Version 1

General Certificate of Education (A-level)
January 2013

Economics ECON1

(Specification 2140)

Unit 1: Markets and Market Failure

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner 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 examiners 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 examiner understands and applies it in the same correct way. As preparation for standardisation each examiner 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, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal 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.

Further copies of this Mark Scheme are available from: aqa.org.uk

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AQA Advanced Subsidiary Economics

January 2013 **ECON1/1**

Section A: Objective Test (ECON1/1)

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

Key List

1.	**B**	**9.**	**C**	**17.**	**A**
2.	**A**	**10.**	**B**	**18.**	**A**
3.	**B**	**11.**	**B**	**19.**	**A**
4.	**B**	**12.**	**A**	**20.**	**D**
5.	**A**	**13.**	**D**	**21.**	**B**
6.	**D**	**14.**	**B**	**22.**	**C**
7.	**D**	**15.**	**B**	**23.**	**C**
8.	**A**	**16.**	**D**	**24.**	**B**
				25.	**A**

* Option A was also accepted as a correct response for Question 11

Advanced Subsidiary Economics

January 2013 **ECON1/2**

Mark Scheme

Section B: Data Response

General Instructions

Marks awarded to students should be in accordance with the following mark scheme and examiners should be prepared to use the full range of marks available. The mark scheme for most questions is flexible, permitting the student to score full marks in a variety of ways. Where the student's response to a question is such that the mark scheme permits full marks to be awarded, full marks **MUST** be given. A perfect answer is not necessarily required for full marks. But conversely, if the student's answer does not deserve credit, then no marks should be given.

Occasionally, a student may respond to a question in a reasonable way, but the answer may not have been anticipated when the mark scheme was devised. In this situation, **OR WHENEVER YOU HAVE ANY DOUBT ABOUT THE INTERPRETATION OF THE MARK SCHEME**, you must in the first instance telephone your team leader to discuss how to proceed.

(i) **An issue based approach.** The mark scheme for questions **01**, **02**, **03**, **05**, **06** and **07** of the data response questions adopts this approach. The mark scheme lists the marks that can be awarded for particular issues (and associated development) that the student might include in the answer.

(ii) **A levels approach.** This approach is used for marking questions **04** and **08** of the data response questions. The Levels of Response Mark Scheme on the next page identifies five levels representing differences in the quality of work. A range of marks is allocated at each level. First decide the level into which an answer falls. The level chosen should be the one which **best fits** the answer provided by the student. It is **not** intended that the answer should satisfy every statement in the level description. Then think in terms of awarding the mid-point mark which has been identified for that level (eg 13 marks for Level 3). Move up and down from this notional mark by considering the extent to which the answer meets the level description overall. Strength in one skill can outweigh weakness in another. When using the Levels Mark Scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is given after the levels descriptions. The question-specific mark scheme summarises the information which could be used to answer the question, but without attaching marks to particular issues.

LEVELS OF RESPONSE MARK SCHEME: QUESTIONS 04 AND 08 ONLY

AS **LEVELS OF RESPONSE**	**AO1** **KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology**	**AO2** **APPLICATION of theories, concepts and terminology**	**AO3** **ANALYSIS of economic problems and issues**	**AO4** **EVALUATION of economic arguments and evidence, making informed judgements**
Level 5 22-25 marks (mid-point 24) **Good analysis and good evaluation**	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement
Level 4 17-21 marks (mid-point 19) **Good analysis but limited evaluation** **OR** **Reasonable analysis and reasonable evaluation**	Good throughout the answer with few errors and weaknesses Good throughout much of the answer with few errors and weaknesses	Good application to issues Good use of data to support answer Some good application to issues. Some good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning Largely relevant and well organised with reasonable logic and coherence	Limited but showing some appreciation of alternative points of view Reasonable, showing an appreciation of alternative points of view
Level 3 10-16 marks (mid-point 13) **Reasonable answer, including some correct analysis but very limited evaluation**	Satisfactory but some weaknesses shown	Reasonable application to issues Reasonable use of data to support answer	Reasonably clear but may not be fully developed and is perhaps confused in places with a few errors present	Superficial, perhaps with some attempt to consider both sides of the issue(s)
Level 2 4-9 marks (mid-point 7) **Weak with some understanding**	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis
Level 1 0-3 marks (mid-point 2) **Very weak**	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

THE KEY TO BE USED WHEN USING THE 'LEVELS' MARKING SCHEME

D Where a particular economic term is correctly **DEFINED** in order to help the student to answer the question properly.

I Where a relevant **ISSUE** is raised by the student.

K Where the student demonstrates **KNOWLEDGE** of recent developments or features of the economy which help enhance the student's response to the question. This should also be used where the student quotes relevant examples.

