



AS ECONOMICS 7135/1

Paper 1 The Operation of Markets and Market Failure

Mark scheme

June 2020

Version: 1.0 Final Mark Scheme

206A7135/1/MS

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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SECTION A

The following list indicates the correct answers used
in marking the students' responses.

KEY LIST

1	A	11	C
2	B	12	B
3	D	13	A
4	D	14	C
5	C	15	B
6	D	16	C
7	A	17	A
8	D	18	B
9	D	19	A
10	B	20	A

Totals

A 6
B 5
C 4
D 5

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

The levels of response grid below should be used when marking the 25 mark questions.

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.	21–25 marks
4	Sound, focused analysis and some supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.	16–20 marks
3	Some reasonable analysis but generally unsupported evaluation that: • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgments but these are not well-supported by arguments and/or data.	11–15 marks
2	A fairly weak response with some understanding that: • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes attempted evaluation which is weak and unsupported.	6–10 marks
1	A very weak response that: • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which, at best, is very weak • includes attempted analysis which is weak and unsupported.	1–5 marks

Section B**Context 1 BUS TRAVEL****Total for this context: 50 marks**

2	1
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 Define 'fixed costs' in **Extract B** (line 13).
[3 marks]

Level of response	Response	Max 3 marks
3	A full and precise definition is given.	3 marks
2	The substantive content of the definition is correct, but there may be some imprecision or inaccuracy.	2 marks
1	Some fragmented points are made.	1 mark

Examples of acceptable definitions worth 3 marks:

- costs of production which do not change with output
- costs incurred when paying for fixed factors of production.

Examples of a definition worth 2 marks:

- costs of production which do not change
- total costs minus variable costs.

Examples of a definition worth 1 mark:

- costs which are not variable
- costs per unit which do not change.

MAXIMUM FOR QUESTION 21: 3 MARKS

2 2

Use **Extract A** to calculate the **difference** in the median male and female take-up rates of concessionary travel schemes for the elderly in England for the years shown.

[4 marks]

Calculation involves $71\% - 78\% = (-) 7\%$ (minus sign not required)

Response	Max 4 marks
For the correct answer (units required): $(-) 7\%$ points also allow 7%	4 marks
For the correct answer but with incorrect or missing units: 7	3 marks
For the correct medians for both males and females, with the correct units: 71% and 78%	2 marks
For the correct medians for both males and females but with incorrect or missing units: 71 and 78 OR For one median correct with the correct units: 71% or 78% OR For listing at least one set of data in the correct ascending or descending order: eg for males 47, 62, 67, 71, 72, 73, 75	1 mark

MAXIMUM FOR QUESTION 22: 4 MARKS

2 3

Use **Extract A** to identify **two** significant points of comparison between the take-up of concessionary travel schemes by males and females in England over the period shown.

[4 marks]

Award up to 2 marks for each point of comparison made.

Response	Max 4 Marks
Identifies a significant point of comparison. Makes accurate use of the data to support the comparison identified. Unit of measurement given accurately.	2 marks
Identifies a significant point of comparison but only one piece of data is given when two are needed and/or no unit of measurement is given and/or the unit of measurement is inaccurate and/or the wrong date is given. OR Identifies a significant feature of one data series with accurate use of the data (including the unit of measurement) but no comparison is made.	1 mark

If a candidate identifies more than two significant points of comparison, reward the best two.

Significant points include:

