

Eastern University, Sri Lanka  
Faculty of Commerce and Management  
Third Year Second Semester Examination in BBA  
2010/2011 (June, 2013)  
(Proper/ Repeat)  
ECN 3023: Managerial Economics



Answer all questions

Time: 03 Hours

1. i. What is 'Managerial Economics'? 03 Marks
- ii. List out the ten principles for Managers 03 Marks
- iii. Suppose the demand and supply curves for a given product have the following equations  
Demand :  $Q_d = 1000 - 10P$   
Supply :  $Q_s = -100 + 10P$
- a. At what price will quantity demanded equal to zero?
  - b. At what price will quantity demanded equal to 200?
  - c. Write the demand equation with price as a function of quantity demanded
  - d. Determine the market equilibrium price and quantity 06 Marks
- iv. Assume a hypothetical demand function for Brand X Microwave ovens  
 $Q_x = 26,500 - 100P_x + 25P_y + 0.0001H + 1.3I + 0.02A$   
where  $Q_x$  = Quantity demanded  
 $P_x$  = \$ 400 (Own price)  
 $P_y$  = \$ 500 (Price of Microwave oven brand Y)  
 $H$  = 40,000,000 ( Household disposable income)  
 $A$  = \$ 50,000 (Advertising expenditure)
- a. Interpret each component of the demand function
  - b. Derive a demand function in terms of its own price
  - c. If all the variables remain at the values stated above, find the total demand of Microwave oven at the market. 08 Marks  
(Total 20 Marks)
2. i. State why managers have to pay attention to know elasticity of demand for their product? 03 Marks
- ii. Briefly explain the determinants of types of demand 04 Marks

- iii. The marketing department of Soney digital camera has estimated the following monthly demand function as

$$Q_{\text{Soney}} = 270 - 0.8P_{\text{Soney}} - 3P_m + 0.4P_c + 0.006I + 0.03A$$

where

- $Q_{\text{Soney}}$  = the quantity of demanded per month advanced consumer electronic cameras  
 $P_{\text{Soney}}$  = the price of camera  
 $P_m$  = Price of memory card  
 $P_c$  = the price of a competing camera  
 $I$  = Annual average household income, and  
 $A$  = Monthly advertising expenditure

- a. Find and interpret the price elasticity of demand for Soney digital cameras if  $P_{\text{Soney}} = \$600$ ,  $P_m = \$40$ ,  $P_c = \$500$ ,  $I = \$50,000$  and  $A = \$1000$
- b. Find and interpret the cross price elasticity of demand between the quantity demanded of Soney cameras and the price of the memory cards?
- c. Is the camera normal goods or luxury goods? Why?

07 Marks

- iv. The following function derived based on the quarterly data of sales of a firm for the period of first quarter of 2000 to first quarter of 2013.

$$S_t = 281.39 + 12.811t$$

where  $S$  = sales

$t$  = time

- a. Interpret each component of the function
- b. Forecast sales volume for the next two quarters of the year 2013

06 Marks  
(Total 20 Marks)

3. i. What is 'Elasticity of Production'?

04 Marks

- ii. Suppose a firm is operating in the short-run, briefly explain how elasticity of production can assist the firm management regarding its production status?

08 Marks

- iii. Using hypothetical examples, show how the exponents of the input factors capture the returns to scale of the long-run production functions?

08 Marks  
(Total 20 Marks)

4. i Brief how a firm can enjoy economies of scale under the following circumstances

- a. Technical
- b. Commercial
- c. Financial
- d. Managerial
- e. Risk bearing



ii. Sri Lankan Airlines flying a particular route has seasonal demand. The total demand for the Airlines is given by:

$$Q = 600 - 4P$$

Where Q is the number of passengers per year, in thousands, and P is the ticket fare in LKR. In the peak season the demand is given by :

$$Q_H = 320 - 1.5P_H$$

and in off-season the demand is given by:

$$Q_L = 280 - 2.5P_L$$

The cost function is given by :

$$C = 6000 + 60Q$$

Where C is total costs in LKR

- a. Calculate the profit-maximizing price and output without price discrimination, and the size of profit.
- b. Calculate the profit-maximizing price and output with price discrimination, and the size of the profit.
- c. Calculate the demand elasticities of the two segments at their profit-maximizing prices. 12 Marks  
(Total 20 Marks)

5. i. What is 'Lerner Index'? 03 Marks

ii. Explain the relationship between the Lerner Index and elasticity of demand 04 Marks

iii. Justify why firms that are operating in Oligopoly market are said to be interdependent 05 Marks

iv. What is Herfindahl-Hirschman Index (HHI)? Explain how can it be useful to determine the market structure of firms?

08 Marks  
(Total 20 Marks)