Mark Scheme (Results)

Summer 2017

Pearson Edexcel GCE AS Level
in Economics A (8EC0)

Paper 01 Introduction to Markets and Market Failure

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General marking guidance

- All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than be penalised for omissions.
- Examiners should mark according to the mark scheme – not according to their perception of where the grade boundaries may lie.
- 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/indicative content will not be exhaustive.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, a senior examiner must be consulted before a mark is given.
- Crossed-out work should be marked unless the candidate has replaced it with an alternative response.

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(a)</td><td>
Knowledge 1, Application 1, Analysis 1

Knowledge/understanding
1 mark for definition of opportunity cost (e.g. value of the next best alternative foregone)
1 mark for definition of production possibility frontier (e.g. the maximum potential output combinations of two goods an economy can achieve when all its resources are fully and efficiently employed)

Application
1 mark for application – Application to the table information to demonstrate that opportunity cost increases or is small for manufacturing goods as more is produced (at least two calculations need to be shown for opportunity cost increasing and this may be in the table or in the written explanation or one data reference to opportunity cost being small)

<table>
<tr><th>Capital goods output (million units)</th><th>Consumer goods output (million units)</th><th>Opportunity cost</th></tr>
<tr><td>0</td><td>42</td><td>-</td></tr>
<tr><td>10</td><td>40</td><td>2</td></tr>
<tr><td>20</td><td>36</td><td>4</td></tr>
<tr><td>30</td><td>30</td><td>6</td></tr>
<tr><td>40</td><td>22</td><td>8</td></tr>
<tr><td>50</td><td>12</td><td>10</td></tr>
<tr><td>60</td><td>0</td><td>12</td></tr>
</table>

Analysis
1 mark for linked development e.g. the opportunity cost for the economy of moving from consumer goods to capital goods is small compared to the gains in production made (1 Analysis) or diagram of production possibility frontier, illustrating concept of increasing opportunity cost – it must be correctly labelled with consumer goods and capital goods (concave to origin) (1)
</td><td>(3)</td></tr>
</table>

Question Number	Answer	Mark
1(b)	B	**(1)**

Question Number	Answer	Mark
2 (a)	**Knowledge 1** **Knowledge/understanding** 1 mark for e.g. • The year with which all other values in a series are compared • Benchmark year	**(1)**

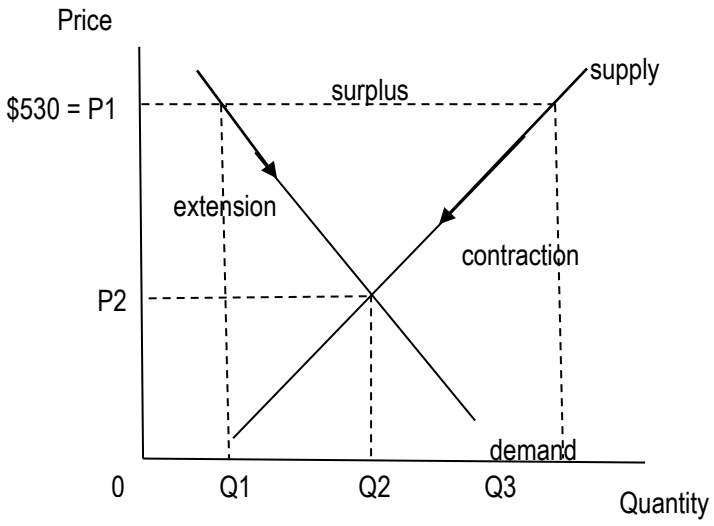
Question Number	Answer	Mark
2(b)	**Application 2** **Knowledge/Understanding** 2011 = (15 257/14 878) x 100 = 102.5 (1) 2012 = (13 261/14 878) x 100 = 89.1 (1) Accept 102-103; 89-89.2	**(2)**

Question Number	Answer	Mark
2(c)	**Application 1** B	**(1)**

Question Number	Answer	Mark
3(a)	**Knowledge 1** **Knowledge** 1 mark for definition, e.g. • Government grant (1) or government policy designed to encourage production or consumption (1) money given (1)	**(1)**

