



**ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
2018**

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## **Economics**

**Assessment Unit AS 1**

*assessing*

**Markets and Market Failure**

**[SEC11]**

**MONDAY 14 MAY, MORNING**

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**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.

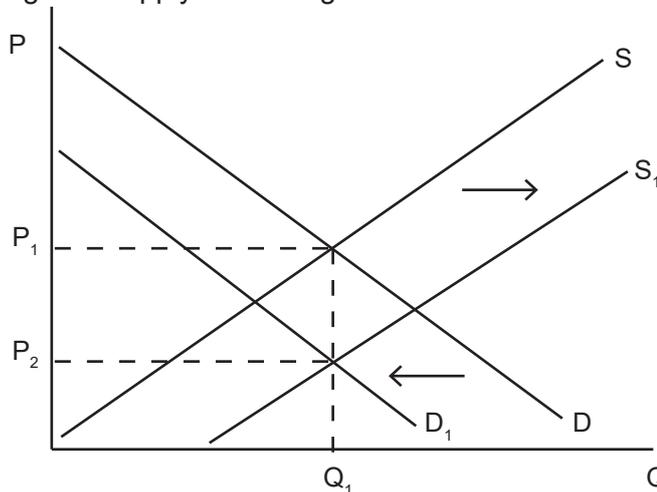
**Level 2 (Satisfactory):** The candidate makes a reasonable attempt to select and use an appropriate form and style of writing, supported with appropriate use of diagrams as required. Relevant material is organised with some clarity and coherence. There is some use of appropriate specialist vocabulary. 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.

## Section A

- 1 For explanation of marginal utility as being the increase in utility (or satisfaction) associated with the consumption of an additional unit of a good or service. [2]  
For calculation of the marginal utility associated with the consumption of the second breakfast bar as 45 utils (110 – 65). [2] [4]

- 2 Up to [3] for an accurately labelled diagram showing a price fall caused by demand falling **and** supply increasing.



- Up to [3] for an explanation explaining the shifts in demand and supply.  
Please note that the new equilibrium quantity may be different from the original.  
Constrained max of [5]. [5]

- 3 (a) For calculation of YED as +0.47 (10%/21.43%) [3]  
Up to [2] for correct methodology but error in calculation. [3]  
(Full marks may be awarded without the “+” sign)

- (b) The positive figure indicates that red meat is a normal good but the fact that the figure is less than 1 indicates that it is not a luxury good.  
[1] for stating that red meat is not a luxury good  
[2] for explanation that a coefficient of less than 1 indicates that it is not a luxury good. [3]

- 4 (a) For calculation of poverty line as £15,360 (£25,600 × 0.6) [2]  
For correct methodology but error in calculation [1] [2]

- (b) *A mean average is calculated by adding up all the values and dividing by the number of values. If the data is symmetrically distributed then it is a very accurate average. However if the data is not evenly distributed, then it can be skewed by extremes in the data.*

*A median average on the other hand is calculated by putting all the data in numerical order and choosing the middle figure.*

Median income is generally used when dealing with relative poverty as the figure is less likely than a mean figure to be skewed by those few who earn incredibly large amounts of income. [2]

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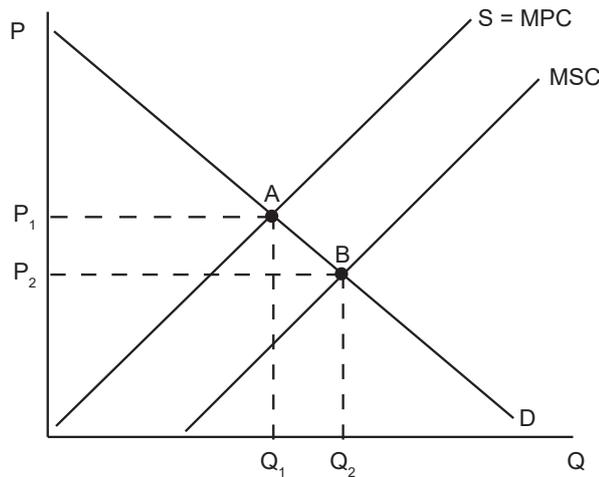
4

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4

- 5 Hobby and commercial bee keeping generates a positive externality in that it helps the pollination process and therefore leads to higher crop yields in surrounding farms. Because these positive externalities are not taken into account by rational economic agents when deciding on whether or not to keep bees, the free market equilibrium  $Q_1$  will be below the socially optimal equilibrium  $Q_2$ .



Some credit will be given for alternative diagrams which clearly indicate that the free market equilibrium is below the socially optimal equilibrium.

#### 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.
- Well focused, relevant analysis used accurately and appropriately in relation to the impact on economic agents.
- An excellent quality of written communication.

