



General Certificate of Education

Economics 1141

ECON1: Markets and Market Failure

Mark Scheme

2009 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.

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Set and published by the Assessment and Qualifications Alliance.

Advance Subsidiary Economics Unit 1**Section A: Objective Test****January 2009**

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

KEY LIST

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

Advanced Subsidiary Economics Unit 1**Section B: Data Response****January 2009****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:

- (i) **An issue based approach.** The mark scheme for parts (a), (b) and (c) 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.
- (ii) **A levels approach.** This approach is used for marking part (d) of the data response questions. The Levels 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 candidate. 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 (e.g. 14 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.

THE LEVELS MARK SCHEME FOR AS**Level Descriptions**

In part (d) 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. An answer showing no evidence of evaluation, however good the analysis, should be awarded a maximum of 13 marks (in Level 3). The quality of evaluation should be the sole distinction between a Level 4 and Level 5 answer. It is not necessary for the answer to identify a wide range of issues to score the top mark. As indicated below, the **Quality of Written Communication** used should be taken into account when awarding marks.

Level 1: A very weak answer

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. There might be some evidence of organisation in the answer but generally it 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 6 marks*Mid-Point 4 marks***Level 2: A poor answer but some understanding is shown**

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 and analysis will therefore be very limited. There may be some attempt to present alternative points of view but any attempt at evaluation is limited or superficial. There is some logic and coherence in the organisation of the answer. 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.

7 to 11 marks*Mid-Point 9 marks***Level 3: An adequate answer with some correct analysis but very limited evaluation**

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 and there is some evidence that the candidate can analyse issues. There will be 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.

12 to 16 marks*Mid-Point 14 marks***Level 4: Good analysis but limited evaluation**

Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to answer the question. Some appreciation of alternative points of view is shown. Satisfactory use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models 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.

17 to 21 marks*Mid-Point 19 marks***Level 5: Good analysis and evaluation**

Two or more relevant issues are identified. Good understanding of basic economic concepts and models is demonstrated. The candidate is able to apply these concepts and models to 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/economic models identified and to support conclusions. A clear final judgement is made. 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.

22 to 25 marks*Mid-Point 24 marks*

THE KEY TO BE USED WHEN USING THE LEVELS MARK 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 or 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.

26**Total for this question: 50 marks**

26 (a) Define the term 'income elasticity of demand' (Extract B , line 9).

(5 marks)

For an acceptable definition (e.g. correct formula, or a sentence stating the income elasticity of demand measures the proportionate or percentage change in quantity demanded following an initial change in income, or a sentence stating that income elasticity of demand measures the responsiveness of demand following an initial change in income):

5 marks

Correct formula is:

Income elasticity of demand = $\frac{\text{proportionate or percentage change in quantity demanded}}{\text{proportionate or percentage change in income}}$

If the definition is incomplete, marks may be broken down, for example as follows:

Formula correct **except** refers to absolute rather than percentage (proportionate) changes in income and demand:

2 marksCorrect formula for **one** of the other elasticities:**2 marks**

No marks for an 'upside – down' formula, or for a statement that elasticity measures how demand affects income.

This mark scheme does not allow examiners to award 1 mark for a point. Examiners must award either 0 or 2 for each point made by the candidate.

MAXIMUM FOR PART (a) 5 MARKS

26 (b) Using **Extract A**, compare the changes in the prices of crude oil and corn over the period shown. *(8 marks)*

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting reference(s) to the data). The valid points include:

- The prices of both crude oil and corn increased over the whole period, e.g. from \$11 to \$60 a barrel in the case of oil, and from about \$90 to about \$162 dollars a tonne in the case of corn
- The prices of both crude oil and corn fluctuated up and down during the whole period
- The price of both crude oil and corn reached their peaks in 2006
- The price of both goods reached their lowest points at roughly the same time in 2000, though the price of corn fell and rose significantly in 2000
- The price of crude oil ranged from a high of about \$68 a barrel to a low of about \$11 a barrel whereas the price of corn ranged from a high of just over \$165 a tonne to a low of about \$77 a tonne
- Both prices were rising towards the end of the period, though the crude oil price dipped for a time in 2006

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 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 **4 marks**.

