



*Rewarding Learning*

**ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
January 2014**

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## **Economics**

**Assessment Unit AS 1**

*assessing*

**Markets and Prices**

**[AE111]**

**WEDNESDAY 15 JANUARY, AFTERNOON**

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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.

## Making 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 Sunbeds ranked alongside cigarettes as cancer risk**

**AVAILABLE  
MARKS**

- (a) Private costs are the costs to an individual of any economic action. If we consider the case of an individual using a sunbed the private cost of tanning includes the private costs to the individual of purchasing or hiring the sunbed and any increased health risk.

External costs on the other hand occur when the activity of one economic agent has a negative effect on the wellbeing of a third party. In this case the external cost is the cost inflicted on society as a result of having to pay for the negative health effects on the individual. The source estimates this to be in the region of £200 million.

**Level 1 ([1]–[2])**

Candidate shows little knowledge or understanding of the difference between private costs and external costs. There is little development through relevant examples, or technical language. Quality of written communication is limited.

**Level 2 ([3]–[4])**

Candidate shows some knowledge or understanding of the difference between private costs and external costs. There is some development through relevant examples or technical language. Quality of written communication is satisfactory.

**Level 3 ([5]–[6])**

Candidate shows extensive knowledge and understanding of the difference between private costs and external costs. There is extensive development through relevant examples, or technical language. Quality of written communication is of a high standard. [6]

- (b) The source identifies a number of factors which have led to the increased use of sunbeds in the UK. These include:

- Increased affordability due to low-cost coin operated outlets
- Effective marketing campaign by tanning companies
- Tanning has become fashionable for cosmetic reasons
- Poor summer weather in UK
- Tanning being seen as an affordable luxury – when incomes fall individuals cannot afford expensive luxuries but still desire to treat themselves to small luxuries.
- Increased availability due to increased number of tanning outlets

**Level 1 ([1]–[2])**

Candidate shows little understanding of the factors which have led to the increased use of sunbeds in the UK. At this level the candidate may simply quote directly from the source without explaining how these factors have led to increased use of sunbeds in the UK. Quality of written communication is limited.

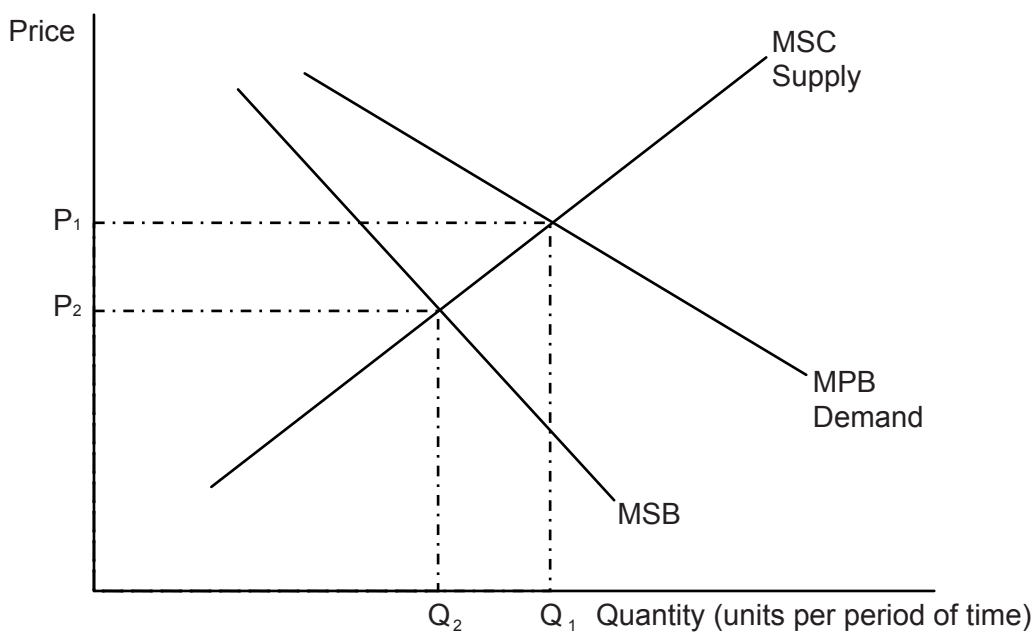
**Level 2 ([3]–[4])**

Candidate shows some understanding of the factors which have led to the increased use of sunbeds in the UK. Quality of written communication is satisfactory.