Question Number	Answer	Mark
3(b)	**Knowledge 1** C	**(1)**

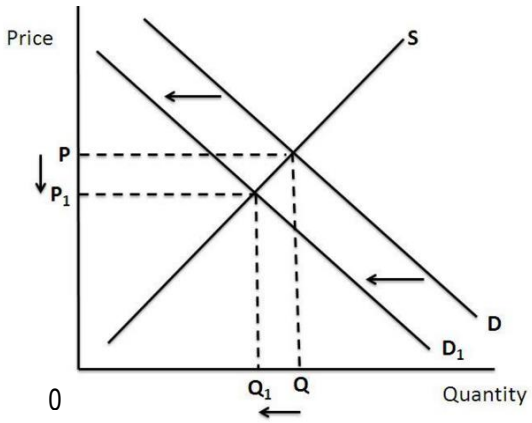
Question Number	Answer	Mark
3(c)	**Application 2** **Application** 2 marks for e.g. • New supply curve drawn and labelled, showing an inwards/leftwards shift (1) • New equilibria labelled, showing a rise in price and/or decrease in quantity (1) OR 2 marks for e.g. • New demand curve drawn and labelled, showing an inwards/leftwards shift (1) • New equilibria labelled, showing a decrease in price and/or decrease in quantity (1)	**(2)**

Question Number	Answer	Mark
4(a)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for identifying/defining surplus, excess supply **Application** 1 mark for reference to context, e.g. • Reference to $530 or falling below (1) • Price mechanism in free market (signal, incentive/disincentive or ration) (1) **Analysis** 1 mark for linked development, e.g. • Steel supply contracts, movement back along supply curve if drawn (1) • Extension in demand for steel, movement forwards along demand curve if drawn (1) • Surplus of steel gradually removed (1) • New market equilibrium identified (1)  	**(3)**

Question Number	Answer	Mark
4(b)	D	**(1)**

Question Number	Answer	Mark
5(a)	**Knowledge 1, Application 1, Analysis 1** **Knowledge/Understanding** 1 mark for identifying/defining excess demand, shortage **Application** 1 mark for application to university education, e.g. • Diagram indicates cut in tuition fees from £9 000 to £6 000 (1) • Universities lack cash so close down departments (1) • University now more affordable for applicants (1) **Analysis** 1 mark for linked development, e.g. • Lower maximum price illustrated or explained, price below market equilibrium (1) • Extension in demand, movement forwards along demand curve if drawn (1) • Contraction in supply of university places, movement backwards along supply curve (1)	**(3)**

Question Number	Answer	Mark
5(b)	A	**(1)**

Question Number	Answer	Mark
6(a)	**Knowledge 1, Application 2, Analysis 2** **Knowledge** 1 mark for definition of revenue or may identify clearly in diagram (1) **Application** 1 mark for using source data or linking ban to reduced consumption (1) and 1 mark for diagrammatic link to change in revenue (1), e.g. • "can reduce tobacco consumption" (1) leading to decreased revenue as shown in diagram (1) **Analysis** Diagram showing demand shifts left or becomes less price inelastic (1) and new equilibrium (1)  	**(5)**

Question Number	Indicative content	Mark
6(b)	**Knowledge 2, Application 2, Analysis 2** • Application – price of e-cigarettes per nicotine cheaper • Data on PED suggests some rational response to price change e.g. 10% rise causes 4% fall in demand (Extract A) Reasons rational • Smokers computationally aware of financial gains of switching • Smokers informed of private health gains (Extract B Paragraph 2) • Reducing health external costs e.g. passive smoking(Extract A L15) • Smokers aware that regulations will increasingly make it difficult for them to gain utility of nicotine consumption through tobacco smoking **NB Reasons for/against being rational may be presented as either KAA or EV**	**(6)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

