



UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Postgraduate & Mid-career Development Unit

Master of Business Administration - 2015/2017 Weekend Programme (Semester I Second-half)

Examination – May/June 2016

MBA 534A Managerial Economics

Three (03) Hours

Answer any **FIVE (05)** questions

Answers for Part – I and Part – II should be provided in two separate booklets.

This paper comprises eight (08) questions on six (06) printed pages.

Part - I

1. i. Explain the concept of utility and the basic assumptions underlying consumer preferences.
(05 Marks)
 - ii. Explain the equilibrium condition for an individual consumer to be maximizing utility subject to a budget constraint.
(05 Marks)
 - iii. Identify the substitution, income, and total effects of a change in the price of a good.
(05 Marks)
 - iv. Suppose that the marginal utility of the last unit of commodity X consumed is 40, and the marginal utility of the last unit consumed of commodity Y is 30. The prices of X and Y are Rs.4/= and Rs.2/= respectively. Should the consumer increase or decrease consumption of commodity X? Explain your answer.
(05 Marks)
- (Total 20 Marks)**
2. i. What is the underlying economic theory in short-run production decisions of a firm? Explain the application of this theory in determining the optimal use of variable input in the short-run.
(05 Marks)

- ii. Explain the relationship between marginal product and average product in each stage of production in the short-run. (05 Marks)
- iii. How does a manager determine the optimal combination of capital and labour in long-run production decisions? Explain. (05 Marks)
- iv. Distinguish the difference between 'Economies of scale' and 'Returns to scale' with managerial implications for long-run production decisions. (05 Marks)

(Total 20 Marks)

3. The top management at a price setting firm is concerned about demand of its product. The management of the firm would like to know the variation of the demand of its products against the variation of the product price (P), consumer's income (M) and a price of one closely related product (PR).

i. With the help of the following estimation results (see Table given below), prepare a comprehensive analysis report on the variation of demand to submit to the management of the firm.

(15 Marks)

ii. Assuming that the firm is to increase price of the commodity by 5% and the manager knows that consumer's income is to increase by 10% and price of the good R is to decrease by 12%, forecast the percentage change in demand of the product for the next period.

(05 Marks)

Dependent variable: LNQ Observations: 44	R-Square 0.94	F-ratio 95.18	P-VALUE ON F 0.0001	
Variable	Parameter estimate	Standard error	t- ratio	P-value
Intercept	-2.00	0.40	-5.00	0.0001
LnP	-1.10	0.44	-2.50	0.0166
LnM	2.4	0.60	4.00	0.0003
LnPR	-0.20	0.05	-4.00	0.0003

(Total 20 Marks)

4. i. Explain why the demand curve facing an individual firm in a perfectly competitive industry is perfectly elastic, and why this demand curve is also the marginal revenue curve for a competitive firm.

(05 Marks)

ii. "In long-run competitive equilibrium, consumers pay the lowest price for each unit of the good." Do you agree with this statement? Explain your answer.

(05 Marks)

iii. Green-Organic is one of many small, perfectly competitive firms growing pineapples for the world market. The forecasted price of pineapple in 2016 is \$ 23.60 per a basket with three pieces. The management of Green-Organic estimates its short-run average variable cost function to be

$$AVC = 20 - 0.04Q + 0.00005Q^2$$

Where Q is the number of baskets of pineapples produced each week.

Total fixed cost at Green-Organic is \$1,200 per week. Find the followings.

- The level of output at which average variable cost reaches its minimum
- The minimum AVC
- The marginal cost function of the firm
- The maximum profit (or minimum loss) of the firm for the year 2016.

(2.5*4=10 Marks)

(Total 20 Marks)

5. i. Define the concept of market power and explain how own-price and cross-price elasticities of demand can be used to measure the degree of market power possessed by a firm.

(05 Marks)

ii. Identify common types of entry barriers to be faced by new potential entrants to the market and explain how each of those becomes a barrier.

(05 Marks)

iii. The manager of a monopoly firm obtained the following estimate of the demand for its product.

$$Q = 1000 - 100P + 0.02M - 500P_R$$

Where M and P_R are respectively, consumer income and the price of a related good. The forecasted values for M and P_R are $M = \text{Rs.}30,000/=$ and $\text{Rs.}5/=$.

- a. What is the forecasted demand function?
- b. What is the marginal revenue function?

(05 Marks)

iv. If the estimated average variable cost function is $AVC = 40 - 0.08Q + 0.0001Q^2$

Find the profit maximizing level of output and the maximum profit (or losses) of the firm.

(05 Marks)

(Total 20 Marks)

Part - II

6. In a highly closed small economy, with the intention of developing automobile industry, the government issues licenses to two giant firms: Auto Alpha and Auto Beta. Both firms are expected to share the market under heavy tariff protection and resultant absence of imports of automobiles. Both firms start their production and marketing at the same time. There is a sharp competition between the two firms to share the market between them and promotions play a vital role in it. The following payoff matrix indicates each firm's payoffs associated with different combinations of strategies:

		Auto Beta	
		With Promotions	Without Promotions
Auto Alpha	With Promotions	20, 30	40, 10
	Without Promotions	5, 50	30, 40

Payoffs are in billions of local currency unit per year.

- i. Assuming that the initial phase comes to an end in a year and the game is played just once, find the possible outcome.
- ii. Assuming that the two firms happen to repeat the game every year, find the most likely outcome.

(03 Marks)

(03 Marks)

iii. Suppose that, after five years of operation in the industry, both firms begin to notice signs of a change in government in another two years. The new government is most likely to introduce open economic policies and remove high tariff protection appearing in most of the industries including automobile. If that happens, the two firms will not be able to remain in business competing with high quality imported cars sold at highly competitive prices. Assuming that the government change is certain, find the most likely outcome.

(04 Marks)

iv. Neglect the background facts given in parts i, ii, and iii above. Assume that Auto Alpha will move first converting this into a sequential game. Find the possible outcome.

(04 Marks)

v. Would the outcome have been different, if Auto Beta had moved first? Draw the game tree and explain how you would arrive at your answer.

(04 Marks)

vi. Based on a comparison between the outcomes in parts iv and v above, show whether there is evidence for first mover advantage in automobile industry.

(02 Marks)

(Total 20 Marks)

7. i. Explain how each of the following remedial actions can be used to solve “Lemons problem” in markets:

- a. Signaling
- b. Screening

(10 Marks)

ii. Show how information asymmetry can adversely affect the quality of products.

(05 Marks)

iii. Explain why insurance companies are forced to use measures like deductibles and coinsurance.

(05 Marks)

(Total 20 Marks)

8. i. Based on the underlying rationale, explain how pricing is done in each of the following cases:

a. Selling two products that are substitutes in production

(06 Marks)

b. Selling two products that are complements in production

(05 Marks)

c. Selling the same product at different prices in markets where demand elasticities are different

(04 Marks)

ii. Explain how price discrimination happens in two part pricing. Why is it argued that the access fee must be less than the consumer surplus of a representative consumer if two part pricing is to be successful?

(05 Marks)

(Total 20 Marks)
