



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2019**

Economics

Assessment Unit AS 1
assessing
Markets and Market Failure

[SEC11]

TUESDAY 14 MAY, MORNING

**MARK
SCHEME**

General Marking Instructions

This mark scheme is intended to ensure that the AS examinations are marked consistently and fairly. The mark scheme provides examiners with an indication of the nature and range of candidate responses likely to be worthy of credit. It also sets out the criteria which they should apply in allocating marks to candidates' responses. The mark scheme should be read in conjunction with these general marking instructions which apply to all papers.

Quality of candidates' responses

In marking the examination papers, examiners will be looking for a quality of response reflecting the level of maturity which may reasonably be expected of 17-year-olds, which is the age at which the majority of candidates sit their AS examinations.

Flexibility in marking

The mark scheme is not intended to be totally prescriptive. For many questions, there may be a number of equally legitimate responses and different methods by which the candidates may achieve good marks. No mark scheme can cover all the answers which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner for the paper concerned.

Positive marking

Examiners are encouraged to be positive in their marking, giving appropriate credit for valid responses rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected for 17-year-old candidates. Conversely, marks should only be awarded for valid responses and not given for an attempt which is completely incorrect or inappropriate.

Types of mark schemes

Mark schemes for questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication. These questions are indicated on the cover of the examination paper. Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided. Some material may be included in the mark scheme for the benefit of teachers and pupils preparing for future examinations. Candidates are not expected to have provided this information. Such material is printed in the mark scheme in italics.

Levels of response

Questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for the "best fit" bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement. The following guidance is provided to assist examiners.

Threshold performance: Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.

Intermediate performance: Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.

High performance: Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

Marking calculations

In marking answers involving calculations, examiners should apply the “own figure rule” so that candidates are not penalised more than once for a computational error.

Quality of written communication

Quality of written communication is taken into account in assessing candidates’ responses to all questions that require them to respond in extended written form. These questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication. Where the quality of candidates’ economics is not matched by the quality of written communication, marks awarded will not exceed the maximum for Level 2 in questions which have three levels of response or the maximum for Level 3 in those which have four levels of response.

For conciseness, quality of written communication is distinguished within levels of response as follows:

Level 1: Quality of written communication is limited.

Level 2: Quality of written communication is satisfactory.

Level 3: Quality of written communication is of a high standard.

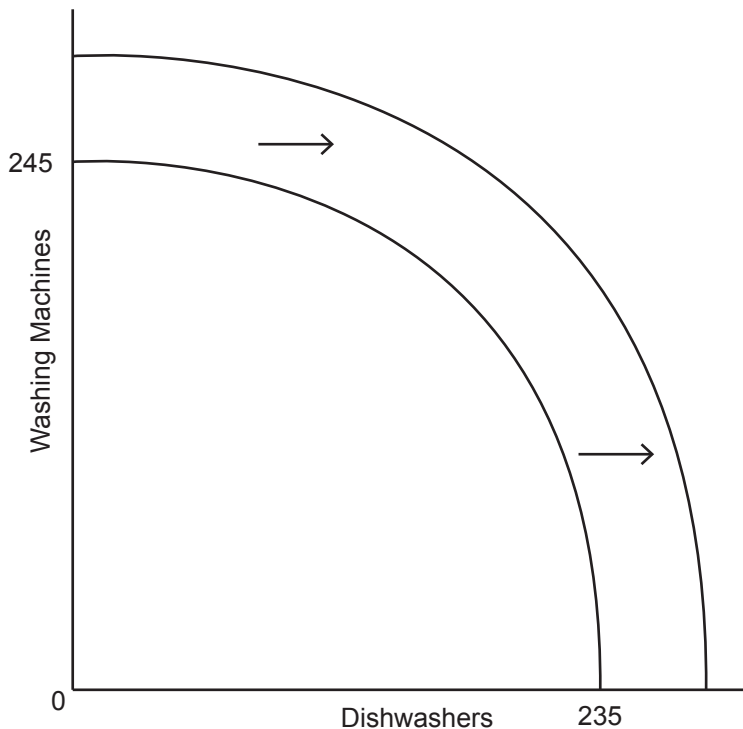
In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below:

