

# EXAMINATIONS

12 September 2000 (am)

## Subject 107 — Economics

*Time allowed: Three hours*

### ***INSTRUCTIONS TO THE CANDIDATE***

1. *Write your surname in full, the initials of your other names and your Candidate's Number on the front of the answer booklet.*
2. *Mark allocations are shown in brackets.*
3. *Attempt all 37 questions, beginning your answer to each question on a separate sheet.*
- 4.

***Graph paper is not required for this paper.***

### ***AT THE END OF THE EXAMINATION***

*Hand in BOTH your answer booklet and this question paper.*

<p><i>In addition to this paper you should have available Actuarial Tables and an electronic calculator.</i></p>
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*For questions 1–26 indicate in your answer booklet which one of the answers A, B, C or D is correct.*

- 1** Scarcity exists if:
- A prices are too high.
  - B economies are not perfectly competitive.
  - C human wants cannot be satisfied when price is zero.
  - D there are shortages of some goods.
- [1½]
- 2** Diseconomies of scale means:
- A short run average total cost falls as output rises.
  - B long run average total cost falls as output rises.
  - C long run average total cost rises as output rises.
  - D short run average total cost rises as output rises.
- [1½]
- 3** Which of the following events would shift the demand curve for good X to the left?
- A An increase in the price of good X.
  - B An increase in the price of a substitute good.
  - C An increase in the price of a complementary good.
  - D An increase in consumer income.
- [1½]
- 4** The demand equation for good X is  $Q_d = 15 - 0.5P$  and the supply equation for good X is  $Q_s = 3 + 2P$ , where P is the price. When the price is £6 there will be:
- A a surplus of good X and price will rise.
  - B a shortage of good X and price will fall.
  - C a surplus of good X and price will fall.
  - D a shortage of good X and price will rise.
- [1½]
- 5** Individual A can choose between good X and good Y. The price of good X is £2 and the price of good Y is £5. What will be the ratio of the marginal utility of X over the marginal utility of Y when individual A maximises total utility?
- A  $\frac{5}{2}$
  - B  $\frac{7}{2}$
  - C  $\frac{1}{1}$
  - D  $\frac{2}{5}$
- [1½]

- 6** Which of the following assumptions apply when constructing a budget line?
- A Consumer preferences exhibit diminishing marginal substitution.
  - B The consumer's income is fixed.
  - C Consumers prefer more of a good to less of it.
  - D A consumer can rank any two bundles of goods.
- [1½]
- 7** Which of the following statements regarding the productivity of labour is correct?
- A Average product is maximised when average product equals marginal product.
  - B Average product is maximised when marginal product is maximised.
  - C Marginal product increases when average product is above marginal product.
  - D Average product increases when marginal product is below average product.
- [1½]
- 8** If the total cost of production is £48 when output is 5 units and rises to £78 when output is 7 units, the marginal cost of production will be:
- A rising and less than the average total cost of production.
  - B falling and less than the average total cost of production.
  - C rising and greater than the average total cost of production.
  - D falling and greater than the average total cost of production.
- [1½]
- 9** If firms in a perfectly competitive industry are making economic profit the long run effect will be to:
- A increase the output of the firms and the industry.
  - B reduce the output of the firms and the industry.
  - C reduce the output of the industry and increase the output of the firms.
  - D reduce the output of the firms and increase the output of the industry.
- [1½]
- 10** In the long run, profit maximising firms operating under conditions of monopolistic competition will produce at a level of output where:
- A price equals marginal cost.
  - B price equals average total cost.
  - C price equals average variable cost.
  - D price equals average fixed cost.
- [1½]

