

EXAMINATION

31 March 2006 (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 37 questions. From question 27 onwards begin each answer on a separate sheet.*
5. *Candidates should show calculations where this is appropriate.*

Graph paper is available on request but 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.

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

1 If demand increases and supply decreases then the:

- A equilibrium quantity will increase but the effect on the price is indeterminate
- B equilibrium quantity will decrease but the effect on the price is indeterminate
- C price will fall but the effect on the equilibrium quantity will be indeterminate
- D price will rise but the effect on the equilibrium quantity will be indeterminate

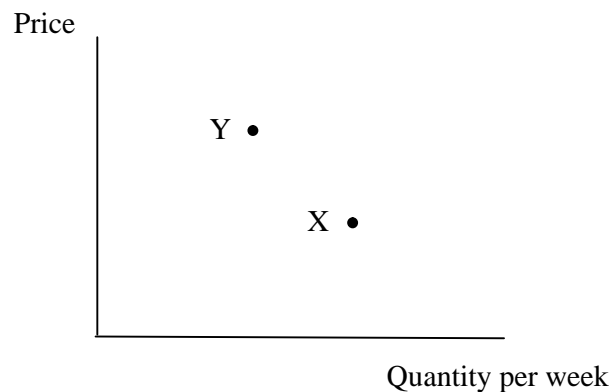
[1½]

2 Flour is an essential input in the production of bread. An increase in the price of flour would have an impact on the demand and supply of bread by:

- A shifting the demand curve to the left
- B shifting the demand curve to the right
- C shifting the supply curve to the right
- D shifting the supply curve to the left

[1½]

3 In the diagram below points X and Y represent the equilibrium price and quantity traded of a good in two successive time periods.



Which of the following is NOT a possible explanation?

- A An input in the production process became more expensive.
- B The price of a close substitute for the good increased.
- C An input in the production process became more expensive and the price of a close substitute increased.
- D An input in the production process became more expensive and the price of a close substitute decreased.

[1½]

- 4** A price floor set above the market equilibrium price is likely to cause:
- A excess supply
 - B excess demand
 - C a decrease in price and a decrease in the quantity traded
 - D an increase in price and an increase in the quantity traded
- [1½]
- 5** If cross elasticity of demand is negative between Goods X and Y then:
- A the demand for X and Y are both price inelastic
 - B X and Y are substitutes
 - C X and Y are complements
 - D the demand for X and Y are both price elastic
- [1½]
- 6** Total Revenue from the sale of a Good will decrease if:
- A income increases and the Good is normal
 - B its price rises and demand is price elastic
 - C its price rises and demand is price inelastic
 - D income falls and the Good is inferior
- [1½]
- 7** Which of the following would result from the removal of a specific tax of £5 per unit on sales of Good X which has a price elasticity of demand of -2 ?
- A The price of Good X would fall by exactly £5.
 - B The price of Good X would fall by less than £5.
 - C The price of Good X would fall by more than £5.
 - D The price of Good X would fall by exactly £10.
- [1½]
- 8** According to the law of diminishing marginal utility the total satisfaction that a consumer receives from consuming Good X will:
- A rise at an increasing rate as the consumption of Good X increases
 - B rise at a decreasing rate as the consumption of Good X increases
 - C fall at an increasing rate as the consumption of Good X increases
 - D fall at a decreasing rate as the consumption of Good X increases
- [1½]

- 9** In relation to insurance the term moral hazard:
- A suggests people who know they are a bad risk are more inclined to take out insurance
 - B suggests people who know they are a bad risk are less inclined to take out insurance
 - C suggests a policyholder may act in a way which makes an insured event less likely to occur
 - D suggests a policyholder may act in a way which makes an insured event more likely to occur
- [1½]
- 10** A profit maximising firm will produce output where:
- A total sales are maximised
 - B average total costs are minimised
 - C marginal cost equals marginal revenue
 - D average revenue is maximised
- [1½]
- 11** Assume two countries with the same level of technology and resources do not presently trade. In country X one unit of labour and one unit of capital can produce 5 bicycles or 2 cars. In country Y one unit of labour and one unit of capital can produce 6 bicycles or 4 cars. Which of the following statements is FALSE?
- A Country Y has an absolute advantage in the production of both goods
 - B Country Y has a comparative advantage in the production of bicycles
 - C Country X has a comparative advantage in the production of bicycles
 - D Country Y has a comparative advantage in the production of cars
- [1½]
- 12** Which of the following is NOT a characteristic of perfect competition?
- A There is freedom of entry and exit to the industry.
 - B There are many firms supplying the market.
 - C Firms can lower their prices without influencing the behaviour of other firms.
 - D Each firm faces a horizontal demand curve.
- [1½]

