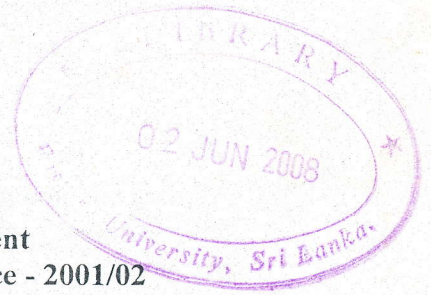


Eastern University, Sri Lanka
Faculty of Commerce and Management
Part III Examination in Bachelor of Commerce - 2001/02
External Degree Program
(Repeat April 2008)



Com - 404 Managerial Economics

(3)

Answer all Question

Time: 3 hours

1. i. Differentiate the operational problems and Environmental problems of managerial Economics?
(10 Marks)
- ii. How do the economic theories contribute to Managerial Economics? Illustrate the application of Economic theory to some Managerial problems
(10 Marks)
2. i. Explain the demand theory in the context of managerial decision making problems?
(5 Marks)
- ii. Explain the following demand forecasting techniques
 - a). Consumer interview
 - b). Market Experiment
 - c). Expert opinion
(15 Marks)
3. i. What is meant by price elasticity of demand? What are the determinants of price elasticity of demand?
(5 Marks)
- ii. Explain how is price elasticity of demand related to total revenue for a firm?
(5 Marks)
- iii. Jeya biscuits company estimated the following demand function for biscuits sold by them

$$Q_d = 1200 - 20P + 0.1Y + 0.08A$$

Q_d – quantity demanded for biscuits

P – Price of the biscuits

Y - Per Capita income in the market area

A - Advertisement cost of the firm

All data are on a monthly basis. The current values of the income and advertisement cost variables are respectively Rs 1200/- per month and Rs 4000/- per month.

- a). assuming the above values for Y and A remain constant what is equation of the demand curve?
- b). Jeya company wished to obtain the maximum monthly sales revenue what price would charge and what would the revenue be?

(10 Marks)

4. i. What are the decisions making problems faced by a production manager in the long run?

(8 Marks)

- ii. A manufacturing firm operates on a technology described by the following production function

$$Q = 100L - L^2 + 200K - 0.5K^2$$

(Q- output, L – Labour, K –capital)

The price of the labour (P_L) is Rs 100/- and the Capital (P_K) is Rs 200/-.

The price of the product is Rs 2/-.

The firm wishes to produce 28,125 units of its product

Determine the least cost input combination that the firm must employ.

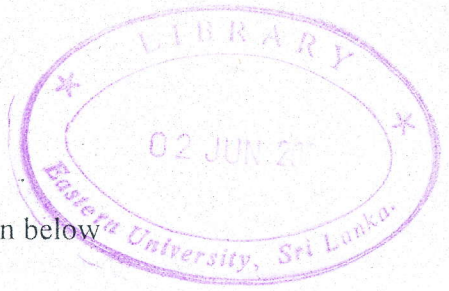
(12 Marks)

5. A company produces small Radios. These Radios are produced at three factories and have to be transported to three distribution centers. The supply availabilities at the three factories the demand requirements at the three distribution centers and the transportation cost (Rs/unit) are shown in the table below.

Factories	Distribution centers			Supply
	D1	D2	D3	
F1	90	80	100	1000
F2	20	40	50	1900
F3	40	90	60	1600
Demand	700	2000	1800	4500

- i. determine an initial basic feasible solution to minimize the transportation cost using North-West corner rule
- ii. Find the optimal solution using MODI method

(20 Marks)



6. Cost and the Demand functions of a firm are given below

Cost function: $TC = 20 + 5Q + Q^2$

Demand function: $Q = 25 - P$

- i. Express in terms of Q the Total profit function for the firm
- ii. Determine the output level for maximum total profit
- iii. What is the Total profit and the price of the product
- iv. If fixed cost increase from Rs 20 to Rs 25 determine the new profit maximizing output level and the total profit

(20 Marks)

7. Use the graphical method to solve the following LP problem

Maximize $Z = 80 X_1 + 120 X_2$

Subject to:

$$2X_1 + X_2 \leq 180$$

$$X_1 + 2X_2 \leq 160$$

$$X_1 + X_2 \leq 100$$

$$X_1, X_2 \geq 0$$

(20 Marks)

8. Briefly explain the following.

- i. Goals of a firm
- ii. Break -Even point
- iii. Sample survey
- iv. Marginal rate of technical substitution

(20 Marks)