Ap Where the student demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.

An Where the student demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.

E Where the student **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

Quality of Written Communication (QWC) will be assessed in Questions 04 and 08 only.

Students will be assessed according to their ability to:

- ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear
- select and use a form and style of writing appropriate to purpose and complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

No specific marks are awarded for QWC.

However, examiners should take into account QWC when determining the mark to be awarded for an answer. This means an answer could be taken either up (for exceptional QWC) or down (for very poor QWC) by 1 mark (and no more).

EITHER

Context 1 **Total for this Context: 50 marks**

01 Define the term 'positive cross elasticity of demand' (**Extract B**, line 9). *(5 marks)*

For an acceptable definition such as: • Positive cross elasticity of demand (CED) is a measure of the percentage increase (or decrease) in the quantity demanded of one good resulting from a percentage increase (or decrease) in the price of another. • CED measures the extent to which a change in the price of one product affects the demand for a different product. It is positive when the rise/fall in the price of the first product leads to a rise/fall in the quantity demanded of the other product. • CED equals the proportionate change in the demand for good A divided by the proportionate change in the price of good B. It is positive when the two products are substitutes. • CED = $\frac{\%\text{ change in quantity demanded of good A}}{\%\text{ change in price of good B}}$ When the change in quantity and price are both positive or are both negative.	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term **positive cross elasticity of demand** even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example, as follows:

Accurate definition of CED but doesn't explain what is meant by a *positive* CED.	**3 marks**
For correctly quoting the formula for CED but doesn't explain what is meant by a *positive* CED.	**3 marks**
For stating that the CED is positive if the two products are substitutes.	**2 marks**
For drawing an accurately labelled diagram to illustrate positive CED, eg with Price of Good A on the vertical axis and Quantity of Good B on the horizontal axis.	**2 marks**
For identifying a relationship between a change in the price of one good and a change in demand of another good eg no reference to percentage or to the "extent"	**2 marks**
For providing a reasonable example of two products that are likely to have a positive CED, eg train journeys and bus journeys (only credit one example).	**1 mark**
For quoting the formula upside down, eg CED equals the % change in the price of good B divided by the % change in the quantity demanded of good A.	**0 marks**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 01: 5 MARKS

02 Using **Extract A**, identify **two** significant points of comparison, over the period shown, between those cars in Great Britain that use petrol and those that use diesel. *(8 marks)*

Award up to 4 marks each for <u>each</u> significant point made.

Identifies a significant point of comparison. Makes accurate use of the data to support the comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the comparison identified. However, 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.	**3 marks**
Identifies a significant point of comparison. No correct use of data to support the comparison identified.	**2 marks**
Identifies a significant feature of one data series but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a student identifies more than 2 valid points of comparison, reward the best two.

Valid points include:

- the number of cars using petrol was lower at the end of the period than at the beginning whereas the number of cars using diesel was higher at the end of the period than at the beginning (from 21 233 000 to 19 548 000 for petrol and from 3 153 000 to 8 763 000 for diesel)

OR

- the difference between the number of cars using petrol and the number of cars using diesel was lower at the end of the period than at the beginning (from 18 080 000 to 10 785 000)
- the peak for the number of cars using petrol was in 2004 at 21 977 000 whereas the peak for the number of cars using diesel was in 2011 at 8 763 000
- the lowest number of cars using petrol was in 2011 at 19 548 000 whereas the lowest number of cars using diesel was in 2000 at 3 153 000
- the number of cars using petrol was higher than the number of cars using diesel throughout the period, eg in 2011, 19 548 000 cars used petrol whereas 8 763 000 cars used diesel
- the number of cars using diesel increased each year throughout the period whereas the number of cars using petrol fluctuated, eg the number of cars using petrol increased from 21 805 000 in 2003 to 21 977 000 in 2004 before falling to 21 876 000 in 2005 whereas the number of cars using diesel increased from 4 400 000 in 2003 to 5 011 000 in 2004 and increased again to 5 596 000 in 2005
- the range for cars using diesel is greater than the range of cars using petrol; diesel has a range of 5 610 000 whereas the range for petrol is 2 429 000

The table below shows the percentages of cars using different fuel types over the period shown. It is not expected that students will make this type of calculation before quoting figures to support their comparisons, but some might. If they do, please check the accuracy of the figures quoted by using the table below.