Level 1 (Limited): The candidate makes only a limited attempt to select and use an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 (Satisfactory): The candidate makes a reasonable attempt to select and use an appropriate form and style of writing, supported with appropriate use of diagrams as required. Relevant material is organised with some clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 (High Standard): The candidate successfully selects and uses an appropriate form and style of writing, supported with the effective use of diagrams where appropriate. Relevant material is organised with a high degree of clarity and coherence. There is widespread use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

- 1 (a) For the correct calculation of the opportunity cost of increasing the production of dishwashers from 130 to 170 as 35 washing machines [2]
For correct methodology but error in calculation [1] [2]
- (b) Specialisation and division of labour occurs when the production process is broken into a number of individual tasks and workers are assigned specific tasks within a production process. This leads to an increase in labour productivity and as a result causes the Production Possibility Frontier to shift to the right as shown below.



Up to [2] for an accurate explanation of specialisation and division of labour
Up to [2] for an accurately drawn diagram showing the PPF shift out to the right [4]

- 2 The law of diminishing marginal utility states that as successive units of a good are consumed the additional satisfaction derived from consuming that good will eventually begin to fall. In an all you can eat buffet, a consumer is likely to derive more utility from the first plate of food consumed than they would from say the second or third plate.
[2] for understanding of diminishing marginal utility
[1] for application to an all you can eat buffet [3]

- 3 (a) For calculation of TR as $(£70 \times 2250) = £157,500$ [2]
For correct methodology but error in calculation [1] [2]
- (b) For correct calculation of PED (using the % change in QD / % change in P formula) as -1.95 [4]. Accept an answer in the range -1.94 to -1.96
For an answer of -2.2 derived from a mid-point calculation or using calculus award full marks.
Up to [2] for correct methodology but error in calculation [4]

AVAILABLE
MARKS

6

3

6

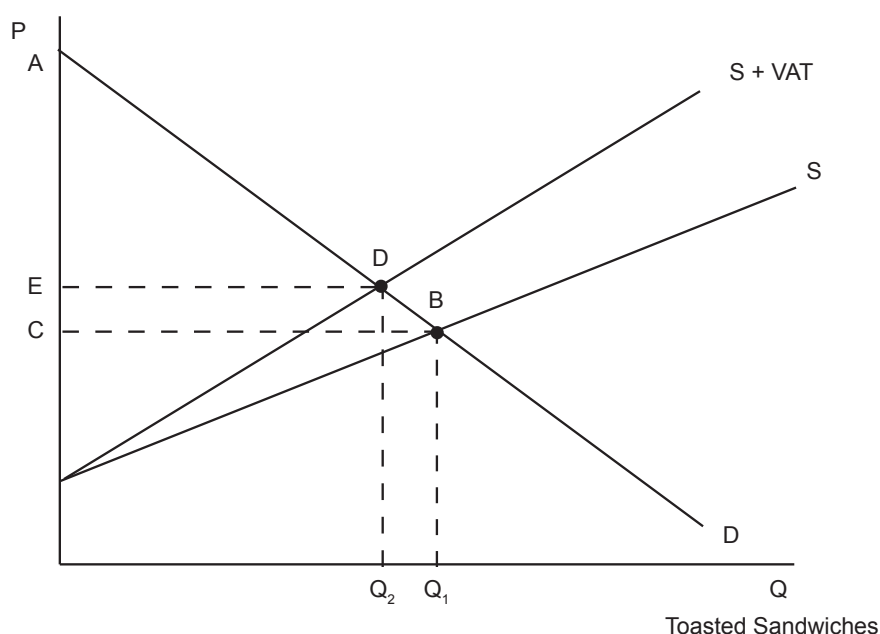
- 4 Economic rent refers to the payment to a factor of production over and above the minimum necessary to secure its services. Transfer earnings refer to the minimum reward required to keep a factor of production in its current use. In this case the transfer earning for a hectare of land with residential planning permission is £20,000 and the economic rent is £1.85mn (£1.87mn – £20,000)
- [2] for accurate definition of economic rent and transfer earnings
- [2] for accurate calculation of economic rent and transfer earnings or accurate diagrammatic representation