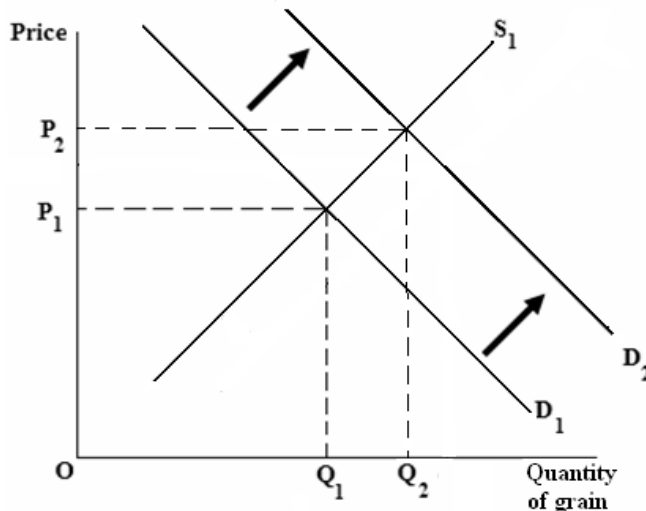
A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

MAXIMUM FOR PART (b) 8 MARKS

26 (c) With the help of a demand and supply diagram and using the information in **Extract B**, explain why the prices of grains such as corn and wheat were rising in 2007. (12 marks)

The anticipated response for the diagram:

Candidates may draw a diagram similar to the one below. The diagram shows a rightward shift in the demand curve for grain.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	1 mark
Original demand and supply curves correctly labelled	1 mark
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	1 mark
Rightward shift of the demand curve	2 marks
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	1 mark
Any other relevant feature of the diagram (e.g. the amount of excess demand at the original equilibrium <i>after</i> the demand curve has shifted)	1 mark per feature up to a maximum of 2 marks

Up to 6 marks for the diagram

Up to 6 marks for the diagram

Note: some candidates may draw a diagram showing demand for, and supply of, grain solely as a foodstuff. In such a diagram, the supply curve could shift leftward as supply is diverted away from food and into biofuel production. Reward such an approach with a maximum of 6 marks for the diagram

Also, since Extract B states '*Farmers should be able to meet increased demand for grains such as corn (maize) and wheat simply by growing more*', some candidates may draw diagrams in which both the demand and supply curves shift rightward, but with the shift of supply being less than the shift of demand'. Reward such diagrams.

The anticipated written response:

For candidates who

define demand and/or supply:

**Up to 2 marks per definition
Maximum of 2 marks for definitions**

explain why the demand curve for grains shifts rightward because of the increased use of grain in biofuel **Up to 4 marks**

explain why the demand curve for grains shifts rightward because richer consumers eating more food: **Up to 4 marks**

explain why the demand curve for grains shifts rightward because of richer consumers eating more meat which requires increased use of grain as an animal feed: **Up to 4 marks**

explain the adjustment to the new equilibrium price: **Up to 4 marks**

explain any other relevant point, e.g. the rightward shift of demand must have been greater than the rightward shift of supply for the prices of grains to rise:

Up to 4 marks per point

Up to a MAXIMUM of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

26 (d) 'Italian consumer associations have asked the Italian government to intervene in the pasta market to reduce the prices of goods such as spaghetti' (**Extract C**, lines 10-11).

Using the data and your economic knowledge, evaluate the economic case **for** and **against** the Italian government intervening in the pasta market to try to reduce pasta prices. (25 marks)

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 13 marks**.

Examples of evaluation include: considering the effectiveness of different forms of intervention; debating whether the increase in pasta prices results from short-lived or more permanent underlying causes; assessing the opportunity cost of intervention; considering the effect on economic efficiency.

A maximum of **21 marks** should be awarded if there is no **explicit** reference to the data.

Issues and areas for discussion include:

- Methods of intervention such as subsidy and price ceilings;
- Effect on relative prices in Italy;
- Effect on pasta producers and farmers in Italy and elsewhere;
- Effect on economic efficiency and resource allocation;
- Opportunity cost arguments;
- Distributional effects;
- Short-term versus long-term considerations;
- Market failure considerations
- Government failure considerations

The issues identified above 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.

Also give credit for:

- Use of diagrams
- Relevant use of the data
- Reference to the UK and/or other economies
- Real world examples

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS

27

Total for this question: 50 marks

27 (a) Define the term 'subsidy' (**Extract E**, line 6).

(5 marks)

For an acceptable definition (e.g. a payment that reduces the cost or price of a good or service) **5 marks**

Note: Many answers will define a subsidy paid by the government to a firm, but a correct definition of a cross-subsidy through which profit on one good subsidises the price of a second good, or of a subsidy paid to consumers can also earn 5 marks.

If the definition is incomplete, marks may be broken down, for example as follows:

As the cause of a rightward or downward shift of a supply curve,
or an accurate diagram:

2 marks

A payment of money:

2 marks

As the opposite of a tax:

2 marks

This mark scheme does not allow examiners to award a total of 1 mark. Examiners must award either 0 or 2 etc.

