



General Certificate of Education

Economics

ECN1: Markets and Market Failure

Mark Scheme

2007 examination - June series

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 meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting 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 candidates' 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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AQA Advanced Subsidiary Economics**June 2007****ECN1/1**

This component is an objective test for which the following list indicates the correct answers used in marking the candidates' responses.

KEY LIST

1.	A	6.	C	11.	B
2.	C	7.	C	12.	B
3.	B	8.	D	13.	B
4.	B	9.	D	14.	A
5.	C	10.	C	15.	B

Advanced Subsidiary Economics**June 2007****ECN1/2****Mark Scheme****General Instructions**

Marks awarded to candidates 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 candidate to score full marks in a variety of ways. Where the candidate'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 candidate's answer does not deserve credit, then no marks should be given.

Occasionally, a candidate 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.

Two approaches have been used in the construction of the mark scheme for the data response questions:

- (i) **An 'issue' based approach.** The mark scheme for parts (a) and (b) 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 candidate might include in the answer. Marks awarded for development should take into account the Quality of Written Communication used by candidates as indicated on page 6 of this mark scheme.
- (ii) **A 'levels' approach.** This approach is used for marking part (c) of the questions. The mark scheme summarises the information required to answer the question, but without attaching marks to particular issues. Marks should be awarded according to whether the answer displays the skills indicated by the five Mark Band Descriptors or "Levels of Skill" included in the mark scheme. The Mark Band Descriptors are set out on page 5. When using a 'levels' mark scheme the marker **must** identify where a particular skill is being demonstrated. The **key** to be used to identify the skill is also shown on page 6. The level chosen should be the one which **best fits** the answer provided by the candidate. It is **not** intended that the answer should satisfy every statement in the level description.

APPLYING THE 'LEVELS' MARK SCHEME

Levels of Response Mark Band Descriptors

In part (c) of the data response questions approximately half the marks are available to award to candidates who demonstrate that they can 'evaluate economic arguments and evidence, and make informed judgements'. It is not necessary that the candidate identifies a wide range of issues. As indicated below, the Quality of Written Communication used should be taken into account when awarding the marks.

Level 1

Few, if any, relevant issues are recognised. Economic concepts and principles are not adequately understood or applied to the question. No satisfactory analysis or evaluation. A poorly organised response which generally fails to answer the question. Descriptions and explanations lack clarity. Spelling, punctuation and grammar may be poor. There is little use of economic terminology.

0 to 3 marks

Mid-Point 2 marks

Level 2

One or more relevant issues are recognised. An attempt is made to use basic economic concepts to answer the question but the candidate's explanation may become confused. There may be some attempt to present alternative points of view but any attempt at evaluation is superficial. The answer is likely to be poorly organised and is unlikely to have a clear structure. The candidate demonstrates some ability to spell commonly used words and to follow the standard conventions of punctuation and grammar. Some use of economic terminology is made but this is not always applied appropriately.

4 to 6 marks

Mid-Point 5 marks

Level 3

Two or more relevant issues are recognised. The candidate has made a reasonable attempt to apply economic concepts and ideas. A satisfactory understanding of some basic economic concepts and theories is demonstrated. There is some attempt to present alternative points of view and to evaluate the issues, arguments and/or data. There is some logic and coherence in the organisation of the answer. The candidate is generally able to spell commonly used words and usually follows the standard conventions of punctuation and grammar. Some descriptions and explanations are easy to understand, but the answer may not be expressed clearly throughout. There is some evidence of the correct use of relevant economic terminology.

7 to 10 marks

Mid-Point 9 marks

Level 4

Two or more relevant issues are identified. Good understanding of some basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to help answer the question. An appreciation of alternative points of view is shown. Satisfactory use is made of evidence and/or theoretical analysis to evaluate the issues/arguments identified and to support conclusions. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are usually clearly expressed. Appropriate use is made of relevant economic terminology.

11 to 13 marks

Mid-Point 12 marks

Level 5

Three or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated throughout. The candidate is able to apply these concepts and models to help answer the question. Clear understanding of alternative points of view is shown. Good use is made of evidence and/or theoretical analysis to evaluate the issues/arguments identified and to support conclusions. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology.

14 to 15 marks

Mid-Point 15 marks

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 candidate to answer the question properly.
- I** Where a relevant **ISSUE** is raised by the candidate.
- K** Where the candidate demonstrates **KNOWLEDGE** of recent developments of features of the economy which help enhance the candidate's response to the question. This should also be used where the candidate quotes relevant examples.
- Ap** Where the candidate demonstrates the ability to **APPLY** knowledge and **CRITICAL UNDERSTANDING** to problems and issues.
- A** Where the candidate demonstrates the ability to **ANALYSE** the problem using appropriate economic ideas.
- E** Where the candidate **EVALUATES** and makes judgements about the significance of various issues and arguments.

