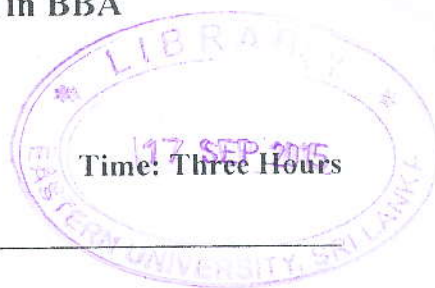


Eastern University, Sri Lanka
Faculty of Commerce and Management
Third Year Second Semester Examination in BBA
2012/2013 (July-2015)-Proper

ECN 3023: Managerial Economics



Answer all questions

- 1.
- i. What is Managerial Economics? Why the concepts of managerial economics are important for firms? (05 Marks)
 - ii. List out the important principles for managers. (05 Marks)
 - iii. Briefly explain the characteristics of two market forces. (05 Marks)
 - iv. Graphically explain market equilibrium, excess demand and excess supply of the market. (05 Marks)
- (Total 20 Marks)

- 2.
- i. What is elasticity? (03 Marks)
 - ii. Explain how price elasticity can be informative to Management of a firm. (04 Marks)
 - iii. The accompanying table below lists the cross-price elasticities of demand for several goods, where the percent quantity change is measured for the first good of the pair, and the percent price practice change is measured for the second good.

Air-conditioning units and kilowatts of electricity	-0.34
Coke and Pepsi	+0.63
High-fuel-consuming sport-utility vehicles (SUVs) and gasoline	-0.28
McDonald's burgers and Burger King burgers	+0.82
Butter and margarine	+1.54

- a. What does it imply about the relationship between the two goods? (04 Marks)

- b. Compare the absolute values of the elasticities between goods and explain their magnitude. (02 Marks)
- iv. The accompanying table shows the price and yearly quantity sold of souvenir T-shirts in the Passikuda Beach site according to the average income of the tourists visiting.

Price of T-shirt \$	Quantity of T-shirts demanded when the average tourist income is \$20,000	Quantity of T-shirts demanded when the average tourist income is \$30,000
4	3000	5000
5	2400	4200
6	1600	3000
7	800	1800

- a. Using the midpoint method, calculate the price elasticity of demand when the price of a T-shirt rises from \$5 to \$6 and the average tourist income is \$20,000. Also calculate it when the average tourist income is \$30,000. (04 Marks)
- b. Using the midpoint method, calculate the income elasticity of demand when the price of a T-shirt is \$4 and the average tourist income increases from \$20,000 to \$30,000. (03 Marks)
3. (Total 20 Marks)
- i. What is production function? Distinguish between short-run production function and long-run production function. (02 Marks)
- ii. **Akila Frozen Yogurt** is a small shop that sells cups of frozen yogurt in a university premises. Akila owns three frozen-yogurt machines. Her other inputs are refrigerators, frozen-yogurt mix, cups, sprinkle toppings, and, of course, workers. She estimates that her daily production function when she varies the number of workers employed (and at the same time, of course, yogurt mix, cups, and so on) is as shown in the accompanying table.

Quantity of labor (workers)	Quantity of frozen yogurt (cups)
0	0
1	110
2	200
3	270
4	300
5	320
6	330

- a. What are the fixed inputs and variable inputs in the production of cups of frozen yogurt? (02 Marks)

- b. What is the marginal product of the first, second and third worker? Does marginal product decline as the number of workers increases? At which stage? Why? (03 Marks)
- c. Calculate average products at each labor level. (02 Marks)
- iii. Define elasticity of production and explain how this concept is helpful in decision making to a production plant. (04 Marks)
- iv. The STATA results of Cobb-Douglas production function is given below, where Q=Output, K=Capital and L=Labor.

. regress lnQ lnK lnL

Source	SS	df	MS			
Model	.387693985	2	.193846992	Number of obs =	10	
Residual	.009489568	7	.001355653	F(2, 7) =	142.99	
Total	.397183553	9	.044131506	Prob > F =	0.0000	
				R-squared =	0.9761	
				Adj R-squared =	0.9693	
				Root MSE =	.03682	

lnQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnK	.1930887	.0515949	3.74	0.007	-.0710862	.3150911
lnL	.8784226	.061938	14.18	0.000	.7319625	1.024883
_cons	2.329507	.1824247	12.77	0.000	1.898141	2.760873

- a. Fit the results in a Cobb-Douglas production function. (02 Marks)
- b. Interpret obtained coefficient values. (03 Marks)
- c. State about returns to scale of this production status. (02 Marks)
- (Total 20 Marks)

4.

- i. Define Total Cost, Total Variable Cost, Total Fixed Cost, Average cost and Marginal Cost (05 Marks)
- ii. What is economies of scale? Under which circumstances a production unit can enjoy economies of scale (05 Marks)
- iii. Suppose a learning curve of a technician is given below

$$y = 100x^{-0.322}$$

where y= hours required to produce the x-th unit and x=cumulative production and matching percentage of (-b) = 80%

- a. Interpret each component of the learning curve formula given. (03 Marks)
- b. What message does the learning curve given above give to the management? (03 Marks)
- c. Suppose (-b) is 70% of another Technician, how do you make comparison between two. (04 Marks)

5.

- i. Does perfectly competitive market exist in the real world? How? (Total 20 Marks)
(03 Marks)
- ii. Explain why product group and product differentiation are important for firms that are operating in monopolistic competitive industry. (04 Marks)
- iii. Explain with appropriate example that how does firm concentration ratio assist to recognize the market structure of a particular industry. (05 Marks)
- iv. Suppose a firm offers two products (*Dettol soap* and *Dettol Hand wash*)with one Brand. The producer faces two demand functions with total cost function

$$Q_1 = 14 - 0.25P_1$$

$$Q_2 = 24 - 0.5P_2$$

$$TC = Q_1^2 + 5Q_1Q_2 + Q_2^2$$

- a. Find the level of price and quantity where the firm's profit is maximized. (04 Marks)
- b. Calculate the maximum profit as per the findings in a. (04 Marks)

(Total 20 Marks)