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Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2011

Economics

Assessment Unit AS 1

assessing

Markets and Prices

[AE111]

WEDNESDAY 12 JANUARY, AFTERNOON

MARK SCHEME

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AVAILABLE MARKS

1 **(a)** Both NHS spending and total government spending have increased significantly since 2001.

NHS spending has increased from £65.5bn in 2001 to £119.4bn which represents an 82% increase.

Total government spending has increased from £389.2bn in 2001 to £701.7bn in 2010 which represents an 80% increase.

In 2001 NHS spending accounted for 16.9% of total government spending. The corresponding figure for 2010 is 17%. Therefore there has been very little change in relative terms.

Level 1 ([1]–[2])
- candidate provides little comparison of the trend in NHS spending with that of total government spending between 2001 and 2010
- quality of written communication is limited.

Level 2 ([3]–[4])
- candidate provides some comparison of the changes in the trend in NHS spending with that of total government spending between 2001 and 2010
- quality of written communication is satisfactory.

Level 3 ([5]–[6])
- candidate provides an extensive comparison of the changes in the trend in NHS spending with that of total government spending between 2001 and 2010
- quality of written communication is of a high standard. [6]

(b) The source identifies three factors that could cause the demand for NHS services to grow over the next ten years.
- medical advances
- rising obesity levels
- an ageing population.

Level 1 ([1]–[2])
- candidate shows little understanding of the factors which may lead to an increase in the demand for NHS services
- at this level the candidate may simply quote directly from the source without explaining how these factors are likely to put increasing demands on NHS resources
- quality of written communication is limited.

Level 2 ([3]–[4])
- candidate shows some understanding of the factors which may lead to an increase in the demand for NHS services
- quality of written communication is satisfactory.

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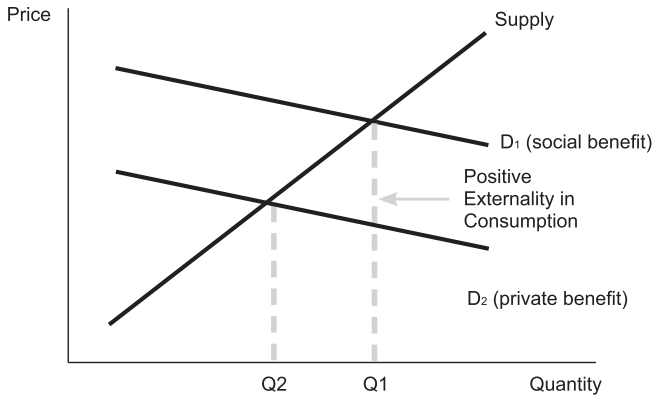
Level 3 ([5]–[6])

- candidate shows a clear and comprehensive understanding of the factors which may lead to an increase in the demand for NHS services
- at this level the candidate will identify all three factors and will provide a clear explanation of how these factors are likely to put increasing demands on NHS resources
- quality of written communication is of a high standard. [6]

(c) Merit goods are goods which in a paternalistic sense the government believe we should consume. The consumption of merit goods by one economic agent will often confer positive externalities on society and therefore would be under-consumed if provided through the market.

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

Since rational economic agents only consider their own private benefit they will not consider the social benefit and therefore the free market will lead to consumption Q2 which is below the socially optimal level Q1.



Alternatively merit goods may be under-consumed due to a lack of information on behalf of the person consuming the good. Some people may not be fully aware of all of the private benefits of consuming the good or may simply discount the benefits since they are likely to occur in the future while the costs are incurred today.

Level 1 ([1]–[2])

- candidate provides little explanation of how the free market leads to the under-consumption of merit goods such as health care
- no attempt is made to represent this in a diagram or if an attempt is made it will contain significant errors
- there is no significant economic analysis and quality of written communication is limited.

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Level 2 ([3]–[5])
- candidate provides some explanation of how the free market leads to the under-consumption of merit goods such as health care
- 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 ([6]–[8])
- candidate provides a clear and comprehensive explanation of how the free market leads to the under-consumption of merit goods such as health care
- a clear and accurate diagram is drawn
- there is significant economic analysis and quality of written communication is of a high standard. [8]

(d) In the absence of a price mechanism the NHS is forced to look at alternative methods of allocating its scarce resources.

The source identifies four methods which the NHS has used to ration its services:
- queuing
- setting priorities
- through private payments to doctors or other medical staff
- denying access to certain groups.