QUALITY OF WRITTEN COMMUNICATION

The Mark Band Descriptors, which are used for assessing part (c) of the questions, incorporate statements which relate to the Quality of Written Communication used by the candidates.

However, it is also important to assess Quality of Written Communication **whenever** candidates produce answers using continuous prose. When applying an issue based mark scheme, examiners must take into account the following when deciding how many marks to award for development:

- (i) use of an appropriate form and style of writing to organise relevant information clearly and coherently;
- (ii) use of specialist vocabulary, where appropriate;
- (iii) legibility of handwriting;
- (iv) accuracy of spelling, punctuation and grammar.

EITHER

1

Total for this question: 25 marks

1(a) Using **Extract A**, compare the changes in the production of televisions (TVs) with the changes in the production of personal computers (PCs) in the UK during the period 1990 to 2004. *(4 marks)*

Award up to 2 marks each for each valid point made (one mark for identification and one mark for supporting reference(s) to the data). The valid points include:

- Production of PCs was higher throughout the period
- Production of PCs increased over the period while production of TV sets fell;
- Production of both PCs and TVs fluctuated over the period, but the fluctuations were less for TVs
- The absolute range between highest and lowest production was greatest for PCs.

A maximum of **1 mark** may be awarded if there is no comparison and a maximum of **2 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **2 marks**.

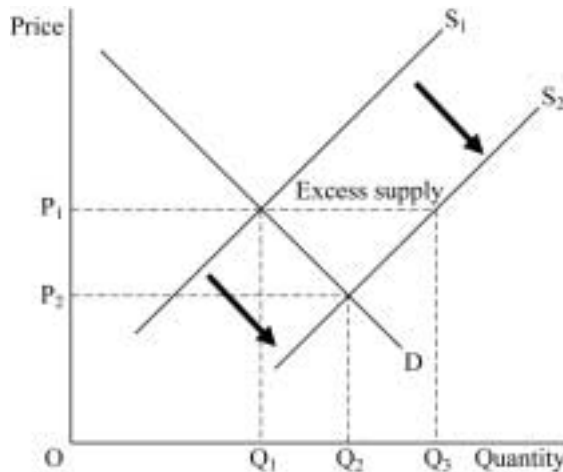
Award **3 marks** where there is evidence of an overview having been taken, even though parts of the answer give an impression of a trawl through the data.

MAXIMUM FOR PART (a) 4 MARKS

1(b) The prices of flat-screen TVs have fallen in recent years.

With the help of a supply and demand diagram and the information in **Extracts B and C**, explain why this has occurred. (6 marks)

Candidates may draw a diagram similar to the one below, illustrating a rightward shift of supply. However, some candidates may also include a second demand curve, located to the right of D_1 , but with the rightward shift of demand less than the rightward shift of supply.



For the diagram:

- drawing a supply and demand diagram, accurately labelled (eg P_1 and Q_1), showing an initial equilibrium price of flat-screen TV sets, and the quantity bought and sold.
- drawing a new supply curve to the right of the original supply curve
- labelling excess supply at the initial equilibrium price after the shift of supply
- showing a new equilibrium price below the initial equilibrium price
- drawing a new demand curve to the right of D_1 , but with the rightward shift of demand less than the rightward shift of supply

Award 1 mark for each of the above

Maximum of 4 marks for the diagram

For the written explanation:

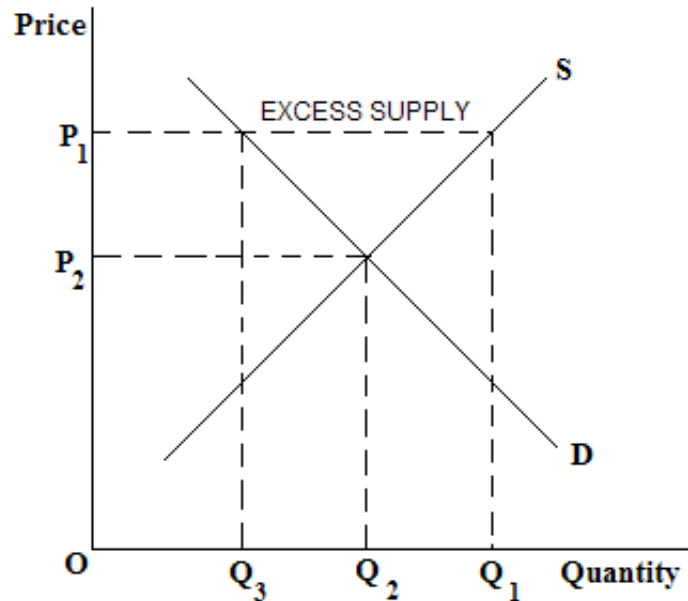
- explaining why the supply curve shifts rightward (eg the result of investment in new flat-screen production capacity in Asian and east European countries)
- explaining the adjustment to the new equilibrium at a lower price, in terms of eliminating excess supply at the previously higher equilibrium price
- explaining why the demand curve shifts rightward (eg the result of consumers substituting flat-screen sets in place of conventional, more bulky, sets)
- explaining that the rightward shift of supply must have been greater than the rightward shift of demand for the price of flat-screen TV sets to fall
- any other relevant point, e.g. production of flat-screen TV sets benefiting from economies of scale which has reduced average or unit costs of production; manufacturers initially over-estimating the demand for flat-screen sets