[6]

Section A

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**Section B**  
**Data Response**

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6 (a) Answers may include:

- Relationship between social deprivation and obesity is similar for both men and woman in that there is a positive correlation
- However the correlation is much more significant among women than men
- **Men**
  - 22% of men in the least deprived group are classified as obese
  - 25% of men in the most deprived group are classified as obese
  - Obesity is 3 percentage points higher in the most deprived group than in the least deprived group
- **Women**
  - 19% of women in the least deprived group are obese
  - 30% of women in the most deprived group are obese
  - Obesity is 11 percentage points higher in the most deprived group than in the least deprived group
  - Obesity rates for women are higher than for men in every group except the least deprived group

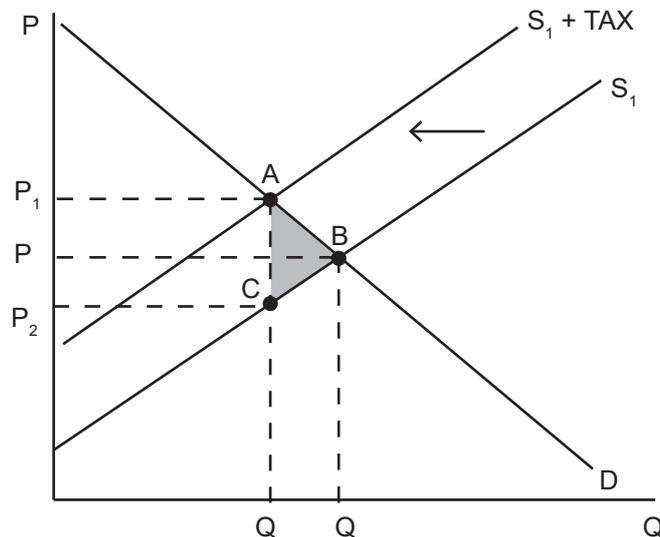
**[1]–[3] Marks** for narrative comparison of the trends

**[4]–[5] Marks** for detailed comparison of trends with appropriate manipulation of data

[5]

(b) Answers may include:

- Community surplus is defined as the total benefit or welfare to society of an economic transaction and is equal to the sum of consumer and producer surplus
- The tax on sugary drinks is an example of a specific indirect tax and as such will cause a parallel leftward shift in the market supply curve from  $S$  to  $S_1$
- This will result in an increase in the price consumers face and so will reduce consumer surplus
- The exact impact on price will depend on both the price elasticity of demand and supply
- While prices rise – the firm will lose producer surplus as they must transfer the tax revenue to government
- The tax leads to a deadweight welfare loss equal to the shaded area  $ABC$  – *sometimes referred to as Harberger's triangle*
- Credit will also be awarded to candidates who analyse the impact of tax on a good, which has negative consumption externalities



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### 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/or diagrams, 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/or 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])

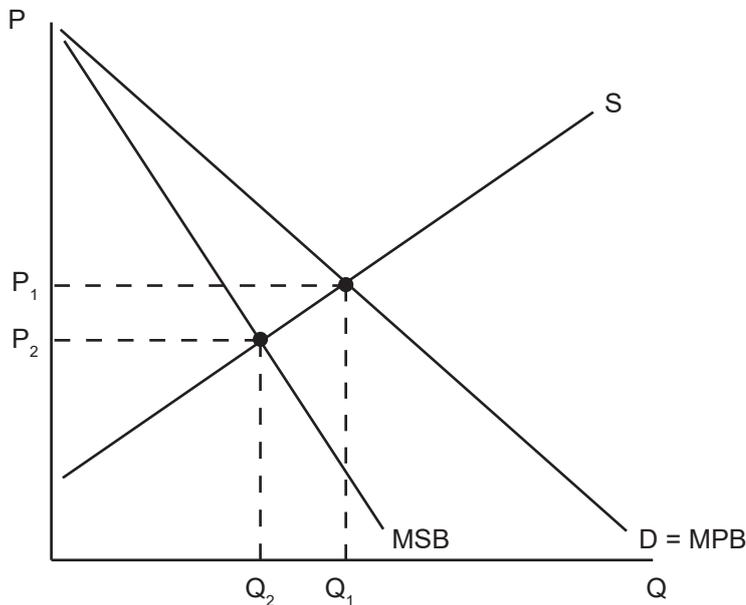
An excellent response provides an answer that demonstrates:

- 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/or 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.
- An excellent quality of written communication.

[6]

- (c) Sugary drinks are considered by many economists to be examples of demerit goods. The consumption of a demerit good such as sugary drinks by one economic agent may confer negative externalities on society (increased obesity and resulting reduction in labour productivity and additional cost to the NHS) and therefore would be over-consumed if provided through the market.

