UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:-

B.Sc.

ES1120: Economics

COURSE CODE   : **ENVS1120**

UNIT VALUE   : **0.50**

DATE   : **13–MAY–04**

TIME   : **14.30**

TIME ALLOWED   : **3 Hours**

TURN OVER

ENVS1120 Economics

You must answer SIX questions in total, FOUR from Section A and TWO from Section B

Section A. Answer FOUR questions. Each question is worth 15 marks

1. To operate a taxi in New York City, it is necessary to own one of a fixed number of licenses, called "medallions." In a taxi on the way from LaGuardia Airport into Manhattan, your cabbie starts talking about what a great country America is. "I own my cab," he says, "and I own the medallion as well. So I take home all the money I make. After paying for gas, insurance, and maintenance, I make about $100 in a day. That's pure profit." Is the cabbie right? Why or why not?

2. In recent months, the view that the British property market is likely to crash can be frequently heard in the media. Please find three strongest reasons to argue against this view and also find three strongest reasons to support this view. Finally, you need to make a verdict on this view.

3. Kathy runs a jewelry business, distributing her faux (fake) pearls over the web. Last month, she was charging $50 for a string of pearls. Anxious for more profits, she hired Meghan to do a study of elasticity. Meghan estimated that the price elasticity for Kathy's pearls was -0.75. On the basis of this information, Kathy raised the price of her pearls to $250. Alas, her revenues went down. Why was Kathy initially surprised by this result and what went wrong?

4. There is a hypothetical mini economy. There are six players: steel firm, machine maker, tyre maker, contractor, car maker and household. Their transaction relationships are as follows: The steel firm makes £4000 worth of steel, ¼ sold to the machine maker and ¾ sold to the car maker. The machine maker spends £1000 buying steel input, and then converts it into a machine sold to the car marker for £2000. The contractor spends £8,000 on building materials and then assembles them into a factory sold to the car maker for £10,000. The car maker spends £3000 on steel, £500 on tyres, £2,000 on machine and £10,000 on factory building and then sells the car for £5000 to the final consumer-households.
(a) Measure the gross domestic product of this mini economy by three ways: value added, spending on final goods and factor earnings. Demonstrate the results measured by these three approaches will be the same.
(b) Assume in this mini economy, depreciation is negligible and the indirect tax is levies at the rate of 10% of transaction value. Compute the national income of this economy.

TURN OVER

ENVS1120

1

5. The price of personal computers – controlling for computing power and speed – has fallen continuously over the past decade. Suppose you know two things. First, the technology for making computer chips has improved over the period. Second, networking has made personal computers much more attractive for businesses. Which of these developments explains the fall in price? Illustrate your answer with a diagram that takes both factors into account.

6. In a hypothetical economy, initially, consumption is determined as 80% of income. Investment is autonomous and occurs at the rate of £90 billion per period.
(a) What is the equilibrium level of income?
(b) What would be the equilibrium level of income if investment increased by £15 billion?
(c) If the consumer now is more thrifty, spending 70 pence in the pound rather than 80. What is the equilibrium level of income?
(d) What will happen to the value of the multiplier if the consumer becomes thriftier? Explain.

Section B. Answer TWO questions. Each question is worth 20 marks

1. A perfectly competitive industry is taken over by a monopolist who intends to run it as a multi-plant concern. Consequently, the long-run supply curve of the competitive industry (LRSS) becomes the monopolist's long-run marginal cost curve (LMC); in the short run the SRSS curve becomes the monopolist's SMC. The position is shown in Fig.1.
(a) What was the equilibrium price and industry output under perfect competition?
(b) At what price and output would the monopolist choose to operate in the short run?
(c) At what price and output would the monopolist maximize profits in the long run?
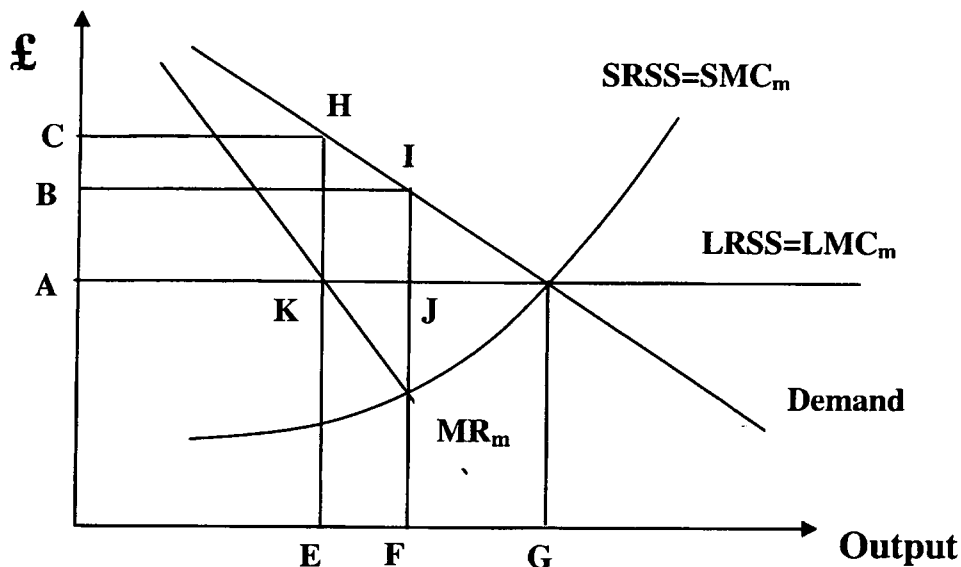(d) What would be the size of these long-run profits.