Award up to 3 marks for each of the above

Maximum of 4 marks for a written explanation

An alternative way of answering the question

Some candidates may base their answers on a diagram similar to the one below. They might argue that because of imperfect information, manufacturers and/or retailers of flat-screen TVs initially over-priced their products (at price P_1 in the diagram). This led to excess supply, which prompted a fall in price to the market-clearing price of P_2 .



For the diagram:

- drawing a supply and demand diagram, accurately labelled, showing an initial price set above the equilibrium or market-clearing price
- labelling excess supply at this price OR drawing a curve showing expected demand, located to the right of the market demand curve
- showing the equilibrium price below this price
- correctly labelling prices and quantities before and after the removal of excess supply

Award 1 mark for each of the above

Maximum of 4 marks for the diagram

For the written explanation:

- why the price was initially set too high
- the reason why there is excess supply at this price
- how the market adjusts to a new equilibrium at a lower price

Award up to 3 marks for each of the above

Maximum of 4 marks for a written explanation

Maximum of 3 marks for a diagram with no written explanation, or for a written explanation without a relevant diagram

Maximum of 4 marks if there is no reference to the data

11(c) The closure of factories may lead to market failures, such as those resulting from the immobility of labour, negative externalities, greater income inequality and uncompetitive markets.

Using the data and your economic knowledge, evaluate the case **for** and **against** the government subsidising firms producing TVs in the United Kingdom in order to prevent such market failures. (15 marks)

Very good answers could contain three main elements. These are: (i) application of theory to explain how the closure of factories may lead to market failure; (ii) explaining how government subsidies may help to prevent factory closures; and (iii) evaluation of the case for and the case against such subsidies, in the context of reducing a market failure or market failures.

The word 'such' is significant in both the preamble to the question and the question itself. The question contains a number of prompts with respect to microeconomic market failures. While candidates do not have to use these examples, they should discuss at least one market failure. Award credit for relevant discussion of market failures such as unemployment and a failure to achieve economic growth, but full marks can be achieved without such discussion.

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 7 marks**.

Examples of evaluation include: weighing up the extent to which a subsidy may reduce or eliminate a market failure; comparing the benefits subsidies may yield with costs such as the opportunity cost of the subsidy; and discussing the effect on resource allocation and/or misallocation.

Candidates should not be awarded **above Level 3** if evaluation does not go beyond the superficial. However, within this constraint there is scope to reward more implicit evaluation, ie where there is some evidence of judgements having been made by candidates as to what are relevant/irrelevant issues.

To gain **Levels 4 or 5 (11 or more marks)**, there needs to be more explicit evaluation, perhaps along the lines suggested above, and clear evidence of critical/informed comment on issues raised, the ability to make judgements, and the ability to draw conclusions from the material presented in the answer.

Candidates should not be awarded more than **12 marks** if there is no **explicit** reference to the data.

The issues identified below are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these issues in the time available.

Issues and areas for discussion include:

- The meaning of market failure;
- Understanding particular examples of market failure;
- The meaning of a subsidy;
- The effect of a subsidy on a factory;
- Identification of particular benefits resulting from a subsidy, eg less income inequality;
- Identification of particular costs resulting from a subsidy, eg opportunity cost, resource misallocation, markets becoming less competitive, possible government failure;

Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Overall assessment.