- the highest take-up rates of concessionary travel schemes by both males and females were in 2011, at 75% for males and 81% for females
- the lowest take-up rates of concessionary travel schemes by both males and females were in 2005, at 47% for males and 58% for females
- there was a greater range of the take-up rate of concessionary travel schemes by males at 28 percentage points (or from 47% to 75%) than for females at 23 percentage points (or from 58% to 81%)
- the take-up rates of concessionary travel schemes by both males and females were higher at the end of the period than the beginning, rising from 47% to 67% by males and from 58% to 71% for females
- there was a greater increase in the take-up rate of concessionary travel schemes by males than females, rising from 47% to 67% for males (a rise of 20 percentage points or 42.6%) and from 58% to 71% for females (a rise of 13 percentage points or 22.4%)
- the take-up rates of concessionary travel schemes by both males and females rose each year from 2005 to 2011 from 47% to 75% for males and from 58% to 81% for females before falling each year to 2017 to 67% for males and to 71% for females
- the greatest decrease in the take-up rate of concessionary travel schemes by both males and females was between 2015 and 2017, when it fell from 72% to 67% (or 5 percentage points) for males and from 78% to 71% (or 7 percentage points) for females
- the smallest decrease/least change in the take-up rate of concessionary travel schemes by both males and females was between 2013 and 2015, when it fell from 73% to 72% (or 1 percentage point) for males and from 79% to 78% (also 1 percentage point) for females
- the greatest increase in the take-up rate of concessionary travel schemes by both males and females was between 2005 and 2007, when it rose from 47% to 62% (or 15 percentage points) for males and from 58% to 70% (or 12 percentage points) for females
- the take-up rates of concessionary travel schemes by males and females were closest in 2017 at 67% for males and 71% for females (a difference of 4 percentage points)
- the take-up rate of concessionary travel schemes had the greatest difference in 2005 at 47% for males and 58% for females (a difference of 11 percentage points).

MAXIMUM FOR QUESTION 23: 4 MARKS

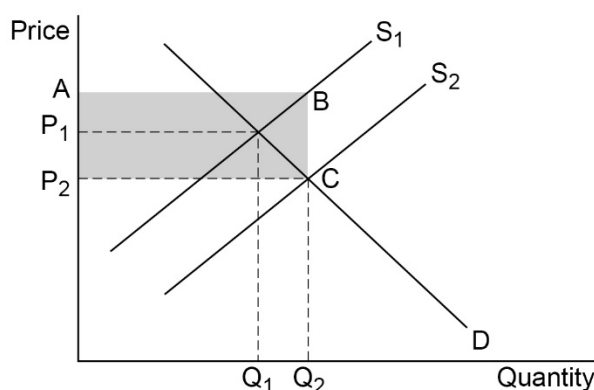
2 4

Extract C (line 7) states: 'Bus companies also receive subsidies to operate routes in rural areas.'

Draw a supply and demand diagram to show the effects on the market for bus travel of the government providing a subsidy. The total amount of government spending on the subsidy should be labelled clearly.

[4 marks]

The correct diagram involves an increase in supply/shift to the right of the supply curve resulting in an increase in quantity sold and decrease in price. The subsidy area should also be shown clearly and correctly through shading, labels such as $ABCP_2$ or the use of a key.



Response	Max 4 marks
Accurately drawn D/S diagram showing a rightwards shift in S, old and new equilibrium price and quantity, eg P_1Q_1 , P_2Q_2 , and correct area for subsidy, with both axes and all curves and coordinates correctly labelled.	4 marks
Accurately drawn D/S diagram showing a rightwards shift in S with correct subsidy area but one label or coordinate missing or incorrect (on axis or curve). OR Accurately drawn and labelled D/S diagram showing a rightwards shift in S, but subsidy area missing or incorrect.	3 marks
Accurately drawn D/S diagram showing a rightwards shift in S, the correct subsidy area but two labels or coordinates missing/incorrect. OR Accurately drawn D/S diagram showing a rightwards shift in S but one label or co-ordinate missing/incorrect and subsidy area missing/incorrect.	2 marks
Accurately drawn D/S diagram showing an initial equilibrium point with both axes, both original curves and both coordinates correctly labelled, eg P_1Q_1 OR Accurately drawn D/S diagram showing an initial equilibrium point and a rightwards shift in S but with two labels missing.	1 mark

Notes: Horizontal axis allow: Quantity of bus travel, Quantity or Q (but not QD or QS or output).
Vertical axis allow: Price, P, £ or some monetary symbol (but not Price level).

MAXIMUM FOR QUESTION 24: 4 MARKS

2 5

Extract C (line 13) states: 'Both the take-up rate and number of journeys per bus pass have been falling in recent years.'

Explain **two** factors which could lead to an increase in the demand for bus travel in the future.

