General Certificate of Education
Advanced Level Examination
January 2013

Economics ECON1

Unit 1   Markets and Market Failure

Tuesday 15 January 2013   1.30 pm to 2.45 pm

For this paper you must have:
- an objective test answer sheet
- a black ball-point pen
- an AQA 8-page answer book.

You may use a calculator.

Time allowed
- 1 hour 15 minutes

Section A (ECON1/1)
- Answer **all** questions on your objective test answer sheet.
- Use a black ball-point pen. Do **not** use pencil.
- Do all rough work in this question paper, **not** on your objective test answer sheet.

Section B (ECON1/2)
- Answer **EITHER** Context 1 **OR** Context 2.
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is ECON1/2.

Information
- The maximum mark for this paper is 75.
- There are 25 marks for **Section A**. Each question carries one mark. No deductions will be made for wrong answers.
- There are 50 marks for **Section B**. The marks for questions are shown in brackets.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend no more than 25 minutes on **Section A** and at least 50 minutes on **Section B**.

ECON1

Section A: Objective Test

Answer **all** questions in **Section A**.
Each question carries one mark. No deductions will be made for wrong answers.
You are advised to spend no more than 25 minutes on **Section A**.

For each question there are four alternative responses, **A**, **B**, **C** and **D**. When you have selected the response which you think is the best answer 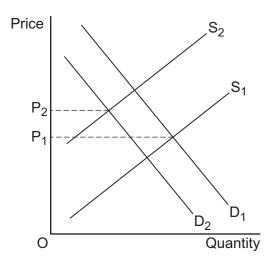to a question, mark this response on your objective test answer sheet. If you wish to change your answer to a question, follow the instructions on your objective test answer sheet.

1   Which one of the following is a factor of production?

   A   The profits made by firms

   B   Land owned or rented by firms

   C   A bank loan

   D   The productivity of labour

2   Which one of the following is most likely to discourage the growth of a firm?

   The existence of

   A   diseconomies of scale at low levels of output

   B   marketing economies of scale at high levels of output

   C   large economies of scale at low levels of output

   D   competing firms in the same industry

3   The income elasticity of demand for bus travel is −1.5. This means that

   A   a 10% increase in fares will lead to a 15% decrease in passengers.

   B   bus travel is an inferior good.

   C   bus travel has a negative cross elasticity of demand.

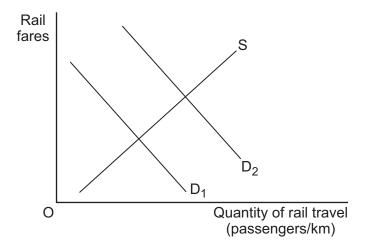   **D**   as unemployment falls, more people will use buses.

4 The diagram below shows the demand and supply curves for butter, where P_1 is the initial equilibrium price.

The increase in price from P_1 to P_2 is most likely to be a result of

A an increase in butter production costs and a decrease in the price of complementary goods to butter.

B a successful advertising campaign for a butter substitute and a tax on butter.

C a decrease in the population and an increase in the subsidy on butter.

D a decrease in wages paid to all workers, including farm workers.

5 Which one of the following is an example of government failure?

A The government overproducing a merit good

B Government provision of national defence

C All subsidies given to private sector firms

D The government allowing free market forces to raise the price of oil

6 The free market equilibrium price of a merit good is £50 per unit. At present, the government does not intervene in the market for this good. The government is most likely to correct the market failure associated with this good if it

    A   imposes a maximum price of above £50 per unit.

    B   sets a minimum price of £50 per unit.

    C   taxes the free market price.

    D   subsidises the free market price.

7 The diagram below shows the demand for, and supply of, rail services.

The shift of the curve from D_1 to D_2 is most likely to result from

    A   a government decision to increase subsidies for rail travel.

    B   a reduction in the tax imposed on the price of a litre of petrol.

    C   a major expansion of the government's new railway track-building programme.

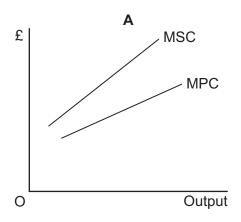   **D**   a decision by the government to impose a tax on all car parking.

