



ADVANCED
General Certificate of Education
2018

Economics
Assessment Unit A2 1
assessing
Business Economics
[AE211]
TUESDAY 5 JUNE, AFTERNOON

MARK
SCHEME

General Marking Instructions

This mark scheme is intended to ensure that the A2 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 schemes should be read in conjunction with these general marking instructions which apply to all papers.

Quality of candidates' responses

In marking the examination paper, examiners will be looking for a quality of response reflecting the level of maturity which may reasonably be expected of 18-year-olds, which is the age at which the majority of candidates sit their A2 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 18-year-old candidates. Conversely, marks should only be awarded for valid responses and not given for an attempt which is completely incorrect and 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.

Level 4: Quality of written communication is excellent.

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.

Level 4 (Excellent): The candidate successfully selects and uses the most appropriate form and style of writing, supported with precise and accurate use of diagrams where appropriate. Relevant material is extremely well organised with the highest degree of clarity and coherence. There is extensive and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of the highest standard and ensure that meaning is absolutely clear.

1 (a) Comparison of trends

- The price of oil and the number of rigs follow similar trends in that they both increase slowly from January 2014 before falling rapidly in the second half of the year, though oil price fall first
- The number of rigs in operation continued to decrease even after oil prices began to recover in February 2015
- The number of rigs in operation only started to decline once the price of oil reached approx. \$65 a barrel

Description of trends

- The price of oil increased from approx. \$95 a barrel in January 2014 to approx. \$105 a barrel in July 2014 representing a rise of approx. 10.5%
- The price of oil then fell rapidly to a low of \$42 a barrel in February 2015 representing a fall of approx. 60%
- The price of oil recovered reaching \$60 a barrel in July 2015 before falling back to \$35 a barrel in Jan 16
- The number of rigs in operation increased from approx. 1400 in January 2014 to approximately 1550 in July 2014 and continued to increase even when oil prices started to fall until it reached a peak of approx. 1600 in October 2014 representing an increase of approx. 14.3%
- The number of rigs fell rapidly reaching a low of approx. 520 in January 2016 representing a fall of approx. 67.5%

Max [4] for description of the trends in oil prices and the number of rigs with manipulation of data but no comparison.

Up to [2] for explanation that the number of rigs only started to decline once the price of oil reached approx. \$65 a barrel.

Constrained max [5]

[5]

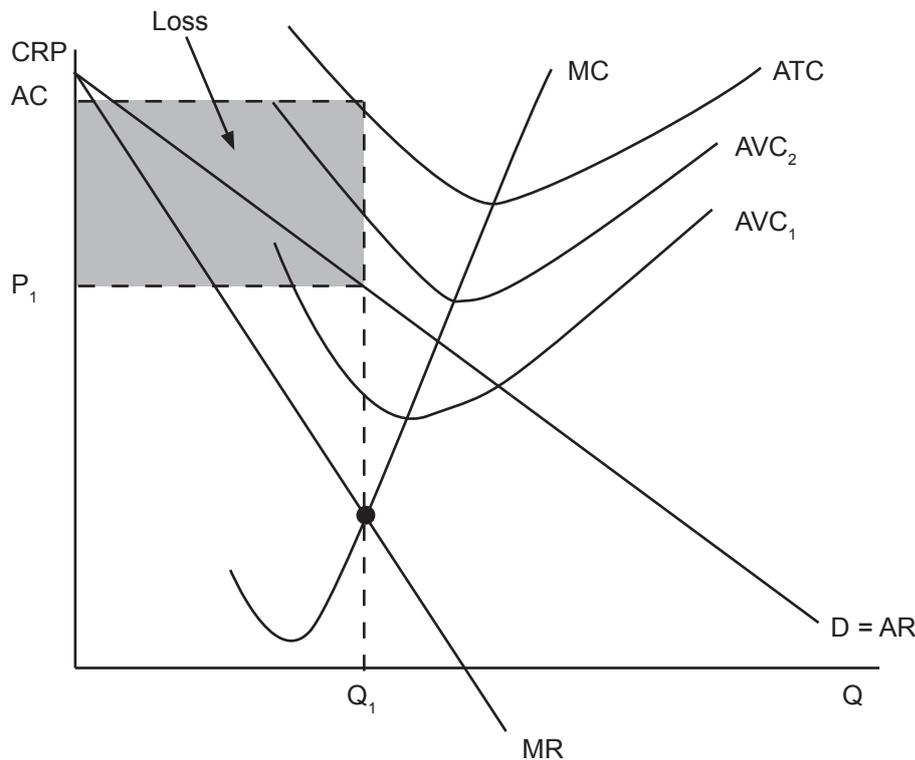
- (b)** In the long run a business must cover all of its costs if it hopes to remain in business. However in the short-run if a loss making business can cover its variable costs of production it will stay in business in the hope that market conditions improve sufficiently to enable it to make at least normal profits in the long run.

