THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR OF MANAGEMENT STUDIES DEGREE PROGRAMME – LEVEL 5
FINAL EXAMINATION – FEBRUARY 2011
MCU 3207 – MANAGERIAL ECONOMICS
DURATION: THREE (03) HOURS

00205

Date : 06th February 2011	Time : 1.30 p.m – 4.30 p.m

Answer Part (A) and any three questions (03) from Part (B).
Use of non programmable calculators allowed.

PART - A

(1) a) "The behavior of real world managers is not always consistent with the profit maximization goal" Do you agree? Explain.

(8 marks)

b) The demand function for a product is given as;

$$Q = 48 - 4p$$

Q – Quantity P – Price

i) Calculate point elasticity at Rs. 4/= and Rs. 6/=. Is the demand curve elastic or inelastic at these points?

ii) At what price would a change in price result in approximately no change in total revenue? why?

iii) Calculate the Arc elasticity at intervals Rs. 4/= & 6/=

(6 marks)

c) Suppose price elasticity of demand for good 'x' is 0.8 and for good 'y' is 1.5, If supply curves of good x and y have normal slope how would the tax be shared between consumers and suppliers when a unit tax of 't' is imposed on the supply of both goods. Use illustrations to explain.

(6 marks)

d) The management of a firm estimates that the demand for firm's product 'x' given by $Q_x = 4800 - 120P_x + 0.25I - 50\ P_y$

Q_x = demand of X in units, P_x = Price of good x

I = income per capita P_y = Price of related product

If P_x = 10/=, I = Rs. 20,000 P_y = Rs. 8/=

i) What is the demand for good 'x' at initial prices and income?

ii) What is the point Income Elasticity of Demand at initial values.

iii) What is the point Cross Price Elasticity between 'x' and 'y' . Are the two goods substitutes or complements? Give reasons.

iv) If the objective is to maintain the quantity of X, as computed in part (i). what reduction in price of X is necessary to compensate for Rs.2/= increase in price of good Y ?

(8 marks)

e) Suppose the total revenue and total cost functions of a firm given as

$$TR = 30Q$$

$$TC = 40000 + 20Q$$

i) Determine the Break Even out put.

ii) Find the Total Revenue at Break Even output

iii) Determine the output rate necessary to make a profit of Rs. 200,000.

(6 marks)

f) " For a firm both Explicit costs and Implicit costs are important to calculate profit".

i) Define Explicit costs & Implicit costs with examples.

ii) How can these be used to calculate the profit of a firm.

(6 marks)

(Part A – Total 40)

PART - B

(2) a) "It is assumed that the objective of a firm is to maximize the Present Value of all future profits".

i) How do you calculate the Present Value of future profits.

ii) "Why is it important for a firm to calculate the Present Value of future stream of income? (5 marks)

b) "Managerial Economics can be defined as the use of economic analysis to make business decisions involving the best use of an organization's scarce resources" Discuss with examples. (15marks)

(3) a) "In economic analysis the distinction between the short run and the long run is not related to any particular measurement of time" Do you agree? Explain with examples.

(6 marks)

b) Daily production function of good 'x' is given below.

Q_L	TP_L	MP_L	AP_L
0	0	0	0
1	-	-	10
2	-	16	-
3	48	-	-
4	-	-	17
5	-	12	-
6	84	-	-
7	-	-	12
8	-	-04	-

Q_L - Quantity of Labour

TP_L - Total product of Labour

MP_L - Marginal product of Labour

AP_L - Average product of Labour

i) Fill in the table and identify three stages of production. Use illustrations to explain.

ii) What stage should the rational entrepreneur select? Provide reasons.

iii) Suppose the price of a unit of 'x' is Rs.100/=, how many labourers should the company employ, if the daily wage rate is Rs. 1200/=?

iv) If the demand for good 'x' drops and the unit price declines to Rs.60/=, how many labourers should the company employ for the same daily wage rate?

(14 marks)

4) a) State whether the following statements are 'true' or 'false' and explain why

i) When the firm is experiencing neither economies nor diseconomies of scale the portion of the long run cost curve is horizontal.

ii) The marginal cost curve intersects the average cost curve at the lowest point of the average cost curve.

iii) Operating leverage can be measured by profit elasticity.

(12 marks)

b) A consulting economist estimated the total cost function of a firm to be;

$$TC = 400 + 3Q - 0.12Q^2 + 0.002Q^3$$

You have been directed by the CEO of the firm to do the following.

i) Determine the total fixed cost, average variable cost and the marginal cost.

ii) Determine the rate of out put that results in minimum average variable cost.

iii) Determine the rate of out put that results in minimum marginal cost.

(8 marks)

5) a) Indicate whether each of the following statements is 'true' or 'false'. Provide reasons.

i) For Perfectly Competitive firm the P = MC rule is the same as the MR = MC rule.

(P – Price of the good, MC – Marginal Cost, MR – Marginal Revenue)

ii) If $P \leq AVC$, a Perfectly Competitive firm should shut down its operations.

(P – Price of the good, AVC – Average Variable Cost)

(8 marks)

b) Suppose market demand and supply curve of a Perfectly Competitive industry, given as,

$$Q_d = 80{,}000 - 80p$$

$$Q_s = 20{,}000 + 40p$$

i) Determine the equilibrium price and quantity.

Suppose total cost function of a firm operating in the industry is given as,

$$TC = 1000 + 200Q + 0.10Q^2$$

Calculate

ii) Profit maximizing output rate

iii) Profit at the profit maximizing out put rate

(6 marks)

c) Suppose total variable cost function of a firm is given as;

$$TVC = 204Q - 16Q^2 + Q^3$$

Below what price should the firm shut down?

(6 marks)

6) a) State whether the following statement is 'true' or 'false'. Provide reasons.

"The profit maximizing price of a Monopolist is always higher than the revenue maximizing price"

(5 marks)

b) Suppose the demand equation and the total cost equation (TC) of a Monopolist given as;

$$Q_d = 48 - 0.1P$$

$$TC = 200 + 5Q^2$$

i) Find the profit maximizing price and quantity.

ii) Calculate the profit at the profit maximizing out put.

iii) Find the revenue maximizing out put & price.

(7 marks)

c) "There are no long run economic profit in Monopolistic Competition although there may be economic profit in the short run" Do you agree? Explain using illustrations.

(8 marks)