Question Number	Indicative content	Mark
6(b) continued	**Evaluation 4** Reasons against being rational • Smokers lack information and computational skills to accurately assess full costs and benefits of switching. May underestimate long-term gains of switching (bounded rationality) • Information overload • Both products contain nicotine which is addictive and habit forming. • If e-cigarettes were not available they may quit smoking altogether • Switch may be only short-term (impulse buying) • E-cigarettes complements tobacco smoking resulting in an overall increase in nicotine consumption • PED for tobacco remains lower than e-cigarettes so a price rise in the latter may result in a switch back • Peer pressure (herd mentality) pushing smokers to make the switch	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Answer	Mark
6(c)	**Knowledge 2, Application 2, Analysis 2** **Knowledge/understanding** 1 mark each for any two of the following: • definition or formula of cross elasticity of demand (1) • tobacco cigarettes and e-cigarettes have a positive cross elasticity of demand (1) • understanding of substitute relationship e.g. similar products (1) **Application** 1 mark each for any two of the following: • e-cigarettes seen as less harmful so become more attractive compared to tobacco cigarettes (1) • tougher regulations and growing health awareness on tobacco (1) • they are substitutes because they offer nicotine (1) • applying cigarettes to diagram showing impact on e-cigarettes (1+1) • relative price differences e.g. Figure 1 or tax rises on tobacco (1) • use of numerical example e.g. a 10% rise in the price of tobacco cigarettes results in a less than 10% rise in demand for e-cigarettes **Analysis** Up to 2 marks for any one of the following in linked development OR two limited examples of analysis (1+1): • the increase in the price of traditional cigarettes is resulting in the change in quantity demanded of e-cigarettes increasing • consideration of whether distant or close substitutes • diagram showing relationship between price of one of the product and demand for the other	**(6)**

	• magnitude/time	

Question Number	Answer	Mark
6(d)	**Knowledge 2, Application 2** 2 marks for each correct answer, e.g. • High-income countries = -4% / +10% (1) =- 0.4 (2) or 0.4 (2) • Low-middle-income countries = -5% / +10% (1) = -0.5 (2) or 0.5 (2) **NB Award 1 mark for a correct formula as an alternative for substituting correct figures on up to one occasion.**	**(4)**

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Identification of determinants of price elasticity of demand • Application – PED tobacco cigarettes -0.35; PED e-cigarettes -1.9. Reasons why tobacco cigarettes being relatively price-inelastic, e-cigarettes relatively price-elastic e.g.: • habitual consumption • tobacco broadly defined • proportion of income spent on tobacco cigarettes lower than switching cost of buying reusable e-cigarette kit • number of close substitutes • tobacco addictive necessity, e-cigarettes luxury (not yet addicted to). **NB to access Level 3 candidates need to consider tobacco and e cigarettes.**	**(9)**

"Assess" was used as the command word for this question instead of "Discuss". In order to meet the expectations set out in the sample material the 10 mark level descriptors have been mapped on to the 15 mark levels as below on this one occasion. See Appendix 1 for full details.

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	4-6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	7-9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad

		elements of the question.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • significance of determinant • e-cigarettes habit forming • tobacco cigarettes narrowly defined • proportion of income spent on tobacco cigarettes is rising • becoming closer substitutes • tobacco addiction waning as lost glamour and health warnings, e-cigarettes nicotine addiction. • longer term response to rising tobacco prices	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evaluative comments supported by chains of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

Question Number	Indicative content	Mark
6(f)	**Knowledge 4, Application 4, Analysis 6** Functions of the price mechanism to allocate resources: • rationing • incentive • signalling Market diagrams for tobacco and e-cigarettes, making use of supply and demand analysis. * Consumers with knowledge of the potential harm of cigarette smoking may quit smoking. * Smokers will maximise their private utility * Consumers will decide what is in their best interests * Reduction in smoking will happen automatically, without government intervention, as e-cigarettes become popular. Candidates may refer to Adam Smith Consumers free to pursue own self interest Profit incentive will mean firms will want their consumers to live long – so move out of tobacco and into e-cigarette market. Without government regulations e-cigarettes market will be easier for new firms to enter thus improving competition. Competition between e-cigarette manufacturers to maximise profits will drive health improvements and lower costs making them more price competitive. Candidates may refer to Friedrich Hayek Resource allocation from tobacco to e-cigarettes will be brought about by market forces, which will be far superior to any state planning system. Individuals do not have perfect information on cigarettes but have the best knowledge of their own situation. The price mechanism acts as a communication network, markets are self-correcting. Government lacks sufficient information about everything happening in the cigarettes market to be able to make informed decisions.	**(14)**