Year	Petrol	Diesel	Other fuels*
2000	87.0%	12.9%	0.1%
2001	86.1%	13.8%	0.1%
2002	84.7%	15.2%	0.1%
2003	83.1%	16.8%	0.1%
2004	81.3%	18.5%	0.2%
2005	79.5%	20.3%	0.2%
2006	77.8%	22.0%	0.2%
2007	75.9%	23.8%	0.3%
2008	74.2%	25.4%	0.3%
2009	72.5%	27.1%	0.4%
2010	70.7%	28.9%	0.5%
2011	68.7%	30.8%	0.5%

A margin of +/- 1% is permissible, if percentage figures are quoted

MAXIMUM FOR PART 02: 8 MARKS

taxes

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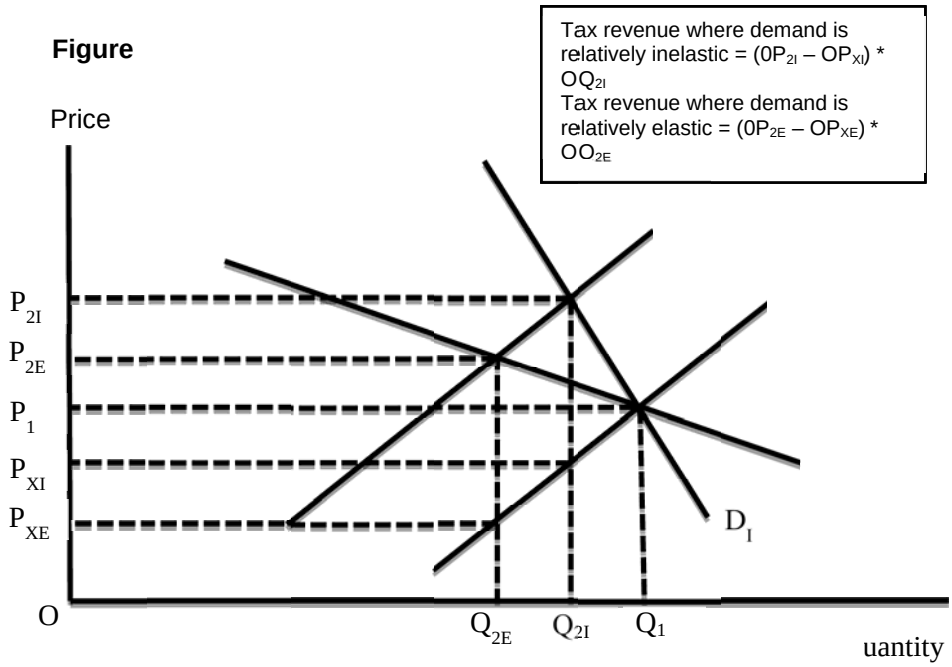
arks)

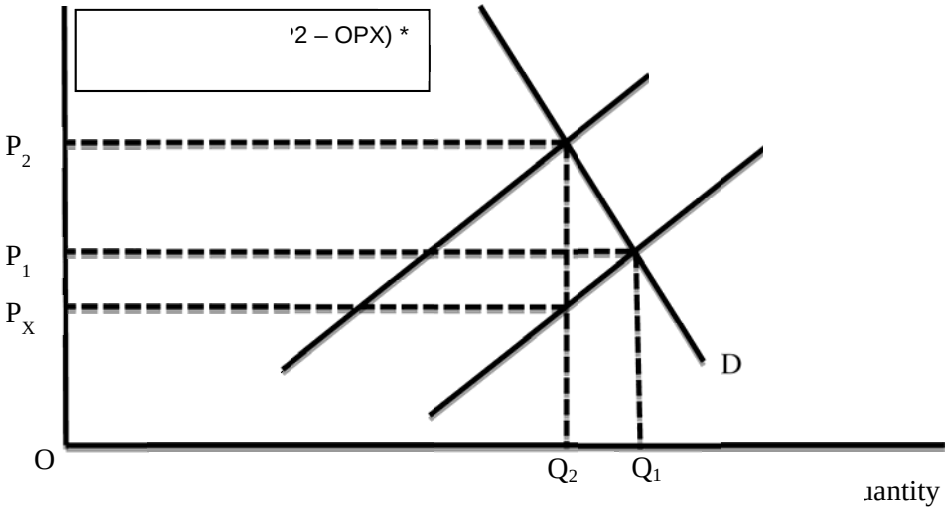
The anticipated response for the diagram

To illustrate the effect of an increase in the tax on fuel, students should shift the supply curve to the left. The majority of students are likely to include two supply curves on the diagram but, given that tax is already levied on fuel, some might include 3 supply curves. Both approaches are acceptable. Some students might also draw 2 separate diagrams, ie one where demand is relatively elastic and another where demand is relatively inelastic (accept the slope of the curve as illustrating the relative elasticity of demand). However, if 2 diagrams are drawn reward the better diagram.