[10 marks]

Level of response	An answer that:	Max 10 marks
Level 3	- identifies two valid factors - shows sound knowledge and understanding of relevant economic terminology, concepts and principles - includes good application of relevant economic principles and/or good use of data to support the response - includes well-focused analysis with a clear, logical chain of reasoning - may include a relevant diagram to support their explanation	8–10 marks
Level 2	- identifies at least one valid factor - shows reasonable knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles and/or data to the question - includes some reasonable analysis but it might not be adequately developed and may be confused in places - may include a relevant diagram to support their explanation	4–7 marks
Level 1	- identifies at least one valid factor - shows some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - demonstrates very limited ability to apply relevant economic principles and/or data to the question - may include some very limited analysis but the analysis lacks focus and/or becomes confused - may include a diagram but the diagram is likely to be inaccurate in some respects or is inappropriate.	1–3 marks

Relevant issues include:

- meaning of 'demand'
- lower relative price and/or greater availability compared with substitute goods
- increased subsidy
- changes in tastes and/or social norms
- changes in income and/or consideration of bus travel as an inferior good
- increased population and/or changes in age structure
- the significance of elasticities.

MAXIMUM FOR QUESTION 25: 10 MARKS

2 6

Extract C (lines 16–17) states: ‘Perhaps the time has come to stop free bus travel for the elderly or to limit it to certain groups?’

Use the extracts and your knowledge of economics to evaluate whether the UK government should continue to provide free bus travel for all, some or no elderly people.

[25 marks]

Areas for discussion include:

- entitlement to concessionary bus travel for the elderly and expected future increase in pensioners
- recent trends in take-up rates/use of concessionary bus travel
- recent changes in price and availability of bus services
- bus travel as a potential merit good with examples of private and external benefits
- alternative forms of transport and potential external costs of greater car usage
- impact of withdrawal of some or all free bus travel for the elderly on the availability of bus services and effects of this
- impact on other areas
- cost and opportunity cost
- if only provided for ‘some’, how this could be done: income, location, other criteria plus pros and cons of only certain groups benefiting
- who gains and who loses from alternative strategies
- equity issues
- market failure versus government failure
- an overall assessment of whether the UK government should continue to provide free bus travel for all, some or no elderly people.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate’s response to the question.

Use the levels mark scheme on page 5 to award candidates marks for this question.

MAXIMUM FOR QUESTION 26: 25 MARKS

Context 2 E-CIGARETTES**Total for this context: 50 marks****2 7** Define 'social cost' in **Extract E** (line 7).**[3 marks]**

Level of response	Response	Max 3 marks
3	A full and precise definition is given.	3 marks
2	The substantive content of the definition is correct, but there may be some imprecision or inaccuracy.	2 marks
1	Some fragmented points are made.	1 mark

Examples of acceptable definitions worth 3 marks:

- the cost to those involved in the activity/transaction/consumption/production and to any third parties affected
- the price paid/harmful effects borne by the party/parties involved in the activity/transaction/consumption/production and by third parties
- the price paid/harmful effects borne by the consumers and firm involved in the transaction plus the negative effects on third parties.

Examples of a definition worth 2 marks:

- private cost plus external cost/negative externalities
- the effects on the consumers, the firm and third parties (not addressing 'cost') of an activity.

Examples of a definition worth 1 mark:

- the negative effect on third parties of an activity
- the cost to consumers and/or firms of an activity.

MAXIMUM FOR QUESTION 27: 3 MARKS

2 8

Use **Extract D** to calculate, to **one decimal place**, the **difference** between the mean male and female rates of cigarette smoking in Great Britain for the years shown.

[4 marks]

Calculation involves $(149.8 \div 7) - (129.8 \div 7)$ or equivalent = $21.4 - 18.542857... = 2.857...$ which rounds to 2.9% (to 1 dp). Some may do the difference between the totals and then divide by 7, ie $(149.8 - 129.8) \div 7 = 20 \div 7$

Response	Max 4 marks
For the correct answer (units required): 2.9% points also allow 2.9%	4 marks
For the exact answer, not rounded to 1dp (maybe more or fewer dp) or rounded the wrong way or with missing or incorrect units: 2.857% (or 3.0%) or 2.8% or 2.9	3 marks
For the exact answer, not rounded to 1dp (maybe more or fewer dp) or rounded the wrong way and with missing or incorrect units: 2.857 or 3 or 2.8 OR For the correct means for both males and females, rounded or not, but with the correct units: 21.4% and 18.5% (or 18.54...%)	2 marks
For the correct means for both males and females, rounded or not, but with incorrect or missing units: 21.4 and 18.5 (or 18.54...) OR For one mean correct with the correct units: 21.4% or 18.5% (or 18.54...%) OR For the correct totals, with or without the correct units: 149.8 and 129.8	1 mark

MAXIMUM FOR QUESTION 28: 4 MARKS

2 9

Use **Extract D** to identify **two** significant points of comparison between the rates of cigarette smoking of males and females in Great Britain over the period shown.

