

THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR OF MANAGEMENT STUDIES - LEVEL 05
FINAL EXAMINATION: 2014
MANAGERIAL ECONOMICS – MCU3207
DURATION THREE (03) HOURS



DATE: 15.06.2014

TIME: 1.30pm – 4.30pm

Answer any four (04) questions. Each question carries 25 marks.

Question 01

- (a) Do you “agree” or “disagree” with the following statements? Explain your answer using illustrations, where possible.
- The higher the Unit Costs of Production, the higher is the Price Elasticity of Supply of that product.
 - The higher the number of substitutes available for a product, the higher is the Price Elasticity of Demand of that product.
 - If the value of Income Elasticity of Demand for a good is negative (-), the particular good is a normal good, if the value is positive (+), it is an inferior good.
 - The higher the substitutability of two products, the higher is the value of Cross-Price Elasticity.

(15 Marks)

- (b) The demand function of good ‘x’ is given as

$$Q_x = 176 - 12p_x + 0.4y + 0.8P_y$$

P_x – Price of good x, Y – Income percapita, P_y – Price of a related good of x

Suppose $P_x = \text{Rs.}12/=$, $Y = \text{Rs.} 2000/=$, $P_y = \text{Rs.}10/=$.

- How many units of good ‘x’ are demanded at initial prices and income?
- Find the Price Elasticity of Demand at the given values. Determine what effect a price increase would have on total revenues.
- What is the point Income Elasticity at given values? How would the sale of good x change during a period of rising income? Explain.
- Are goods x and y substitutes or complementary good? Explain your answer.
- What is the Point Cross Price Elasticity between goods x and y?

(10Marks)

Question 02

- (a) Do you “agree” or “disagree” with the following statements? Explain your answer using illustrations, where possible.
- i. If output increases more than in proportion to the change in inputs, the firm said to be experiencing decreasing returns to scale.
 - ii. The slope of the ISO-Quant indicates how one input (ex. Labour) can be substituted for another (ex. Capital), so that the given output rate is maintained.
 - iii. The slope of the ISO-Cost Curve is the Price ratio of two factor inputs used in the production (ex:-Labour & Capital).

(12 Marks)

- (b) Consider the short run production function given below.

Q_L	TP_L	AP_L	MP_L	MRP_L
1		04		
2		06		
3			15	
4	40			
5			10	
6		09		
7	54			
8	50			

TP_L - Total Product of Labour

AP_L - Average Product of Labour

MP_L - Marginal Product of Labour

MRP_L - Marginal Revenue Product of Labour

- i) Fill in the table.
- ii) Identify the stages of production and explain these stages using illustrations.
- iii) Suppose each unit that is being produced is sold at Rs. 100/= and hiring a unit of labour costs the firm Rs.1000/=. How many units of labour should the firm hire? Explain your answer.

(13 Marks)

Question 03

- (a) Do you “agree” or “disagree” with the following statements. Explain your answer using illustrations, where possible.

i. Firm achieves the Break Even output at, $\frac{A.V.C}{P-T.F.C}$

(A.V.C – Average Variable Costs, P – Unit price, T.F.C – Total Fixed Costs)

- ii. A general characteristic of the highly leveraged firm is that it experiences more variation in profit for a given percentage change in output that does a less leveraged firm.
- iii. The difference between price and average variable cost is defined as profit contribution (P- AVC).

(12 Marks)

- (b) The Total Fixed Cost (TFC) and Average Cost per unit of three firms in the same industry are given below. (Figures in rupees)

	I	II	III
TFC	12,000	16,800	28,000
AVC	16	12	8

All three firms sell their product at Rs. 36/=.

- i. Find the Break Even Output rate for each firm.
- ii. What is the Profit Elasticity for each firm at an output rate of 1200?

$$\text{Profit Elasticity} = \frac{Q(P-AVC)}{Q(P-AVC)-TFC}$$

- iii. Comment on the Degree of Operating Leverage (DOL) of each firm.

(13 Marks)

Question 04

- (a) “The difference between the revenue a firm receives and the costs it incurs is profit. The main goal of the firm is to maximize profit”.

- i. How relevant is the profit maximizing behavior for a firm that operates in modern day dynamic environment? Explain with examples.
- ii. Differentiate between “Economic Profit” and “Accounting Profit”.

(13 Marks)

- (b) The Total Cost Function of a firm is given as;

$$TC = 200Q - 3Q^2 + 0.05Q^3$$

- i. Is this a Short or Long Run Cost Function? Explain.
- ii. Determine the Average Cost Function and the rate of output that will minimize Average Cost.
- iii. Determine the Marginal Cost Function and the rate of output that will minimize Marginal Cost.
- iv. At what rate of output does Average Cost equals Marginal Cost.

(12 Marks)

Question 05

Market Demand and Supply Curve of a Perfectly Competitive Industry given as;

$$Q_d = 8800 - 100p \quad Q_s = -1200 + 400p$$

- i. Find the Market Equilibrium Price and Quantity.
- ii. If a firm operating in this industry sets the price above the Market Equilibrium Price, what will be the outcome? Explain using illustrations.

Suppose the Total Cost Function of a firm operating in this industry given as;

$$TC = 200 + 4Q + 0.02Q^2$$

- iii. Find the Profit Maximizing Price and out put of this firm.
- iv. Calculate the firms Short Run Profit. Using illustrations explain your answer.
- v. Considering the situation in above (iv), what will be the likely market outcome in the long run? Explain using illustrations.
- vi. Suppose existing firms are making losses, how will the market behave in the long run? Explain using illustrations.

(25 Marks)

Question 06

- (a) Do you “agree” or “disagree” with the following statements. Using illustration explain your answer.
 - i. Compared to a Perfectly Competitive Industry, a Monopolist restricts output, charges higher price, and earns positive profits.
 - ii. The Profit Maximizing output of a Monopolist is the one at which Marginal Revenue equals zero (MR=0).
 - iii. The Demand Curve faced by a Monopolistic Competitor is likely to be less Elastic than the Demand Curve faced by a Perfectly Competitive Firm and it is likely to be more elastic than the Demand Curve faced by a Monopolist.

(16 Marks)

- (b) Suppose the Demand Curve of a Monopolist is give as

$$Q = 24 - 0.04p$$

The Total Cost Equation of the firm is given as; $TC = 500 + 5Q^2$

- i. Derive the Total Revenue, Average Revenue and Marginal Revenue Equations.
- ii. Find the Profit Maximizing Price and Quantity.
- iii. Calculate the Profit or Loss.
- iv. Find the Revenue Maximizing Out put.

(09 Marks)