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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**Post Graduate Diploma in Management (Batch 2024-26) |
| **Course Title: Managerial Economics (Course Code: 40401)****End-Term Examination, Term - I (1st October, 2024)** |
|  **Time Duration: 2 Hours Total Marks: 40** |

***General Instructions*:**

1. *Answer the questions as directed. The break-up of the marks is given wherever necessary.*
2. *Marks against each question are indicated to its right.*
3. *Answer all the questions of a ‘Section/Question’ in one place in continuation.*
4. *Answers should be brief and to the point.*
5. *Do not write on the question paper except your roll number.*
6. *Simple calculators are allowed in the exam.*

**Q:1** The corn market in an agricultural state has the following supply and demand equations:

Supply: Qs = 500 + 400P

Demand: Qd = 2500 - 100P

Where Q is the quantity of corn in thousands of bushels per month, and P is the price per bushel in dollars.

**a.** Calculate the equilibrium price and quantity in the domestic market.

**b.** The state government implements a price floor of $5 per bushel. Illustrate the impact on the market; also use a graph to explain the impact. If the government decides to purchase the surplus to maintain the price floor, what would be the total cost to the government per month?

**c.** Assess the impact of the following situations on the equilibrium in **the domestic market of corn:**

**(i)** The producers are getting better prices for corn in the international market than in the domestic market.

**(ii)** Due to the higher sugar content in corn, customers are looking for better alternatives to corn.

**[4 + 3 + 3 = 10 Marks]**

**Q:2** The demand function for electric vehicles (EVs) in a region is represented by:

Q = 500 - 0.5P + 0.1M + 0.5Pe

Where: Q = Quantity of EVs demanded (in hundreds of units); P = Price of EVs (in $ thousands); M = Average household income (in $ thousands); Pe = Expected future price of EVs (in $ thousands)

Current market conditions: P = $40,000; M= $75,000; Pe = $38,000. Estimate:

1. The current quantity of EVs demanded
2. The price elasticity of demand for EVs. Comment on the elasticity value. How a 4% increase in price will affect the quantity demanded of EVs? Also, what shall be the impact on total revenue?
3. The income elasticity of demand. Is the good normal or inferior? Is the market income elastic? How a 10% rise in the income of the customers will affect the demand for EVs?

**[2 + 4 + 4 = 10 Marks]**

**Q:3A** Estimate the missing values in this short-run cost table. Demonstrate your calculations.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Quantity** | **Fixed Cost** | **Variable Cost** | **Total Cost** | **AFC** | **AVC** | **ATC** | **MC** |
| 1 |  | 50 | 150 |  |  |  |  |
| 2 |  |  |  |  |  |  | 40 |
| 3 |  |  |  |  | 40.00 |  |  |
| 4 |  |  |  |  |  | 60.00 |  |
| 5 |  | 170 |  |  |  |  |  |
| 6 |  |  |  |  |  |  | 40 |

**Q:3B** FitLife Gym, a new fitness center in a suburban area, is analyzing its financial projections. The gym offers monthly memberships and has gathered the following information:

Rent, equipment leases, salaries, etc. are $15,000 per month; The monthly membership fee is $50; Variable costs per member (towel service, cleaning, utilities) are $10 per month; The gym has a capacity for 1,000 members.

1. Analyze how many memberships does FitLife Gym need to sell to break even.
2. If the FitLife Gym has currently 400 members, assess its monthly profit/loss.
3. The owner wants to achieve a profit of $5,000 per month. How many memberships are needed to reach this goal?

 **[4 + 2 + 2 + 2 = 10 Marks]**

**Q:4** Comment with reasonable and to-the-point justification.

1. Reward cards that provide frequent shoppers with a discount on future products are what kind of price discrimination
2. A few companies have more market power as they can create more barriers to entry. How?
3. A few conditions should be met for a firm to practice price discrimination.
4. The Indian government is considering easing regulations to allow more foreign airlines to operate in India. Would it affect the current market structure of the aviation industry? Justify citing and comparing specific characteristics of this market.
5. Examine the following (hypothetical) market share data for an industry in India: Company A: 40%; Company B: 25%; Company C: 20%; Company D: 10%; Others: 5%. Using the Concentration Ratio and the Herfindahl Index, how would you like to categorize this industry?

 **[2 \* 5 = 10 Marks]**