UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Postgraduate & Mid-Career Development Unit

Master of Business Administration -Weekday Programme

(Semester I - Second half -Repeat) Examination – March 2017

MBA 534 – Managerial Economics

Three (03) Hours

Answer any **FIVE (05)** questions

---

1. Estimated demand equation for commodity X is given below.

   $Q_d = 180 - 10P_X - 0.2M + 10P_R$

   Where, Qd is quantity demanded of commodity, Px is the price of the commodity, M is the consumer Income P_R is the price of related good

   i. Construct the (direct) demand curve for the commodity when M = Rs1, 000 and P_R = Rs 5. (04 Marks)

   ii. Interpret the intercept and slope parameters for the demand equation in part i. (04 Marks)

   iii. State whether this commodity is normal or inferior and whether this is substitute or complement commodity. (04 Marks)

   iv. Using your graph in part i, find consumer surplus when market equilibrium price of X is Rs. 20. (04 Marks)

   v. Find the price elasticity of demand for X at the equilibrium price of Rs20. (04 Marks)

   (Total 20 marks)

2. i. Suppose the marginal utility of the last unit of X consumed is 40, and the marginal utility of the last unit consumed of Y is 30. The prices of X and Y are Rs.4 and Rs.2, respectively. Should the consumer increase or decrease consumption of X? Explain your answer.

(05 Marks)

ii. If person A is consuming apple and his total utility function is given as $TU = 12Q - 2Q^2$, how many apples he will consume at the level of maximum total utility.

(05 Marks)

iii. Explain the equilibrium condition for an utility maximizing individual consumer with the help of indifference curves and the budget constraint. (05 Marks)

iv. Identify the substitution, income, and total effects of a change in the price of a good with the help of indifference curves and the budget line.

(05 Marks)

(Total 20 marks)

3. i. Define output elasticity of labor and capital in production. (05 Marks)

ii. Compare the characteristics of the three stages of production in the Short-run.

(05 Marks)

iii. Explain why stage II of the short-run production is considered as the rational area of production.

(05 Marks)

iv. Illustrate graphically the optimum production decision of a long-run producer with the help of Iso- quant and Iso-cost curves.

(05 Marks)

(Total 20 marks)

4. Explain conditions for

i. Free market equilibrium

ii. Consumer equilibrium

iii. Producer equilibrium and

iv. Profit maximization of a firm

(5x 4= 20 marks)

5. Consider the following nonlinear demand function, which is estimated for a price setting firm. The method of least-squares is used to estimate the parameters.

$$Q = aP^b M^c P_Y^{\ d}$$

where Q is output, P is price per unit, M is income, and P_Y the price of a related good. The results of the estimation are:

Dependent variable: LNQ Observations: 44	R-square 0.93	F-ratio 105.18	P-value on F 0.0001	
Variable	Parameter estimate	Standard error	t- ratio	P-value
Intercept	-2.00	0.4	-5.00	0.0001
LnP	-1.10	0.44	-2.50	0.0166
LnM	2.4	0.60	4.00	0.0003
LnP_Y	- 0.2	0.05	-4.00	0.0003

i. Interpret the value of price elasticity of demand obtained from the analysis. (05 Marks)

ii. Are the parameter estimates statistically significant at the 5 percent level of significance? Explain your answer. (05 Marks)

iii. What is the relationship between this commodity and commodity Y? Explain your answer. (03 Marks)

iv. Assuming that for the next year the manager of this firm is planning to increase price of the commodity by 5% and the manager knows that consumers' income is to increase by 8% and price of the commodity Y is to decrease by 12%, forecast the next year demand for the commodity. (07 Marks)

(Total 20 marks)

6. i. Discuss the main characteristics of perfectly competitive markets. (05 Marks)

ii. "In competitive equilibrium, businesses can charge lowest price for each unit of the good in the long-run". Do you agree with this statement? Explain your answer. (05 Marks)

iii. Explain why a firm should not shut down in the short run if market price falls below average total cost and why a firm should shut down if market price falls below minimum average variable cost. (05 Marks)

iv. "The output level that maximizes profit margin is not the output level that maximizes profit in a perfectly competitive". Do you agree with this statement? Explain your answer. (05 Marks)

(Total 20 marks)

7. i. Define the concepts of risk and uncertainty. (05 Marks)

ii. Explain how a manager in a business firm incorporates the risk factor in measuring the value of the firm. (10 Marks)

iii. Identify the characteristics of risk adverse, risk neutral and risk loving managers with the help of utility function of money. (05 Marks)

(Total 20 marks)

.....

Related formulas

$$Q^* = \frac{-b \mp \sqrt{b^2 - 4ac}}{2c} \qquad NPV = \sum \frac{R_t}{(1+k)^t} - C$$

$$NPV = \sum_{t=1}^{n} \frac{\alpha R_t}{(1+r)^t}$$