AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Education

Economics 5141

ECN1   Markets and Market Failure

Mark Scheme

2008 examination - January 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.

AQA Advanced Subsidiary Economics

January 2008   **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.	D	9.	B
2.	C	10.	C
3.	D	11.	C
4.	B	12.	A
5.	D	13.	C
6.	A	14.	A
7.	C	15.	C
8.	C		

Advanced Subsidiary Economics

January 2008   **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 5 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 will be some attempt to present alternative views 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 world price of copper with the changes in world stocks of copper over the period shown. *(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:

- Over the whole period, the price of copper rose from around $1,500 a tonne to over $8,000 a tonne, while stocks of copper fell from just over 0.4 million tonnes to about 0.1 million tonnes.

- A negative correlation in 2003-2005.

- Not much of a correlation in the earlier and later parts of the data period.

A maximum of **2 marks** if there is no use of 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**.

A maximum of **3 marks** may be awarded 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 price of copper has surged by 80 per cent so far in 2006 as speculators buy into commodities, having seen the disruptions to supply, strikes at mines and low stock levels' (**Extract B**, lines 4-6).

Using a supply and demand diagram, explain this statement. *(6 marks)*

Three marks can be earned for a diagram showing **only** a shift of the **demand curve**, or for a diagram showing **only** a shift of the **supply curve**. A diagram that accurately shows **both** shifts, such as the diagram below, can earn up to **four marks**.
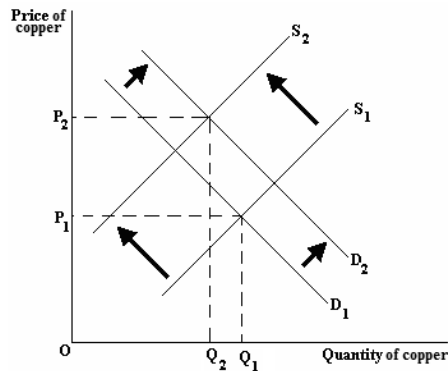
For the diagram:

For a candidate who only shifts the demand curve, award 1 mark for each of the following:
- drawing a supply and demand diagram, accurately labelled (e.g. P_1 and Q_1), showing an initial equilibrium price of copper, and the quantity bought and sold.
- drawing a new demand curve to the right of the original demand curve
- showing a new equilibrium price above the initial equilibrium price

For a candidate who only shifts the supply curve, award 1 mark for each of the following:

- drawing a supply and demand diagram, accurately labelled (e.g. P_1 and Q_1), showing an initial equilibrium price of copper, and the quantity bought and sold.
- drawing a new supply curve to the left of the original supply curve
- showing a new equilibrium price above the initial equilibrium price

For a candidate who shifts both curves, award 1 mark for each of the following:

- drawing a supply and demand diagram, accurately labelled (e.g. P_1 and Q_1), showing an initial equilibrium price of copper, and the quantity bought and sold.
- drawing a new demand curve to the right of the original demand curve
- drawing a new supply curve to the left of the original supply curve
- showing a new equilibrium price above the initial equilibrium price

For the written explanation

No marks for just mentioning speculation, disruption to supply, strikes or low stock levels.

For explaining how one of the above contributed to the rise in the price of copper in 2006:
Up to 2 marks each

For relevant application of elasticity concepts: **Up to 2 marks**

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 5 marks for an answer that explains the statement solely in terms of the shift of demand or solely in terms of the shift of supply.

MAXIMUM FOR PART (b) 6 MARKS

> 1(c) Using the data and your economic knowledge, evaluate the case **for** and **against** governments intervening to try to stabilise the price of copper, for example through setting up a buffer stock scheme. *(15 marks)*

The subsection on '*Methods of Government Intervention to Correct Distortions in Individual Markets'* in the specification section 10.6 states that candidates should be able to use basic economic models to analyse and evaluate the use of buffer stocks to correct market failure. Candidates should therefore possess economic knowledge of the way a buffer stock system is supposed to work, together with some knowledge of its advantages and disadvantages. However, key words in the question are *for example*. Although most candidates will probably restrict their analysis and evaluation to buffer stocks, answers that consider other methods of intervention (such as maximum and/or minimum prices) as well as buffer stocks, or indeed answers that do this without mentioning buffer stocks, should also be rewarded.

Analysis requires consideration of at least one method of stabilising the price of copper.

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**.

Evaluation could involve: discussion of the advantages and disadvantages of the chosen method(s) of intervention; comparing the strengths and weaknesses of different methods of intervention; arguing that all methods of intervention may lead to government failure.

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, i.e. 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, 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.

Where there is no explicit reference to the data, award a maximum of 12 marks.

Examples of reference to the data are: the effect of high copper prices on Africa; relating stabilisation to the reduction of corruption in copper-producing countries; the damaging effects of the speculation mentioned in Extract B.

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:

- Explaining how a buffer stock scheme (or any other relevant method of intervention) operates;

- Discussing the advantages of the scheme, e.g. preventing copper mines going out of business following a collapse in the price of copper, protecting consumers from very high prices in the event of a copper shortage;

- Discussing the disadvantages of the scheme, e.g. it may be ineffective if some governments refuse to join the scheme, it may lead to continuing over-production of copper, the scheme may run into financial difficulty;

- Evaluation of the advantages and disadvantages of the method of intervention;

- Comparison with the advantages and disadvantages of alternative methods of intervention;

- Possible government failure;

- The impact of elasticity;

- The costs and benefits of non-intervention and letting the market run its course.