Figure



Figure



Examples of 2 acceptable diagrams are shown above. The first diagram illustrates that the more price inelastic the demand for fuel the larger the increase in tax revenue. The second diagram just illustrates the tax revenue and does not consider the impact of PED on the revenue raised. In this case, it is expected that the student will consider this as part of the discussion.

Neither diagram takes into account the original tax revenue. It is not expected that many students will draw a diagram that takes into account the original tax revenue but any such diagrams should also be rewarded as indicated below.

For a diagram which just illustrates a demand curve, students can earn up to 2 marks for labelling the axes, the demand curve and the lines drawn, and labels such as P_1Q_1 and lines drawn for the higher price and lower quantity such as P_2Q_2.

Breakdown of the marks for the diagram	
For labelling both axes, the original demand and supply curves, lines drawn from the initial equilibrium and labels such as P_1 and Q_1.	**1 mark**
An accurately-drawn shift of the supply curve to the left.	**1 mark**
Lines drawn from the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Showing the amount of tax revenue.	**1 mark**
Any other relevant feature of the diagram, eg the amount of tax per unit (ie the vertical distance between the supply curves), showing 2 demand curves with different PEDs, showing the amount of tax revenue for both relatively elastic and relatively inelastic demand.	**1 mark per feature up to a maximum of 2 marks**

Note:

(i) To earn the first mark in the grid above, all three listed tasks must have been completed correctly.

(ii) For the task of labelling the axes, price and quantity, P and Q (but not QD or QS), a monetary value such as a £ sign on the vertical axis are all acceptable. Price level is not acceptable.

Up to a MAXIMUM of 4 marks for diagram or diagrams

The anticipated written response

Define demand, supply, tax, tax revenue, price elasticity of demand (PED), inelastic PED, elastic PED, or any other *relevant* term.	**Up to 1 mark per definition Maximum of 2 marks**
For the explanation, award 2 marks for each logical link in the chain of reasoning, for example:	
The demand for fuel is derived from the demand for road travel **(2 marks).** Demand is likely to be price inelastic **(2 marks)**. The tax will lead to a rise in the price of fuel **(2 marks)** the more inelastic the PED the smaller the fall (or percentage fall) in sales **(2 marks)** and hence the greater the increase in tax revenue **(2 marks)**. In the short run, since fuel/road travel has few substitutes **(2 marks)** demand is likely to be inelastic and so tax revenue is likely to rise **(2 marks)** but with development of electrified and more fuel-efficient cars demand will become more elastic **(2 marks)**.	**Up to 10 marks**
If the percentage increase in price is greater/less than the percentage decrease in sales **(2 marks)**, total revenue from selling fuel will increase/decrease **(2 marks)** if demand is inelastic tax revenue will increase **(2 marks)** but even if demand is elastic and the revenue from selling fuel falls **(2 marks)** this may be offset by the higher tax rate **(2 marks)**. Alternatively as the price of fuel increases demand for electrified and fuel-efficient cars is likely to increase **(2 marks)** further reducing tax revenue **(2 marks)**.	**Up to 10 marks**
An explanation of the impact on tax revenue that **USES** the first diagram above (or when 2 diagrams are used): When demand is relatively price inelastic the increase in the tax on fuel will raise the price from P_1 to P_{2I} whereas if demand is relatively price elastic the price will only rise from P_1 to P_{2E} **(2 marks)** the fall in sales is smaller when demand is relatively inelastic **(2 marks)** as can be seen from the diagram the tax revenue is larger when demand is inelastic $(0P_{2I} – OP_{XI}) \times OQ_{2I}$ than when it is elastic $(0P_{2E} – OP_{XE}) \times OQ_{2E}$ **(2 marks)**.	**Up to 6 marks**

Note: (i) Only reward a particular link in the chain of reasoning ONCE, eg that the more inelastic the demand the greater the increase in tax revenue.

(i) Do NOT award marks for simply describing what the diagram shows.

Up to a MAXIMUM of 10 marks for a written explanation

Up to a MAXIMUM of 8 marks for the whole question can be awarded if the student does not refer to total revenue/tax revenue that the government receives.

MAXIMUM FOR PART 03: 12 MARKS

04 **Extract B** (lines 6 and 7) states that 'the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus'.

Using the data and your economic knowledge, assess which is the best policy the UK government could adopt to reduce congestion on the roads. *(25 marks)*

Extracts A, **B** and **C** provide a number of prompts for students and it is expected that they will make use of this material when developing their answers. It is anticipated that good answers will analyse the likely impact of at least two and probably three, or possibly more, methods that the UK Government might use to try to reduce congestion and attempt to assess the pros and cons of each method. Although not essential, it is likely that the best answers will also consider the relative merits of the different policies and conclude by including a supported final judgement that indicates which method(s) they consider is/are likely to be most effective (suitable) in reducing congestion.