[4]

AVAILABLE
MARKS

4

- 5 Consumer surplus refers to the difference between the price a consumer is willing to pay for a good and the price they actually pay. It is equal to the area under the demand curve and above the price line. Before the imposition of the 20% tax on toasted sandwiches consumer surplus was equal to area ABC. The imposition of VAT at 20% causes the supply curve to shift to the left and become more inelastic – as a result consumer surplus falls from ABC to ADE.



Level 1 ([1]–[2])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts and models to the context of the question; limited use of relevant data, and diagrams where relevant, to address the issues in the question.
- Basic analysis; may lack focus.
- A low quality of written communication.

Level 2 ([3]–[4])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used reasonably to address the issues in the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have some inaccuracy at times.
- A good quality of written communication.

Level 3 ([5]–[6])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Excellent, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- An excellent quality of written communication.

[6]

6

- 6 (a) The price of lithium has increased significantly over the period, from \$1,700 per tonne in 2002 to \$9,100 per tonne in 2017. This represents an increase of approximately 435%.
- Lithium prices stayed pretty stable between 2002 and 2005 fluctuating between \$1,600 per tonne and \$1,850 per tonne. The period of increase began in 2006 with prices increasing every year except 2010 and 2011 where prices fell very slightly before increasing rapidly again from 2014 onwards.
- Up to [2] for narrative identification of trend and selection of appropriate data
Up to [2] for appropriate manipulation of data to show relative price increases [4]

- (b) Price elasticity of supply refers to how responsive quantity supplied is to a change in price. The process of extracting lithium from the earth's surface requires specialised and expensive machinery and equipment. A temporary rise in lithium prices is unlikely to encourage additional investment from lithium miners and hence quantity supplied is unlikely to increase significantly. However if prices remain high for a longer period of time or indeed continue to increase, (as is the case with lithium since 2005) the firms are likely to invest in the machinery and infrastructure required to extract the lithium. Obviously it takes some time for this investment to occur and the additional equipment and machinery to become fully operational. Hence lithium supply will become more responsive over the longer time period.

Issues, analysis and areas for discussion include:

- Explanation of price elasticity of supply and how it is measured
- Explanation that investment decisions take time and can depend on the expected future price as well as current price
- Reference to the time taken to make new investments fully operational; level of stock or spare capacity in the industry
- Relevant examples
- Relevant diagrams

Level 1 ([1]–[2])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts and models to the context of the question; limited use of relevant data, and diagrams where relevant, to address the issues in the question.
- Basic analysis; may lack focus.
- A low quality of written communication.

Level 2 ([3]–[4])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used reasonably to address the issues in the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have some inaccuracy at times.
- A good quality of written communication.

Level 3 ([5]–[6])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Excellent, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- An excellent quality of written communication. [6]

- (c) An increase in demand for electric vehicles is likely to have an impact on a range of other markets.

The markets most likely to be affected are:

- The market for substitute goods – petrol/diesel cars
- The market for complementary goods – electricity, electricity charging points and the associated infrastructure
- The markets for the factors of production used in the production of electric vehicles – the source refers to lithium, copper and cobalt
- The market for other goods which use these factor inputs – mobile phone batteries, electricity cables etc.

Issues, analysis and areas for discussion include:

- Use of appropriate diagrams
- Appropriate examples
- Reference to cross price elasticity of demand

Level 1 ([1]–[3])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts and models to the context of the question; limited use of relevant data, and diagrams to address the issues in the question.
- Basic analysis; may lack focus.
- A low quality of written communication.

Level 2 ([4]–[7])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used reasonably to address the issues in the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have some inaccuracy at times.
- A good quality of written communication.

