00015

THE OPEN UNIVERSITY OF SRI LANKA
COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC ADMINISTRATION PROGRAMME
FINAL EXAMINATION – 2017 JULY
MCP2605 – MANAGERIAL ECONOMICS
DURATION: THREE (03) HOURS

DATE: 23.07.2017 TIME: 09.30 AM – 12.30 PM

Answer Part A (40 Marks) and any three (03) questions from Part B (20 Marks each).
Use of Non Programmable calculator is allowed.

Part - A

Question No. 01

a) "Hired managers are paid to earn profit for the owners of firms, but it is possible that their actions incur costs to the firm, and do nothing to the firm's profit. These might make managers better off." Do you agree? Explain taking Principal – Agent problem into account.

(06 Marks)

b) "Participation in a global market is a necessary for most modern day firms. Profitability and even survival can depend on a firm entering global market and competing worldwide." What are the restrictions and complications a firm might encounter when doing business abroad? Explain with examples.

(08 Marks)

c) Using the concept of Elasticity, explain whether you "agree" or "disagree" with the following statements. Provide illustrations where appropriate.

i. Spending on restaurant meals declines more during economic downturn than does spending on food to be eaten at home.
ii. A policy aimed at reducing the supply of farm products may raise the income of farmers, but it does so at the expense of consumers.
iii. Rather than strict law enforcement and aiming at drug prohibition, it is more productive for authorities to pursue a policy of drug education.

(09 Marks)

d) The management of an electronic firm estimates the demand for one of its product(x) as,

$$Q_x = 2000 - 20P_x + 0.1I - 20P_y + 6A$$

Price of good x (P_x) = Rs.61/=
Price of related product y (P_y) = Rs.40/=
Income per capita (I) = Rs.20,000/=
Unit Advertizing budget (A) = Rs. 32/=

i. How much of good 'X' will be demanded at initial prices, income and advertizing expenditure.
ii. Explain the effect of price increase/decrease would have on total revenues.
iii. Assess how the sales of good 'X' change during a period of rising and declining incomes.
iv. How will the rise in price of good 'Y' affect the sales of good 'X'? What is the nature of relationship between good 'X' and 'Y'.
v. If the price of good 'X' increases by Rs.9/=, to maintain the quantity of 'X' as computed in part (i), by how much the advertizing expenditure be changed?
vi. Would the sign of Cross Price Elasticity and Advertizing Elasticity for substitutes and complementary goods be the same? Explain with examples.

(17 Marks)

Part – B

Question No. 02

a) Suppose in a firm capital input is fixed and the labour input can be varied. On what basis profit maximizing firms hire labour? If the labour input is fixed and capital stock could be varied, how would the profit maximizing firm employ capital? Explain.

(05 Marks)

b) The production function of a firm is given as;

$$Q = 2K^{0.5}L^{0.5}$$

K – Capital L – Labour

i. Assume that the capital stock is fixed at 36 units and the unit price of the product is Rs. 200/=. If the wage rate is Rs. 300/=, find the profit maximizing rate of labour to be hired.
ii. Would the answer to (i) differ, if the price of the product increases to Rs.240/= and the wage rate increases to Rs. 360/=? Explain.

(05 Marks)

c) Using the production function given in b), if the firm operates in the long run and the unit price of capital is Rs. 500/= and unit price of labour is Rs.300/=,
i. Determine the optimum combination of inputs.
ii. If the firm has Rs. 6000/= to be spent on two factor inputs, how many units of labour and capital should the firm acquire? **(05 Marks)**

d) Using Cobb – Douglas production function explain the phenomenon of "Returns to Scale". Use illustrations to explain your answer. **(05 Marks)**

Question No. 03

a) "In a Perfectly Competitive firm, there may be times when the price does not fully cover the unit cost of production. Thus a firm must assess the extent of its losses in relation to the alternative of discontinuing production"

i. How would a Perfectly Competitive firm make the closing down decision? Explain using illustrations.

ii. The total viable cost of a Perfectly Competitive firm is given as;

$$TVC = 194Q - 24Q^2 + Q^3$$

Find the price below which the firm should shut down?