If a firm finds that its revenue is not sufficient to cover its variable costs it will have to shut down its operations.

Source 2 states that the average shale producer can make normal profit at around \$50 a barrel. However when price falls below this most firms will make a loss. However some firms will be able to remain in business as long as price stays above \$40 as they will have enough to cover their average variable costs. When price falls below \$40 shale producers must shut down as AR is less than AUC.

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In the sketch diagram below a firm with an AVC curve equal to AVC₁ will remain in business in the short run in the hope that market conditions improve while a firm with an AVC curve equal to AVC₂ will shut down immediately.



Areas for analysis and discussion include:

- Distinction between the long run and the short run
- Distinction between the fixed costs and variable costs
- Explanation of the shut-down point in short run and/or long run
- Reference to actual costs and revenues outlined in source 2
- Appropriate diagrams

Level 1 ([1]–[3])

Candidate shows little understanding of why some shale oil producers are able to remain in business despite making a loss while others are forced to shut down. No attempt is made to represent this in a diagram or if an attempt is made it will contain significant errors. Quality of written communication is limited.

Level 2 ([4]–[7])

Candidate shows some understanding of why some shale oil producers are able to remain in business despite making a loss while others are forced to shut down. The diagram will support the analysis but may contain some minor errors. Quality of written communication is satisfactory.

Level 3 ([8]–[10])

Candidate shows comprehensive understanding of why some shale oil producers are able to remain in business despite making a loss while others are forced to shut down. This analysis is supported by a clear and accurate diagram. Quality of written communication is of a high standard. [10]

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- (c) The social cost of an economic activity is equal to the sum of all the private costs plus all external costs. The private costs of oil extraction include the cost of drilling and refining the oil and labour costs. The external costs include the cost to society of the visual and noise pollution associated with drilling for oil and the cost to the environment and local economy of any gas or chemical leakages.

While it is relatively easy to calculate the private costs it is much more difficult to calculate the external costs. For example, how do we put a value on noise pollution or on the death of wildlife or the destruction of natural habitat? Calculating the external cost to the local economy is also fraught with difficulty. For example, when trying to calculate the impact of the leakage of chemicals into local water supplies on local farmers or fishermen, estimates need to be made of how much fish each fisherman is likely to have caught in the period the waters were polluted and the likely market price of these fish at that time.

Issues for analysis and discussion include:

- Definition or explanation of social costs
- Definition or explanation of external costs + private costs
- Discussion of the difficulty in placing a monetary value on non-traded entities such as wildlife and natural habitats
- Reference to different estimates of cost of cleaning polluted water reserves
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[3])

Candidate shows very limited understanding of the term social cost or why it is difficult for economists to accurately calculate the social cost of economic activity. There is no significant analysis or application and quality of written communication is limited.

Level 2 ([4]–[7])

Candidate provides some understanding of the term social cost and why it is difficult for economists to accurately calculate the social cost of economic activity. There is a degree of analysis and application and quality of written communication is satisfactory.

