EXAMINATION

24 April 2007 (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 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 A resource can be considered scarce if:

A There is insufficient quantity supplied at the equilibrium price.
B There is not enough of it to satisfy all those who would want it at zero price.
C The good's demand and supply functions don't meet.
D It can't be decided who should consume the good.

[1½]

2 Which of the following is NOT true of a free market economy?

A The interaction of demand and supply solves the allocation problem.

B The methods of production minimise the costs of production.

C The goods produced are those for which the amount consumers are willing to pay exceeds the costs of production.

D The allocation problem is determined by an agency.

[1½]

3 A movement along a demand curve is best described as:

A a change in demand
B an increase in demand
C a decrease in demand
D a change in quantity demanded

[1½]

4 Given that an individual's income has decreased from £100 to £90 and the quantity of a Good X demanded has fallen from 25 to 20, the income elasticity of demand for Good X is:

A 2
B ½
C 50
D impossible to calculate from the information given

[1½]

5 When demand for a good is elastic then:

A Quantity effects will be large and price effects large.
B Quantity effects will be small and price effects large.
C Quantity effects will be large and price effects small.
D Quantity effects will be small and price effects small.

[1½]

6 Along a straight-line demand curve which of the following is FALSE?

A Demand is perfectly elastic where the quantity demanded is zero.
B Demand is unit elastic at the midpoint of the curve.
C Elasticity increases as the price falls and the quantity demanded rises.
D Elasticity decreases as the price falls and the quantity demanded rises.

[1½]

7 A firm uses labour as an input to production and finds the following relationship:

Hours of Labour	*Output*	*Average Product of Labour*
0	0	0
1	50	50
2	80	40
3	100	33.3

The marginal product of the second hour's labour is:

A 40
B 20
C 30
D 80

[1½]

8 Which concept does the following table demonstrate, given that all other factors are held constant other than the amount of labour employed?

Number of workers	*Output*
1	10
2	14
3	19
4	25

A constant returns to scale
B decreasing returns to scale
C increasing returns to scale
D increasing marginal returns

[1½]

9 Two firms operate in a duopoly, but do not collude. Given the pay-off matrix of output options to firms A and B below, what is the dominant strategy for the firms?

		Firm B	
		High	*Low*
Firm A	High	(20,20)	(50,10)
	Low	(10,50)	(40,40)

A Firm A – High; Firm B – Low
B Firm A – High; Firm B – High
C Firm A – Low; Firm B – Low
D Firm A – Low; Firm B – High

[1½]

10 Monopolies can be considered detrimental to society since they lead to a social cost. This is because they profit maximise at a level of output and price different from the socially optimal output and price. The monopolist produces where:

A Prices are higher and output lower than the social optimum.
B Prices are higher and output higher than the social optimum.
C Prices are lower and output lower than the social optimum.
D Prices are lower and output higher than the social optimum.

[1½]

11 To transform GDP from market prices to basic prices it is necessary to:

A exclude imports
B subtract taxes and subtract subsidies
C subtract taxes and add subsidies
D add income from abroad

[1½]

12 The circular flow of income model is balanced and has injections equal to leakages when:

A $I + G + B + X + S \equiv T_e - T_d + Z$
B $I + G + B + X \equiv T_e + T_d + Z + S$
C $I + G - B + S \equiv T_e + T_d + Z + X$
D $G + B + X + S + I \equiv T_e + T_d + Z$

[1½]

13 Which of the following would NOT cause a country's production possibility frontier to move outwards?

A an increase in the country's population
B creation of a better transport infrastructure
C full employment of all available resources
D technological advances

[1½]

14 Following an expansionary fiscal policy to boost national income, a government can avoid Keynesian crowding out by:

A altering the multiplier
B reducing private sector investment
C imposing price controls
D increasing the money supply

[1½]

15 A regressive tax is one where:

A The marginal tax rate is less than the average tax rate.
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]

16 GDP at market prices is £1,400m. Consumption is known to be £800m, government expenditure £200m and net imports -£200m. What is the level of investment?

A £600m
B –£200m
C £200m
D impossible to determine from the information given

[1½]

17 By accounting for the depreciation of capital assets used in production the measure for GDP is transformed to:

A Gross National Product
B National Income
C Net Domestic Product
D Net Capital Formation

[1½]

18 Starting at the equilibrium position of a standard IS-LM analysis with a fixed money supply, a fiscal contraction will lead to:

A a rise in the level of national income and fall in the interest rate
B a fall in the level of national income and fall in the interest rate
C a rise in the level of national income and rise in the interest rate
D a fall in the level of national income and rise in the interest rate

[1½]

19 Which of the following conditions indicates that a firm is operating in a perfectly competitive industry, rather than a monopolistic industry?

A Output of the firm is where marginal revenue equals marginal cost.
B The cost curves of the firm are U-shaped.
C Marginal revenue equals average revenue.
D The marginal cost curve cuts the average cost curve at its minimum point.

[1½]

20 There are no restrictions on world trade. Good X is produced both at home and abroad without constraints on further supply. In the home country it is priced at £20 while the world price is £22. Which of the following will occur?

A Good X will be exported to the rest of the world and the world price will fall towards £20.

B Good X will be imported from the rest of the world and the home price will rise towards £22.

C Good X will be imported from the rest of the world and the world price will fall towards £20.