- 13** As a result of an improvement in productivity a profit maximising monopolist is currently operating at a level of output where marginal revenue is greater than marginal cost. The monopolist should:
- A increase output and reduce price
 - B reduce price and output
 - C increase price and output
 - D reduce output and increase price
- [1½]
- 14** In the short run a rise in the fixed costs of production for a monopolist causes:
- A the market price to increase and the quantity traded to decrease
 - B the market price to decrease and the quantity traded to decrease
 - C the market price to increase and the quantity traded to increase
 - D no change to price or the quantity traded
- [1½]
- 15** The kinked demand curve model of oligopoly:
- A suggests that price will remain constant even with fluctuations in demand
 - B assumes that competitors will match price cuts and ignore price increases
 - C assumes that marginal revenue sometimes increases with output
 - D suggests how the current price is determined
- [1½]
- 16** In a country with a rising population nominal Gross Domestic Product (GDP) increases at a rate of 3% per annum while the GDP deflator increases at 2% per annum. Which of the following **MUST** be true?
- A Real GDP per capita falls
 - B Real GDP per capita rises
 - C Real GDP falls
 - D Real GDP rises
- [1½]
- 17** To obtain a measure of Net National Product from Gross National Product it is necessary to:
- A deduct transfer payments
 - B deduct any indirect taxes paid by firms
 - C add net property income from abroad
 - D deduct depreciation
- [1½]

- 18** An explanation of risk aversion is that:
- A the marginal utility of an extra pound of income decreases as more income is received
 - B the marginal utility of an extra pound of income increases as more income is received
 - C there will always be some individuals willing to take risks while others will be unwilling to take risks regardless of the pay offs
 - D investors will only take an increased risk if the marginal utility of risk over the price of risk rises
- [1½]

- 19** Which of the following is a potential source of demand-pull inflation?
- A A fall in wages.
 - B An increase in imported commodity prices.
 - C An increase in consumer expenditure.
 - D An increase in direct taxes.
- [1½]

- 20** Which of the following is NOT associated with Keynesian economics?
- A The marginal propensity to consume.
 - B The autonomous expenditure multiplier.
 - C The vertical long run aggregate supply curve.
 - D The speculative demand for money.
- [1½]

- 21** If a household's disposable income increases from £15,000 to £20,000 and its consumption expenditure increases from £10,000 to £12,000 then the marginal propensity to consume is:
- A 0.4
 - B 0.6
 - C 0.67
 - D 0.7
- [1½]

- 22** Following an increase in the price of fuel there is a 20% increase in the price of air travel tickets which results in a 10% decrease in total revenue. How would you describe the demand for air travel?
- A The demand for air travel is price inelastic.
 - B The demand for air travel is price elastic.
 - C The demand for air travel is perfectly price elastic.
 - D The demand for air travel perfectly price inelastic.
- [1½]
- 23** If the money supply decreases due to a contractionary open market operation by the central bank then the price of treasury bills will:
- A fall as the short term interest rate rises
 - B fall as the short term interest rate falls
 - C rise as the short term interest rate rises
 - D rise as the short term interest rate falls
- [1½]
- 24** According to Keynesian analysis the adoption of an expansionary fiscal policy will result in:
- A an increase in aggregate demand and a reduction in real output and unemployment
 - B an increase in aggregate demand, real output and unemployment
 - C an increase in aggregate demand and real output and a reduction in unemployment
 - D a reduction in aggregate demand and real output and an increase in unemployment
- [1½]
- 25** A country with a population of 25 million has 20 million in employment and 1 million unemployed. What is the unemployment rate?
- A 4.8%
 - B 4.0%
 - C 5.0%
 - D 5.3%
- [1½]