8 A firm is productively efficient when

A it is operating at the lowest point on its average cost curve.

B it cannot increase current production even if demand for its product increases.

C output per worker cannot increase.

D an increase in production will decrease average costs.

9 Which one of the following is most likely to be a source of monopoly power?

A The employment of additional workers by a firm as it increases its size

B The existence of diseconomies of scale at high levels of output

C The granting of a patent to a pharmaceutical company for a newly developed drug

D The merger of two small firms in a large industry

10 The government is considering four possible capital investment projects. It has the resources to implement only one of these projects. The table below shows the estimated value of the private and external costs and benefits that each project is expected to yield.
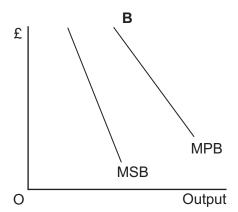
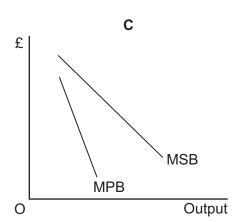|	New hospitals (£ million)	New roads (£ million)	New railways (£ million)	New housing (£ million)
Private benefits	600	500	1000	150
Private costs	450	500	2000	70
Positive externalities	200	250	1000	40
Negative externalities	90	80	200	120

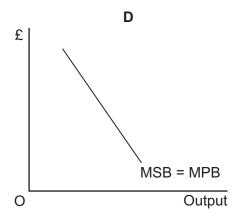Which one of the projects should the government adopt if it wishes to maximise the economic welfare of the whole community?

A New railways

B New hospitals

C New housing

D New roads

Turn over ▶

11 The diagrams below show the marginal social cost and marginal private cost (MSC and MPC) curves and marginal social benefit and marginal private benefit (MSB and MPB) curves for different goods. Which diagram, **A**, **B**, **C** or **D**, is most likely to illustrate a demerit good?
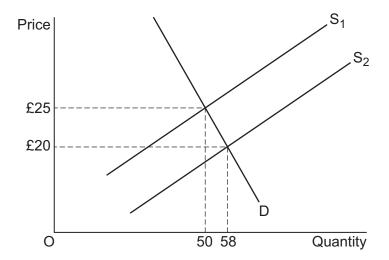

12 If there is a negative value for the cross elasticity of demand between two goods, this means that the two goods are

A   complementary to each other.

B   both inferior goods.

C   unrelated to each other.

D   substitutes for each other.

13 A shift to the right of the supply curve for a product can be caused by

A   a rise in popularity of the product.

B   a rise in costs of production.

C   a tax on the product.

D   the entry of new firms into the industry.

14 In a free market, the rationing function of the price mechanism means that

A an increase in demand, leading to a rise in price, will encourage new firms to enter the market.

B when there is a shortage of a product, the price will rise and deter some consumers from buying the product.

C changes in price provide information to both producers and consumers about changes in market conditions.

D if a product is scarce, a rise in price is likely to make the shortage worse.

15 The diagram below shows demand (D) and supply (S) curves for beef, where the initial equilibrium price is £25.

Which one of the following combinations, **A**, **B**, **C** or **D**, is correct?

	Cause of the fall in the price of beef	Price elasticity of demand when the price of beef falls from £25 to £20
A	Rise in the price of animal feedstuffs	Between −1 and minus infinity
B	Fall in the wage of agricultural workers	Between −1 and zero
C	Lower rent on agricultural land	Between −1 and minus infinity
D	Rise in the price of lamb	Between −1 and zero

Turn over ▶

16 Merit goods are likely to be underprovided in a free market economy because their

    A private benefits exceed their social benefits.

    B social benefits exceed their social costs.

    C private costs exceed their private benefits.

    D social benefits exceed their private benefits.

17 At current levels of output, the marginal social cost of making a good is greater than its marginal private cost. Also, the marginal social benefit of the good is greater than its marginal private benefit. As a result, there will probably be

    A a misallocation of resources.

    B positive externalities in production.

    C negative externalities in consumption.

    D diseconomies of scale in production.