Level 3 ([8]–[10])

Candidate provides a clear and comprehensive understanding of the term social cost and why it is difficult for economists to accurately calculate the social cost of economic activity. There is significant analysis and application, with some degree of evaluation and quality of written communication is of a high standard. [10]

- (d) Proponents of fracking argue that if regulated properly the industry can be just as clean and socially responsible as the vast majority of other US industries. They argue that effective government regulation and enforcement can ensure that shale oil companies produce in a way which minimises the environmental damage that could occur. They argue that the Environmental Protection Agency (EPA) has been very successful in regulating other industries and in reducing pollution and increasing compliance with

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environmental legislation. Others however argue that regulation is often extremely complex and costly to enforce and that in many cases environmental legislation is ignored by large firms who calculate that the cost of compliance is greater than the potential cost of punishment if caught and prosecuted for non-compliance. Those who feel that regulation is ineffective argue that there a number of alternative policies that would be more effective in reducing the environmental cost of shale oil production.

Areas for analysis and discussion include:

- Reference to types and examples of regulation
- Reference to examples of enforcement – companies receiving fines or bans
- Reference to regulatory capture
- Reference to administration cost of regulation for both the government and for firms
- Reference to cost of policing regulations and enforcement costs
- Reference to political interference and lobbying when regulations are being drawn up and its impact on their effectiveness – *“Halliburton loophole” which was negotiated by Vice President (and ex Halliburton CEO) Dick Cheney exempts shale oil producers from a whole range of environmental legislation including the Safe Drinking Water Act*
- Reference to alternative policies for environmental protection – green taxes, tradeable pollution permits, extension of property rights
- Impact on efficiency
- Appropriate diagrams
- Appropriate examples

Level 1 ([1]–[5])

Candidate displays little understanding of the view that regulation is the most effective method of reducing the external costs associated with shale oil production. There is no significant evaluation of the issues and quality of written communication is limited.

Level 2 ([6]–[10])

Candidate provides some understanding of the view that regulation is the most effective method of reducing the external costs associated with shale oil production. There is a degree of evaluation though this may lack depth or be one sided. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate provides a clear and comprehensive understanding of the view that regulation is the most effective method of reducing the external costs associated with shale oil production. There is significant evaluation and judgement and quality of written communication is of a high standard. [15]

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2 Non-price competition benefits firms but not consumers

- (a) Price competition occurs whenever firms use price as the basis for attracting and retaining customers. There are a number of different pricing strategies that firms can use. These include; competitive pricing, destroyer/predatory pricing, psychological pricing and penetration pricing.

Non-price competition refers to all forms of competition other than through the price mechanism. Non-price competition involves firms focusing on areas such as quality, design, after sales services and other marketing factors such as product differentiation, branding and advertising.

Areas for analysis and discussion include:

- Definition and explanation of price competition
- Definition and explanation of non-price competition
- Discussion of alternative pricing strategies
- Discussion of non-price competitive strategies
- Use of appropriate examples

Level 1 ([1]–[5])

Candidate shows little understanding of the difference between price and non-price competition. Quality of written communication is limited.

Level 2 ([6]–[10])

Candidate shows some understanding of the difference between price and non-price competition however this may be incomplete or contain errors. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate shows a comprehensive understanding of the difference between price and non-price competition. Quality of written communication is of a high standard. [15]

- (b) Traditional economic theory assumes that consumers benefit from price competition. Price competition between firms leads to lower prices for consumers which increases consumer surplus. Lower prices also lead to an increase in real income and an increase in efficiency as firms are forced to reduce costs.

However some economists argue that, in the long term, intense price competition can be detrimental to consumers since it leads to smaller/less efficient firms leaving the industry. This in turn reduces competition which has a negative impact on choice and quality and can lead to higher prices in the long term.

Those economists who support non-price competition argue that it can lead to price stability which allows consumers to plan more effectively. They also contend that it can lead to improved product quality and improved customer service. They argue that non-price competition can lead to a wider choice of products within a market and that advertising that is associated with non-price competition improves information and therefore competition and efficiency. However others argue that non-price competition can create artificial barriers to entry and hence reduce the level of competition in the

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industry. They also argue that competitive advertising represents a waste of scarce economic resources and can be designed to manipulate the tastes and desires of consumers.

