a free market system might include monopoly power; externalities; information failure; under-provision of merit goods (e.g. health and education); failure to supply public goods (e.g. defence); unemployment and income inequality and how far these might offset any gains. In a free market system a change in consumer preferences which increases the demand for a good /service is signalled by a shift in the demand curve from D1 to D2. This leads to a rise in price from P1 to P2.

mechanism e.g. on allocative efficiency. There is correct analysis in the form of developed links. These links are developed through a clear chain of reasoning which addresses the question. Any relevant diagram(s) are predominantly correct and linked to the analysis.

Good evaluation of the effect of increased use of the price mechanism and a conclusion drawn weighing up both sides/comparing alternatives but without reaching a supported judgement.

There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.

Level 2 (6-10 marks)

Reasonable knowledge and understanding of the effect of increased use of the price mechanism.

Reasonable analysis of the effect of the increased use of the price mechanism. There is correct analysis largely in the form of single links. These address the question **but** are not developed into a clear chain of reasoning. The relevant diagram(s), if present, may be imperfectly labelled or not linked to the analysis.

Reasonable evaluation of the effect of increased use of the price mechanism considering both sides/comparing alternatives.

The information has some relevance and is presented with limited structure. The information is supported by limited evidence.
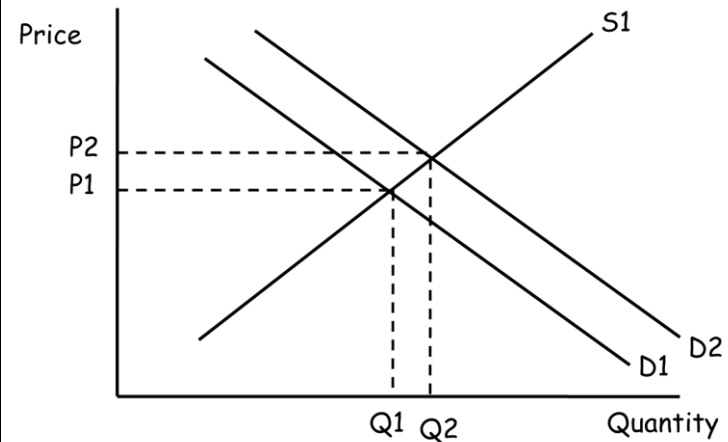
As producers can earn higher profits, supply will extend until a new equilibrium quantity is reached at Q2. The market is allocatively efficient as firms are producing what consumers want.

Level 1 (1-5 marks)

Limited knowledge and understanding of how resources are allocated in a free market system.

Limited or no analysis of the effect on the allocation of resources. There is little evidence of reasoning that addresses the question asked. There is a lack of a clear structure. The relevant diagram(s) may not be present or incorrectly labelled.

Limited evaluation in the form of an unsupported assertion **or no** evaluation

Information is basic and communicated in an unstructured way. The information is supported by limited evidence. The relationship to the evidence may not be clear.

0 marks no response worthy of credit

Descriptor	Award mark
Consistently meets the criteria for this level	At top of level
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Meets most of the criteria with some inconsistencies	Middle of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
On the borderline of this level and the one below	At bottom of level

Question	Answer	Marks	Guidance
	Consumption of sugary drinks can lead to obesity. Evaluate, using an appropriate diagram(s), the effectiveness of an indirect tax as a method of reducing the market failure arising from their consumption (20)		
18	**Level 4 (16-20 marks)** **Good** knowledge and understanding of the effect of a tax in reducing consumption of a good that is over-consumed **Strong** analysis of the effect on supply (i.e. higher costs of production), equilibrium quantity and allocative efficiency/MSC=MSB/welfare 'gain'. **Strong** analysis will have **consistently** well-developed links through a **coherent** chain of reasoning which addresses the question. Any relevant diagram(s) are predominantly correct with no significant errors that affect the validity of the analysis. Any diagrams must be integral to the analysis. **Strong** evaluation of the effect of a tax and conclusion drawn weighing up both sides/comparing alternatives and reaching a supported judgement *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 3 (11-15 marks)** **Good** knowledge and understanding of the effect of a tax in reducing the consumption of sugary drinks. **Good** analysis of the effect of the decrease in supply on	20 (AO1x3) (AO2x4) (AO3x6) (AO4x7)	Candidates may argue that indirect taxes are effective at reducing consumption if demand is elastic and therefore a relatively small rise in price (tax) will lead to a relatively large decrease in consumption of sugary drinks and therefore an output that is closer to the social optimum (reduced market failure) and reduces welfare loss It is possible, though not necessary, for candidates to consider an alternative policy. This could qualify as analysis or evaluation, as appropriate, provided that the alternative (e.g. provision of information about the health risks associated with consuming sugary drinks) is assessed relative to a tax on sugary drinks. There may be a clear illustration of the mechanics of indirect taxes: increasing costs of production, reducing supply, raising price and the consequent contraction in demand, leading to a lower output that is closer to the social optimum, so reducing market failure (over consumption of sugary drinks). Arguments in favour might refer to reduced production of demerit goods\negative externalities; positive externalities from increased consumption of (relatively cheaper) healthier alternatives; revenue raised from tax (which may be used to help address the market failure in other ways e.g. information provision) Arguments against include: depends on PED (NB a tax will be most effective at reducing consumption if PED is elastic.) Incidence of tax may fall on producers (affecting competitiveness\employment); indirect taxes are regressive

(equilibrium) quantity (Q1 to Q2).
There is correct analysis in the form of developed links. These links are developed through a clear chain of reasoning which addresses the question. Any relevant diagram(s) are present, predominantly correct and linked to the analysis.