Level 1 ([1]–[2])
- candidate shows little understanding of the methods the NHS can use to allocate its resources between competing demands
- at this level the candidate may simply quote directly from the source but make no attempt at explaining how these methods can be used to ration NHS resources
- quality of written communication is limited.

Level 2 ([3]–[5])
- candidate shows some understanding of the methods the NHS can use to allocate its resources between competing demands
- the candidate may attempt to explain how one or two of these methods can be used to ration NHS resources
- quality of written communication is satisfactory.

Level 3 ([6]–[8])
- candidate shows clear and comprehensive understanding of the methods the NHS can use to allocate its resources between competing demands
- at this level the candidate will identify three or four methods and will provide a clear explanation of how these methods can be used to ration NHS resources
- quality of written communication is of a high standard. [8]

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AVAILABLE MARKS

(e) There have been growing calls for the NHS to deny treatments to groups of people such as smokers, heavy drinkers and the obese. The argument used to justify this stance is that these individuals are less deserving of treatment since their illnesses may be self-inflicted and the treatments are less likely to be effective due to their unhealthy lifestyle. With increasing demands being put on resources the NHS needs to find some way of rationing services.

However, others have argued that it is wrong for doctors to punish patients for their unhealthy lifestyles. They argue that such a system would impact upon the poor disproportionately and would be extremely difficult to administer. It could also be argued that smokers and drinkers more than compensate for the increased cost they place on the NHS through the tax they pay on cigarettes and alcohol.

Issues for discussion and evaluation include:

- impact on low income groups
- difficulty in proving that illness is caused by unhealthy lifestyle
- if we deny smokers and drinkers should we also deny treatments to those who are injured as a result of playing sport or driving too fast?
- everyone pays for NHS through general taxation therefore everyone should have access to it
- discussion of alternative forms of rationing
- inefficiency of treating those who lead unhealthy lifestyles
- moral/ethical arguments
- decisions based on calculation of likely “quality added life years” (Qualys).

Level 1 ([1]–[4])

- candidate shows little understanding of the arguments for and against the view that it is wrong for the NHS to deny treatments to people with unhealthy lifestyles
- there is no significant evaluation of the issues and quality of written communication is limited.

Level 2 ([5]–[8])

- candidate provides some understanding of the arguments for and against the view that it is wrong for the NHS to deny treatments to people with unhealthy lifestyles
- there is a degree of evaluation though this is likely to be one-sided or lack depth and quality of written communication is satisfactory.

Level 3 ([9]–[12])

- candidate provides a clear and comprehensive understanding of the arguments for and against the view that it is wrong for the NHS to deny treatments to people with unhealthy lifestyles
- there is significant evaluation and judgement, and quality of written communication is of a high standard. [12]

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Essay section

2 Government car scrappage scheme leads to increase in new car sales

(a) Price elasticity of demand measures how responsive quantity demanded is to a change in price.

It is calculated by dividing the percentage change in quantity demanded by the percentage change in price.

Appropriate development
- calculation
- relevance of numerical values
- diagrams
- examples of elastic and inelastic products.

Level 1 ([1]–[3])
- candidate shows little understanding of the term price elasticity of demand
- there is no significant development and quality of written communication is limited.

Level 2 ([4]–[7])
- candidate shows some understanding of the term price elasticity of demand
- there is a degree of development and quality of written communication is satisfactory.

Level 3 ([8]–[10])
- candidate shows clear and comprehensive understanding of the term price elasticity of demand
- there is significant development and quality of written communication is of a high standard. [10]

(b) A number of different studies have attempted to measure the price elasticity of demand for new cars in the UK. These studies have estimated that in the short run (where the short run is defined as one year after the price change) the PED of new cars lies somewhere between –1.1 and –1.4.

Economists have identified a number of factors which are likely to influence the PED of new cars. These include:
- the degree to which a car is seen as a necessity or a luxury
- the proportion of income needed to purchase a new car
- availability of good substitutes – public transport, high quality second hand cars
- the time period over which the PED is measured
- when calculating the PED for a particular type or make of car other factors such as the strength of the brand play an important role.

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Level 1 ([1]–[5])
- candidate displays little understanding of the factors which influence the PED of new cars
- there is no significant economic analysis and quality of written communication is limited
- a candidate at this level may identify one or two factors which influence PED but will make no attempt to apply it to the new car market.

Level 2 ([6]–[10])
- candidate displays some understanding of the factors which influence the PED of new cars
- there is a degree of economic analysis and application and quality of written communication is satisfactory.