Areas for analysis and discussion include:

- Definition and explanation of price competition
- Examples of price competition
- Impact of price competition on consumer welfare
- Impact of price competition on real incomes
- Long term impact of price competition on competition levels and prices
- Impact of non-price competition on product quality
- Impact of non-price competition on customer service
- Impact of non-price competition on choice (positive and negative)
- Impact of advertising on information, competition and efficiency
- Reference to how some forms of non-price competition are designed to manipulate consumer tastes
- Reference to how some forms of non-price competition can create barriers to entry
- Appropriate diagrams
- Appropriate examples

Level 1 ([1]–[7])

Candidate shows little understanding of the view that consumers benefit more from price competition than from non-price competition. There is no significant analysis, application or evaluation and quality of written communication is limited.

Level 2 ([8]–[13])

Candidate shows some understanding of the view that consumers benefit more from price competition than from non-price competition. There is some attempt at analysis, application and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate shows in-depth understanding of the view that consumers benefit more from price competition than from non-price competition. There is significant analysis, application and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate shows clear and comprehensive understanding of the view that consumers benefit more from price competition than from non-price competition. There is a thorough analysis, application and evaluation of the arguments and quality of written communication is excellent. [25]

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3 Traditional theories of the firm are outdated and unrealistic

- (a) A market is said to be perfectly competitive when individually buyers and sellers believe that their own actions will have no influence on the market price.

Perfectly competitive markets do not exist in the real world; however agriculture and market gardening, and the foreign exchange markets are often regarded as the closest examples since they demonstrate many of the characteristics of perfect markets.

The model of perfect competition is based on a number of simplifying assumptions.

1. There are a large number of buyers and sellers who buy and sell such a small amount that they cannot affect market demand or supply.
2. The firms produce homogeneous products.
3. There is perfect knowledge of market conditions for both buyers and sellers.
4. There are no barriers to entry. Firms are free to enter and leave the industry.
5. There are no externalities.

A fall in market demand will lead to a decrease in the price firms receive for their products. In the short run, perfectly competitive firms will not earn enough revenue to cover their costs and so will make losses. Those firms who are able to cover their variable costs will remain in the industry in the hope that revenues will recover. Since there are no barriers to exit those firms who cannot cover their variable costs will leave the industry. This will reduce supply in the industry and will push up prices and revenues until normal profits are made by all remaining firms.

Areas for analysis and discussion include:

- Explanation of perfect competition
- Assumption of model
- Explanation of short run and long run equilibrium
- Distinction between fixed and variable costs
- Explanation of shut-down point
- Appropriate diagrams
- Appropriate examples

Level 1 ([1]–[5])

Candidate shows little understanding of how a perfectly competitive industry responds to a fall in demand. A diagram is unlikely to be attempted or where it is attempted it will contain significant errors. Quality of written communication is limited.

Level 2 ([6]–[10])

Candidate shows some understanding of how a perfectly competitive industry responds to a fall in demand. Diagrams will be drawn but they may contain minor errors. Quality of written communication is satisfactory.

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Level 3 ([11]–[15])

Candidate shows detailed understanding of how a perfectly competitive industry responds to a fall in demand in both the short run and the long run. Clear and accurate diagrams will be drawn. Quality of written communication is of a high standard. [15]

- (b) The neo classical theory of the firm was initially developed by economists such as Adam Smith and Alfred Marshall and later by economists such as Edward Chamberlin and Paul Sweezy. The models of perfect competition, monopoly, monopolistic competition and oligopoly are an attempt to explain and predict the behaviour of firms in different markets.

As with all economic models both the general theory and the individual models are based on a number of simplifying assumptions and it is these simplifying assumptions which have led to criticism that the models do not reflect the behaviour of firms in the real world and therefore the models are of limited use.

The most common criticism of the theory of the firm is that it assumes that all firms seek to maximise profit and therefore produce at the point where marginal cost equals marginal revenue. Critics suggest that in reality most firms do not equate MC and MR. Indeed some mathematicians have even questioned the validity of the assumption that profits are maximised at the point where MC equals MR.

However supporters of the neoclassical theory argue that models are not meant to strictly represent the behaviour of individual firms but rather provide a framework or benchmark against which the behaviour of real world firms can be judged. They also point particularly to modern developments in the theories of oligopoly which take account of the potential for collusive behaviour as models of best practice.