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of **21 marks** may be awarded if there is no explicit use of the data, eg through the use of quotes or referring explicitly to the extracts.

A maximum of **16 marks** (top level 3) may be awarded if students only analyse and evaluate **one** policy.

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

Issues and areas for discussion (it is expected that students will only cover some of these issues in the time available):

Introduction	• roads as a scarce resource • the price of using roads in the UK is not determined by the market but is influenced by decisions made by government, eg the tax on fuel • where the price is too low there will be excess demand for roads • congestion as a negative externality • the costs of congestion on other road users and non-road users • identification of various policies that a government might adopt to reduce congestion, eg increase taxes on cars/fuel, road pricing (various forms of road pricing might be mentioned), subsidising public transport, improving and investing in public transport.
Developing the response to the question: **Application**	Credit for application can be given for relevant application of economic theory, use of the data and the student's own knowledge of relevant aspects of transport. Examples might include: • use of the statistical data in **Extract A**, that shows a substantial increase in the total number of cars licensed in Great Britain • drawing on the prompts in **Extract B** regarding charging drivers more (lines 7 and 8) and cross elasticity of demand (line 9) • use of the prompts in **Extract B** regarding bus travel (paragraph 3), and rail transport (paragraph 4) • drawing on the prompts in **Extract C** regarding fuel taxes (lines 2 – 7) • drawing on the prompts in **Extract C** regarding road pricing (paragraph 2) • drawing on the prompts in **Extract C** regarding the costs of collecting fuel duties and of operating a system of road pricing (lines 16 to 19) • drawing on the prompts in **Extract C** regarding the fairness of taxing fuel and road pricing (lines 20 – 22) • use of own knowledge of other forms of road pricing, eg the London Congestion Charge, toll roads in the UK or abroad • use of own knowledge of the effectiveness of other approaches to reducing congestion in the UK or abroad, eg car sharing. Some examples of relevant economic concepts and principles that might be applied to this question include: the functions of price, elasticity, private and social costs, market failure and government failure.
Developing the response to the question: **Analysis**	• developing a chain of reasoning to explain why congestion is an economic problem • use of relevant diagrams to support the explanation above • developing a chain of reasoning to explain how increasing taxes on fuel will help to reduce congestion • developing a chain of reasoning to explain how a system of road pricing will help to reduce congestion (various forms of road pricing might be analysed) • explaining the importance of PED and CED in relation to the effectiveness of increasing taxes on fuel and road pricing • analysis of how subsidising, for example bus and rail transport, will help to reduce congestion • use of a relevant diagram to support the previous bullet point • developing a chain of reasoning to explain how investing in public transport and/or improving the quality of the service provided will help to reduce congestion • analysis of the evidence in the extracts.

Evaluation	• the pros and cons of increasing taxes on fuel • the pros and cons of building more roads to reduce congestion • the pros and cons of road pricing • the pros and cons of different forms of road pricing • the pros and cons of subsidising travel by bus or rail • the pros and cons of investing in public transport and/or improving the quality of the service provided • possible unintended consequences of the different methods, eg the impact of road pricing on local business in towns and cities • the likelihood of government failure, eg inadequate information means that the government is likely to set a price for using roads (or the fuel duty) which is too high or too low, government policy is likely to be swayed by public opinion and electoral success • equity arguments, eg the impact of the different policies on: the poorest members of society, the road user versus the taxpayer, town versus country dwellers, commuters • the comparative costs to the taxpayer/society of implementing and operating the different methods, eg the cost of subsidising travel by bus, the cost of improving the rail network, the cost of investing in the technology needed to set up a system of road pricing and operating such a system • use of the data in the extracts to help to assess the different methods, eg **Extract C** paragraph 1 which points out the likelihood of a long-term decline in fuel duties, **Extract B** (lines 20 – 22) which indicates that it might be impractical to try to achieve a significant reduction in congestion by just relying on a switch to rail • consider the view that the only effective way to reduce congestion is likely to involve a combination of policies • an overall assessment of the relative merits of the different methods • a final judgement that considers which method(s) are likely to be most appropriate.

Examiners should note that credit can be given for basic evaluation if a student simply identifies some of the arguments for and against the different methods that might be employed to reduce congestion. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by students who are able to support arguments both for and against the different methods of reducing congestion by the use of evidence and/or sound economic analysis.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 04: 25 MARKS

OR

Context 2 **Total for this question: 50 marks**

05	Define the term 'marginal private costs' (**Extract E**, line 9).	*(5 marks)*

For an acceptable definition, **such as**: • the cost borne by the party/parties involved in the activity/transaction due to the consumption (or production) of an extra unit • the change in cost borne by the consumer (or firm) due to an increase/decrease in the consumption (or production) of one more/less unit of a good/service • stating that marginal private cost is marginal social cost minus marginal external cost (externalities).	**5 marks**
Full marks should be awarded to a student who demonstrates a clear understanding of the term **marginal private cost** even if the definition is not exactly the same as the acceptable examples quoted above.	

