ECONOMICS TRIPOS PART I

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Monday 11 June 2007   9-12

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Paper 1

MICROECONOMICS

*Attempt **six** questions only from Section A, and **two** questions only from Section B.*

Section A and B will each carry 50% of the total marks for this paper.

STATIONERY REQUIREMENTS   SPECIAL REQUIREMENTS
20 Page Booklet x 1   *Approved calculators allowed*
Rough Work Pad x 1
Tags

You may not start to read the questions printed on the subsequent pages of this question paper until instructed that you may do so by the Invigilator

SECTION A

Answer **six** questions

1   'Pareto-superiority is a welfare criterion with no practical application, since every non-trivial change in resource allocation involves both winners and losers.' Comment.

2   If all the firms in a perfectly competitive industry have long-run marginal cost equal to price, is the industry in long-run equilibrium?

3   Consider the following three-person game in which the first number in each cell is the payoff to player 1, the second number is the payoff to player 2, and the third number is the payoff to player 3. The three players move simultaneously.

Matrix A:

	L	*R*
l	6, 3, 2	4, 8, 6
r	2, 3, 9	4, 2, 0

Matrix B:

	L	*R*
l	8, 1, 1	0, 0, 5
r	9, 4, 9	0, 0, 0

Player 1 chooses the row, player 2 chooses the column, and player 3 chooses the matrix that will be played. Find the pure-strategy Nash equilibria of this game. Explain your reasoning.

4   The production function for a product is given by Q=100KL, where Q denotes output per day, K denotes capital input per day, L denotes labour input per day, and both K and L must be non-negative.   If the price of capital is £40 per day and the price of labour £20 per day, what is the minimum cost of producing 800 units of output per day?

5   Carefully describe a market failure which can be ascribed to asymmetric information.

6   In a two-good exchange economy, if the market for one good is in equilibrium at a particular price ratio, will the market for the other good also be in equilibrium?

7   'If leisure is a normal good for an individual, then she will supply less labour when her wage rate increases.' Comment.

8   How does the incidence of a tax on a good sold in a perfectly competitive market depend on the elasticities of supply and demand?

9   Harry and Karen are talking about how much they like going to the gym and how much they like eating out at their favourite restaurant. A session at the gym costs the same as a meal at the restaurant. Harry says that, for his current consumption of gym sessions and restaurant meals, he values one more meal twice as much as he values one more session at the gym. Karen tells him that he cannot be choosing his optimal consumption bundle. Is Karen right? Why or why not?

10   There are two individuals. Each has an envelope. Each knows that each envelope may contain £2, £4, £8, or £16. Neither of the two individuals knows how much money is contained in the other's envelope, but each knows how much money is contained in his or her own envelope. They then announce simultaneously that they wish to 'trade' or that they wish 'not to trade'. They swap their envelopes if and only if both announce 'trade'. Each individual ends up with the amount of money in the envelope he or she is holding after the swap has or has not taken place. If each individual wants to maximize the expected amount of money he or she gets, what outcome would you predict? Explain your reasoning.

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SECTION B

Answer **two** questions

11   Assuming that global warming has significant negative consequences and that air travel contributes significantly to the problem, what are the advantages or disadvantages of including air travel within a universal trading system for carbon emission permits, as opposed to taxing air travel?

12   How can a monopolist use price discrimination to increase its profits? Is such price discrimination desirable?

13   'The production function of the firm is analogous to the utility function of the consumer.' Discuss.

14   Define a public good and explain the condition which characterizes the efficient level of provision of a public good. If the efficient amount of a public good is being provided, is it possible that individuals would want to have more of it?

15   Lancelot behaves according to the theory of consumer choice and spends all his income (denoted by M) on goods 1 and 2, the prices of which are denoted by p_1 and p_2. The following table shows seven combinations of incomes and prices with Lancelot's consumption of good 1 (denoted by x_1) shown in four of them. Lancelot's consumption of good 2 is denoted by x_2.

Situation	M	p_1	p_2	x_1	x_2
A	100	1	1	40	**a**
B	140	2	1	30	
C	300	3	3	**b**	
D	200	1	1	70	
E	100	0.5	0.5	**c**	
F	100	2	1	25	
G	270	2	3		

(a)   What are the missing entries **a**, **b**, and **c** in the table? Explain your reasoning. (NB: Write your answers on your examination script, not on the question paper.)

(b)   Comparing A and F, and taking A to be the initial position, how much of the reduction in consumption of good 1 is due to the income effect of an increase in p_1 and how much is due to the substitution effect? Illustrate your answer with a diagram.

(c)   Does Lancelot prefer the situation in G to that in A?

16   The tickets for many events, such as music festivals and football matches, are sold at prices below market-clearing values, with the result that there is excess demand for tickets, which are then allocated by some form of rationing.

(a)   Is such behaviour by the organizers of the events consistent with profit-maximization?

(b)   Discuss the view that in these circumstances the activities of ticket touts in creating a secondary market in tickets should be welcomed as they ensure that the limited supply of tickets is allocated to those consumers who value them most.

END OF PAPER