Level 3 ([11]–[15])
- candidate displays a clear and comprehensive understanding of the factors which influence the PED of new cars
- the candidate will identify a number of factors which influence PED and these will be clearly applied to the new car market
- there is extensive and accurate economic analysis and quality of written communication is of a high standard. [15]

(c) In May 2009 the UK government introduced a car scrappage scheme whereby motorists who owned cars over 10 years old could receive a £1,000 subsidy from the government towards the purchase of a new car on the condition they scrapped their old car. Car dealers were encouraged to match this deal and offer customers a further £1,000. The scheme was designed to help support the car industry which was struggling as a result of the economic slowdown. It was also justified on environmental grounds with supporters suggesting that replacing old cars with new fuel efficient cars would help to reduce CO_2 emissions.

However, others have argued that subsidising the purchase of new cars will actually increase CO_2 emissions since the production of cars creates CO_2. In addition they argue that drivers are likely to increase the number of journeys they take if they buy a new car.

On the other hand those in the motor industry argue that the scheme does not go far enough and should be changed to match the German model where the government gave €2000 for cars over nine years of age which could be used to purchase cars less than one year old.

At the time of writing the scheme has had mixed results with sales of small cars from manufacturers at the lower end of the price range benefiting most.

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Issues for analysis and discussion include:
- impact on road safety
- impact of subsidy on purchasing decisions
- impact of PED and PES on effectiveness of subsidy
- impact on environment
- opportunity cost of the £300 million set aside for the subsidy scheme
- administration cost of subsidy on both government and motor industry
- impact on jobs in motor industry
- impact on second hand market
- appropriate examples
- impact on imports.

Level 1 ([1]–[5])
- candidate displays little understanding of the case for and against the car scrappage scheme
- 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 car scrappage scheme
- 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 car scrappage scheme
- there is significant evaluation and judgement and quality of written communication is of a high standard. [15]

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3 Government fails to meet pollution targets

(a) An allocatively efficient outcome is a situation where the current combination of goods produced and sold gives the maximum satisfaction. Allocative efficiency is achieved when the cost of producing a good is equal to the value consumers place on that good, which is reflected in the price they are willing to pay. It occurs when P = MC.

Productive efficiency on the other hand is a situation where firms are producing the maximum output for a given quantity of inputs or producing a given output at lowest cost. Productive efficiency is achieved when production takes place at the lowest possible average cost. It occurs when AC are minimised.

Appropriate development
- appropriate definitions
- numerical examples
- relevant diagrams.

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AVAILABLE MARKS

Level 1 ([1]–[3])
- candidate shows little or no understanding of the terms productive and allocative efficiency
- there is no significant development and quality of written communication is limited.

Level 2 ([4]–[7])
- candidate shows some understanding of the terms productive and allocative efficiency
- there is a degree of development and quality of written communication is satisfactory.

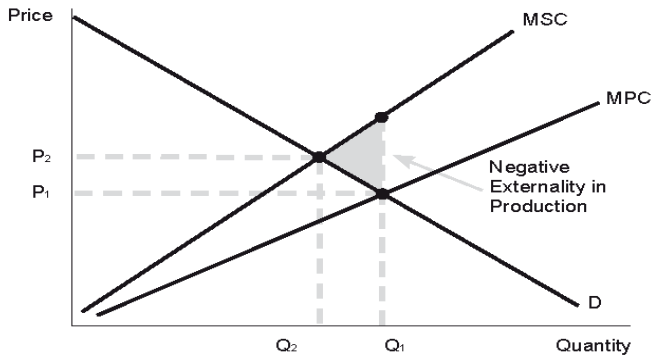
Level 3 ([8]–[10])
- candidate shows clear and comprehensive understanding of the terms productive and allocative efficiency
- there is significant development and quality of written communication is of a high standard. [10]

(b) A negative externality occurs whenever the activity of one economic agent has a negative effect on the well-being of a third party.

Whenever production creates negative externalities the marginal social cost of production is greater than the marginal private cost.

In free markets, firms only consider the private costs of production and therefore produce at the point where demand is equal to marginal private cost.

However, production at this level represents an inefficient allocation of resources since the price charged does not equal the full marginal social cost of production.



Issues for analysis include:
Issues for analysis include:
- use of appropriate diagrams
- appropriate examples
- definition of free market
- definition of negative externality.