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6 (f) continued	**Evaluation 6** Failings of the price mechanism • Information gaps • Asymmetric information • Externalities • Peer pressure ignores utility • Habit forming distorts utility Possible different disadvantages or approaches : * While consumers may maximise their private utility MSC > MSB, with explanation. e.g. passive smoking/health care costs * Without government intervention the oligopolistic/monopolistic power of cigarette firms, in the form of advertising and propaganda, will go unchecked Candidates may refer to Karl Marx Consumers exploited in past by misinformation on tobacco and due to being addictive they become dependent. Competition and the need to profit maximise will mean firms cut costs risking consumers health and increase prices thus reducing consumer surplus. Nature of free market is for powerful monopolies to emerge that can further exploit consumers.	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Question Number	Indicative content	Mark
6 (g)	**Knowledge 4, Application 4, Analysis 6** Positive/negative effects of government intervention on tobacco cigarettes and or e-cigarettes with reference to market failure and using diagrams in various contexts: • Indirect taxation (ad valorem and specific) • Subsidies for tobacco replacements • Minimum cigarette price • Provision of information e.g. public health campaign • Regulation e.g. banning smoking in public places or advertising. • Direct provision – nicotine patches and e-cigarettes on NHS prescription Diagrams may be used to illustrate the above.	**(14)**

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Level 1	1–3	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	7–10	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	11–14	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(g) continued	**Evaluation 6** Negative or unsuccessful impact of the intervention methods. Understanding of government failure as intervention that results in a net welfare loss – tobacco cigarette tax revenue exceeding tobacco related NHS expenditure. Causes of government failure: • Distortion of price signals – harm reduction instead of prevention, consuming e-cigarettes rather than quitting • Unintended consequences – e-cigarettes draw in new users acting as a gateway to smoking; regulating e-cigarettes protect tobacco from competition; tobacco smuggling • Excessive administrative costs – slow down e-cigarette innovation • Information gaps – little research on long term effects of e-cigarettes • Ineffective as PED <1; diminishing returns of tax and regulations. Price inelastic demand diagram. Other evaluation approaches include: • Consideration of the extent of government intervention e.g. could it be more regulated • Free market approach might be more effective • Depends on the country being considered • Short run and long run	**(6)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question, leading to a substantiated judgement.

Appendix 1

Question 6e directed candidates to "Assess" for 15 marks. In order to be in line with the support materials for this specification, this question should instead have directed candidates to "Discuss" for 15 marks. In order to ensure that all candidates received the fairest possible outcome, examiners were briefed on a levels-based marking structure for both command words. The body of the mark scheme includes the levels structure for the "Assess" command word as written in the paper. The levels structure that examiners considered for the "Disucss" command word is included below.

Question Number	Indicative content	Mark
6(e)	**Knowledge 3, Application 3, Analysis 3** • Identification of determinants of price elasticity of demand • Application – PED tobacco cigarettes -0.35; PED e-cigarettes -1.9. Reasons why tobacco cigarettes being relatively price-inelastic, e-cigarettes relatively price-elastic e.g.: • habitual consumption • tobacco broadly defined • proportion of income spent on tobacco cigarettes lower than switching cost of buying reusable e-cigarette kit • number of close substitutes • tobacco addictive necessity, e-cigarettes luxury (not yet addicted to). NB to access Level 3 candidates need to consider tobacco and e cigarettes.	**(9)**

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Level 2	4–6	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but

		the answer may lack balance.
Level 3	7–9	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
6(e) continued	**Evaluation 6** • significance of determinant • e-cigarettes habit forming • tobacco cigarettes narrowly defined • proportion of income spent on tobacco cigarettes is rising • becoming closer substitutes • tobacco addiction waning as lost glamour and health warnings, e-cigarettes nicotine addiction. • longer term response to rising tobacco prices	**(6)**

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Level 2	3–4	Evidence of evaluation of alternative approaches which is unbalanced. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	5–6	Evaluative comments supported by relevant chain of reasoning and appropriate reference to context. Evaluation is balanced and considers the broad elements of the question.

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