Economics
Advanced Subsidiary
Unit 1: Competitive Markets: How they work and why they fail

Tuesday 13 May 2014 – Morning
Time: 1 hour 30 minutes

Instructions
• Use black ink or ball-point pen.
• Fill in the boxes at the top of this page with your name, centre number and candidate number.
• Answer all the questions in Section A and one question from Section B.
• Answer the questions in the spaces provided – there may be more space than you need.

Information
• The total mark for this paper is 80.
• The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.
• Questions labelled with an asterisk (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.
• Calculators may be used.

Advice
• Read each question carefully before you start to answer it.
• Keep an eye on the time.
• Check your answers if you have time at the end.

Turn over
1. Opportunity cost arises because

A. the price mechanism may lead to a misallocation of resources
B. resources are scarce
C. the supply of goods and services is infinite
D. supply may exceed demand

Answer

Explanation

(Total for Question 1 = 4 marks)
2. The most likely consequence of an increase in the division of labour in the construction of new houses is an increase in

(A) output per unit of labour
(B) the price of houses
(C) the production cost of each house
(D) the range of skills required by each worker

Answer

Explanation

(Total for Question 2 = 4 marks)
The price of black tea, US cents per kilogram

The graph shows the price of tea between October 2012 and February 2013. (You may use a demand and supply diagram in your answer.)

A possible cause of this fall in the price of tea is

A  an increase in the wages of tea growers
B  an increase in the price of coffee
C  a larger tea harvest than expected
D  a decrease in the price of sugar

Answer:  

(1)
Explanation

(Total for Question 3 = 4 marks)
A negative cross elasticity of demand may be expected for which of the following pair of goods?

A Motor vehicles and rail travel  
B Bus transport and potatoes  
C Motor vehicles and petrol  
D Bus transport and taxi services

Answer

Explanation

(Total for Question 4 = 4 marks)
Estimates of income elasticity of demand for selected food items in Cyprus and the Maldives.

<table>
<thead>
<tr>
<th>Product</th>
<th>Cyprus</th>
<th>Maldives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals e.g. rice</td>
<td>-0.12</td>
<td>0.50</td>
</tr>
<tr>
<td>Fish</td>
<td>0.37</td>
<td>0.64</td>
</tr>
<tr>
<td>Oils and fats</td>
<td>0.00</td>
<td>0.52</td>
</tr>
</tbody>
</table>

(Source: http://www.ers.usda.gov/Data/InternationalFoodDemand)

It may be deduced from the data in the table that

A the demand for fish is income inelastic in both countries
B the demand for oils and fats is perfectly income elastic in Cyprus
C cereals are a normal good in Cyprus but an inferior good in the Maldives
D the demand for oils and fats is more responsive than the demand for fish to a change in income in the Maldives

Answer

Explanation

(Total for Question 5 = 4 marks)
Market research estimates that a 100% increase in the price of coffee in Uganda leads to a 33% increase in the quantity supplied. This information suggests the supply of coffee in Uganda is

A income inelastic
B price elastic
C unit elastic
D price inelastic

Answer

Explanation

(Total for Question 6 = 4 marks)
In September 2012 the Spanish Government increased the sales tax (VAT) on goods such as clothing to 21%. Which of the diagrams, labelled A, B, C and D, best illustrates the effects of the increase in sales tax? (You may annotate the relevant diagram in your answer.)

Answer
Explanation

(Total for Question 7 = 4 marks)
The diagram shows the operation of a buffer stock scheme in the barley market where a government agency intervenes to ensure the price remains between P1 and P2. (You may annotate the diagram in your answer.)

The 2013 harvest led to

A an excess demand for barley
B the government agency selling barley from its stockpile
C price increasing to P2
D the government agency buying barley and adding to its stockpile

Answer
Explanation

(Total for Question 8 = 4 marks)

TOTAL FOR SECTION A = 32 MARKS
Section B: Answer either Question 9 or Question 10.

If you answer Question 9 put a cross in this box ☐.

Question 10 starts on page 26.

You should spend 55 minutes on this section.

9  Proposals for a tidal barrage in the Severn Estuary

Figure 1  The proposed tidal barrage between Cardiff and Weston-Super-Mare

Figure 2  The proposed Severn Barrage
Extract 1  Benefits and costs of the tidal barrage

Plans for an 11 mile tidal power barrage across the Severn Estuary have been proposed by private consortium Corlan Hafren. The scheme would generate around 5% of the UK’s electricity needs and be funded by overseas investors. No UK government subsidy would be involved in funding the huge £34 billion cost of the scheme. However, consumers will be expected to pay higher prices for the electricity generated from this renewable energy source (to cover increased production costs) compared to non-renewable energy supplies such as gas and coal.

The Severn Estuary has the world’s second largest tidal range of almost 14 metres. Harnessing this energy would make a significant contribution to the government’s target of generating 20% of the nation’s energy from renewable sources by 2020. A tidal barrage, once complete, is carbon neutral. It would help diversify the UK’s energy supply and operate for at least 120 years. This compares favourably with the lifespan of nuclear power plants (35 years) and wind turbines (25 years). These forms of renewable energy receive substantial government subsidies and planning restrictions are relaxed to promote their development.

More than 30 000 local jobs would be created from the scheme. This includes constructing road and rail links on top of the barrage to improve the transport infrastructure in the region. A factory to build the 200 giant turbines required for the tidal barrage and a deep water dock facility is also planned in Port Talbot.

The tidal barrage would also help reduce flooding along the river Severn floodplain. In 2007 severe flooding in the area led to £3.2 billion of damage.