Also give credit for:

- Relevant use of evidence;

- Relevant use of a diagram or diagrams;

- Overall assessment.

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 estimates of carbon dioxide emissions from aircraft with those from the other forms of long-distance transport. *(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:

- Throughout its range, the CO_2 emissions of aircraft flying on domestic flights were greater than for any other form of transport;

- At the very top of its range, the CO_2 emissions of aircraft flying on international flights were greater than for any other form of transport;

- For some of its range, the CO_2 emissions of aircraft flying on international flights were less than for other forms of transport, except for travel by coach;

- Specific comparison of aircraft emissions with those of a particular alternative form of transport, e.g. aircraft flying on domestic flights with high speed trains;

- Comparing in order, relative to aircraft, the CO_2 emissions of the various forms of transport.

A maximum of **2 marks** if there is no use of 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**.

A maximum of **3 marks** may be awarded 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** (lines 2-3) states that 'the best way to reduce aircraft carbon emissions is to impose a tax on aviation fuel, so that the cost of the emissions has a monetary impact on air travel'.

Using a supply and demand diagram, explain why a tax on aviation fuel may **not** have much effect on the demand for air travel. *(6 marks)*

A candidate who draws a diagram similar to the one below, illustrating a leftward shift of the supply curve along a demand curve, earns all 4 available marks for the diagram, provided that there is sufficient accuracy in labelling axes and coordinates. Correct analysis centres on the supply curve shifting along a demand curve:

For the diagram, award 1 mark for each of the following:

- drawing a supply and demand diagram, accurately labelled (e.g. P_1 and Q_1), showing an initial equilibrium price of an airline ticket, and the quantity bought and sold
- drawing a new supply curve to the left of the original supply curve
- showing a new equilibrium price above the initial equilibrium price and a new equilibrium quantity to the left of the original equilibrium quantity
- labelling excess demand at the initial equilibrium price after the shift of supply
- showing the tax per ticket on the diagram
- showing the demand curve shifting rightward (see reason for this below*)
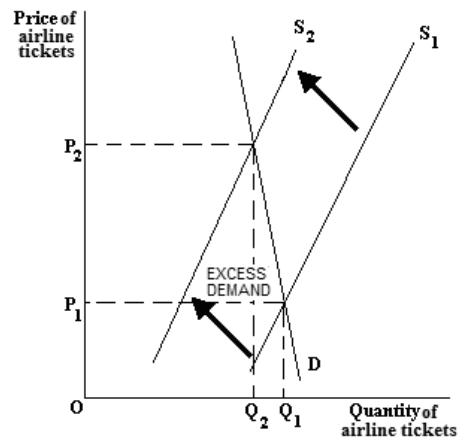
Maximum of 4 marks for the diagram

For the written answer, award:

- **1 mark** for explaining the cause of the shift of supply
- **Up to 3 marks** for relevant application of elasticity analysis

  o stating that demand is likely to be inelastic

  o developing this with an explanation

  o stating that an increase in price leads to a less than proportionate fall in demand

  o hence, 'not much effect'

  1 mark for each of the above, subject to the maximum of 3 marks for elasticity

- ***up to 2 marks** for explaining that, because the demand curve for air travel continuously shifts rightward, this may offset the effect on quantity of the price rise

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 FOR PART (b) 6 MARKS

2 (c) Using the data and your economic knowledge, evaluate the **advantages** and **disadvantages** of various methods of government intervention to correct market failure arising from aircraft emissions. *(15 marks)*

Analysis requires consideration of at least two ways in which aircraft emissions can be reduced (the prompts in Extract F are imposing taxes, introducing pollution permits, improving and reorganising air-traffic control, making airports less crowded with planes, towing aircraft with electrically-powered engines, and encouraging consumers to undertake offsetting action, for instance by planting trees).

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**.

Evaluation could involve: assessing the extent to which market failure is occurring or has occurred; comparison of two or more alternative policies or methods of government intervention; assessing whether the methods of intervention are appropriate for dealing with the alleged market failure; considering whether the possibility of government failure is more significant than the alleged market failure; discussing whether or not intervention by a national government may be ineffective unless backed up by intervention by other governments.

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, i.e. 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.

Where there is no explicit reference to the data, award a maximum of 12 marks.

Examples of reference to the data are: extension of the EU's 'cap and trade' system; effect on such a system of the US's refusal to comply with the requirements of the Kyoto Treaty.

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:

- Identifying and explaining different methods of government intervention;

- Explaining how the different methods might operate;

- Discussing the advantages and disadvantages of the different methods;

- Discussing the nature of the market failure in relation to the case for government intervention;

- Discussing the possibility that the methods of intervention may be ineffective;

- Considering market failure versus government failure arguments;

- The international nature of the problem facing both markets and government intervention.

Also give credit for:

- Relevant use of diagrams;

- Relevant use of evidence;

- Overall assessment.

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (c) 15 MARKS