EXAMINATION

5 October 2010 (am)

Subject CT7 — Business 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 from the approved list.

1 According to the accelerator principle investment expenditure will:

A fluctuate more than consumer expenditure.
B rise when the long term rate of interest falls.
C accelerate if business confidence picks up.
D accelerate if the government increases its capital expenditure.

[1½]

2 A firm that produces a main product and a by-product will maximise profits if it:

A decides on the viability of producing the by-product after it has made the decision to produce the main product.

B selects the level of output of the by-product where marginal cost of the by-product equals its marginal revenue.

C selects the combined output where the combined marginal cost equals the combined marginal revenue.

D uses cost-based pricing for the main and the by-product.

[1½]

3 If Goods X and Y are substitutes, an increase in the price of Good X causes the:

A quantity demanded of Good X to fall and the demand curve for Good Y to shift to the left.

B quantity demanded of Good X to fall and the demand curve for Good Y to shift to the right.

C quantity demand of Good X to remain constant, but the demand for Good Y to fall.

D demand curves for both Good X and Good Y to shift to the right.

[1½]

4 Which of the following is not a characteristic of an inferior good?

A The income elasticity of demand is negative.
B The income elasticity of demand is between zero and one.
C The demand for the good increases as income falls.
D The demand will rise if its price falls.

[1½]

5 The price elasticity of demand for beer is –2. If beer increases in price by 15 per cent the quantity demanded falls by:

A 7.5 per cent.
B 15 per cent.
C 17 per cent.
D 30 per cent.

[1½]

6 If a firm incurs a total cost of £874 when it produces 10 units of output and a total cost of £950 when it produces 11 units of output, the marginal cost of the 11^{th} unit is:

A 1,824.
B 950.
C 54.
D 76.

[1½]

7 Suppose that in a firm the amount of capital and plant size are fixed. With 10 workers, the firm can produce 180 units of output and with 11 workers 190 units of output, then the:

A average product of labour when 10 workers are hired is lower than when 11 workers are hired.

B 11th worker has a higher average product of labour than marginal product of labour.

C firm has not yet passed the point of diminishing returns to labour.

D marginal product of the 11th worker is negative.

[1½]

8 Increasing long run average costs are associated with:

A constant returns to scale.
B decreasing returns to scale.
C increasing returns to scale.
D the law of diminishing returns.

[1½]

9 A firm operating in a perfectly competitive industry uses the least cost combination of the two factors of production capital and labour to produce its output. The price per unit of capital and labour are £8 and £200 respectively. If the marginal physical product of labour is 10, then the marginal physical product of capital is:

A 20.
B 250.
C 160.
D 25.

[1½]

10 Which one of the following defines the economic growth rate?

A An increase in real investment.
B An increase in Gross Domestic Product.
C An increase in real Gross Domestic Product.
D An increase in the Gross Domestic Product price deflator.

[1½]

11 In an economy, economic agents have a marginal propensity to save of 0.25, an income of £200 million and an autonomous expenditure of £15 million. The level of consumption will be:

A £215 million.
B £165 million.
C £65 million.
D £100 million.

[1½]

12 In a closed economy with no government sector, the marginal propensity to save is 0.1, investment is £500 million, and autonomous consumption is £200 million. Which of the following statements is true at the equilibrium level of national income?

A Planned savings are £300 million.

B The marginal propensity to consume is higher than the average propensity to consume.

C Consumption expenditure is equal to £6,500 million.

D The Gross Domestic Product is £6,800 million.

[1½]

13 In an open economy with a government sector, the marginal propensity to consume is 0.75 and the marginal propensity to import is 0.25. The open economy multiplier will equal:

A 4
B 2
C 1
D 1.33

[1½]

14 Which of the following is not a problem associated with the active management of fiscal policy?

A time lags
B uncertainty
C crowding out
D the accelerator

[1½]

15 If a country experiences high domestic inflation compared to its trading partners with a fixed exchange rate then the effect of the inflation will be to:

A decrease the country's imports.

B increase the country's exports.

C shift the country's currency supply curve in the foreign exchange market to the right requiring central bank purchases of the domestic currency to maintain the fixed exchange rate.

D shift the demand curve for the country's foreign exchange to the right requiring central bank purchases of the domestic currency to maintain the fixed exchange rate.

[1½]

16 Under fixed exchange rates with perfect capital mobility the most effective macroeconomic policy to increase output is:

A an expansionary monetary policy.
B a revaluation of the domestic currency.
C an expansionary fiscal policy.
D an increase in taxes.

[1½]

17 If the central bank has to intervene in the foreign exchange markets to prevent the home currency from appreciating, then its foreign exchange reserves will:

A decrease and the domestic money supply rise.
B decrease and the domestic money supply fall.
C increase and the domestic money supply rise.
D increase and the domestic money supply fall.