(09 Marks)

b) Suppose the market demand and supply equations for a Perfectly Competitive firm given as,

$$Q_d = 36000 - 20p \qquad Q_s = 24000 + 20p$$

The average cost function of an individual firm that operates in this industry is given as;

$$AC = \frac{400}{Q} + 50 + Q$$

i. Find the profit maximizing price and output.
ii. Calculate the economic profit of this firm.
iii. Can the firm continue to make economic profit in the long run? Explain using illustrations.
iv. If a Perfectly Competitive firm continues to make economic losses in the short run, what will happen in the long run? Explain.

(11 Marks)

Question No.04

a) "Today the Sweezy's kinked demand curve model is viewed in a more limited perspective as one of several descriptions of Oligopoly behavior"

i. How would Sweezy's kinked demand curve model explain the behavior of firms in Oligopoly industry? Explain using illustrations.

ii. How would this differ from the model that explains the behavior of firms in Oligopoly industry that tend to collude? Explain using illustrations.
iii. When collusive arrangements are not easily achieved another type of pricing practice, the practice of "price leadership" may occur. What is meant by "price leadership model" ? Explain.

(13 Marks)

b) Consider the details of an item produced by an Oligopoly firm given below.

Above the kink D_1; $\quad$ $\mathbf{Q_1=106 - P_2}$

Below the kink D_2; $\quad$ $\mathbf{Q_2=68 - 0.5P_2}$

Q-output $\quad$ P-price

The total cost of the firm is given as;

$$\mathbf{TC= 400 + 8Q + O.5Q^2}$$

i. Find the firm's output and the price at the kink.
ii. Calculate the firm's profit.
iii. Are the output, price and profit optimal? Explain.
iv. Using illustrations explain the findings. **(07 Marks)**

Question No.05

a) "The standard method of classification identified three types of price discrimination. Their common characteristics is that they allow the firm to capture part of the consumer surplus that would have resulted from uniform pricing".

i. What are the necessary conditions for price discrimination? Explain
ii. How the consumer surplus is captured under each type of price discrimination? Explain using illustrations.
iii. "Under the first and second degree, a firm may produce larger quantity than a single price monopoly" Do you agree? Explain.

(12 Marks)

b) Suppose a firm has two different groups of clients and the demand equation representing each group is given as;

$\mathbf{Q_A= 500 - 20P}$ $\quad$ $\mathbf{Q_B= 300 - 5P}$

Q-demand $\quad$ P-price

Firms cost function is given as:

$TC(Q) = 8Q_T$ $\quad$ $Q_T = Q_A+Q_B$

i. If the firm is to practice third degree price discrimination, find the profit maximizing price and output of each market.
ii. If the firm is unable to practice price discrimination find the profit maximizing price and output.
iii. Prove that firm is able to make a higher profit when practicing price discrimination than charging a single price.

(08 Marks)

Question No.06

a)

i. What is meant by "Cost-Plus" pricing? Explain.
ii. "If a company sets its price on the basis of Cost-Plus calculation, it cannot possibly ignore the Price Elasticity of Demand of the product" Do you agree? Explain.
iii. Price Elasticity of Demand for good 'X' is given as '2' and it costs the firm Rs.100/= to produce good X. In pricing the product using Cost –Plus method, out of the two prices, Rs.200/= and 300/=, which price is optimal? Explain with necessary calculations.

(10 Marks)

b)

i. Explain the following;

- Nash equilibrium
- Dominant Strategy

ii."Non cooperative game can result in outcomes that are undesirable for the participants and also for the society. It could result in waste. "Analyzing the following given pay off matrix. Explain whether you "agree" or "disagree" with the above statement.

Firm 2

		Low advertising	High advertising
Firm 1	Low advertising	20m,20m	5m,30m
	High advertising	30m,5m	10m,10m

(10 Marks)