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**JAIPURIA INSTITUTE OF MANAGEMENT INDORE**

**PGDM (2020 -22)**

**first TRIMESTER**

**END-TERM EXAMINATIONS, NovemBER 2020**

**SET A**

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| **Course Name** | **Managerial Economics** | **Course Code** | **ECO101** |
| **Max. Time** | **2 hours 15 mins** | **Max. Marks** | **40 MM** |

**INSTRUCTIONS: All the question are compulsory to attempt. "All students are compulsorily required to upload only one file as solution sheet. There is no compulsion of using graphs if you are writing your answers over word document.**

**In case you take picture of your hand written solutions, then paste all that in a single word document, submit by renaming the file."**

**Q: 1** Anil book publisher identifies following equation for demand of its fiction novels:

Qa = 12000 – 5000Pa + 5I + 500Pc

Where Qa is quantity demanded for books by Anil publishing, Pa is price charged by Anil publishing for fiction novels, I in income per capita, Pc is Price of similar books from competing publishers.

Using this information, the company’s manager wishes to:

1. Determine what effect a price rise would have on total revenue of company. Is the market price elastic or inelastic?
2. Evaluate how a rise in income would affect the quantity demanded of their novels?
3. Assess the probable impact, if competing publishers raise their prices?

Assuming the initial price of novels; Pa be $5; I be $10,000; and Pc be $6.

Help the manager to evaluate the whole situation.

1. If the demand and supply curve for an exotic fruit in the market are:

Qd = 1200 – 10P

Qs = – 500 + 10P

Where P is the price of the exotic fruit in rupees per kg and Qd and Qs are quantity demanded and supplied respectively of the fruit in kilograms.

Compute equilibrium price and quantity of the exotic fruit in the market. Assess the impact of a ceiling price of Rs. 75 per kilogram, as imposed by the government.

**[2.5\*4 = 10 marks]**

**Q: 2**

**A.** Comment upon price discriminations practiced by various firms citing examples from different degrees and sharing what allows a firm to practice price discrimination?

**B.** Orange Applications Inc. is a small firm that specializes in the production and mail order distribution of computer programs for microcomputers. The accounting department has gathered the following data on development and production costs for a typical program and the documentation (i.e. the manual) that must accompany the program.

**Development costs**  **(INR)**

Program development 10,000

Manual preparation and typesetting 3000

Advertising 10,000

**Per unit cost applicable for manufacturing (INR)**

Blank disk 2.00

Loading cost 0.50

Postage and handling 1.25

Printing of the manual 2.75

A typical program of this type, including the manual, sells for Rs 40. Based on the information, determine the break-even number of programs and the total revenue associated with this volume.

**C.** Using the concept of Dominated strategy or Nash Equilibrium, analyse the solution of the below mentioned game? The matrix contains pay-offs in terms of profits in million rupees in next one year.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Boeing** | | | | |
| **Airbus** |  | Invest high in R & D | Invest low | Do not invest |
| Invest high in R & D | 0,0 | 13,9 | 19,10 |
| Invest low | 9,13 | 17,17 | 21,16 |
| Do not invest | 10,19 | 16,21 | 19,19 |

**[8 + 6 + 6 = 20 Marks]**

**Q:3** The Organisation of Petroleum Exporting Countries (OPEC) is dominated by the Arab oil producers as they hold the maximum amount of oil refineries which gives them an opportunity to dominate others and decide on prices. The Members of OPEC tries to influence the world oil prices with the consent of all and they set the production quotas and become an effective cartel by restricting the sales. They deeply analyze the current market situation and anticipate future demand and supply to see various fluctuations of prices in the markets. After analyzing the market scenario, they decide to raise or lower the oil production as agreed by all the members to maintain price stability and make the oil available for consumption. It controls approximately 80% of the world’s oil reserves and 40% of the world’s production among their member states. As discussed earlier, it is dominated by Gulf States who can easily turn the taps on and off when required to influence the market prices. Even when the economy was facing an issue of recession, it did not have any effect on oil industry and were still making heavy profits.

Hence, we can say that OPEC does play an important role in making decision of oil supply to the market which may affect the oil prices in a greater extent. The members have larger number of oil reserves and can increase or decrease the production or supply whenever they want. As they very well know that all the developing and developed nations wants oil and has almost become the necessity of life like food in today’s lifestyle, so they try to earn as much as they can by controlling the prices with the kind of power they hold in their hands.

1. What type of market structure exists in the article mentioned above? What are the features of such a market?
2. What can you say about the market power of the companies operating in such market structure?

**[5 + 5 = 10 marks]**