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AVAILABLE MARKS

Level 1 ([1]–[5])
- candidate displays little understanding of why the existence of negative externalities may cause firms in free markets to produce at a level which is economically inefficient
- there is no significant economic analysis and quality of written communication is limited.

Level 2 ([6]–[10])
- candidate displays some understanding of why the existence of negative externalities may cause firms in free markets to produce at a level which is economically inefficient
- there is a degree of economic analysis and application, and quality of written communication is satisfactory.

Level 3 ([11]–[15])
- candidate displays a clear and comprehensive understanding of why the existence of negative externalities may cause firms in free markets to produce at a level which is economically inefficient
- there is extensive and accurate economic analysis and quality of written communication is of a high standard. [15]

(c) There are a number of policies that governments could use to reduce the external costs and inefficiency associated with production. These include regulation, taxation, the use of tradable pollution permits, and the extension of property rights.

Each of these policies has its strengths and weaknesses – however, most economists would argue that the best policy is one which would internalise the externality and make the polluter pay the full social cost of production.

Issues, analysis and areas for discussion include:
- use of environmental taxes
- appropriate diagrams
- tax avoidance
- the effectiveness of regulation
- administration costs of tradable permits
- appropriate examples.

Level 1 ([1]–[5])
- candidate shows limited understanding of the policies governments could use to reduce the external costs associated with production
- there is no significant evaluation of the issues and quality of written communication is limited.

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AVAILABLE MARKS

Level 2 ([6]–[10])
- candidate provides some understanding of the policies governments could use to reduce the external costs associated with production
- 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 governments could use to reduce the external costs associated with production
- there is significant evaluation and judgement, and quality of written communication is of a high standard. [15]

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4 The theory of demand and supply is flawed

(a) The market equilibrium or market clearing price is the price that equalises the demand for a product and the supply of the product. It is one which is static and exhibits no tendency to change. At the equilibrium price the number of consumers who are willing and able to purchase the product is equal to the number of products that firms are willing to supply.

Appropriate development
- explanation of demand and supply
- diagrams
- explanation of equilibrium and disequilibrium
- reference to conditions of demand and supply.

Level 1 ([1]–[3])
- candidate shows little understanding of the market clearing price
- there is no significant development and quality of written communication is limited.

Level 2 ([4]–[7])
- candidate shows some understanding of the market clearing price
- there is a degree of development and quality of written communication is satisfactory.

Level 3 ([8]–[10])
- candidate shows clear and comprehensive understanding of the market clearing price
- there is significant development and quality of written communication is of a high standard. [10]

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(b) A change in demand or supply in one market may have an impact on a range of other markets.

The markets most likely to be affected are:
- the market for substitute goods
- the market for complementary goods
- the market for goods which are in joint supply
- the markets for the factors of production used in this and other products
- the market for other goods for which this product is a factor input.

Issues for analysis include:
- use of appropriate diagrams
- appropriate examples
- reference to cross price elasticity of demand.

Level 1 ([1]–[5])
- candidate provides little explanation of how a change in demand or supply in one market may have effects on other markets
- there is no significant economic analysis and quality of written communication is limited.

Level 2 ([6]–[10])
- candidate provides some explanation of how a change in demand or supply in one market may have effects on other markets
- 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 how a change in demand or supply in one market may have effects on other markets
- there is significant economic analysis and quality of written communication is of a high standard. [15]

(c) Virtually all demand theory is based on the view that, so long as other factors remain unchanged, rational consumers will be prepared to buy more when price falls and less when it rises. A price fall gives consumers greater real income and also makes substitute goods less attractive. It also increases consumer surplus.

Some economists, however, argue that consumers do not always act rationally, and that there may be circumstances when they would be prepared to buy more of a particular product at higher prices.

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

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Issues for analysis and discussion include:

- discussion of goods purchased for conspicuous consumption
- altruistic purchase of fair trade and environmentally friendly products
- speculative goods
- discussion of irrational behaviour on behalf of consumers
- impact of marketing on consumer decisions
- if price is perceived to be an indication of quality consumers may demand more of a good at higher prices
- appropriate examples
- appropriate diagrams.

Level 1 ([1]–[5])

- candidate displays little understanding of the view that it is unrealistic to assume that consumers buy more of a product when price falls
- 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 it is unrealistic to assume that consumers buy more of a product when price falls
- 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 view that it is unrealistic to assume that consumers buy more of a product when price falls
- there is significant evaluation and judgement, and quality of written communication is of a high standard. [15]

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Total **80**