Maximum of 7 marks if there is no mention of market failure OR or relevant discussion of any of the four examples in the preamble

Maximum of 9 marks if the discussion of market failure focuses solely on unemployment and the consequent effects on the balance of payments, economic growth etc.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (c) 15 MARKS

OR

2

Total for this question: 25 marks

2 (a) Using **Extract D**, compare the changes in the annual rate of change of air fares with the changes in the price of oil during the period 2002 to 2005. *(4 marks)*

Award up to 2 marks each for each valid point made (one mark for identification and one mark for supporting reference(s) to the data). The valid points include:

- The data series differ in that one shows absolute price changes while the other shows rates of change over the period of each year;
- Whereas the price of crude oil is shown at all points of time throughout the period, the price of air fares is not shown at all;
- The price of crude oil rose over the whole period (from \$20 a barrel to just over \$50 a barrel), whereas the price of air fares fell over the period;
- Periods of falling oil prices were shorter than periods of falling air fares;
- Over the whole period, oil prices nearly trebled while the annual rate at which air fares changed fluctuated from negative to positive at different times in the period;
- Both data series fluctuated over the period;
- The data may show a generally positive correlation between changes in the price of crude oil and the annual rate at which air fares change.

A maximum of **1 mark** may be awarded if there is no comparison and a maximum of **2 marks** if there is no use of correct statistics or if a candidate confines the comparison to just one indicator.

If the candidate simply trawls through the data, award a maximum of **2 marks**.

Award **3 marks** where there is evidence of an overview having been taken, even though parts of the answer give an impression of a trawl through the data.

MAXIMUM FOR PART (a) 4 MARKS

2 (b) **Extract E** mentions three factors that influence the demand for air travel.

Define price elasticity of demand **and** explain how **two** of the factors in **Extract E** can affect the price elasticity of demand for air travel. (6 marks)

The three factors identified in Extract E are the:

- availability of alternative or substitute modes of transportation;
- airfare as a proportion of overall trip costs;
- ability to shop around in response to high fares to particular destinations.

For candidates who:

accurately define price elasticity of demand: **up to 2 marks**
(a completely accurate definition or formula gains both marks; a statement that elasticity measures the responsiveness of demand to a change in price should earn 1 mark)

identify one relevant factor listed above: **1 mark**

explain how the factor affects price elasticity of demand for air travel: **up to 2 marks**

If the answer explains how all three factors influence price elasticity of demand, award marks solely for the best two.

Maximum of 4 marks if only one relevant factor is identified

MAXIMUM FOR PART (b) 6 MARKS

2(c) Lines 8 to 9 of **Extract F** state that 'we must eventually replace the fossil fuels burned by planes. Therefore some clean alternative is needed.'

Using the data and your economic knowledge, evaluate the case **for** and **against** relying on the market mechanism to produce clean alternative sources of energy that can replace fossil fuels such as oil and coal. (15 marks)

Although the prompts in the Extracts relate to aircraft and their emissions, the question has been worded in a more general and non-specific way. Indeed, the word 'coal' in the question invites a more general approach. In the candidates' answers, either approach is valid, ie an answer focusing solely on matters relating to alternative fuels for aircraft, or on wider issues relating to fossil fuels and their alternatives. Whichever approach is adopted, the key issue in the question is whether markets, on their own, can effectively produce clean or cleaner alternatives to fossil fuels.

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion, if they are to be awarded **more than 7 marks**.

Examples of evaluation include: arguing that the market mechanism may produce clean fuels in the long run, but not in the short run; arguing that whatever the disadvantages of the market mechanism in this respect, it may still offer a better outcome than government intervention; arguing the case for a combined approach; discussing the intractability of the problem; arguing that the market mechanism may solve the problem related to some energy uses, but not others.

Candidates should not be awarded **above Level 3** if evaluation does not go beyond the superficial. However, within this constraint there is scope to reward more implicit evaluation, ie where there is some evidence of judgements having been made by candidates as to what are relevant/irrelevant issues.

To gain **Levels 4 or 5 (11 or more marks)**, there needs to be more explicit evaluation, perhaps along the lines suggested above, and clear evidence of critical/informed comment on issues raised, the ability to make judgements, and the ability to draw conclusions from the material presented in the answer.

Candidates should not be awarded more than **12 marks** if there is no **explicit** reference to the data

The issues identified below are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these issues in the time available.

Issues and areas for discussion include:

- Fossil fuels and resource depletion and degradation, and resulting market failure(s)
- The finite nature of fossil fuels
- The characteristics of alternatives to fossil fuels
- How the market mechanism can, in principle, lead to the development and use of alternative, clean, energy sources, through changes in relative prices, incentive effects and the profit motive;
- Discussion of whether the market mechanism can solve the problem;
- Discussion of the length of time needed;

- The case for replacing the market, eg through the use of a ban;
- The case for modifying the market, eg by imposing similar taxes on all fossil fuels;
- The ineffectiveness of government intervention and the possibility of government failure;
- Adverse effects on industries that might be affected by government intervention, eg commercial airlines and the travel industry;
- The international nature of the problem facing both markets and government intervention.

Also give credit for:

- Relevant use of data and/or candidate's knowledge;
- Relevant use of evidence;
- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (c) 15 MARKS