If the definition is inaccurate or incomplete, award a maximum of 4 marks which may be broken down, for example, as follows

Definition that states that private cost = social cost minus external cost	**3 marks**
Definition of private cost but no correct definition of marginal.	**3 marks**
Definition of marginal but no correct definition of private cost.	**3 marks**
For an accurate diagram correctly illustrating a marginal private cost curve (one mark for labelling the axes and one for the curve).	**2 marks**
Definition of cost.	**1 mark**
For an example of a private cost (only credit one example).	**1 mark**

Maximum of 4 marks if definition is incomplete or inaccurate

MAXIMUM FOR PART 05: 5 MARKS

06	Using **Extract D**, identify **two** significant points of comparison, over the period shown, between the annual percentage changes in the shop prices of fruit and sugars in the UK. *(8 marks)*

Award up to 4 marks each for each significant point made.

Identifies a significant point of comparison. Makes accurate use of the data to support the point of comparison identified. Unit of measurement given accurately.	**4 marks**
Identifies a significant point of comparison. Makes use of the data to support the comparison identified. However, 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.	**3 marks**
Identifies a significant point of comparison. No correct use of data to support the comparison identified.	**2 marks**
Identifies a significant feature of the data series but no comparison is made. Makes use of the data to support the feature identified. Unit of measurement given accurately.	**1 mark**

If a student identifies more than 2 valid points of comparison, reward the best two.

The valid points include:

- the annual percentage change of the prices of both fruit and sugars was higher at the end of the period than the beginning (from 0.4% to 3.7% for fruit and from 0.7% to 7.5% for sugars)
- the peak for annual percentage change of fruit prices was in 2001 at 8.7% whereas the peak for sugars was in 2011 at 7.5%
- the lowest annual percentage change of fruit prices was in 2004 at -2.8% whereas the lowest for sugars was in 2000 at 0.7%
- the only year when the prices of either item fell was in 2004 when fruit prices fell by 2.8% (no comparative data is needed for sugars for this point)
- the annual price changes for fruit were more volatile/had a greater range (-2.8% in 2004 to 8.7% in 2001, ie 11.5%) than sugars (0.7% in 2000 to 7.5% in 2011, ie 6.8%)
- the greatest difference in the annual percentage change in prices was in 2001 when fruit prices increased by 8.7% but sugars only rose by 1.6%
- in most years, the annual percentage change in sugars prices was higher than for fruit, eg in 2003, fruit prices increased by 1.2% but sugars prices rose by 3.8% OR the annual percentage change in fruit prices was only higher than for sugars in 2001 (8.7% compared to 1.6% respectively) and 2010 (7.9% compared to 5.6%)
- the annual percentage changes in both fruit and sugar were generally higher towards the end of the period/2008 onwards, eg only in 2001 (8.7%), was the growth of fruit prices higher than the years from 2008 onwards (6.7% in 2008 to 3.7% in 2011), whilst the four highest growth rates for sugars' prices all occurred in the period 2008 to 2011 (lowest of 5.6% in 2010). Accept any reasonable figures in comparison for this point.

Students who confuse levels of prices with annual percentage changes in prices should be awarded **2 marks** per comparison providing they identify a significant comparison **and make** accurate use of statistics.

Allow a margin of error of +/- 0.4% when judging the accuracy of statistics.

MAXIMUM FOR PART 06: 8 MARKS

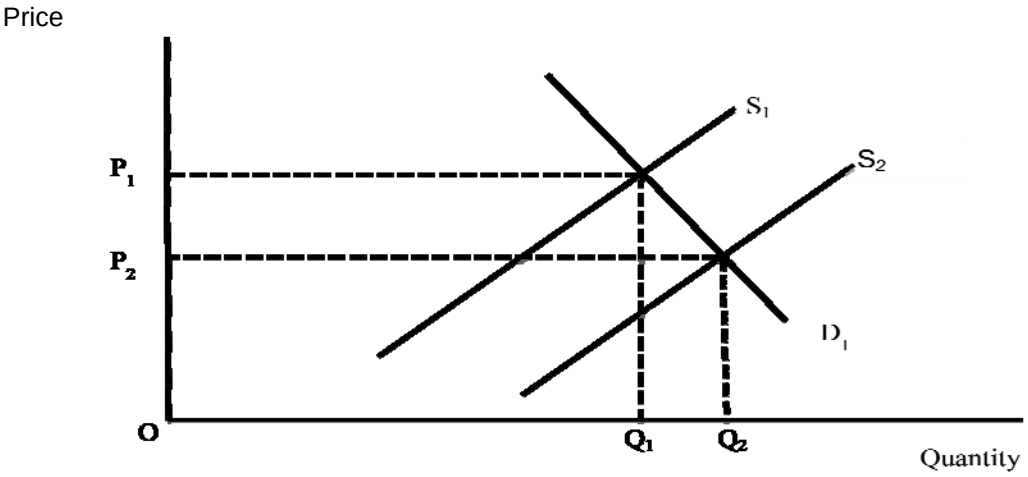
07 **Extract E** (lines 12 to 14) states that in 'the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables'.

