

EXAMINATION

11 April 2008 (am)

Subject CT7 — Economics Core Technical

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Mark allocations are shown in brackets.*
4. *Attempt all 36 questions. From question 27 onwards begin each answer on a separate sheet.*
5. *Candidates should show calculations where this is appropriate.*

Graph paper is not required for this paper.

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

For questions 1–26 indicate in your answer booklet which one of the answers A, B, C or D is correct.

1 A progressive tax is one where:

- A the marginal tax rate is negative.
- B the marginal tax rate is equal to the average tax rate.
- C the marginal tax rate is greater than the average tax rate.
- D the marginal tax rate is zero.

[1½]

2 In an economy where only two goods are produced then efficiency has been achieved when:

- A the quantity of both goods produced is equal.
- B it is possible to produce more of only one good.
- C it is possible to produce more of one good only by sacrificing some production of the other good.
- D it is possible to produce more of both goods.

[1½]

3 Which of the following statements is FALSE?

- A A change in consumer tastes may lead to a shift in a demand curve.
- B A rise in the price of other goods may lead to a shift in a demand curve.
- C A change in the resources required to produce a good may lead to a shift in a demand curve.
- D A fall in the price of other goods may lead to a shift in a demand curve.

[1½]

4 A firm's supply curve for Good X is given by $Q = 200 - 3P$ where Q is quantity and P is price. The government now imposes a tax of 50 on each unit of Good X sold. Which of the following represents the firm's new supply curve?

- A $Q = 150 - 3P$
- B $Q = 350 - 3P$
- C $Q = 250 - 3P$
- D $Q = 200 - 3P$

[1½]

5 There are two goods, X and Y. The price of Good X changes from 4 to 5, the price of Good Y from 10 to 11, the quantity demanded of Good X from 5 to 6 and the quantity demanded of Good Y from 3 to 4. What is the cross price elasticity of demand for Good X with respect to the price of Good Y?

- A 5
- B 2
- C 3.33
- D 0.33

[1½]

6 Which of the following statements is TRUE?

- A An inferior good is one for which income elasticity of demand is perfectly inelastic, so that quantity demanded falls as income increases.
- B An inferior good is one for which income elasticity of demand is positive, so that quantity demanded increases as income increases.
- C An inferior good is one for which income elasticity of demand is negative, so that quantity demanded falls as income increases.
- D An inferior good is one for which income elasticity of demand is zero, so that quantity demanded is invariant to income changes.

[1½]

7 The impact of a decrease in the fixed costs of production on a firm's marginal costs is that:

- A marginal costs will be unaffected.
- B marginal costs will rise by more than the decrease in fixed costs.
- C marginal costs will fall by more than the decrease in fixed costs.
- D marginal costs will fall by the same amount as the decrease in fixed costs.

[1½]

8 A firm selling only one good has positive marginal revenue where:

- A the demand for its product is zero.
- B the demand for its product is elastic.
- C the demand for its product is inelastic.
- D the demand for its product is no more than 1.

[1½]

9 The long run marginal cost curve will always intersect the short run marginal cost curve at the quantity of output where:

- A the amount of capital employed is rising.
- B the amount of capital is the same as the price per unit.
- C the amount of capital employed is optimal.
- D the amount of capital employed starts decreasing at an increasing rate.

[1½]

10 A firm faces the following relationships between capital, labour and output:

<i>Labour employed</i>	<i>Capital employed</i>	<i>Output</i>
10	5	20
20	10	28
30	15	35
40	20	41
50	25	45

Which of the following concepts does the firm experience?

- A decreasing returns to scale
- B constant returns to scale
- C increasing returns to scale
- D the law of increasing marginal returns

[1½]

11 In the short run, a firm should shut down when:

- A average costs exceed average revenue.
- B it can no longer cover its fixed costs.
- C it can no longer cover its variable costs.
- D expanding output narrows the gap between marginal revenue and marginal cost.

[1½]

- 12** A firm is part of a monopolistically competitive market. It is known to be in a long run equilibrium position and earning only normal profits.

<i>Output</i>	<i>Total Revenue</i>	<i>Total Cost</i>
100	500	600
200	1,000	700
300	1,200	900
400	1,900	1,200
500	2,000	2,300

From the information given in the table what will be the output of the firm?

- A Greater than 100 but less than 200
- B Greater than 200 but less than 300
- C Greater than 300 but less than 400
- D Greater than 400 but less than 500

[1½]

- 13** Which of the following statements is TRUE of monopoly, but NOT of monopolistic competition?

- A Profit is maximised where $MC = MR$.
- B The firm faces a downward sloping demand curve for normal goods.
- C The firm can set price or quantity, but not both.
- D Supernormal profits are experienced in the long run.

[1½]

- 14** Which of the following is NOT a standard way of classifying public expenditure?

- A by sector
- B by economic category
- C by listed firm
- D by department

[1½]

- 15** It is known that the government of Country X has raised £2,440m in total taxation. It is also known that expenditure on health is £860m, social security £610m, defence £120m and law and order £100m. Other government expenditure amounts to £310m. Country X exported £1,150m of goods and imported £1,220m of goods.

Country X has a:

- A Public Sector Borrowing Requirement of £440m.
- B Public Sector Borrowing Requirement of £370m.
- C Public Sector Debt Repayment of £440m.
- D Public Sector Debt Repayment of £510m.

[1½]

16 Which of the following is NOT a motive for holding money?

- A inflationary motive
- B precautionary motive
- C transactions motive
- D asset motive

[1½]

17 Within the circular flow of income, which of the following statements is CORRECT?

- A Taxes, investment and consumption are leakages.
- B Imports, exports and savings are injections.
- C Exports, investment and savings are injections.
- D Savings, imports and taxation are leakages.

