37

**THE OPEN UNIVERSITY OF SRI LANKA**
**COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC ADMINISTRATION PROGRAMME**
**FINAL EXAMINATION – 2024**
**AFP9305/MCP2605 – MANAGERIAL ECONOMICS**
**DURATION: THREE (03) HOURS**

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**DATE: 07.09.2024** **TIME: 01.30 pm – 04.30 pm**

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**Answer any five (05) questions, all the questions carry equal marks (20 Marks each).**
**Use of Non-Programmable calculator is allowed.**

**Question No. 01**

a) "Modern day firms extensively use advertising to enhance their profit/revenues, yet every advertising campaign may not bring desired outcomes for the firm."
How would the knowledge in the said concept help a manager in evaluating the effectiveness and usefulness of a firm's advertising campaign? Explain. **(05 Marks)**

b) How could the knowledge of the concept of elasticity be effectively used;
i. when air lines set prices of their air tickets for business travelers and tourists? Explain.
ii. when does a firm engages in price discrimination? Explain. **(08 Marks)**

c) Define; i. Learning Curve, ii. Economies of Scope.
How could the knowledge in these concepts be used in effective managerial decision making? Provide examples to explain the answer. **(07 Marks)**

**Question No. 02**

a) i. Using short run production theories explain why it is important to be knowledgeable in production functions for effective managerial decision making. **(05 Marks)**

ii. The production function of good "X" is given as; $Q = 48L - L^2$ (Q – Output, L – Quantity of Labour).
If the unit price of good X is Rs. 120/= and the wage rate is Rs. 2160/=, find the quantity of labour to be hired in order to maximize the firm's profit. **(04 Marks)**

b) The production function of a firm is given as; $Q = 100\,K^{0.5}L^{0.5}$ (K – Capital, L - Labour)

i. If the price of a unit of capital is Rs. 25/= and unit of labour is Rs. 16/= determine the optimum expansion path.
ii. Find the efficient combination of inputs needed to produce 4000 units of the given item.
iii. How would the firm react if price of labour increases to Rs.25/=, while the price of capital remains the same in producing an output of 4000? Explain.
iv. What is the nature of returns to scale reflected in the above function? Explain. **(11 Marks)**

## Question No. 03

a) i. If the market price of the product offered by a Perfectly competitive firm is lower than its average total cost (ATC) in the short run, can the given firm continue to produce? Explain. **(05 Marks)**

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

$$TVC = 184Q - 16Q^2 + Q^3$$

Find the price below which the firm should shut down? **(05 Marks)**

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

$$Q_d = 16000 - 40p \qquad Q_S = -8000 + 80p$$

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

$$AC = \frac{240}{Q} + 60 + Q$$

i. Find the profit maximizing price and output.

ii. Calculate the economic profit/ loss of this firm.

iii. Based on the answer to part ii, what could be the outcome in this market in the long run? Explain using illustrations. **(10 Marks)**

## Question no.04

a) **i.** Explain the economic effects of monopolies. **(04 Marks)**

**ii.** What makes a monopolist operate multi plants? Explain. **(03 Marks)**

b) Demand function faced by a monopolist given as; Q = 39 – 0.25P (Q – quantity in units, P – price in rupees), Marginal Cost of the firm is Rs.12/= and it is constant.

**i.** Calculate profit maximizing price and output.

**ii.** What is the dead weight loss resulting from the monopolist?

**iii.** Compared to pricing at marginal cost, how much income is redistributed from the consumers to the owners of the monopoly? **(08 Marks)**

Provide illustrations to explain your answers.

c) Could the ability of monopolistically competitive firm to offer differentiated product help it to compensate for its failure to achieve economic efficiency? Explain using examples. **(05 Marks)**

## Question no.05

a) i. Could economic efficiency be realized under oligopoly? Explain. **(04 Marks)**

ii. "Kinked demand curve model gives each oligopoly a reason to believe that any change in the price of the product is for the worse, yet there is a question of whether the model is realistic, given the modern-day business context." Do you agree? Explain using illustrations. **(08 Marks)**

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

Above the kink $D_1$; $Q_1 = 96 - P_1$

Below the kink $D_2$; $Q_2 = 36 - 0.25P_2$ (Q-output, P-price)

**The total cost of the firm is given as; $TC = 214 + 10Q + 0.5Q^2$**

i. Find the firm's output and the price at the kink.
ii. Calculate the profit/loss of the firm.
iii. Determine whether the output, price and profit are optimal.
iv. Explain the findings using an illustration. **(08 Marks)**

## Question no.06

a) i. Define, **I.** Cost – Plus pricing,
**II.** Transfer pricing. **(04 Marks)**

ii. How would the demand elasticity of a good affect the mark-up used in cost plus pricing? Explain. **(04 Marks)**

iii. Which product in each pair tends to have a higher mark-up in a supermarket? Explain.
**I.** Sugar verses Cheese **II.** Cooking oil verses Ice - Creams **(04 Marks)**

b) i. Define; Nash Equilibrium. **(02 Marks)**

ii. Analyze the following given pay-off matrix and identify the Nash equilibrium(S). Table provides details of two firms aiming at increasing the profit through price Changes. (Figures in rupees millions).

**Firm 2**

| | | **No price change** | **Price increase** |
|---|---|---|---|
| **Firm 1** | **No price change** | 20,20 | 120, - 30 |
| | **Price increase** | - 25, 35 | 130, 40 |

**(06 Marks)**