**Level 3 ([5]–[6])**

Candidate shows comprehensive understanding of the factors which have led to the increased use of sunbeds in the UK. At this level the candidate will identify at least three factors and will provide a clear explanation of how these factors have led to the increased use of sunbeds in the UK. Quality of written communication is of a high standard. [6]

- (c) Demerit goods such as sunbeds are goods which in a paternalistic sense the government believe we should not consume. Demerit goods are often over-consumed because the benefit received by the consumer exceeds the social benefit. For example in the case of tanning the demand curve based solely on the marginal private benefit (MPB) is higher than that which encompasses the disutility suffered by others as a consequence of sunbed use (MSB). Hence sunbeds are overvalued and over-consumed in a free market.



The free market price is P<sub>1</sub> and consumption is Q<sub>1</sub>. When allowance is made for the disutility suffered by others then the socially optimum level of consumption is Q<sub>2</sub>.

In addition 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 dangers involved in using a sunbed or may simply discount the dangers since they are likely to occur in the future while the benefits occur immediately.

**Level 1 ([1]–[2])**

Candidate shows little understanding of why free markets often lead to the over-consumption of sunbeds. 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.

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MARKS

**Level 2 ([3]–[5])**

Candidate shows some understanding of why free markets often lead to the over-consumption of sunbeds. The diagram will support the analysis but may contain some minor errors. Quality of written communication is satisfactory.

**Level 3 ([6]–[8])**

Candidate shows a clear and comprehensive understanding of why free markets often lead to the over-consumption of sunbeds. This analysis is supported by a clear and accurate diagram. Quality of written communication is of a high standard. [8]

- (d) There is a range of policy measures the government could use to reduce the over-consumption of sunbeds. Examples include
- The imposition of indirect taxes which should lead to higher prices and therefore a reduction in quantity demanded
  - Regulations to restrict use – age restrictions, restrictions on time spent on sunbeds, planning restrictions to reduce availability
  - Improve information on the dangers of tanning – introduction of cigarette-style warnings, public health campaigns
  - Complete ban on sunbeds
  - Introduction of minimum pricing
  - Introduction of a licensing system for sunbed operators similar to that which exists for the sale of alcohol.

**Level 1 ([1]–[2])**

Candidate provides little analysis of policies a government could use to reduce the over-consumption of sunbeds. There are few if any relevant examples and quality of written communication is limited.

**Level 2 ([3]–[5])**

Candidate provides some analysis of policies a government could use to reduce the over-consumption of sunbeds. There are some relevant examples and quality of written communication is satisfactory.

**Level 3 ([6]–[8])**

Candidate provides extensive analysis of policies a government could use to reduce the over-consumption of sunbeds. There is significant development through examples and quality of written communication is of a high standard. [8]

- (e) The case for free markets is based on the view that they are likely to successfully and efficiently deliver a wide variety of goods and services in the right quantity and at a price that consumers are willing to pay. Hence a free market is assumed to lead to both allocative and productive efficiency. Free market economists also argue that governments often lack the information required to improve market outcomes.

However, those in favour of government intervention argue that free market analysis assumes that the market price truly reflects society's costs and benefits. They argue that in the case of sunbeds this may not be the case, since significant negative consumption externalities are present and there is imperfect information on the true costs and benefits of using a sunbed. They argue that government intervention is necessary to correct the failings of the market mechanism

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

- Reference to benefits of free markets – allocative and productive efficiency
- Reference to types and causes of market failure
- Reference to external costs associated with using sunbeds – cost to NHS of treating effects of tanning
- Discussion of reasons for government intervention – information failure, negative consumption externalities
- Reference to different methods of government intervention – regulation, taxation etc.
- Reference to government failure
- Reference to political motivation for market interventions – nanny state, excuse to increase taxation
- Impact of government intervention on economic welfare – consumer and producer surplus
- Use of appropriate diagrams
- Use of appropriate examples

**Level 1 ([1]–[4])**

Candidate displays little critical examination of the case for and against government intervention in the sunbed market. There is no significant evaluation of the issues and quality of written communication is limited.

**Level 2 ([5]–[8])**

Candidate provides some critical examination of the case for and against government intervention in the sunbed market. There is a degree of evaluation and quality of written communication is satisfactory.

**Level 3 ([9]–[12])**

Candidate provides a clear and comprehensive critical examination of the case for and against government intervention in the sunbed market. There is significant evaluation and judgement and quality of written communication is of a high standard. [12]

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## 2 Government introduces greater competition in health care in an attempt to reduce costs

- (a) The basic economic problem facing society is how to allocate scarce resources between competing alternatives. Economists say that resources are finite; needs may be finite, but wants are infinite. Therefore scarcity means that there are not enough resources available to satisfy the **wants** of the population.