[1½]

18 Which of the following is not included in a country's current account?

A exports of goods
B foreign direct investment flows
C unilateral transfers to other nations
D imports of services

[1½]

19 Suppose that you import DVDs from France and write a £10,000 cheque to cover a €12,500 billing for your latest purchase of DVDs. The exchange rate is:

A £0.8 / €1.00
B €0.8 / £1.00
C £1.25 / €1.00
D none of the above

[1½]

20 In a perfectly competitive market, the typical firm cannot affect the price of its output, and so it maximises profits or minimises losses when marginal cost is:

A less than the price.
B greater than the price.
C equal to the price.
D below average variable cost.

[1½]

21 A firm is producing 1000 units of output at a price of £20, with a marginal cost of £5 and average cost of £8 at that level of output. What is the supernormal profit that the monopoly firm is making?

A £20,000
B £15,000
C £7,000
D £12,000

[1½]

22 A firm producing carpets has average variable costs of production of £420, marginal costs of production of £500 and operates in a perfectly competitive market. A decrease in the demand for carpets which reduces the price from £600 to £400 will mean that the firm will do which of the following in the short run:

A shut down its production.
B decreases its level of output but continue to produce carpets.
C reduce its fixed costs of production.
D increases its level of output.

[1½]

23 5,000 bottles of a soft drink are demanded when the price for each bottle is £5. When the price is £6 only 4000 bottles are demanded. The marginal revenue from increasing the price is:

A +£1,000.
B –£1,000.
C +£1.
D –£1.

[1½]

24 Which one of the following is NOT a cause of cost push inflation?

A An increase in the price of raw materials.

B A percentage increase in wages which is less than the percentage increase in labour productivity.

C An increase in the profit margins applied by firms.

D A depreciation of the exchange rate.

[1½]

25 Which one of the following will NOT happen following a devaluation of the domestic currency on the foreign exchange market?

A Exports become less expensive when measured in the foreign currency.
B Imports become more expensive when measured in the domestic currency.
C Export values measured in the domestic currency will increase.
D Import volumes will increase.

[1½]

26 An implicit or explicit agreement amongst firms in an industry not to compete with each other is known as:

A the dominant firm hypothesis.
B collusion.
C non-cooperative oligopoly.
D product differentiation.

[1½]

27 (i) State whether each of the following is an example of a horizontal, vertical or conglomerate type of merger or takeover.

(a) a supermarket takeover of a small grocery store
(b) an airline merging with a record company

[2]

(ii) Explain the effect of mergers on consumers' interests. [2]

[Total 4]

28 In a country the banking sector is dominated by a single large Bank X with a positive sloping marginal cost curve *MC* with the sum of other firms' marginal costs being identical to that of Bank X. Assume that the other banks adopt exactly the same mortgage interest rate as set by Bank X and that changes in the mortgage interest rates are initiated by Bank X.

(i) Draw a diagram to show the market demand curve for loans at different mortgage interest rates and label it $D_{M.}$ On the same diagram draw the demand curve facing Bank X and its marginal revenue curve MR_X. Add the marginal cost curve *MC* of Bank X and depict Bank X's profit maximising mortgage interest rate r_1 and the quantity of mortgages sold by Bank X as Q_X.

[2]

(ii) Show on your diagram the mortgage amount provided by the rest of the banking sector as Q_X Q_R. [1]

(iii) Bank X takes over all the other banks and becomes the sole provider in the mortgage market. Bank X has the same marginal cost as before the takeover. Show on your diagram, the new marginal revenue curve facing the new monopoly firm MR_M, the new mortgage interest rate r_2 and the new quantity of mortgages offered by Bank X as Q_{X2}. [2]

[Total 5]

29 (i) Explain how the concept of moral hazard can be applied in the context of a government's measures to rescue banks in a financial crisis. [2]

(ii) List two ways in which insurance companies attempt to mitigate the additional risk arising from moral hazard. [2]

(iii) Explain the adverse selection problems facing banks and why these may mean that raising interest rates may lower rather than raise bank profits. [3]

[Total 7]

30 The following information is available about the labour market in a small country:

Real wage (£'s per hour)	AD_L	AS_L	N
3	480,000	320,000	500,000
4	440,000	360,000	528,000
5	400,000	400,000	556,000
6	360,000	440,000	584,000
7	320,000	480,000	612,000

where AD_L, AS_L and N are the aggregate demand for labour, the aggregate supply of labour and the labour force respectively.

Assume that the real wage is flexible.