18 Which one of the following is an appropriate form of government intervention for the problem identified?

    A The introduction of pollution permits to limit negative externalities

    B The use of a buffer stock to stabilise the price of a public good

    C The imposition of a maximum price for a merit good above its free market price

    D The provision of a subsidy for a product which generates negative externalities

19 In the diagram below, the production possibility frontier shows the various combinations of cars and vans that a firm can produce when all of its resources are fully and efficiently employed.

Which one of the following statements is correct?

The opportunity cost of producing one more car is

A   greater at X than at Y.

B   lower at X than at Y.

C   the same at both X and Y.

D   zero at both X and Y.

Turn over for the next question

Turn over ▶

20 The table below shows indices of labour productivity for two firms between 2008 and 2011.

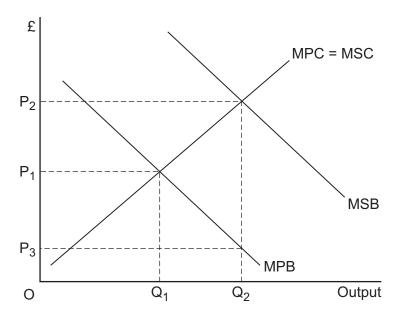|	Index of labour productivity (2010 = 100)	
Year	Firm X	Firm Y
2008	150	120
2009	120	110
2010	100	100
2011	80	80

Which one of the following can be concluded from the data?

A Firm X had a higher level of labour productivity than Firm Y in 2008.

B Productivity in both Firms X and Y was in equilibrium in 2010.

C Labour productivity was identical in both Firms X and Y in 2011.

D Labour productivity fell at a faster rate in Firm X than in Firm Y between 2008 and 2011.

21 A manufacturer of rubber tyres for motor vehicles invents and sells a new tyre. The new tyres cut petrol consumption by 25% on cars fitted with them.

Which one of the following is most likely to be correct? The

A supply of petrol will fall because petrol is in joint supply with tyres.

B demand for crude oil to produce petrol will fall because the demand for oil is derived from the demand for petrol.

C demand for car tyres will rise because tyres and petrol are in composite demand.

D demand for existing types of tyre will fall because they are in joint demand with the new tyres.

22 The price elasticity of supply of wheat is

A less elastic in the long run than in the short run.

B determined by the availability of substitutes.

C affected by the stocks of wheat available.

D more elastic when there are restrictions on the amount of wheat that can be imported.

23 The diagram below shows the marginal private benefit and the marginal social benefit (MPB and MSB) curves and the marginal private cost and the marginal social cost (MPC and MSC) curves for rented accommodation. The free market level of output is Q_1 at price P_1.

To achieve an efficient level of availability of rented accommodation, the government should

A supply Q_1Q_2 accommodation at a zero rent.

B impose a minimum price of OP_2 per unit of accommodation.

C provide a subsidy of $P_3 P_2$ per unit of accommodation.

D set a maximum price of OP_3 per unit of accommodation.

Turn over for the next question

24 A free good

    A   is paid for by the government.

    B   has zero opportunity cost.

    C   is non-excludable and non-rival.

    D   has a perfectly inelastic supply.

25 Where there is partial market failure,

    A   a market exists but there is a misallocation of resources.

    B   the product is both non-excludable and non-rival in consumption.

    C   the market can only be competitive with government support.

    D   there is excess demand in the market at the current market price.

**QUESTION 25 IS THE LAST
QUESTION IN SECTION A**

**On your answer sheet
ignore rows 26 to 50**

Now turn to page 14 for Section B

Turn over for the next section

Section B: Data Response

Answer **EITHER** Context 1 **OR** Context 2
You are advised to spend at least 50 minutes on **Section B**.

Total for this Context: 50 marks

EITHER

Context 1

CONGESTION ON THE ROADS

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

Extract A: Cars by fuel type, thousands, Great Britain, 2000 to 2011

Year	Petrol	Diesel	Other fuels*
2000	21 233	3 153	20
2001	21 641	3 460	25
2002	21 839	3 912	30
2003	21 805	4 400	35
2004	21 977	5 011	41
2005	21 876	5 596	48
2006	21 466	6 083	60
2007	21 264	6 657	78
2008	20 899	7 164	98
2009	20 491	7 641	114
2010	20 083	8 203	135
2011	19 548	8 763	155

Source: Department for Transport, April 2012

* Other fuels include gas, biofuels, electric and hybrid electric.