MAXIMUM FOR PART (a) 5 MARKS

27 (b) Using **Extract D**, compare the changes in electricity generation from hydroelectric and other renewable sources as proportions of total UK electricity generation over the period 1990 to 2005. **(8 marks)**

Award up to 4 marks each for each valid point made (two marks for identification and up to two marks for supporting reference(s) to the data). The valid points include:

- Hydro power's contribution to total UK electricity generation fell over the period, from about 1.7% to about 1.3%, whereas the contribution of other renewable energy sources rose from about 0.25% to about 2.9%
- In all the years, other renewable resources' contribution rose, e.g. from about 2.25% to about 2.9% between 2004 and 2005, whereas hydro's contribution fluctuated, e.g. falling from about 1.25% to about 0.7% between 2002 and 2003, which was followed by an increase to back to about 1.25% in 2004
- Other renewable resources' contribution was below that of hydro between 1990 and 2000, but overtook hydro power's contribution in 2001
- The range between the highest and lowest contribution for hydro was about 1.7% minus about 1.3%, or 0.4%, whereas that for other sources of energy was greater at about 2.9% minus 0.25%, or 2.65%

A maximum of **2 marks** may be awarded if there is no comparison and a maximum of **4 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 **4 marks**.

A maximum of **6 marks** may be awarded where there is evidence of an overview being taken, even though parts of the answer give the impression of a trawl through the data.

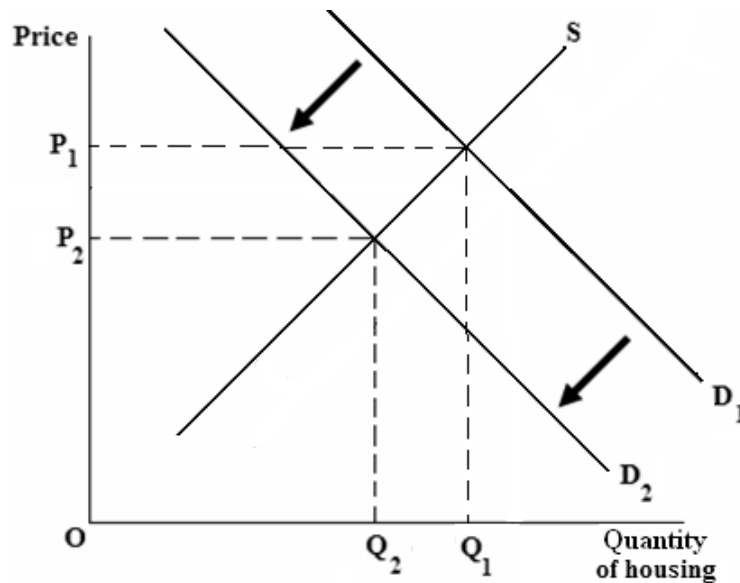
MAXIMUM FOR PART (b) 8 MARKS

27 (c) Extract E (lines 12) states that wind turbines lead to the “negative externality of ‘eyesore’ or visual pollution”.

With the use of a diagram, explain how the building of wind turbines may affect house prices in the area in which the wind turbines are located. (12 marks)

The anticipated response for the diagram:

Candidates may draw a diagram similar to the one below. The diagram shows a leftward shift in the demand curve for housing.



Breakdown of the marks for the diagram:

Axes labelled (price and quantity or P and Q will do)	1 mark
Original demand and supply curves correctly labelled	1 mark
Co-ordinates drawn in at the initial equilibrium and labels such as P_1 and Q_1	1 mark
Leftward shift of the demand curve	2 marks
Co-ordinates drawn in at the new equilibrium and labels such as P_2 and Q_2	1 mark
Any other relevant feature of the diagram (e.g. the amount of excess supply at the original equilibrium <i>after</i> the demand curve has shifted)	