Because resources are scarce society must make choices, i.e. they must answer the questions of what, how, and for whom?

### Appropriate development

- Explanation of scarce resources
- Reference to scarcity, choice and opportunity cost
- Explanation of basic economic problem
- Factors of production

### Level 1 ([1]–[3])

Candidate shows little understanding of the basic economic problem. There is no significant development and quality of written communication is limited.

### Level 2 ([4]–[7])

Candidate shows some understanding of the basic economic problem. There is a degree of development and quality of written communication is satisfactory.

### Level 3 ([8]–[10])

Candidate shows clear understanding of the basic economic problem. There is significant development and quality of written communication is of a high standard. [10]

- (b) The production-possibility frontier shows the maximum combination of two or more goods/services that can be produced using all resources efficiently. The PPF is a simplified model of what happens in the real world and it allows economists to illustrate on a graph the problem of scarcity and the concept of opportunity cost.

For simplicity's sake we assume that:

1. The government can only produce two types of services; education and health.
2. Its scarce resources are efficiently used in the production of these two services.
3. Resources can be used to produce either of these two services.

If this is the case then the government will be producing at some point on the PPF and will be using its scarce resources efficiently. Because resources are scarce, if the government wishes to produce more of one service, for example, education, then it will have to sacrifice some of the other service, in this case health. In other words producing more of one service will involve an opportunity cost.



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

- Definition/explanation of a Production-Possibility Frontier
- Assumptions of the model
- Explanation and analysis of opportunity cost
- Different measures of efficiency
- Reference to factors which could cause a shift in the PPF
- Use of appropriate diagram
- Use of appropriate examples

**Level 1 ([1]–[5])**

Candidate provides little explanation of how a PPF can be used to analyse the problem of allocating scarce resources between health and education. Some attempt may be made to represent this in a diagram but this is likely to contain significant errors. There is no significant economic analysis and quality of written communication is limited.

**Level 2 ([6]–[10])**

Candidate provides some explanation of how a PPF can be used to analyse the problem of allocating scarce resources between health and education. An attempt is made to represent this in a diagram but it may contain some minor errors. There is a degree of economic analysis and quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive explanation of how a PPF can be used to analyse the problem of allocating scarce resources between health and education. A clear and accurate diagram is drawn. There is significant economic analysis and quality of written communication is of a high standard. [15]

- (c) The NHS provides health care free at the point of use. Access to care is based on clinical need and not on the ability to pay.

In recent years, advances in technology and treatments and an ageing population have placed increasing demands on an already overstretched budget. *This limited budget has meant that the National Institute for Clinical Excellence (NICE) has had to deny patients' access to some treatments on the basis that they do not represent value for money in terms of quality life years.* This has led some commentators to call for the NHS to be reformed and private companies given a greater role in the provision of health care.

**Issues for analysis and discussion include:**

- The cost to the taxpayer of NHS (£125bn in 2012)
- Opportunity cost of health spending
- Reference to NHS monopoly over health care provision
- Impact of increased competition on efficiency
- Inequality in health provision if provided by the market
- Inefficiency in the NHS
- Health care as a merit good
- Comparison of the quality of health care provision under different systems, e.g. USA and UK
- Impact of medical advances and ageing population on NHS budget

**Level 1 ([1]–[5])**

Candidate displays little understanding of the case for and against the introduction of greater competition in the provision of health care in the UK. 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 case for and against the introduction of greater competition in the provision of health care in the UK. There is a degree of evaluation and quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive understanding of the case for and against the introduction of greater competition in the provision of health care in the UK. There is significant evaluation and judgement and quality of written communication is of a high standard. [15]

**AVAILABLE  
MARKS**

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**3 Wind farm subsidies to top £10bn this year**

- (a) Supply is defined as the quantity of a good or service that producers are willing and able to supply at a given price in a given time period. An increase in supply means that producers are willing to produce more of a product at all price levels. It is represented by a rightward shift in the supply curve. An increase in supply can be caused by a range of factors such as a change in the price of factors of production, an increase in productivity and technological developments.

**Appropriate development**

- Definition of supply
- Reference to supply curve
- Conditions of supply
- Appropriate diagrams
- Appropriate examples

**Level 1 ([1]–[3])**

Candidate shows little understanding of what is meant by an increase in supply. There is no significant development and quality of written communication is limited.

**Level 2 ([4]–[7])**

Candidate shows some understanding of what is meant by an increase in supply. There is a degree of development and quality of written communication is satisfactory.

**Level 3 ([8]–[10])**

Candidate shows clear understanding of what is meant by an increase in supply. There is significant development and quality of written communication is of a high standard. [10]

- (b) An increase in supply in one market may have an impact on a range of other markets.