Level 3 ([8]–[10])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant

- terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Excellent, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- An excellent quality of written communication. [10]

- (d) Free market economists argue that while markets sometimes fail to provide efficient outcomes, government intervention to correct these market failures often leads to a loss of economic welfare rather than a gain.

There are a number of reasons why government failure can occur:

- Information failure – governments may take action on the basis of inaccurate or misleading information – the source refers to the government encouraging drivers to adopt diesel cars in the past in the now mistaken belief that they were less damaging to the environment than petrol cars
- Conflicting objectives – sometimes the appropriate government intervention is politically unpopular and is therefore ignored
- Administration costs – sometimes the cost of administering a policy response is greater than the benefits gained
- Market distortions – where intervention to correct a market failure leads to problems in other markets – a rapid increase in electric vehicles could put strain on the already overstretched electricity market and could lead to greater pollution if the electricity is generated from burning fossil fuels

However those who support government intervention argue that appropriate government intervention can reduce the inefficiency or inequality of the market system and can therefore lead to an improvement in economic welfare for all.

Issues for discussion and evaluation include:

- Reference to government failure and its causes
- Reference to information failure
- Examples of government failure
- Administration cost of intervention
- Measures of economic welfare
- Measures of economic efficiency
- Conflicting objectives
- Reference to successful examples of government intervention
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[5])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts, and models to the context of the question. Some limited use of data, and diagrams where relevant, in relation to the context of the question.
- Basic analysis; analysis may lack focus.

- Judgement(s) unsupported.
- A low quality of written communication.

Level 2 ([6]–[10])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts, and models to the context of the question; where relevant, some reasonable use of data and diagrams in relation to the context of the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have inaccuracies at times.
- Reasonable judgement(s) building on analysis.
- A good quality of written communication.

Level 3 ([11]–[15])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Well focused, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- Informed judgements that directly address the issues in the question and reach clear conclusions built on analysis.
- An excellent quality of written communication. [15]

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- 7 There are a range of policies the UK government could use to reduce income and wealth inequality. These include:

1. Change the tax and benefit system

- Increase the higher rate of income tax. This will make the tax system more progressive and will reduce the income of the top earners. The money could then be redistributed to the poorest. However this may lead to an increase in tax evasion/avoidance as better off individuals try to minimise their tax bills.
- Cut the lower rate of income tax and increase the level of the tax-free allowance. This should reduce the poverty trap and encourage people to look for work. However this can be costly and benefits high earners as well as low.
- Introduce a tax on wealth where individuals would pay an annual tax based on the total value of their assets. However this may be difficult and costly to manage as the value of assets can vary significantly from one year to the next and hence valuations may need to take place every year.
- Change the bands of the council tax (domestic rates in NI) to make it more progressive. However this may punish those who are asset rich but income poor.
- Lower the nil rate band for inheritance tax – currently £325,000 and create bands to make it more progressive. However this may be politically unpopular.

- Reduce the availability of universal state benefits and switch towards more means tested benefits. This would save the government money and the money will go to those who need it most. However the administration costs of means testing can be very high.
- Link benefits to average earnings instead of average prices. However this would clearly add significantly to the cost of providing benefits.

2. Measures to reduce unemployment and economic inactivity

- The government have used special employment measures such as the single work programme (known as the Steps to Work programme in NI) to improve the job prospects of the unemployed. These schemes could be expanded to include more people. However this does little for those already in low wage employment.
- Regional policy assistance. The government can focus attention on areas of high unemployment and inactivity to encourage firms to locate there. However this can create perverse incentives where firm engage in brass plating.

3. Measures to increase the income and wealth of the bottom quartile

- Increasing the NMW will help to increase the incomes of the low paid and also improve the incentive for people to find work. However this may create higher levels of unemployment.
- Encourage firms to pay a living wage. However this may be inflationary.
- Legislate against unpaid internships and zero hours contracts. Enforcing such legislation may be difficult and counterproductive since many unemployed individuals are currently willing to take unpaid internships in the hope of gaining experience and improving their job prospects.
- Increase the pay of low-paid public sector workers. However this will be costly and can divert productive employees from the private sector
- Introduce compulsory pension savings to encourage the poor to build up a stock of wealth. However this could increase relative poverty in the short run as the poor are forced to sacrifice some of their current income.
- Expand schemes such as right to buy and shared ownership to help poorer people build a stock of property wealth. However the right to buy scheme has increased inequality by reducing the stock of available public sector housing and hence putting upward pressure on private rents.