Extract B: Too much traffic on our roads?

The importance of the road network to transport and the economy is not always appreciated. In 2007, 92% of passengers and 67% of freight were transported by road. However, drivers impose costs on other road users by increasing their journey times, and inflict costs on non-road users through the generation of greenhouse gases, pollution and noise. | 1

| 5

Some argue that the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus. This might be achieved by charging drivers more. However, increasing the cost of motoring will not be effective if the positive cross elasticity of demand between travel by car and other forms of passenger transport is very low. | 10

An alternative approach is to increase the subsidies paid to other forms of transport. Such subsidies could be used to reduce the price charged and/or to improve the quality of the service provided. In 2011/2012, the bus companies received a subsidy of around £450 million, and bus passes, offering free off-peak travel to older and disabled people, cost the government approximately £1 billion. | 15

In 2011, despite difficult economic conditions, the railways experienced a 7% increase in passenger journeys and a 12.5% increase in the volume of freight carried. A £9.4 billion government-funded investment programme, announced in July 2012, is designed to increase capacity, reduce journey times and improve reliability. However, attempting to reduce congestion on the roads by getting people to travel by train is not without its problems. Shifting 10% of the current journeys by road onto rail would require more than double the current, already overstretched, rail capacity.

20

Source: news reports, August 2012

Extract C: How should we pay for roads?

Roads, and transport generally, have to be paid for, and so the issue is not whether we pay but how we pay. As more cars become electrified and fuel-efficient, the amount of revenue raised from petrol and diesel taxes, and other taxes on vehicles, will fall substantially in the future. The Institute for Fiscal Studies (IFS) estimates that replacing this lost revenue would require a 50% increase in taxes on fuel. A report produced by the IFS has argued that the government should review the present system of road taxes and move towards a nationwide system of road pricing.

1

5

One solution is to charge drivers for each mile travelled, with higher prices in congested areas at peak times. The aim of road pricing is to charge drivers for the costs they impose on other road users, and non-road users, to optimise the use of scarce road space. Such a system would mean that drivers would pay less per mile for the majority of miles driven but would be charged more when high demand for road space results in congestion. A small reduction in the number of vehicles on the road at peak times would produce a large reduction in congestion.

10

Taxes on fuel are another way to make the user pay for the external costs of motoring. Fuel tax collection costs are estimated at just 0.2% of the revenue generated. Road pricing, on the other hand, has high set-up and running costs, the best estimate being at least 10% of the revenue raised. However, these costs are likely to fall as a result of improvements in technology and economies of scale. There is also the question of fairness to consider. The less-well-off motorists may be priced off the roads by a system of road pricing but fuel taxes also hit the poor hardest.

15

20

Source: news reports, August 2012

0 1 Define the term 'positive cross elasticity of demand' (**Extract B**, line 9). *(5 marks)*

0 2 Using **Extract A**, identify **two** significant points of comparison, over the period shown, between those cars in Great Britain that use petrol and those that use diesel. *(8 marks)*

0 3 **Extract C** (lines 4 and 5) states that 'The Institute for Fiscal Studies (IFS) estimates that replacing this lost revenue would require a 50% increase in taxes on fuel'.

With the help of an appropriate diagram, explain how the price elasticity of demand for road travel will affect the total revenue that the government receives if it increases the taxes on fuel. *(12 marks)*

0 4 **Extract B** (lines 6 and 7) states that 'the solution to congestion is to persuade people to leave their cars at home and encourage them to travel by rail, tube or bus'.

Using the data and your economic knowledge, assess which is the best policy that the UK government could adopt to reduce congestion on the roads. *(25 marks)*

Turn over ▶

Do **not** answer Context 2 if you have answered Context 1.
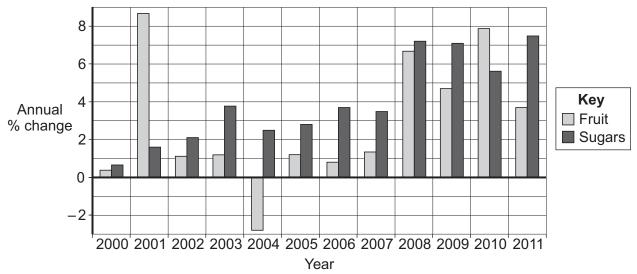
Total for this Context: 50 marks

OR

Context 2

HEALTH AND DIET IN THE UK

Study **Extracts D**, **E and F**, and then answer **all** parts of Context 2 which follow.

