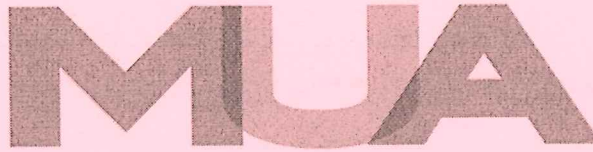


The
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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF MANAGEMENT AND LEADERSHIP

BMT 300/ BMT 202: MANAGERIAL ECONOMICS

DATE: 11TH AUGUST 2023

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. Write all your answers in the Examination answer booklet provided.

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

- a) XYZ Company Ltd is attempting to develop a demand model for its line of exterior house paints. The company's chief economist feels that the most important variable affecting paint sales (Y) (measured in gallons) is: promotional expenditures (X) (measured in dollars). These include expenditures on advertising (radio, TV, and newspaper), in-store displays and literature, and customer rebate programs. The chief economist decides to collect data on the variables in a sample of ten company sales regions that are roughly equal in population. Data on paint sales and promotional expenditures were obtained from the company's marketing department.

sales region	promotional expenditures (X)	Sales(Y)
	Kes 1000	Kes 1000
1	150	160
2	160	220
3	50	140
4	190	190
5	90	130
6	60	160
7	140	200
8	110	150
9	200	210
10	100	190

Required:

- i) Using ordinary least square regression determine demand function for house paints and interpret the coefficients of the function **(10 marks).**

b) Assume that a monopolist is faced with the following demand functions:

$$Q_1 = 48 - 0.4 P_1$$

$$Q_2 = 20 - 0.1 P_2$$

Where $TC = 70 + 80 Q$

Required: Compute the prices that the monopolist will charge in the different markets. (10 Marks)

c) Assess any five factors affecting the supply for the product in (b) above (5 marks).

QUESTION TWO

- a) Briefly illustrate the following terms as used in managerial Economics
- i. Zero-sum game (3 marks)
 - ii. Nash Outcome (2 marks)
 - iii. Free-rider problem (2 marks)
 - iv. Hidden preferences problem (2 marks)
 - v. Certainty equivalent adjustment factor (2 marks)
 - vi. Possible risk attitudes (2 marks)
 - vii. Degree of operating leverage (2 marks)

QUESTION THREE

- a) Derive mathematically the relationship between marginal revenue and price elasticity of demand and hence show that the optimal price charged by a firm is a function of marginal cost and price elasticity of demand (8 marks)
- b) The use of capital budgeting has become common approach used by managerial economists to estimate demand. Discuss the steps followed in capital budgeting. (7 marks).

QUESTION FOUR

- a) State the law of diminishing returns (3 marks)
- b) With the aid of a well labelled diagram, explain the three stages of production and state the stage under which a firm should operate (12 marks)

QUESTION FIVE

- a) Project A has the following cashflows over its useful life of 3 years. The market value (Abandonment value) has also been given.

<i>Year</i>	<i>Cash flow</i> <i>Sh`000'</i>	<i>Abandonment value</i> <i>Sh`000'</i>
0	(4,800)	4,800
1	2,000	3,000
2	1,875	1,900
3	1,750	0

Required:

Determine when to abandon the project assuming a discount rate of 10%.

(10 marks)

- b) Using the following demand and supply functions for a commodity X, compute the equilibrium price and quantity. (5 marks)

$$Q_d = 100 - 2p; \quad Q_s = 40 + 4p$$

QUESTION SIX

- a) Malcomid Co. Ltd is a firm operating in an oligopolistic market. The firm has been experiencing constant prices for its product over a long period of time and as a result, the board members have contracted you to explain to them the economic justification for this price stickiness. Using appropriate examples and the concept of elasticity, respond to the concerns of your clients. **(10 Marks)**
- b) Illustrate the differences between a dominated and dominant strategies as used in game theory. **(5 Marks).**