- 11** If the government places an indirect tax on good X, the price of good X to consumers will not change when:
- A supply of good X is price elastic.
  - B supply of good X is completely price inelastic.
  - C demand for good X is price elastic.
  - D demand for good X is completely price inelastic. [1½]
- 12** In a country with a population of 25 million people there are 16 million in the total workforce and 2 million unemployed. What is the rate of unemployment?
- A 8%
  - B 11.1%
  - C 12.5%
  - D 44% [1½]
- 13** The need to employ workers with certain skills may decline even if the industry as a whole is not in decline . This form of unemployment is called:
- A structural.
  - B demand-deficient.
  - C regional.
  - D technological. [1½]
- 14** Which of the following costs of inflation occurs because of the possibility of unanticipated inflation?
- A “Inflation risk premium”.
  - B “Menu costs”.
  - C “Shoe-leather costs”.
  - D “Institutional sluggishness”. [1½]
- 15** Other things remaining the same, the result of an increased PSBR is:
- A higher short term interest rates because the LM curve moves to the left.
  - B lower short term interest rates because the LM curve moves to the right.
  - C higher short term interest rates because the IS curve moves to the right.
  - D lower short term interest rates because the IS curve moves to the left. [1½]

- 16** In the circular flow of income model of an economy with no government or international trade, the flow of money is:
- A from firms to households in return for goods and services provided. and from households to firms in return for the factor services provided.
  - B from households to firms in return for the factor services provided.
  - C from firms to households in return for the factor services provided. and from households to firms in return for the goods and services provided.
  - D from firms to households in return for goods and services provided.
- [1½]
- 17** The macroeconomic demand schedule slopes downwards because at higher price levels the real money supply:
- A increases and national income is lower.
  - B increases and national income is higher.
  - C decreases and national income is lower.
  - D decreases and national income is higher.
- [1½]
- 18** The short run aggregate supply schedule tells us that an increase in the average price level will encourage firms to:
- A increase output and employment.
  - B reduce output and employment.
  - C increase output and reduce employment.
  - D reduce output and increase employment.
- [1½]
- 19** If consumption expenditure increases from £18,000 to £19,500 when disposable income increases from £20,000 to £26,000, then:
- A the marginal propensity to consume is 0.25 and the multiplier is 1.33.
  - B the marginal propensity to consume is 0.25 and the multiplier is 4.
  - C the marginal propensity to consume is 0.75 and the multiplier is 4.
  - D the marginal propensity to consume is 0.75 and the multiplier is 1.33.
- [1½]

- 20** A fall in real Gross Domestic Product would result from an increase in all of the following with the exception of:
- A saving.
  - B imports.
  - C taxation.
  - D government expenditure. [1½]
- 21** An unexpected increase in the price level which causes a temporary reduction in the real wage rate may:
- A increase the natural rate of unemployment.
  - B decrease the natural rate of unemployment.
  - C give an actual rate of unemployment which is temporarily greater than the natural rate.
  - D give an actual rate of unemployment which is temporarily lower than the natural rate. [1½]
- 22** In Country A government expenditure is £360 billion, tax revenue is £375 billion, aggregate saving is £225 billion and aggregate investment is £205 billion. The net exports of Country A are equal to:
- A deficit of £35 billion.
  - B surplus of £35 billion.
  - C deficit of £15 billion.
  - D surplus of £15 billion. [1½]
- 23** Keynesian economists support the argument that:
- A the aggregate labour market will automatically move towards equilibrium.
  - B changes in interest rates have little effect on aggregate investment in the short term.
  - C changes in the money supply have a proportionate impact on the rate of inflation.
  - D crowding out effects will seriously reduce the impact of increases in government expenditure. [1½]

- 24** A fall in a country's terms of trade index means that:
- A the index of export prices has risen by a smaller percentage than the index of import prices.
  - B the index of export prices has risen but the index of import prices has remained the same.
  - C the index of export prices remains the same whilst the index of import prices falls.
  - D the index of export prices has fallen by a smaller percentage than the index of import prices. [1½]
- 25** In Country A it takes 15 hours to produce a unit of good X and 12 hours to produce a unit of good Y. In Country B it takes 10 hours to produce a unit of good X and 15 hours to produce a unit of good Y. Which of the following statements is correct?
- A Country B has a comparative advantage in the production of good X and an absolute advantage in the production of good Y.
  - B Country B has a comparative advantage in the production of good X and an absolute advantage in the production of good X.
  - C Country A has a comparative advantage in the production of good X and an absolute advantage in the production of good Y.
  - D Country A has a comparative advantage in the production of good X and an absolute advantage in the production of good X. [1½]
- 26** An appreciation of the domestic currency:
- A reduces the foreign price of exports and increases the domestic price of imports.
  - B reduces the foreign price of exports and reduces the domestic price of imports.
  - C increases the foreign price of exports and reduces the domestic price of imports.
  - D increases the foreign price of exports and increases the domestic price of imports. [1½]

