PAN AFRICA CHRISTIAN UNIVERSITY

END OF SEMESTER EXAMINATION FOR THE DEGREE OF

MASTER OF BUSINESS ADMINISTRATION

MAY-AUGUST 2025

CAMPUS: ROYSAMBU-EVENING (ON –LINE)

DEPARTMENT: BUSINESS STUDIES

COURSE CODE: MBA501

COURSE TITLE: MANAGERIAL ECONOMICS

EXAM DATE: AUGUST 2025

TIME:WEDNESDAY 5.30PM- 8.30PM

INSTRUCTIONS

- Read all questions carefully before attempting.

Answer question 1 and any other three questions. .

QUESTION 1 – Case Study (10 marks)

Read the following case and answer the questions that follow:

TechCool Ltd. is a local startup that produces smart cooling fans targeting urban households. Over the past year, it observed a sharp increase in electricity prices and a drop in consumer disposable income. Consequently, its product demand declined by 20%. The CEO believes that the firm is operating in a highly elastic demand environment and is considering price reduction, despite increasing input costs. Meanwhile, a rival firm is planning to enter the market with a substitute product priced 15% lower than TechCool's.

Questions:

a) Using the concept of price elasticity of demand, explain the implications of a price reduction strategy in the short run of techCool's . **(5 marks)**

b) Evaluate two factors (excluding price) that may affect the elasticity of demand for TechCool's product. ***(*5 marks)**

QUESTION 2: (10 marks)

A company estimates its demand and supply functions as, Demand: Qd=240−4P and Supply: Qs=60+2P.

a) Calculate the equilibrium price and quantity. **(4 marks)**

b) If the government imposes a price ceiling of 30, determine whether there is a shortage or surplus, and by how many units. **(3 marks)**

c) Illustrate part b) above on a demand-supply graph. **(3 marks)**

QUESTION 3: (10 marks)

a) At price P=25 quantity demanded is 200 units. When price increases to 30, demand drops to 150 units. Calculate the price elasticity of demand using the midpoint formula and interpret the results. ***(*5 marks)**

b) Explain two managerial implications of this elasticity result for pricing decisions. **(3 marks)**

c) Briefly differentiate between price elasticity and cross-price elasticity, giving one real-world example of each. ***(*2 marks)**

QUESTION 4: (10 marks)

A firm's cost function is: $TC=100+10Q+Q^2$ and the price of the product is constant at 50.

a) Calculate the following:
i. Marginal Cost (MC)
ii. Average Cost (AC)
iii. Total Revenue (TR). **(3 marks)**

b) Determine the profit-maximizing output level using MR = MC. ***(*3 marks)**

c) Calculate total profit at that output level. ***(*2 marks)**

d) Interpret the result in terms of cost efficiency and economic profit**.** ***(2 marks)***

QUESTION 5: (10 marks)

a) Compare the features of monopolistic competition and oligopoly. **(4 marks)**

b) Briefly explain the kinked demand curve model in oligopoly and what it implies for price rigidity**.** ***(3 marks)***

c) A monopoly sets its price above marginal cost. Justify whether this leads to allocative efficiency or inefficiency, using a diagram. **(3 marks***)***

QUESTION 6: (10 marks)

A company collected the following data on advertising expenditure (in thousands of KES) and corresponding monthly sales (in thousands of units):

Advertising (X)	**Sales (Y)**
2	40
4	60
6	65
8	80
10	95

1. Using the data, calculate the simple linear regression equation given, Y=a+bX . **(6 marks)**
2. Interpret the above equation. **(2 marks)**
3. Using the regression model, predict the sales if the company spends KES 7,000 on advertising. **(2 marks)**