Fig. 1

ENVS1120

2. The diagram below shows how a consumer reacts to a fall in the price of beefburgers, in her choice between beefburgers and pork chops. AB represents the original budget line and OX_1 is the quantity of beefburgers bought by this consumer. After the price falls, the budget line moves to AC, and this consumer now consumes OX_2 beefburgers.

(a) Illustrate the real income and substitution effects involved in this consumer's reaction to the price fall.

(b) Does your analysis reveal beefburgers to be a normal or an inferior good?

(c) Do the income and substitution effect reinforce each other or work in opposite directions?

(d) Under what circumstances would the opposite be the case?

Pork Chops
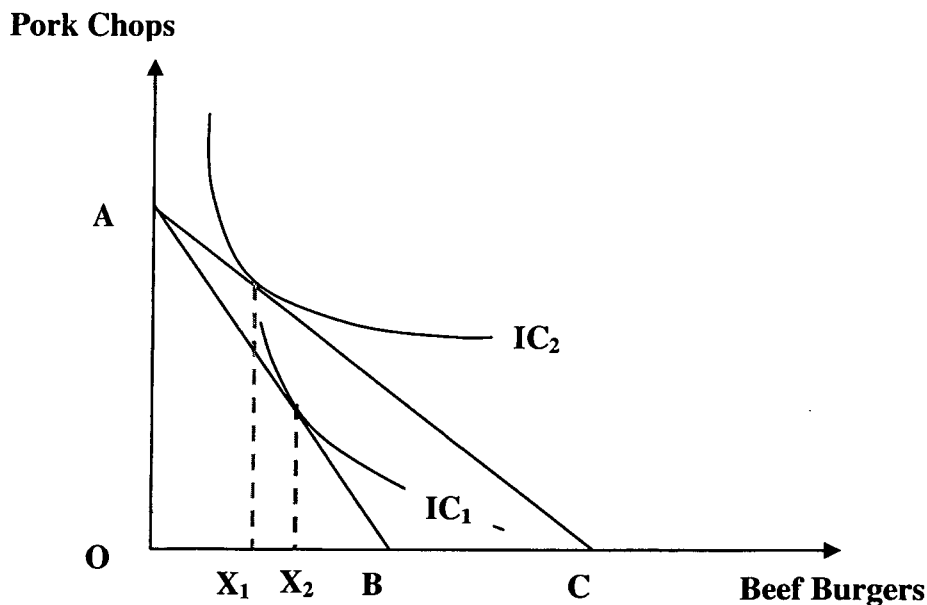
3. A firm making toffees has a choice between three production techniques, each using different combinations of labour input and capital input, as shown in Table 1.

Suppose labour costs £2 per unit/week and capital input costs £4 per unit/week. Assume this firm always employ the most efficient technique to produce.

(a) Calculate average cost and marginal cost for each level of output. At what output level is long-run average cost at a minimum?

(b) Assume the optimal output level of this firm is 4 units/week and the market price is £23. Which one is the appropriate decision for the firm: produce at a profit, produce at a loss or close down? Explain.

(c) Suppose that the price of labour input reduces to £1 per unit/week, but the price of capital remains constant. In what way would you expect the firm's choice of technique to be affected by this change in relative prices? Does the decrease in labour costs change the output level at the minimum long-run average cost?

Table 1

Output	Technique A		Technique B		Technique C	
	L	K	L	K	L	K
0	3	1	2	2	1	3
1	9	2	6	4	4	6
2	19	3	10	8	8	10
3	29	4	14	12	12	14
4	41	5	18	16	16	19
5	59	6	24	22	20	25
6	85	7	33	29	24	32
7	120	8	45	38	29	40

L: labour; K: capital
All measured in units per week.

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