The markets most likely to be affected are:

- markets for substitute goods
- markets for complementary goods
- markets for goods which are in joint supply
- markets for factors of production

**Issues for analysis include:**

- Use of appropriate diagrams
- Appropriate examples
- Reference to elasticities of demand and supply (PED, XED, PES)

**Level 1 ([1]–[5])**

Candidate provides little explanation of how a change in supply in one market may impact upon other markets. There is no significant economic analysis or application and quality of written communication is limited.

**Level 2 ([6]–[10])**

Candidate provides some explanation of how a change in supply in one market may impact upon other markets. There is a degree of economic analysis and application. Quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive analysis of how a change in supply in one market may impact upon other markets. There is significant economic analysis and application. Quality of written communication is of a high standard. [15]

- (c) Those who support the cut in subsidy to wind farms argue that subsidising wind farm creation has become very expensive at a time when the technology has become cheaper for individual firms. They also argue that it is the large and often foreign firms who benefit most from the subsidy. *They point to the fact that, in 2011, the top 10 wind farm providers received over £800 million between them. Of the 10 top companies 8 are foreign owned.*

They also argue that the benefits of wind farms are overstated and point particularly to the noise and visual pollution they create. They also point out that recent developments in technology mean that creating energy from fossil fuels is not as environmentally damaging as was once the case. In addition, wind farms have a significant negative impact on bird life.

However those who support the policy of subsidising wind farms argue that it will increase the incentive to create wind farms and as a result it will lead to a reduction in the pollution caused by traditional forms of energy production. They argue that without the subsidy, the creation of wind farms will be below the socially desirable level and therefore make it more difficult for the UK to meet their carbon reduction targets. They also argue that the subsidy helps UK firms develop innovative energy products and creates both employment and economic growth.

**Issues for discussion and evaluation include:**

- Impact of cut in subsidy on supply of green energy
- Impact of subsidy will depend on the relative price elasticity of demand and supply
- Impact of cut in subsidy on environment
- Need for investment in alternative energy infrastructure
- Reference to energy used in the construction of windfarms
- Opportunity cost of subsidy
- Administration cost of allocating subsidy
- Impact of subsidy cut on employment and growth
- Appropriate examples
- Appropriate diagrams

**Level 1 ([1]–[5])**

Candidate displays little understanding of the case for and against the proposal to cut the level of subsidy available for wind farms. 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 case for and against the proposal to cut the level of subsidy available for wind farms. There is a degree of evaluation and quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive understanding of the proposal to cut the level of subsidy available for wind farms. There is significant evaluation and judgement and quality of written communication is of a high standard. [15]

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**4 Bosses' pay now more than 50 times that of the average worker**

- (a) The demand for labour refers to the quantity of labour that firms are willing and able to employ at a given wage rate in a given time period. The demand curve for labour is downward sloping, reflecting an inverse relationship between the wage rate and the quantity of labour demanded. At lower wages firms are willing and able to employ greater quantities of labour.

**Appropriate development**

- Definition of demand for labour
- Explanation of downward sloping demand for labour curve
- Reference to derived nature of demand for labour
- Reference to factors which could cause a shift in the demand for labour curve
- Appropriate diagrams
- Appropriate examples

**Level 1 ([1]–[3])**

Candidate shows little understanding of what is shown by the demand curve for labour. There is no significant development and quality of written communication is limited.

**Level 2 ([4]–[7])**

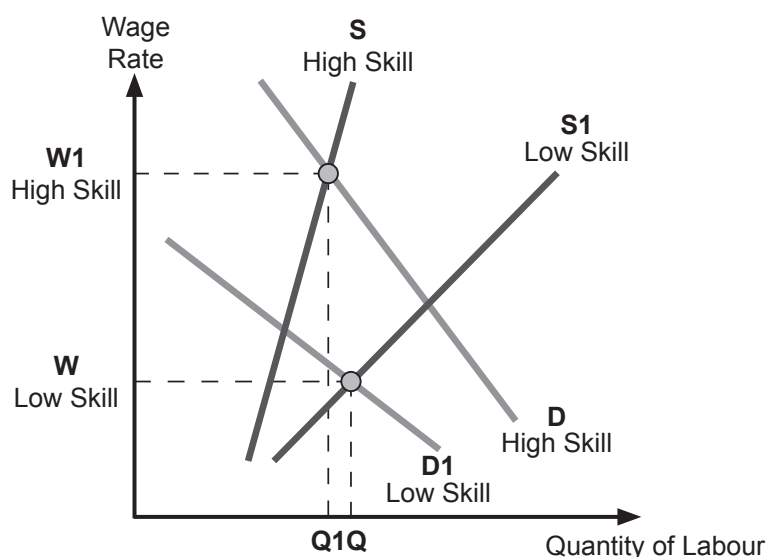
Candidate shows some understanding of what is shown by the demand curve for labour. There is a degree of development and quality of written communication is satisfactory.