Obviously no candidate would be expected to discuss all of these policies in order to achieve marks in the Level 3 range. Rather candidates are expected to select a number of policies for both income and wealth inequality and comment on their suitability and relative effectiveness.

Level 1 ([1]–[7])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts, and models to the context of the question; some limited use of data, and diagrams where relevant, in relation to the context of the question.
- Basic analysis; analysis may lack focus.
- Judgement(s) unsupported.
- A low quality of written communication.

Level 2 ([8]–[14])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts, and models to the context of the question; some reasonable use of data, and diagrams where relevant, in relation to the context of the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have inaccuracies at times.
- Reasonable judgement(s) building on analysis.
- A good quality of written communication.

Level 3 ([15]–[20])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Well focused, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- Informed judgements that directly address the issues in the question and reach clear conclusions built on analysis.
- An excellent quality of written communication.

[20]

20

- 8 The theory of demand is based on the view that, so long as other factors remain unchanged, rational consumers will be prepared to buy more of a product when price falls and less when it rises and hence the demand curve will slope downwards from left to right. A price fall gives consumers greater real income and also makes substitute goods less attractive and therefore quantity demanded increases. A price fall also increases the marginal utility to price ratio and the potential consumer surplus.

Some economists however argue that consumers do not always act rationally, and that there may be circumstances when they would be prepared to buy more of a particular product at higher prices. For example some goods may be purchased at higher prices for altruistic or speculative purposes or because the higher price may be seen by some as an indication of quality.

Nevertheless, in practice, there seems to be very little evidence to support the existence of an upward sloping demand curve. Many of the instances quoted as examples of upward sloping demand curves can often be better explained by shifts of the original demand curve brought about by non-price factors.

Issues for analysis and discussion include:

- Discussion of why demand curve is assumed to be downward sloping – reference to income and substitution effects of prices changes or marginal utility theory
- Discussion of goods purchased for conspicuous consumption
- Altruistic purchase of fair trade and environmentally friendly products

- Giffen goods where a negative income effect may overcome a positive substitution effect
- Speculative goods
- Discussion of irrational behaviour on behalf of consumers
- Impact of marketing on consumer decisions
- If price is perceived to be an indication of quality consumers may demand more of a good at higher prices – this seems to be the main rationale for the increased prices in Lidl
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[7])

A basic response provides an answer that demonstrates:

- Basic knowledge and understanding of relevant terminology, concepts, principles and models.
- Basic application of relevant economic principles, terminology, concepts, and models to the context of the question; some limited use of data, and diagrams where relevant, in relation to the context of the question.
- Basic analysis; analysis may lack focus.
- Judgement(s) unsupported.
- A low quality of written communication.

Level 2 ([8]–[14])

A good response provides an answer that demonstrates:

- Good knowledge and understanding of relevant terminology, concepts, principles and models.
- Good application of relevant economic principles, terminology, concepts, and models to the context of the question; some reasonable use of data, and diagrams where relevant, in relation to the context of the question.
- Good analysis in relation to the impact on economic agents; analysis may not be developed fully or may have inaccuracies at times.
- Reasonable judgement(s) building on analysis.
- A good quality of written communication.

Level 3 ([15]–[20])

An excellent response provides an answer that demonstrates:

- Excellent accurate knowledge and understanding of relevant terminology, concepts, principles and models.
- Excellent application of relevant economic principles, terminology, concepts and models to the context of the question; where relevant, data and diagrams are used effectively to address the issues in the question.
- Well focused, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- Informed judgements that directly address the issues in the question and reach clear conclusions built on analysis.
- An excellent quality of written communication.

[20]

AVAILABLE
MARKS

20

Total

80