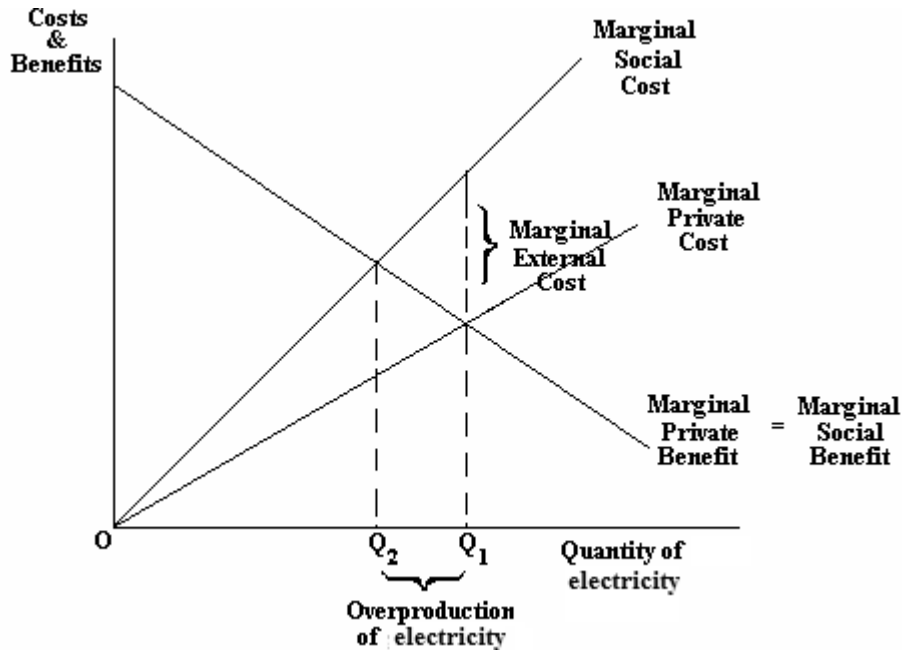
1 mark per feature up to a maximum of 2 marks

Up to 6 marks for the diagram

Note: some candidates may draw a diagram based on the assumption that the demand curve for housing shifts rightward, because houses are needed for workers building and/or maintaining the wind turbines, and/or because the wind turbines become a tourist attraction. Allow marks for such a diagram provided the diagram is consistent with the written explanation provided.

Some candidates may use a marginal cost and benefit diagram, such as the diagram below, rather than a demand and supply diagram. An appropriate diagram should show the marginal external cost of producing electricity (from wind turbines). The diagram should *not* have labels relating to the housing market on the axes of the diagram.

The diagram shows the marginal private costs, the marginal external costs, and the marginal social costs incurred when producing electricity (from wind turbines).



Breakdown of the marks for the diagram:

- Axes labelled (quantity or output, costs and benefits, Q and £ will do) 1 mark
- MPB and MPC curves correctly labelled 1 mark
- Clear indication of MSC being above MPC: 1 mark
- Quantity co-ordinate drawn in where MPB = MPC 1 mark
- Quantity co-ordinate drawn in where MSB = MSC 1 mark
- Indication of marginal external cost: 1 mark
- Indication of overproduction of the good
(or explicit indication of privately optimal and socially optimal levels of production: 2 marks

Up to 6 marks for the diagram

The anticipated written response:

For candidates who

define externality/or negative externality:

**Up to 2 marks per definition
Maximum of 2 marks for definitions**

For candidates who, for the written explanation:

explain why the demand curve for housing shifts leftward because 'eyesore' pollution makes it less attractive to live in the area where the turbines are located: **Up to 4 marks**

explain why the demand curve for housing shifts leftward because of a decline in the demand for workers in tourist industries: **Up to 4 marks**

explain why the demand curve for housing may shift rightward because construction and/or maintenance workers for the turbines need housing: **Up to 4 marks**

explain the adjustment to the new equilibrium price: **Up to 4 marks**

explain any other relevant point, e.g. the possible effect of the price elasticity of supply of housing: **Up to 4 marks per point**

Maximum of 8 marks for a written explanation

MAXIMUM FOR PART (c) 12 MARKS

27 (d) Using the data and your economic knowledge, evaluate the economic case **for** and **against** leaving the provision of renewable energy to market forces. (25 marks)

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 13 marks**.

Examples of evaluation include: arguing that market forces can effectively supply wind energy but not other forms of renewable energy such as wave energy; arguing that markets are prone to take account only of short-term and not long-term considerations; the 'level playing field' argument that non-renewable energy sources may be, or are, subsidised so renewable energy should also be subsidised; debating what 'market forces' means, i.e. does the question relate to non-market provision or to subsidised market provision?

A maximum of **21 marks** should be awarded if there is no **explicit** reference to the data.

Issues and areas for discussion include:

- The world's and the UK's future energy crisis when non-renewable fuels run out;
- The negative externalities discharged by both renewable and non-renewable fuels;
- The ability of the market to provide renewable energy;
- 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 produce *sufficient* renewable energy;
- The market is likely to be better at producing *some* renewable energy, e.g. wind energy, but *not others*, e.g. wave energy;
- Nuclear energy as an alternative, and/or is nuclear energy renewable?
- Short-term versus long-term considerations;
- Market failure considerations;
- Government failure considerations.

The issues identified above 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.

Also give credit for:

- Use of diagrams
- Relevant use of the data
- Reference to the UK and/or other economies
- Real world examples

USE THE LEVELS MARK SCHEME ON PAGES 5 & 6

MAXIMUM FOR PART (d) 25 MARKS