**Level 3 ([8]–[10])**

Candidate shows clear understanding of what is shown by the demand curve for labour. There is significant development and quality of written communication is of a high standard.

[10]

- (b) In a free market wages are determined solely by the forces of demand and supply. The market theory of wages states that wage differentials are due to differences in demand and supply conditions for different occupations. For example the wages of a premier league footballer are higher than the wages of a street sweeper because the supply of individuals with the skills to play premier league football is much more limited than the supply of workers with the skill to sweep streets. Equally the demand for premier league footballers is likely to be much higher than the demand for street sweepers. This is because a star player can generate much higher revenues for the football club through attracting more fans to the ground or club. This combination of high demand and limited supply will lead to a higher equilibrium wage for highly skilled workers such as premier league footballers. This is shown on the diagram below



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

- Reference to demand and supply conditions for different occupations
- Reference to how equilibrium wage is determined
- Reference to the skills levels of workers
- Reference to human capital differences – some jobs require lengthy training and education, and this is reflected in higher wages.
- Influence of trade unions on wages – heavily unionised occupations tend to have higher wages
- Impact of discrimination – gender pay gap
- Impact of perceived social benefit of occupation
- Impact of barriers to entry – chartered status
- Appropriate examples
- Appropriate diagrams
- Explanation of economic rent and transfer earnings

**Level 1 ([1]–[5])**

Candidate provides little analysis of why free markets often lead to large wage differentials. No attempt is made to represent this in a diagram or if an attempt is made it may contain significant errors. There is no significant economic analysis and quality of written communication is limited.

**Level 2 ([6]–[10])**

Candidate provides some analysis of why free markets often lead to large wage differentials. An attempt may be made to represent this in a diagram but it will contain some minor errors. There is a degree of economic analysis and quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive analysis of why free markets often lead to large wage differentials. At this level a candidate is likely to include a clear and accurate diagram. There is significant economic analysis and quality of written communication is of a high standard. [15]

- (c) The last 30 years have seen a huge rise in the gap between the pay of those at the bottom of the pay scale and those at the top. *For example in 1979 the boss of Barclays earned 14.5 times that of the average Barclays employee. In 2012 that multiple had grown to 79. When the comparison is made with the lowest paid employees the multiple is 202. In the last year (2011) executive pay in the FTSE 100 rose by 49% on average compared to 2.7% for the average employee.* For some this widening gap is a source of market failure and they are calling on the government to intervene to reduce wage inequality in the UK.

If the government choose to intervene to reduce wage inequality they have a number of policy options at their disposal. These include:

- Introduction of a maximum wage
- Increasing higher rate of tax to make tax system more progressive and therefore narrow the gap in net pay
- Increasing the national minimum wage to increase the wages of the lowest paid
- Removing the barriers to entry to high paying professions
- Strengthening regulation with regard to discrimination in workplace
- Reducing wage differentials in the public sector by limiting the wages of

the highest paid – suggestion that no public sector worker should earn more than the Prime Minister (£156,000) – this would reduce public sector wage inequality and could encourage pay restraint in the private sector

- Introducing a maximum wage multiple – *Economist Will Hutton has suggested a maximum pay multiple of 20:1. Indeed some successful firms already implement such a policy. Ben & Jerry’s have a maximum pay multiple of 8:1.*

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

- Disincentive effects of higher taxation
- Reference to Laffer curve effects of higher taxation
- Impact of higher NMW on employment, prices and competitiveness of British firms
- Difficulty in implementing maximum wage legislation
- Difficulty in attracting talent if wages are significantly lower in the UK than elsewhere
- Reference to regulatory capture or government failure
- Appropriate diagrams
- Appropriate examples

**Level 1 ([1]–[5])**

Candidate displays little understanding of the policies the government could use to reduce wage inequality. 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 policies the government could use to reduce wage inequality. There is a degree of evaluation and quality of written communication is satisfactory.

**Level 3 ([11]–[15])**

Candidate provides a clear and comprehensive understanding of the policies the government could use to reduce wage inequality. There is significant evaluation and judgement and quality of written communication is of a high standard.

[15]

**AVAILABLE MARKS**

40

**Total**

**80**