With the help of an appropriate diagram, explain how subsidies on ingredients such as corn, soya beans and rice will affect the market for processed food.

(12 marks)

The anticipated response for the diagram

Given that the subsidies on corn, soya beans and rice will decrease their price, this will in turn reduce the cost of the ingredients for processed food. Consequently, the correct diagram involves a shift to the right of the supply curve. Do not penalise students who draw a diagram showing the impact of a subsidy on the markets for corn, soya beans and/or rice since this diagram could alternatively be used to indicate how the markets for processed food will be affected. Such a diagram also requires a rightward shift of the supply curve.



To illustrate the effect of a subsidy, it would also be acceptable to draw an MPC/MPB diagram, with MPC shifting to the right, with or without the inclusion of MSC and/or MSB curves.

Breakdown of the marks for the diagram.

For labelling both axes, the original demand and supply curves, lines drawn from the initial equilibrium and labels such as P_1 and Q_1.	**1 mark only**
An accurately-drawn shift of the supply curve to the right.	**2 marks**
Lines drawn from the new equilibrium and labels such as P_2 and Q_2.	**1 mark**
Any other relevant feature of the diagram, eg the excess supply at the original price (or the extent of the subsidy **IF** the diagram clearly relates to corn, soya beans and/or rice).	**1 mark per feature up to a maximum of 2 marks**

Note:

(i) To earn the first mark in the grid above, all three listed tasks must have been completed correctly.

(ii) For the task of labelling the axes, price and quantity, P and Q (but not Q_D or Q_S), a monetary value such as a £ sign on the vertical axis are all acceptable. Price level is not acceptable.

Up to a MAXIMUM of 4 marks for the diagram

The anticipated written response	
Define demand, supply, subsidy, market, derived demand or any other *relevant* term.	**1 mark per definition** **Up to a maximum of 2 marks**

For the explanation, award 2 marks for each logical link in the chain of reasoning, for example:	
The demand for ingredients/corn/soya beans/rice is derived from the demand for processed food **(2 marks)**. A subsidy will reduce the price of corn/soya beans/rice/ingredients **(2 marks)** reduce the cost of ingredients of processed food **(2 marks)**, which will increase the profits of producers **(2 marks)** and hence the supply of processed food **(2 marks)**. *This will reduce the price **(2 marks)** and increase the quantity sold **(2 marks)**.*	**Up to 10 marks**
An explanation relating to the adjustment process, ie the increase in supply of processed food causing excess supply at the original price **(2 marks)** and an extension along the demand curve **(2 marks).** *This will reduce the price* **(2 marks)** *and increase the quantity sold* **(2 marks)**.	**Up to 4 marks**
An explanation relating to the impact of price elasticity of demand/supply on the price and quantity of processed food.	**Up to 4 marks**

Note: (i) Only reward a particular link in the chain of reasoning ONCE, eg that the price of processed food will fall and that the quantity sold will rise.

(ii) Do NOT award marks for simply describing what the diagram shows, eg allow 'supply increases' but not 'supply shifts to the right'.

Up to a MAXIMUM of 10 marks for the written explanation.

Up to a MAXIMUM of 8 marks for the whole question can be awarded if the student does not link the markets for corn/soya beans/rice to the market for processed foods.

MAXIMUM FOR PART 07: 12 MARKS

08 **Extract F** (lines 3 and 4) states that 'providing nutritional information and promoting healthy eating are not enough – the government needs to do more'.

Using the data and your economic knowledge, assess the case **for** and **against** government intervention in the markets for food and drink to encourage a healthy diet. *(25 marks)*

Extracts D, **E** and **F** provide a number of prompts for students and it is expected that they will make use of this material when developing their answers. It is anticipated that good answers will consider merit and/or demerit good arguments as well as the pros and cons of alternative methods of intervention. Although much of the data relates to the UK, the wording of the question enables students to consider the appropriateness of different types and amounts of intervention to different countries, but this is not required for maximum marks. Some students may decide to discuss excess consumption of alcohol and whilst such a response has some merit, answers which focus mainly on this aspect are unlikely to warrant more than mid–Level 3.