- 27** Illustrate on four separate supply and demand diagrams the effect on equilibrium price and quantity of good X (which is a normal good) of (i) to (iv) below. Use the labels P1 and P2 for the original and new price and Q1 and Q2 for the original and new quantity respectively.
- (i) A reduction in the price of a substitute good. [1]
  - (ii) The introduction of an indirect tax on good X. [1]
  - (iii) An increase in the productivity of labour in producing good X. [1]
  - (iv) An increase in consumers' incomes. [1]
- [Total 4]
- 28** Consumer A demands 450 units of good X per year given that the price of good X is £3.50 per unit, the price of good Y is £4.80 per unit and consumer A's income is £35,000 per year.
- (In each case your answer should be given to two decimal places.)
- (i) When the price of good X falls to £2.80 per unit, consumer A's demand for good X rises to 530 units per year, other things remaining the same. What is consumer A's price elasticity of demand for good X? [2]
  - (ii) When the price of good Y falls to £4.40 per unit, consumer A's demand for good X declines to 380 units per year, other things remaining the same. What is consumer A's cross price elasticity of demand for good X? [2]
  - (iii) When consumer A's income increases to £38,000 per year his demand for good X increases to 480 units per year, other things remaining the same. What is consumer A's income elasticity of demand for good X? [2]
- [Total 6]
- 29** Define the following:
- (i) an inferior good. [1]
  - (ii) a Giffen good. [1]
  - (iii) a normal good. [1]
- [Total 3]
- 30** Read all parts of the question before answering.
- (i) Draw a diagram to show a monopoly firm making a profit. Label your diagram as follows: AR for average revenue, MR for marginal revenue, AC for average total cost and MC for marginal cost. Indicate on your diagram the profit maximising price P1 and output Q1. [2]
  - (ii) Indicate on the diagram drawn in part (i) the socially optimal output level Q2. [1]
  - (iii) Indicate and label on the diagram drawn in part (i) the social cost of monopoly. [1]
- [Total 4]



**31** Define the following:

- (i) adverse selection. [2]
  - (ii) moral hazard. [2]
- [Total 4]

**32** Discuss briefly FOUR factors that would explain why economies of scale might occur in large firms. [4]

**33** A perfectly competitive firm manufactures good X which sells at £9.50 per unit. The total output per week at each level of employment is given below.

<i>Number of employees per week</i>	<i>Total output per week (units)</i>
1	6
2	13
3	22
4	32
5	39
6	44

- (i) Construct a table to provide the following information per week at each level of employment;
    - (a) marginal product of labour.
    - (b) marginal revenue product of labour.
    - (c) total revenue. [3]
  - (ii) Determine the level of employment after which the firm begins to experience diminishing marginal returns. [1]
- [Total 4]

**34** Use the following annual data for Country A to answer the questions below.

Consumer expenditure = £203 million plus 75% of disposable national income.  
Government expenditure = £120 million.  
Investment expenditure = £90 million.  
Direct tax revenue = £100 million.  
Transfer payments = £64 million  
Export expenditure = £85 million  
Import expenditure = £68 million

- (i) What is the equilibrium value of national income? [1]
- (ii) If government expenditure increased by £15 million:
- (a) by how much would national income increase? [1]  
(b) by how much would consumer expenditure increase? [1]  
(c) by how much would saving increase? [1]
- [Total 4]

**35** Explain four economic benefits of international trade. [4]

**36** Briefly discuss four factors which explain economic growth. [4]

- 37** (i) Explain what IS and LM curves show. Use an IS-LM graph to explain how the equilibrium national income and the equilibrium level of interest rates is determined. [5]
- (ii) Discuss, with the aid of IS-LM graphs, the impact on interest rates and national income of:
- (a) an increase in injections.  
(b) an increase in the money supply.  
(c) an increase in the average price level. [15]
- [Total 20]