However, the tidal barrage will have a significant impact on wildlife and their habitats. The Royal Society for the Protection of Birds believes that the barrage would destroy huge areas of estuary marsh and mudflats used by 70 000 birds. It would also block the migration routes of fish including wild salmon. Corlan Hafren intends to reduce the negative effects by building turbines which rotate at slow speed to minimise damage to sea life.

(Source for Figure 2 and Extract 1: Adapted from ‘UK Government considering new multi-billion plan for barrage across Severn Estuary, Western Mail, 7th December 2011)

(a) Explain two likely reasons why the UK government has a target of ‘generating 20% of the nation’s energy from renewable sources by 2020’ (Extract 1, line 10). (6)

(b) Explain how ‘funding the huge £34 billion cost of the scheme’ could proceed without a UK government subsidy (Extract 1, lines 4 and 5). (4)

(c) Examine the possible impact on the production possibility frontier for the UK economy if the Severn Estuary tidal barrage is constructed. Illustrate your answer with an appropriate diagram. (10)

(d) Discuss factors which might influence the supply of labour for constructing the tidal barrage scheme. (14)

(e) Evaluate two measures, other than supporting the Severn Estuary tidal barrage, by which the Government could promote the generation of renewable energy. (14)
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(14)
(e) Evaluate **two** measures, other than supporting the Severn Estuary tidal barrage, by which the Government could promote the generation of renewable energy.
10 Tobacco consumption in Britain

Figure 1 Percentage of adults in Great Britain who smoke cigarettes, 1974–2010

Figure 2 The estimated costs of tobacco smoking in Britain

<table>
<thead>
<tr>
<th>Type of cost</th>
<th>£ billion per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Health Service</td>
<td>2.7</td>
</tr>
<tr>
<td>Loss of productivity from smoking breaks at work</td>
<td>2.9</td>
</tr>
<tr>
<td>Staff absence from work owing to tobacco-related illnesses</td>
<td>2.5</td>
</tr>
<tr>
<td>Cleaning up tobacco litter</td>
<td>0.3</td>
</tr>
<tr>
<td>House fires from tobacco smoking</td>
<td>0.5</td>
</tr>
<tr>
<td>Loss of output from early death of smokers</td>
<td>4.1</td>
</tr>
<tr>
<td>Loss of output from early death of passive smokers</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td>13.7</td>
</tr>
</tbody>
</table>

(Source: © ASH)
Extract 1  The decline of tobacco smoking in Britain

Tobacco smoking has fallen over the past fifty years following government health campaigns warning people of its dangers and greater regulations on its sale and consumption. Higher taxes on cigarettes have also contributed to the decline in smoking. The tax on tobacco now accounts for 80% of the £7.45 price paid for a premium packet of cigarettes.

The leading anti-smoking pressure group ASH, believes it will take a further fifty years to eliminate smoking in Britain. ASH claims that up to two-thirds of lifelong smokers are eventually killed by their habit.

(Source: © ASH)

Extract 2  Tobacco taxation

In the 2012 Budget the Chancellor George Osborne increased the tax on tobacco by 5 percentage points above the rate of inflation (known as the tobacco tax escalator). This added 37 pence to the price of a packet of cigarettes. The government received £12.1 billion in revenue from indirect taxes on tobacco in 2012.

Despite price increases on tobacco contributing to a fall in its demand, total expenditure has risen (including the tax receipts). For example, consumer expenditure on tobacco increased from £15.1 billion in 2010 to £15.3 billion in 2011.

Tobacco consumption among 11–15-year-old children has not changed over the past five years with 5% being regular smokers. Tobacco smoking also remains much higher for low income workers in manual occupations (29%) compared to higher income workers in professional and managerial occupations (13%).

There has also been a significant switch in tobacco sales, from high quality, expensive brands to low quality and cheap cigarettes. The latter now account for 30% of the British market.

(Source: © ASH)

Extract 3  Tobacco smuggling and government regulations

Around 20% of all tobacco smoked in the UK is smuggled into the country and the government loses more than £2 billion a year in potential tax revenue. High tobacco taxes are blamed for creating the illegal trade. The trade is dominated by criminal gangs who can import into the country more than 10 million cigarettes in just one lorry container load.

However, some of the highest levels of smuggling were found in Spain and Italy, two countries with the lowest tax rates on tobacco.

There has also been an increase in the manufacture of counterfeit tobacco products. Many counterfeit cigarettes are hard to distinguish from genuine brands and often consist of even more harmful chemical compounds. Government plans to force tobacco companies to use plain packaging may make it easier to produce counterfeit cigarettes.

A government smoking ban imposed on enclosed public spaces since 2007 has coincided with more than 1 500 pubs and bars closing down each year.

(Source: © ASH)
(a) With reference to the information provided, explain two possible causes of the decrease in tobacco smoking.

(b) Outline the likely impact on consumer surplus and producer surplus in the tobacco market of a decrease in demand for tobacco. Illustrate your answer with a supply and demand diagram.

(c) Using the information in Extract 2 and your own knowledge, discuss whether the demand for tobacco products is likely to be price inelastic or price elastic.

*(d) With reference to the information provided and your own knowledge, discuss the likely benefits to consumers and the government of a decrease in tobacco smoking.

*(e) With reference to the information provided and your own knowledge, to what extent might regulations on the sale of cigarettes and high taxes on tobacco result in government failure?
(a) With reference to the information provided, explain two possible causes of the decrease in tobacco smoking.

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