[4 marks]

Award up to 2 marks for each point of comparison made.

Response	Max 4 Marks
Identifies a significant point of comparison. Makes accurate use of the data to support the comparison identified. Unit of measurement given accurately.	2 marks
Identifies a significant point of comparison but only one piece of data is given when two are needed and/or no unit of measurement is given and/or the unit of measurement is inaccurate and/or the wrong date is given. OR Identifies a significant feature of one data series with accurate use of the data (including the unit of measurement) but no comparison is made.	1 mark

If a candidate identifies more than 2 significant points of comparison, reward the best two.

Significant points include:

- the highest rates of cigarette smoking for both males and females were in 2005, at 25.3% for males and 22.7% for females
 - the lowest rates of cigarette smoking for both males and females were in 2017, at 18.7% for males and 15% for females
 - there was a greater range of the rate of cigarette smoking for females at 7.7 percentage points (or from 15% to 22.7%) than for males at 6.6 percentage points (or from 18.7% to 25.3%)
 - the rates of cigarette smoking for both males and females were lower at the end of the period than the beginning, falling from 25.3% to 18.7% for males and from 22.7% to 15% for females
 - there was a greater decrease in the rate of smoking for females than males, falling from 22.7% to 15% for females (a fall of 7.7 percentage points or 33.9%) and from 25.3% to 18.7% for males (a fall of 6.6 percentage points or 26.1%)
 - the rate of cigarette smoking for males fell each year from 2005 to 2011 from 25.3% to 21% before rising in 2013 to 21.6% and then falling each year to 18.7% in 2017 whereas the rate of cigarette smoking for females fell from 2005 to 2007 from 22.7% to 19.7% before rising in 2009 to 20.2% and then falling each year to 15% in 2017
- OR**
- the only year that the rate of smoking rose for males was in 2013, when it increased to 21.6% from 21% in 2011 whereas the only year that the rate of smoking for females increased was in 2009, when it increased to 20.2% from 19.7% in 2007
- the greatest decrease in the rate of cigarette smoking for both males and females was between 2005 and 2007, when it fell from 25.3% to 22.1% (or 3.2 percentage points) for males and from 22.7% to 19.7% (or 3 percentage points) for females
 - the smallest decrease/least change in the rate of cigarette smoking for males was between 2007 to 2009, when it fell from 22.1% to 22% (or 0.1 percentage point) whereas the smallest decrease/least change in the rate of smoking for females was from 2013 to 2015, when it fell from 16.8% to 16.6% (or 0.2 percentage points)
 - the rates of cigarette smoking for males and females were closest in 2009 at 22% for males and 20.2% for females (or 1.8 percentage points)
 - the rates of cigarette smoking had the greatest difference in 2013 at 21.6% for males and 16.8% for females (or 4.8 percentage points).

MAXIMUM FOR QUESTION 29: 4 MARKS

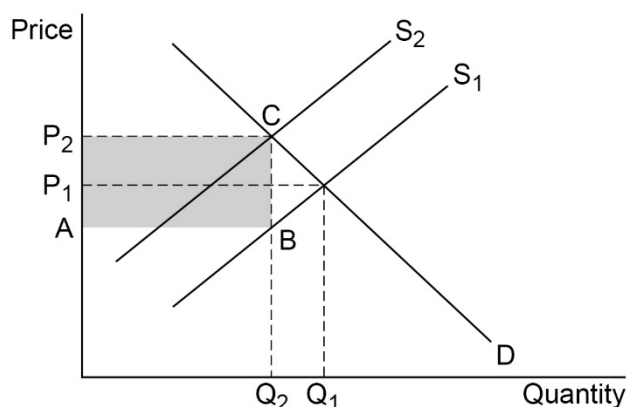
3 0

Extract E (lines 10–12) states: ‘between 2006 and 2016, the price of tobacco rose by 43% more than general retail prices with the tax now being about 80% of the price.’

Draw a supply and demand diagram to show the effects on the market for cigarettes of the government imposing an indirect tax. The total amount of government tax revenue should be labelled clearly.