Good evaluation of the effect of a tax and a conclusion is drawn weighing up both sides/comparing alternatives but without reaching a supported judgement.

There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.

Level 2 (6-10 marks)

Reasonable knowledge and understanding of the effect of a tax on the consumption of sugary drinks
Reasonable analysis of the effect on supply i.e. supply shifts inwards/decreases from S1 to S2. There is correct analysis largely in the form of single links. These address the question **but** are not developed into a clear chain of reasoning. The relevant diagram(s), if present, may be imperfectly labelled or not linked to the analysis.
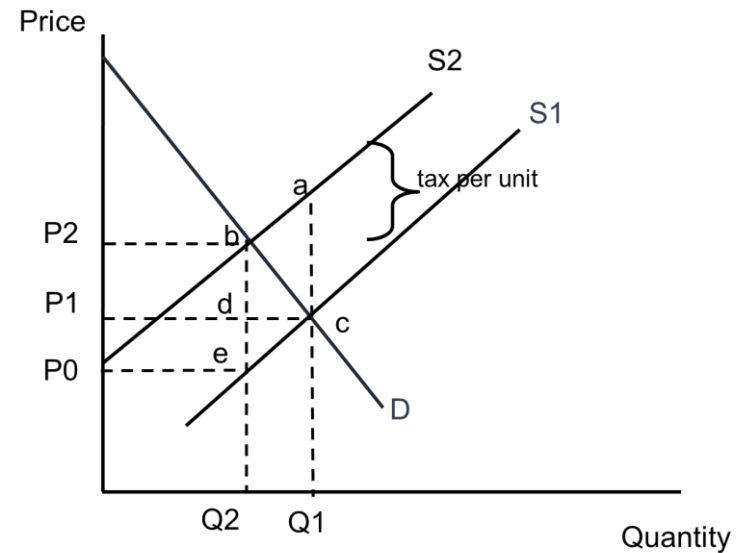
Reasonable evaluation of a tax considering both sides/comparing alternatives.

The information has some relevance and is presented with limited structure. The information is supported by limited evidence.

(equity implications); difficult to determine level of tax required to tackle market failure and achieve social optimum (possibility of government failure); cost of administration and enforcement

Candidates can clearly illustrate on a diagram the effect of a tax showing
- Leftward shift in supply curve

- Old and new market equilibrium

- Tax (revenue) per unit

- Extent to which incidence of tax falls on producer\consumer

- Effect on market failure e.g. comparison of original market equilibrium with new market equilibrium (social optimum).

			Level 1 (1-5 marks) **Limited** knowledge and understanding of how a tax might reduce the consumption of sugary drinks. **Limited or no** analysis of the effect on the market. Little evidence of reasoning that addresses the question asked. There is a lack of a clear structure. The relevant diagram(s) may not be present or incorrectly labelled. **Limited** evaluation in the form of an unsupported assertion **or no** evaluation *Information is basic and communicated in an unstructured way. The information is supported by limited evidence. The relationship to the evidence may not be clear.* **0 marks** no response worthy of credit	The effect of an indirect tax is to decrease supply from S1 to S2. This is because a tax increases producers' costs, so less can be supplied at any given price. The tax is equal to ab (P0 – P2) per unit and the revenue for the government is P0P2be.The incidence of the tax on the seller is P0P1de; the burden on the consumer is P1P2bd. As a result of the tax, price rises from P1 to P2, there is a contraction in demand and the new market equilibrium is at Q2. If sugary drinks are over-consumed, this new equilibrium will be closer to the social optimum where marginal social cost = marginal social benefit. At outputs between Q1 and Q2 marginal social cost is greater than marginal social benefit. A tax therefore removes the welfare loss of abc This will reduce market failure and mean that resources are allocated more efficiently.

Descriptor	Award mark
Consistently meets the criteria for this level	At top of level
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Meets most of the criteria with some inconsistencies	Middle of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
On the borderline of this level and the one below	At bottom of level

Assessment Objectives Grid

Question	AO1	AO2	AO3	AO4	Total
1 to 15	7	6	2		**15 (5)**
16(a)	1				**1**
(b)(i)	2				**2**
(b)(ii)		2			**2**
(c)(i)	2				**2**
(d)(i)	1	1 (1)			**2 (1)**
(d)(ii	1	1(1)			**2(1)**
(e)	1	3 (3)			**4 (3)**
(f)		1	4 (2)	5 (2)	**10 (4)**
17 or 18	3	4 (2)	6 (3)	7 (3)	**20 (8)**
Total	**18**	**18**	**12**	**12**	**60 (22)**

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