JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FIRST TRIMESTER (Batch 2024-26)

END TERM EXAMINATIONS, SEPTEMBER 2024

Course Name	Managerial Economics	Course Code	**20401**
Max. Time	**2 hours**	Max. Marks	**40 MM**

INSTRUCTIONS:

(a) All questions are compulsory.

(b) For analytical questions, it is important to show all steps clearly. Each step will carry marks, so make sure to present your work in a detailed and structured manner.

(c) For theoretical questions, answers should be concise and to the point, focusing on key concepts and ideas.

Question 1 (BL 1 & V): Willy is a publication of fiction books. The company hires an economist to determine the demand for its product, which is given by:

$Q_d = \ 12{,}000 - 5000P_x + 5I + 500\ P_y$

Where:

- P_x: Price charged for novels
- I: Income per capita
- P_y: Price of books from competing publishers

Assume the initial values of P= Rs. 5, I= Rs. 10,000 and P_y= Rs. 6. Using this information, the company's managers want to:

(I) Determine what effect a price increase would have on total revenue. (CLO2| 2 Marks)

(II) Evaluate how the sale of novels would change during a period of rising incomes. (CLO3| 2 Marks)

(III) Assess the probable impact if competing producers raise their prices. (CLO2| 2 Marks)

(IV) What factors influence the demand for a product, and how do changes in price, income, and competition affect the quantity demanded? (CLO1| 4 Marks)

Question 2 (BL 1 & V): Textbook publishers evaluate market size, competition, revenues, and costs for each new title. If a book is unlikely to exceed the breakeven point, publishers may cut costs. Here's the data for a proposed book:

Cost Category	Rupee Amount
Fixed Costs	
Copyediting and other editorial costs	₹ 15,750
Illustrations	₹ 32,750
Typesetting	₹ 51,500
Total fixed costs	₹ 100000
Variable Costs	
Printing, binding, and paper	₹22.50 per copy
Bookstore discounts	₹25.00 per copy
Sales staff commissions	₹8.25 per copy
Author royalties	₹10.00 per copy
General and administrative costs	₹26.25 per copy
Total variable costs per copy	₹92.00 per copy
List price per copy	₹ 100.00

The fixed costs are ₹100,000, and each copy sold provides an ₹8 profit contribution (₹100 - ₹92). Based on the above information answer the following questions.

(I) What is the breakeven point, and why is it important for businesses to calculate it before launching a product? (CLO2| 6 Marks)

(II) Estimate the volume necessary to reach a breakeven level of output. (CLO3| 3 Marks)

(III) How many textbooks would have to be sold to generate a profit contribution of ₹20,000? (CLO3| 3 Marks)

(IV) Calculate the economic profit contribution or loss from accepting a book club offer to buy 3,000 copies at ₹77 per copy. Should the offer be accepted? (CLO3| 3 Marks)

Question 3 (BL2 & 3): Consider the following payoff matrix for two firms, Firm 1 and Firm 2, each deciding whether to price high or price low:

			Firm 1
Firm 2		Price High	Price Low
	Price High	400, 400	-50, 700
	Price Low	700, -50	100, 100

(I) What is an oligopoly? How does the strategic decision-making by firms in an oligopoly differ from that in perfect competition or monopoly? (CLO1| 6 Marks)

(II) Identify the dominant strategy for both Firm 1 and Firm 2. (CLO3| 3 Marks)

(III) Determine the Nash equilibrium of the game. (CLO3| 3 Marks)

(IV) Explain why this scenario is considered a Prisoner's Dilemma, even though both firms could achieve a better outcome by pricing high. (CLO3| 3 Marks)