This is illustrated on the diagram below where the marginal social benefit of consumption (MSB) is less than the marginal private benefit (MPB).



Since rational economic agents only consider their own private benefit they will not consider the externalities and therefore the free market will lead to consumption  $Q_1$  which is above the socially optimal level  $Q_2$ .

Alternatively demerit goods may be over consumed due to a lack of information on the part of the person consuming the good. Some people may not be fully aware of the private costs involved in consuming a good (such as higher risk of obesity and illness) or may simply discount the costs since they are likely to occur sometime in the future while the benefits of consumption occur immediately.

**Issues, analysis and areas for discussion include:**

- Definition of demerit good
- Discussion of negative externalities associated with consumption of sugary drinks
- Discussion of future costs and benefits associated with consumption of sugary drinks
- Distinction between MPB and MSB
- Analysis of information failure
- Reference to market failure
- Appropriate diagrams
- Appropriate examples

**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,

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- and diagrams where relevant, to address the issues in the question.
- Basic analysis; may lack focus.
- A low quality of written communication.

**Level 2 ([4]–[6])**

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 ([7]–[9])**

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. [9]

(d) Those who are opposed to the tax on sugary drinks argue that:

- It will do little to reduce consumption since demand is relatively inelastic
- Only a small proportion (*about 5%*) of an average individual's calorie intake comes from sugary drinks
- It may lead to people to turn to other, less healthy products to get their sugar fix
- Regressive nature of tax
- Alternative measures such as greater education about diet and exercise are more likely to change consumer behaviour than a sugar tax

However those who support the scheme point to its success in reducing sugary drinks consumption in other countries such as Mexico.

**Issues, analysis and areas for discussion include:**

- Impact of tax on consumption patterns
- Impact of tax on inflation and government revenue
- Use of the revenue raised from tax
- Impact of tax on economic welfare and distribution of income
- Alternative policies to deal with obesity:
  - Subsidising healthy food
  - Education schemes on healthy diet and exercise
  - Subsidies for gym membership and sports clubs
  - Provision of healthy meals in schools
  - Restrictions on sale of fatty, salty or sugary foods
  - Restrictions on advertisement of unhealthy foods
- All of the policies outlined above have their own issues, including:
  - Cost/effectiveness of subsidising healthy food or gym membership
  - Opportunity cost of money spent on each policy
  - Administration costs
  - Regulatory difficulties- regulatory capture, policing costs to

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- government and compliance cost on firms
- 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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## Section C

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- 7 Those who support the introduction of the National Living Wage argue that it will reduce in-work poverty and will save the government millions by reducing the requirement to pay top-up benefits. However those opposed argue that it could lead to thousands of job losses as firms shed labour to reduce costs and could make UK firm less competitive.

**Issues, analysis and areas for discussion include:**

- Impact of NLW on employment and unemployment
- Impact of NLW on tax revenue and government spending
- Impact of NLW on prices
- Impact on FDI
- Impact of NLW on mobility of labour
- Possible use of regional minimum wages which reflect differences in cost of living
- Reference to non-compliance, e.g. illegal exploitation of workers
- Impact on relative poverty
- Impact on economic welfare
- Appropriate examples
- International comparisons
- 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]

20

- 8 In recent years the numbers attending university has increased dramatically, and there are many within government who feel that it would be almost impossible for the state to fully fund university education adequately.

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**Issues, analysis and areas for discussion include:**

- The people who gain most from university education are the students themselves, who will secure highly paid employment. It is estimated that a typical graduate will earn over £200,000 more over their lifetime (referred to as the graduate premium) than a non-graduate, therefore they should be the ones who contribute most to its cost
- In most cases the fees paid will only cover a portion of the actual cost of a university place and therefore education will still be subsidised
- Making students pay could reduce the numbers who drop-out before completing their course
- Introducing a market in higher education could increase efficiency and improve the quality of higher education
- Removing the cap will allow universities to raise the revenue required to invest in new facilities, research and attract the best staff
- Higher education confers positive externalities on society and therefore others should pay something towards the cost
- Reference to education as a merit good
- Fees and the subsequent debt of up to £30,000 could reduce the number of students from low-income groups attending university. This will widen further the gap between the rich and the poor
- The graduate premium is over-stated, with many graduates earning less than non-graduates
- Students could be forced to work in low paid, part-time jobs to fund university. This will lead to under-achievement, which will affect future earning potential
- Fees could reduce the number of students who do arts degrees, or, who do courses which lead to low paid jobs, e.g. teaching
- Drop-out rates could increase, as students will find it impossible to cope and are reluctant to borrow huge sums of money
- The total cost to government of paying student fees is relatively small when compared to expenditure in other areas
- Appropriate diagrams
- Appropriate examples

**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]

**Section C**

**Total**

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MARKS**

20

**20**

**80**