[4 marks]

The correct diagram involves a decrease in supply/shift to the left of the supply curve resulting in a decrease in quantity sold and increase in price. The tax area should also be shown clearly and correctly through shading, labels such as $ABCP_2$ or the use of a key.



Response	Max 4 marks
Accurately drawn D/S diagram showing a leftwards shift in S, old and new equilibrium price and quantity, eg P_1Q_1 , P_2Q_2 , and correct area for tax, with both axes and all curves and coordinates correctly labelled.	4 marks
Accurately drawn D/S diagram showing a leftwards shift in S with correct tax area but one label or coordinate missing or incorrect (on axis or curve) OR Accurately drawn and labelled D/S diagram showing a leftwards shift in S but tax area missing or incorrect.	3 marks
Accurately drawn D/S diagram showing a leftwards shift in S, the correct tax area but two labels or coordinates missing/incorrect. OR Accurately drawn D/S diagram showing a leftwards shift in S but one label or coordinate missing/incorrect and tax area missing/incorrect.	2 marks
Accurately drawn D/S diagram showing an initial equilibrium point with both axes, both original curves and both coordinates correctly labelled, eg P_1Q_1 OR Accurately drawn D/S diagram showing an initial equilibrium point and a leftwards shift in S but with two labels missing.	1 mark

Notes: Horizontal axis allow: Quantity of tobacco (or cigarettes), Quantity or Q (but not QD or QS or output). Vertical axis allow: Price, P, £ or some monetary symbol (but not Price level).

MAXIMUM FOR QUESTION 30: 4 MARKS**3 1**

Extract E (lines 18–19) states: ‘the growth of e-cigarettes has fallen since, with some smokers switching back to conventional cigarettes.’

Explain **two** factors which could lead to an increase in the demand for conventional cigarettes.

[10 marks]

Level of response	An answer that:	Max 10 marks
Level 3	- identifies two valid factors - shows sound knowledge and understanding of relevant economic terminology, concepts and principles - includes good application of relevant economic principles and/or good use of data to support the response - includes well-focused analysis with a clear, logical chain of reasoning - may include a relevant diagram to support their explanation.	8–10 marks
Level 2	- identifies at least one valid factor - shows reasonable knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles and/or data to the question - includes some reasonable analysis but it might not be adequately developed and may be confused in places - may include a relevant diagram to support their explanation.	4–7 marks
Level 1	- identifies at least one valid factor - shows some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - demonstrates very limited ability to apply relevant economic principles and/or data to the question - may include some very limited analysis but the analysis lacks focus and/or becomes confused - may include a diagram but the diagram is likely to be inaccurate in some respects or is inappropriate.	1–3 marks

Relevant issues include:

- meaning of ‘demand’
- lower relative price and/or greater availability compared with substitute goods
- reduced regulation and/or tax
- changes in view of health concerns of cigarettes compared with alternatives
- changes in tastes and/or social norms
- changes in income
- increased population and/or changes in age structure
- the significance of elasticities.

MAXIMUM FOR QUESTION 31: 10 MARKS

3 2

Extract F (lines 17–19) states: ‘Should the UK government promote a particular brand of e-cigarettes as a ‘healthy alternative’ to conventional cigarettes? Should the use of e-cigarettes be discouraged or has government intervention already gone far enough?’

Use the extracts and your knowledge of economics to evaluate whether the UK government should encourage, discourage or do nothing more to affect the use of e-cigarettes.

[25 marks]

Areas for discussion include:

- recent trends in e-cigarette and conventional cigarette use
- e-cigarettes as a substitute for conventional cigarettes
- conventional cigarettes as a demerit good and examples of private and external costs
- e-cigarettes as a potential demerit or merit good with examples of private and external costs and benefits
- examples of existing and possible government intervention in the market for e-cigarettes (or conventional cigarettes) to either encourage or discourage their use – more or less regulation, taxation, promotion, prescription on the NHS
- analysis of the impact of alternative policies
- pros and cons of alternative policies
- who gains and who loses from alternative policies
- equity issues
- whether there is a need for more action
- market failure versus government failure
- an overall assessment of whether the UK government should encourage, discourage or do nothing more to affect the use of e-cigarettes.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate’s response to the question.

Use the levels mark scheme on page 5 to award candidates marks for this question.

MAXIMUM FOR QUESTION 32: 25 MARKS