Extract D: UK shop prices of fruit and sugars*, annual percentage change, 2000 to 2011

Source: National Statistics, June 2012

*   Sugars includes sweets, chocolate, sugar and jam.

Extract E: Obesity – a growing problem

According to figures published in 2011, about half the adult population in developed countries is overweight or obese. In the UK, obesity rates are at 26% and, if the current rate of growth continues, experts predict that three-quarters of the population could be overweight within 10 to 15 years. Some believe that obesity is responsible for more ill health than smoking. Problems include high blood pressure and diabetes. A study by the National Audit Office estimates that obesity costs the National Health Service (NHS) at least £500m a year, as well as more than £2bn a year in lost output. In making decisions about what and how much to eat, consumers usually consider only the short-run marginal private costs and benefits.	1 5
So what is causing this growing problem? Poor diet is one factor. Bigger portions, increased demand for fast food meals and sweetened drinks are among the culprits. Agricultural policy in the US and Europe has also played a part. In the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables. According to a recent survey, sales of fruit in the UK are now 11.6% lower than in 2007.	10 15
Insufficient exercise is also to blame. A shift towards less physically demanding work, increasing use of transport and more labour-saving technology in the home have all contributed, whilst in both children and adults, there is an association between television viewing time and the risk of obesity. However, it must be remembered that for some people, obesity is caused by medical conditions over which they have little control.	20

Source: news reports, August 2012

Extract F: Government intervention – food for thought?

One way to tackle obesity is by not putting on too much weight in the first place. A combination of a healthy, balanced diet and regular exercise should be sufficient in most cases. However, providing nutritional information and promoting healthy eating are not enough – the government needs to do more.	1
One option is a tax on junk food, possibly accompanied by subsidies for fruit and vegetables. But will demand be sufficiently price elastic? Such taxes may have to increase the price of unhealthy food and drinks by as much as 20% to cut consumption enough to reduce obesity, according to research published in the *British Medical Journal*. However, a spokesman for the Food and Drink Federation representing food producers and retailers claimed: "When the whole of the food industry is focused on continuing to give hard-pressed families great tasting food at an affordable price, discussion of adding 20% to food prices seems irresponsible."	5

10 |
| Denmark, Hungary and France have introduced taxes on a variety of foods and drinks high in salt, sugar and fat but the UK government faced an outcry when it announced that it would add Value Added Tax (VAT) to hot food such as pasties. Other suggestions include a ban on firms such as McDonald's and Coca-Cola sponsoring major sports events such as the Olympics. Some head teachers have written to parents forbidding children from bringing in unhealthy snacks but others believe it has no effect, or that what children eat is not their responsibility. | 15 |
| As food profit margins rise, we get fatter and less healthy. Should companies do more to persuade their customers to eat more healthily? Should governments intervene? Why can't we just eat what we want? | 20 |

Source: news reports, August 2012

0 5   Define the term 'marginal private costs' (**Extract E**, line 9).   *(5 marks)*

0 6   Using **Extract D**, identify **two** significant points of comparison, over the period shown, between the annual percentage changes in the shop prices of fruit and sugars in the UK.
(8 marks)

0 7   **Extract E** (lines 12 to 14) states that in 'the US, subsidies on corn, soya beans and rice have made the main ingredients used to make processed food cheap compared to fruit and vegetables'.

With the help of an appropriate diagram, explain how subsidies on ingredients such as corn, soya beans and rice will affect the market for processed food.   *(12 marks)*

0 8   **Extract F** (lines 3 and 4) states that 'providing nutritional information and promoting healthy eating are not enough – the government needs to do more'.

Using the data and your economic knowledge, assess the case **for** and **against** government intervention in the markets for food and drink to encourage a healthy diet.
(25 marks)

END OF QUESTIONS

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