[1½]

18 Given the following information:

Consumption = £210m
Direct Taxation = £100m
National Income = £330m

What is the level of savings in a three sector economy?

- A £80m
- B £20m
- C –£60m
- D £100m

[1½]

19 In an economy where government spending, net exports and investment are known to be exogenous, an injection of £50m is known to lead to a final increase in national income of £125m. Which of the following is the marginal propensity to save?

- A 0.4
- B 0.6
- C 1.4
- D 1.6

[1½]

- 20** It is known that the money multiplier is 7 and the ratio of cash held by the public to their deposits is 1 to 20. Which of the following must be the bank's reserve ratio?
- A 0.25
 - B 0.02
 - C 0.2
 - D 0.1
- [1½]
- 21** In the long run, the long run aggregate supply curve will be:
- A infinitely elastic at the long run equilibrium level of output.
 - B inelastic at the long run equilibrium level of output.
 - C infinitely elastic at some point below the long run equilibrium level of output.
 - D upward sloping with decreasing elasticity.
- [1½]
- 22** Which of the following will reduce the PSBR rather than provide a method by which to fund it?
- A taxation
 - B printing money
 - C sale of public assets
 - D borrowing
- [1½]
- 23** The level of economic activity is known to be £100m, the average price level 2 and the nominal money supply £50m. The velocity of circulation is:
- A 2
 - B 1
 - C 8
 - D 4
- [1½]

- 24** Which of the following is NOT considered an economic benefit of world trade?
- A It lowers prices through increased competition.
 - B It allows the world's resources to be used in a more economically efficient way.
 - C It increases the range of goods and services available to consumers.
 - D It spreads the benefits of economic growth more evenly across countries.
- [1½]
- 25** The Marshall-Lerner condition states that, when starting from a position of balance, a small depreciation between two currencies will lead to a balance of payments surplus if, and only if, the:
- A import elasticity is less than 1.
 - B sum of the import and export elasticities is less negative than -1 .
 - C sum of the import and export elasticities is more negative than -1 .
 - D export elasticity is less negative than -1 .
- [1½]
- 26** The Consumer Price Index is published monthly and refers to:
- A a moving average of monthly prices.
 - B the percentage growth in prices between the month in question and one year ago.
 - C prices over a few days in the middle of the previous month.
 - D the expected growth in prices between the first day of the current month and the first day of the next month.
- [1½]
- 27** Outline the three categories that may be used to classify different types of economies.
- [3]

28 From information in the table calculate the following elasticities:

	<i>Point 1</i>	<i>Point 2</i>
Quantity Demanded of Good X	250	300
Quantity Supplied of Good Y	100	110
Price of Good X	50	45
Price of Good Y	60	65
Income of Individual A	250	260

- (i) income elasticity of demand of Good X [1]
 - (ii) own price elasticity of supply of Good Y [1]
 - (iii) own price elasticity of demand of Good X [1]
 - (iv) cross price elasticity of Good X with respect to the price of Good Y [1]
- [Total 4]

29 Using appropriate diagrams for a firm operating in a monopolistically competitive market illustrate:

- (a) a short run position where a seller is making supernormal profits. [3]
 - (b) a long run position. [3]
- [Total 6]

30 Use and appropriately label a diagram to:

- (i) show the production possibilities of producing two Goods X and Y. Indicate on the diagram a point where the production of goods is inefficient. [2]
 - (ii) explain how the opportunity cost of Good X is related to the production of Good Y. [2]
- [Total 4]

- 31** Consider a firm in a perfectly competitive market where the market price is £3 per unit and the firm's cost data are as below:

<i>Output</i>	<i>Total Cost</i>
0	10
10	45
20	75
30	100
40	120
50	145
60	175
70	210

- (i) State the firm's fixed costs of production. [1]
 - (ii) Construct three further columns showing the average variable costs, marginal costs and total revenue for each level of output. [3]
 - (iii) State the profit maximising level of output and the amount of profit at that level of output. [1]
- [Total 5]

- 32** The following information is available on the component parts of a country with an open economy:

Investment	£250m
Government Spending	£320m
Transfer Payments	£65m
Consumption	£710m
Exports	£180m
Imports	£190m
Net Property Income from Abroad	–£25m

- (i) Calculate the country's Gross Domestic Product. [1]
 - (ii) Calculate the country's Gross National Income. [1]
 - (iii) Explain the difference between basic and market prices. [2]
- [Total 4]

- 33** Detail why the accelerator principle can be used to explain the presence of economic cycles. [4]

- 34** (i) Two normal Goods A and B are available for a consumer to purchase. Using an appropriate diagram illustrate how an increase in the price of Good A can be explained using income and substitution effects. [5]
- (ii) State how the relationship between the income and substitution effects will differ where one good is an inferior good. [1]
[Total 6]
- 35** (i) Draw and appropriately label an aggregate demand — aggregate supply diagram that is in long run equilibrium. Your diagram should show appropriate short and long run functions. [2]
- (ii) (a) Illustrate using a diagram the impact of a positive supply shock on the market.
(b) Explain your diagram. [2]
- (iii) State why the short run demand for money function slopes downwards. [1]
[Total 5]
- 36** (i) Analyse the different means by which fiscal and monetary policy can be used to influence a country's macroeconomic environment. [12]
- (ii) Discuss why fiscal or monetary policy may be preferred within a system of fixed exchange rates. [8]
[Total 20]

END OF PAPER