D Good X will be exported to the rest of the world and the home price will rise towards £22.

[1½]

21 Country X will have a comparative advantage over Country Y in producing Good A when Country X:

A can produce Good A using less labour than Country Y
B has a higher opportunity cost of producing Good A than Country Y
C has a lower opportunity cost of producing Good A than Country Y
D is in a free trade area

[1½]

22 Given the information available below, what must be the capital account balance?

Visible plus invisible transactions balance: -£20.8bn
Official financing: £3.6bn
Balancing item: £1.4bn

A £23bn
B £18.6bn
C £25.8bn
D £15.8bn

[1½]

23 What will be the real value of the Euro / £ (sterling) exchange rate if:

Index of UK prices = 118
Index of Euro-area prices = 110
Nominal Euro / £ (sterling) exchange rate = 1.58
UK marginal tax rate = 0.15

A 1.69
B 1.47
C 1.23
D It is impossible to calculate from the information available.

[1½]

24 Wage negotiations are under way and workers and employers anticipate the price inflation rate to be 8% and the money supply to increase by 8%. As a result wages are increased by 8% to maintain equilibrium. The government plans to increase the money supply by 4%, but only they know this. What will be the outcome?

A The real money supply will increase, interest rates will fall and employment will increase

B The real money supply will decrease, interest rates will fall and employment will increase

C The real money supply will decrease, interest rates will rise and unemployment will increase

D The real money supply will decrease, interest rates will fall and unemployment will increase

[1½]

25 With a fixed system of exchange rates:

A Fiscal policy is more effective than monetary policy because interest rates are allowed to fluctuate to prevent crowding out.

B Monetary policy is more effective than fiscal policy because changes in interest rates will reduce imports and encourage exports.

C Fiscal policy is more effective than monetary policy because interest rates cannot be allowed to rise and so crowding out cannot occur.

D Monetary policy is more effective than fiscal policy because it permits the government to lower the interest rate.

[1½]

26 For a Phillips curve with unemployment on the x-axis and inflation on the y-axis, which of the following statements is correct?

A The long-run curve is vertical and the short-run curve slopes upwards.

B The long run curve is vertical and the short-run curve slopes downwards.

C Both the short-run and long-run curves slope downwards, but the short-run curve is steeper than the long-run curve.

D The long run curve is horizontal and the short-run curve slopes downwards.

[1½]

27 (i) List FOUR factors that determine the quantity demanded of a good. [2]

(ii) List TWO factors that determine the quantity supplied of a good. [1]

[Total 3]

28 (i) Draw and label appropriately a demand and supply diagram for a normal good. [2]

(ii) Use the diagram to explain the impact of setting a price ceiling below the equilibrium price. [1]

(iii) Use the diagram to explain the impact of setting a price floor above the equilibrium price. [1]

(iv) State two other controls the government may choose to control supply. [1]

[Total 5]

29 Outline the three alternative methods that may be used to measure national income. [3]

30 (i) Explain briefly the concepts of Keynesian, classical and frictional unemployment. [3]

(ii) Outline two reasons why there may be wage inflexibility. [2]
[Total 5]

31 (i) Calculate the value of the multiplier in an economy where there are no direct taxes and investment, government expenditure and trade transactions are all exogenous, when

(a) the marginal propensity to save is 0.25 [1]
(b) the marginal propensity to consume is 0.6 [1]

(ii) Briefly explain why there may be difficulties in placing a value on national income. [2]
[Total 4]

32 A government wishes to control the money supply through its central bank. It knows national income is £600m, the price level is 2 and the velocity of circulation is 3.

(i) Calculate the level of the money supply. [1]

(ii) The central bank has changed the money supply to £500m. The velocity of circulation remains 3 and national income £600m. Calculate the absolute change in the price level. [1]

(iii) Outline three main ways in which the central bank may control the money supply. [3]
[Total 5]

33 There are two Countries A and B and two Goods X and Y. It takes Country A two hours to produce one unit of Good X and three hours to produce 1 unit of Good Y. It takes Country B three hours to produce one unit of Good X and six hours to produce one unit of Good Y.

(i) Calculate the opportunity cost to Country A of producing one unit of Good Y in terms of Good X. [1]

(ii) Demonstrate which country has the comparative advantage in producing Good Y. [2]

(iii) List two of the factors that may limit international trade. [1]

(iv) Outline the terms of trade and demonstrate how the terms of trade index may be calculated. [2]

[Total 6]

34 You are told that the broad money supply is £800m, the banking sector's reserve ratio is 0.3 and the ratio of cash held by the public to their deposits is 0.4.

(i) Calculate the money multiplier. [1]

(ii) Calculate the monetary base. [1]

(iii) State three motives for holding money. [1]

[Total 3]

35 (i) Draw and label appropriately an IS-LM diagram. [2]

(ii) Briefly explain what relationships are shown by the IS and LM curves respectively. [2]

(iii) Using the diagram in part (i) demonstrate and briefly explain the impact of an expansionary monetary policy. [3]

[Total 7]

36 Using correctly labelled diagrams to illustrate your answer, assess the short-run impact on an individual producer of an increase in demand in a perfectly competitive industry. Discuss the long-run consequences of this change on the market. [10]

37 Investigate the conditions under which a monopolist might practice price discrimination. [10]

END OF PAPER