For this question, an answer should be limited to a maximum of 13 marks if there is no evidence of evaluation.

A maximum of **21 marks** may be awarded if there is no explicit use of the data, eg through the use of quotes or referring explicitly to the extracts.

Level 5	**Good analysis <u>and</u> good evaluation**	**22 to 25 marks** *Mid-Point 24 marks*
Level 4	**Good analysis <u>but</u> limited evaluation** **OR** **Reasonable analysis <u>and</u> reasonable evaluation**	**17 to 21 marks** *Mid-Point 19 marks*
Level 3	**Reasonable including some correct analysis <u>but</u> very limited evaluation**	**10 to 16 marks** *Mid-Point 13 marks*
Level 2	**Weak with some understanding**	**4 to 9 marks** *Mid-Point 7 marks*
Level 1	**Very weak**	**0 to 3 marks** *Mid-Point 2 marks*

Issues and areas for discussion (it is expected that students will only cover some of these issues in the time available):

Introduction	• identifying the extent of, and problems associated with, obesity • outlining methods of government intervention in the markets for food and drink.
Developing the response to the question: (Application)	Credit for application can be given for relevant application of economic theory, use of the data and the student's own knowledge of relevant aspects of the markets for food and drink. Examples might include: • use of the changes in price of fruit and sugars in **Extract D**, showing the greater growth in sugar prices since 2000 but the increased growth in both in the last four years • drawing on the prompts in **Extract E** regarding the extent of obesity (lines 1 – 4) and the problems it causes for health and production (lines 5 – 8) • use of the prompts in **Extract E** regarding the causes of poor diet, including the agricultural policy of the US and EU (lines 12 – 15)

	• drawing on the prompts in **Extract E** regarding the contribution played by lack of exercise (lines 16 – 19) • drawing on the prompt in **Extract F** regarding the claim that providing nutritional information and promoting of healthy eating is not enough (lines 3 – 4) • use of **Extract F** to identify alternative methods of government intervention in the markets for food and drink to encourage healthy eating – a tax on unhealthy food and drinks, subsidies on fruit and vegetables, a ban on firms such as McDonald's and Coca-Cola sponsoring major sports events, head teachers writing to parents, firms persuading customers to eat more healthily or simply leaving the choice to consumers • use of own knowledge of, for example, campaigns and other methods to reduce the consumption of alcohol. Some examples of relevant economic concepts and principles that might be applied to this question include: functions of price, merit and demerit goods, externalities, market failure and government failure.
Developing the response to the question: **(Analysis)**	• developing a chain of reasoning to explain why healthy food and drink may be considered to be merit goods • developing a chain of reasoning to explain why unhealthy food and drink may be considered to be demerit goods • analysis of the consequences of 'leaving it to the market', eg rationing, incentive and signalling functions • analysis of the effects of alternative methods of government intervention, eg tax, subsidy, ban, advertising, etc. • analysis of the significance of elasticity – using the prompt in **Extract F** • the use of diagrams to illustrate merit and demerit goods plus alternative forms of intervention. (Strictly speaking the diagrams should relate to positive and negative externalities in consumption, however diagrams showing positive and negative externalities in production are acceptable) • developing a chain of reasoning to explain how and why government failure could result • analysis of the evidence in the extracts.
Evaluation	• the pros and cons of leaving it to the market • the advantages and disadvantages of alternative methods of intervention, both separately and in combination • equity versus efficiency arguments • the cost and opportunity cost of intervention • the practicalities of intervention and unintended consequences, eg the possible formation of a black market • other priorities of government, perhaps in different countries • the likelihood of government failure • an overall assessment of whether or not there should be government intervention in the markets for food and drink to encourage healthy eating.

A **MAXIMUM of 16 marks** (top of Level 3) can be awarded to a student who only considers the advantages and disadvantages of different types of government intervention, ie the case for and against intervention is not addressed.

Examiners should note that credit can be given for basic evaluation if a student simply identifies some of the arguments for and against government intervention in the markets for food and drink to encourage a healthy diet. Basic evaluation (and good analysis) would allow the answer to achieve low Level 4. Stronger evaluation is provided by students who are able to support arguments both for and against intervention by the use of evidence and/or sound economic analysis.

USE THE DETAILED LEVELS MARK SCHEME ON PAGES 4 & 5 FOR FURTHER CLARIFICATION

MAXIMUM FOR PART 08: 25 MARKS