UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Bachelor of Business Administration (Level I – Semester I) Repeat Examination

Examination – June 2017

BEC 1301 - Microeconomics

Time: Three (03) Hours

Answer only <u>Five</u> (05) questions.

Use of Calculators Is Allowed

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1. i. 'Rational people think at the margin'. Explain this statement with a suitable example.

(05 Marks)

ii. State two assumptions of the cobweb theorem and explain what is a 'convergent system'.

(05 Marks)

iii 'The market mechanism has many advantages.' Do you agree with this statement? Justify your answer.

(05 Marks)

iv. The market demand is given by the function $Q_D = 1000 - 4P$ while supply is given by $Q_S = 5P$. Determine the market price, quantity, consumer surplus, and producer surplus.

(05 Marks)

(Total 20 marks)

2. i. Briefly explain the concepts of 'indifference curve' and 'budget line'.

(04 Marks)

ii. Compare and contrast the price effect, income effect, and substitution effect of a normal good and an inferior good, when price falls.

(04 Marks)

iii. Explain what the Price Consumption Curve is and show how it could be derived.

(05 Marks)

iv. Compare and contrast the cardinal utility analysis and ordinal utility analysis.

(05 Marks)

v. Briefly explain the 'law of demand'.

(02 Marks)

(Total 20 marks)

3. i. What are Income Consumption Curves and Engel Curves? Show how they are derived.

(06 Marks)

ii. List the assumptions of the 'law of diminishing marginal utility'.

(04 Marks)

iii. Distinguish between short run and long run in production.

(04 Marks)

iv. If the total cost function is $TC = 100 + 4Q + 3Q^2$ and the demand function is $Q_D = 100 - P$, determine the profit maximizing output and price.

(06 Marks)

(Total 20 marks)

4. i. a. Explain the concepts of 'Total Product', 'Marginal Product' and 'Average Product' and show them in one graph.

(06 Marks)

b. Briefly explain the reason for the behaviour of the curves drawn above.

(03 Marks)

ii. Explain the relationship between average product and average cost, and marginal product and marginal cost.

(05 Marks)

iii. Explain the different stages of economies of scale with examples.

(06 Marks)

(Total 20 marks)

5. i. Distinguish between 'expansion path' and 'ridge lines'.

(04 Marks)

ii. Graphically explain the producer's equilibrium in the long run.

(05 Marks)

iii. List the characteristics of a perfectly competitive market.

(05 Marks)

iv. Using appropriate graphs and explanations show how the long run supply curve of a perfectly competitive market could be derived in an increasing cost industry. How would this differ from a constant cost industry?

(06 Marks)

(Total 20 marks)

6. i. The market demand is P = 120-Q and marginal cost of a firm is assumed to be zero.

a. If there are two firms A and B, using Cournot's model derive the reaction functions of both firms and determine the equilibrium level of output of each firm.

b. In the above if firm B enters first, determine the level of output of each firm.

(09 Marks)

ii. The following information relate to a monopolist operating in markets A and B.

Demand Functions: $Q_A = 100 - 4P_A$

$Q_B = 80 - 2P_B$

Cost function: $TC = 10 + 10Q$

Find the prices to be charged from the two markets if there is price discrimination.

(07 Marks)

iii. Firms C and D have to decide whether to advertise (A) or not (N), and the payoff of the strategies in terms of profits is given below;

		C: A	C: N
D	A	90,85	80,50
	N	45 , 95	60,70

What is the equilibrium? What are the characteristics of this equilibrium?

(04 Marks)

(Total 20 marks)

7. i. 'A firm in monopolistic competition makes normal profits in the long run'. Do you agree with this statement? Justify your answer.

(05 Marks)

ii. A monopolist currently owns two plants, A and B. The cost functions and the demand function are given below. Using them determine how much to produce at each plant.

Cost Functions: $TC_A = 12 + 3Q + 5Q^2$

$TC_B = 10 + 5Q + 2.5Q^2$

Demand Function: $P = 200 - 4Q$

(07 Marks)

iii. Firms C and D are thinking of introducing two products A and B and the payoff in terms of profits is given below. If firm C moves first what would be the equilibrium?

		C: A	C: B
D	A	10 , 05	10 , 45
D	B	40 , 05	-05 , -10

(03 Marks)

iii. There are two firms (A and B) in the market. They produce differentiated products. The marginal cost is zero. The demand functions of the two firms are given below.

$Q_A = 60 - 2P_A + 4P_B$

$Q_B = 60 - 2P_B + 4P_A$

Determine the equilibrium prices to be charged by the two firms.

(05 Marks)

(Total 20 marks)

8. i. Compare and contrast partial equilibrium analysis and general equilibrium analysis.

(06 Marks)

ii. a. Graphically explain the contract curve.

(06 Marks)

b. Briefly explain Pareto optimality. Comment on the Pareto optimality of points on the curve and points outside the curve drawn above.

(05 Marks)

iii. State the conditions for there to be efficiency in the economy.

(03 Marks)

(Total 20 marks)