Areas for analysis and discussion include:

- Discussion of unrealistic nature of profit maximising assumption inherent in all traditional models
- Discussion of alternative objectives
- Discussion of unrealistic assumptions of each model, e.g. product homogeneity and perfect knowledge in perfect competition
- Discussion of economic models being used only as a framework or benchmark
- Discussion of alternative theories of firm behaviour – contestable markets theory and new models based on behavioural economics
- Discussion of the validity of the law of diminishing marginal productivity and the impact this would have on the shape of the MC curve
- Discussion of the validity of the assumption of rational behaviour on the part of firms or consumers
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[7])

Candidate shows little understanding of the view that the traditional models of firm behaviour are of little use to modern economists. There is no significant analysis or evaluation and quality of written communication is limited.

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Level 2 ([8]–[13])

Candidate shows some understanding of the view that the traditional models of firm behaviour are of little use to modern economists. There is some attempt at analysis and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate shows in-depth understanding of the view that the traditional models of firm behaviour are of little use to modern economists. There is significant analysis and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate shows clear and comprehensive understanding of the view that the traditional models of firm behaviour are of little use to modern economists. There is thorough evaluation and judgment of the arguments and quality of written communication is excellent. [25]

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4 Tesco retains market power despite losing market share

- (a) Market share is defined as the proportion of total sales in a market that is accounted for by a particular brand, product or company. It is normally calculated by taking a company's sales revenue and dividing it by the total value of sales in that particular market. Alternatively it can be calculated by taking the company's total volume of sales and dividing it by the total volume of units sold in that market.

The term market power (or monopoly power) refers to the ability of a firm to alter the market price of a good or service by exercising control over its demand, supply or both. A firm (or group of firms) would be considered to have market power if they have the ability to raise and maintain price above the level which would prevail under perfect competition. Market power is much more difficult to measure than market share. *The most common method is the Lerner Index which measures the extent to which price exceeds marginal (or variable) cost.*

While market share and market power often go hand in hand one does not necessarily depend upon the other. It is possible for a firm to have significant market share yet have little power to influence the price of the product, while firms in other markets may have more market power despite having a much lower market share.

Areas for analysis and discussion include:

- Definition of market share
- Explanation of how market share is measured
- Reference to measurements based on volume or value
- Definition of market power
- Explanation of how market power is measured
- Reference to monopoly or monopsony power
- Reference to market share tests being used to measure market dominance
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[5])

Candidate shows little understanding of the difference between market share and market power. Quality of written communication is limited.

Level 2 ([6]–[10])

Candidate shows some understanding of the difference between market share and market power. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate shows detailed and comprehensive understanding of the difference between market share and market power. Quality of written communication is of a high standard.

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(b) There are a range of measures available to government to reduce the market power of companies such as Tesco. These include:

- Removing barriers to entry to make the market more competitive or contestable
- Breaking the monopoly up – by forcing Tesco to sell stores to smaller rivals and hence increase competition
- Use of planning regulations to limit the expansion of Tesco or to stop Tesco “land banking”
- The use of price controls – forcing Tesco to pay higher prices to its suppliers, limiting the price it charges its customers
- The use of taxation – imposition of windfall taxes on supernormal profits
- The use of subsidies to encourage competition

Clearly each of these policies has their advantages and disadvantages.

Areas for analysis and discussion include:

- The efficiency of government regulation
- The difficulty in setting an appropriate price (RPI – x formula)
- Discussion of regulatory capture
- Evaluation based on contestable markets
- The opportunity cost of using subsidies
- Welfare implications of taxation
- Appropriate examples
- Reference to UK competition policy

Level 1 ([1]–[7])

Candidate shows little understanding of the measures a government could use to reduce the market power of a company such as Tesco. There is no significant analysis or evaluation and quality of written communication is limited.

Level 2 ([8]–[13])

Candidate shows some understanding of the measures a government could use to reduce the market power of a company such as Tesco. There is some attempt at analysis and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate shows in-depth understanding of the measures a government could use to reduce the market power of a company such as Tesco. There is significant analysis and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate shows clear and comprehensive understanding of measures a government could use to reduce the market power of a company such as Tesco. There is a thorough analysis, application and evaluation of the arguments and quality of written communication is excellent. [25]

Total

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40

80