(i) (a) State the equilibrium wage rate per hour. [1]

(b) State the number of unemployed at the natural rate of unemployment. [1]

(ii) Determine the level of disequilibrium unemployment if the wage rate is rigid at £2 per hour above the equilibrium wage. [1]

(iii) Explain the reason why the gap between AS_L and N becomes closer as the wage rate rises. [1]

[Total 4]

31 (i) Draw a graph showing the four stages of the product life cycle. [2]

(ii) Describe the stages of the life cycle of basic mobile phones. [2]

(iii) Explain the pricing policies of the basic mobile phone companies during the cycle including the later introduction of more sophisticated smart phones. [2]

[Total 6]

32 (i) Draw a diagram showing the demand D and supply S curves for a good. Show the equilibrium price by P_1 and the equilibrium level of sales by Q_1. [1]

(ii) On your diagram draw the line $S + T$ to show the new supply curve after an excise tax of T is imposed on the good. Denote the new equilibrium price and quantity by P_2 and Q_2. [2]

(iii) Show clearly on your diagram consumer and producer surplus before and after the tax, the government revenue and the excess burden (i.e. net welfare loss) from the tax. [3]

[Total 6]

33 A bank's liquidity ratio is 10 per cent, and the bank's deposits increase by £25 billion.

(i) Calculate the increase in total deposits. [2]

(ii) Explain the circumstances in which the overall multiplier effect could be smaller than that shown by your result in (i) above. [2]

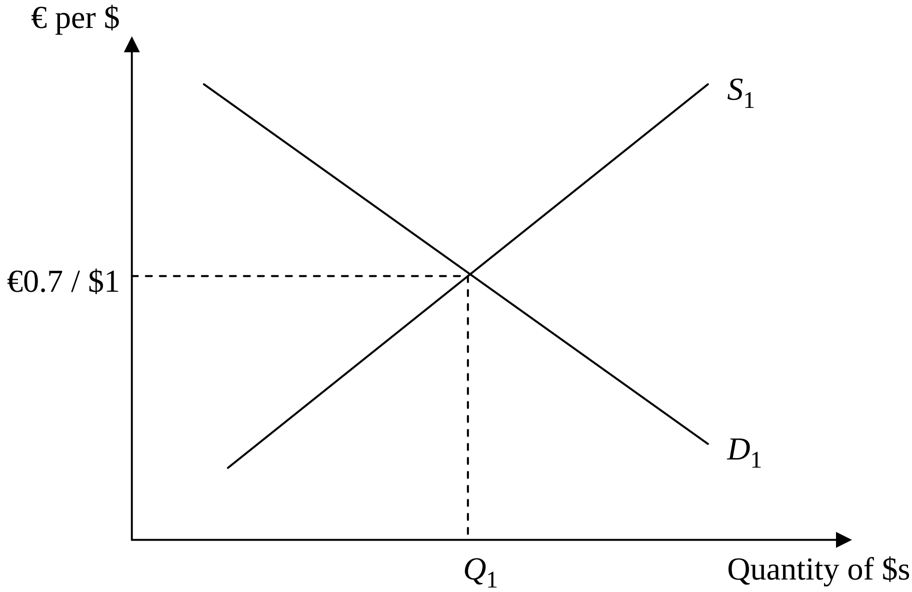
[Total 4]

34 (i) Describe four broad categories of globalisation drivers. [4]

(ii) State four of the market drivers within the market category of drivers that influence globalisation. [2]

[Total 6]

35 The following diagram shows the market demand D_1 and supply S_1 for the United States dollar against the Euro. Assume that the US government does not intervene in the foreign exchange market and increases government expenditure in order to reduce unemployment.



Explain the effects that this fiscal expansion would have on the US current account, the financial account and the euro per dollar exchange rate. Show the effects of the government policy on a copy of the diagram. [5]

36 There are two companies, Iceberg and Easifreeze, producing a single model of identical freezers in a country. Both companies face identical demand curves and costs and do not collude in deciding their pricing strategy. The following table shows the possible prices they could charge and the profits they could make.

		Iceberg Price	
		£ 200	*£250*
Easifreeze Price	*£200*	£80,000 each	£120,000 Easifreeze £50,000 Iceberg
	£250	£50,000 Easifreeze £120,000 Iceberg	£100,000 for each

(i) Determine the price for each firm when the equilibrium outcome of the game is a Nash equilibrium. [2]

(ii) Describe the likely result of a Nash equilibrium outcome in the context of expenditure on advertising. [2]

[Total 4]

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37 (i) Describe the Keynesian explanation of the business cycle. [5]

(ii) Explain the fluctuations in the level of the Gross Domestic Product with reference to the interaction of the multiplier and accelerator. [5]

[Total 10]

END OF PAPER