- 26** A country is running a current account deficit. In relation to the rest of the world it is:
- A increasing its net liabilities and increasing its net assets
 - B decreasing its net liabilities and increasing its net assets
 - C increasing its net liabilities and decreasing its net assets
 - D decreasing its net liabilities and decreasing its net assets

[1½]

- 27** In analysing simple insurance problems in terms of utility theory explain how you would find:

- (a) the maximum premium that a consumer is willing to pay
- (b) the minimum premium that an insurer would be willing to charge

[2]

- 28** Draw a diagram to illustrate each of the following:

- (a) a demand curve for an inferior good that is not a Giffen Good
- (b) a demand curve for a Giffen Good
- (c) a demand curve with minus unity price elasticity
- (d) a supply curve with unit price elasticity

[6]

- 29** Consider the following options A to E. Each option relates to an individual firm operating under a certain market structure.

<i>Option</i>	<i>Marginal Cost</i>	<i>Average Cost</i>	<i>Marginal Revenue</i>	<i>Average Revenue</i>
A	20	20	20	20
B	24	18	24	24
C	30	36	30	40
D	18	28	28	40
E	40	40	20	40

Write down all the options that:

- (i) indicate short run equilibrium output for a profit maximising monopolist [1]
- (ii) indicate a firm is both profit maximising and making excess profit [1]
- (iii) indicate a firm could reduce its output and increase its profit [1]
- (iv) would be consistent with a perfectly competitive firm in long run equilibrium [1]

[Total 4]

- 30** A perfectly competitive firm manufactures Good X which sells at £16 a unit. The total cost of production for different levels of output is given below:

<i>Output</i>	<i>Total Cost</i>
0	10
1	18
2	30
3	47
4	67
5	92

- (i) Construct a table to provide the following information at each level of output:

- (a) Total Fixed Cost
- (b) Marginal Cost
- (c) Average Total Cost

[3]

- (ii) State the level of output at which profit will be maximised.

[1]

[Total 4]

- 31** It can be argued that monopolies are bad for society. Draw a diagram which illustrates this argument showing clearly the social cost of monopoly. Include the following curves: marginal revenue (MR), marginal cost (MC) and average revenue (AR). Explain the diagram.

[4]

- 32** You are given the following information on an open economy:

Consumption Expenditure = $0.6Y$
Investment Expenditure = £200 million
Government Expenditure = £400 million
Exports = £300 million
Imports = $0.3Y$
The rate of taxation is 50% of all income

where Y is national income.

- (i) Calculate the equilibrium level of national income. [2]
- (ii) Calculate the equilibrium level of consumption expenditure. [1]
- (iii) Calculate the fiscal surplus/deficit at the equilibrium level of national income. [1]
- (iv) Calculate the trade surplus/deficit at the equilibrium level of national income. [1]

[Total 5]

- 33** (i) Define economies of scale. [2]
- (ii) List four factors which can be given as explanations of the existence of economies of scale. [2]
- [Total 4]

- 34** You are given the following data on a country's international transactions for 2004 with the rest of the world (ROW).

	£ (millions)
Exports of goods and services	100
Imports of goods and services	150
Interest profit and dividends received from ROW	40
Interest profit and dividends paid to ROW	50
Transfer payments from ROW	20
Transfer payments to ROW	40
Investment from ROW	80
Investment to ROW	40
Balancing Item	?
Decrease in official reserves	20

- (i) Calculate the current account balance indicating whether it is in surplus (+) or deficit (–). [2]
- (ii) Calculate the value of the balancing item. [1]
- (iii) List the three subsections of the balance of payment accounts. [1]
- [Total 4]

- 35** Define the following types of unemployment:

- (i) classical
- (ii) demand deficient
- (iii) voluntary
- (iv) involuntary

[4]

- 36** Given that expenditure $Y \equiv C + I + G + X - Z - T_e$ where C = Consumption, I = Investment, G = Government Expenditure, X = Exports, Z = Imports and T_e = Taxes. Show, by a set of equations, how the general identity of injections into the circular flow of income is identical to leakages out of the circular flow of income. [4]

- 37** (i) Use diagrams to define and explain the aggregate demand and supply model. [5]
- (ii) Use the aggregate demand and supply model to explain the possible short run and long run impact that a technological breakthrough will have on output and the price level in an economy. [15]
- [Total 20]

END OF PAPER