JAIPURIA INSTITUTE OF MANAGEMENT
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JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FIRST TRIMESTER (Batch 2023-25)

END TERM EXAMINATION, OCTOBER 2023

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

INSTRUCTIONS:

a. **Attempt all Questions**
b. **Be Precise in your answers**

Q.1. As the marketing manager of a luxury car company, evaluate the potential impact of the new luxury goods tax on your company's sales and revenue, specifically focusing on price elasticity of demand (PED):

a) Analyze the price elasticity of demand for luxury cars in response to the new tax. Explain how the concept of PED applies to luxury car market.
b) Assess how a change in price due to the tax will affect the quantity demanded for luxury cars. Will the demand for luxury cars be elastic or inelastic in response to the price increase?
c) Discuss how changes in price and quantity will influence your company's revenue. Will revenue increase, decrease, or remain relatively stable after the tax is imposed?
d) Explore the potential impact of the new luxury goods tax on consumer preferences for luxury car **(2*4=8 Marks)**

Q.2. Cartels can form in different industries, whether they are very competitive or not. This often happens when the government intervenes in the market. Let us look at what is happening in the apple industry in Himachal Pradesh. Under the Agricultural Produce Marketing Act, local apple producers are allowed to team up and decide together how they will split up their yearly apple harvest between two markets: one for fresh apples and another for apples used in making things like juice or jam called apple-processing industry.

In this situation, the fresh apple market usually offers much higher prices compared to the market for processed apples. However, economic studies and estimates (Table 1) reveal that the percentage of the apple crop chosen by the cartel for sale in the fresh market is significantly lower than what would be the case if the cartel were to dissolve.

Table 1: Percent sold in the fresh market

Market with or without cartel	**Variety of Apple**	
	Royal Gala	**Fuji**
Cartel	42	55
Without cartel	58	80

Read the above information carefully and answer the following question

a) Does the Himachal Pradesh Apple Industry, with more than 4000 growers and 100 packers, qualify as an oligopoly? Explain why or why not.

b) Does the cartel have control over entry into the industry?

c) The price elasticity of demand for apples in the fresh market is approximately 0.8 for Fuji apples and roughly 1.2 for Royal Gala apples. In the processed market, the price elasticity of both types of apples exceeds 2.0. Does this help explain why the cartel's prices are higher in the fresh market compared to the processed market?

d) Why does the cartel allocate a smaller proportion of apples to the fresh market than would be the case if the cartel were disbanded? **(2*4=8 Marks)**

Q.3. Extensive consultation with engineers and technicians in the field of manufacturing yields the following results. If the wage rate (w) is ₹10,000 per week and the rental price of capital (r) is ₹20,000 per week, then cost-minimizing combinations of labor (L) and capital (K) for various levels of production (Q) measured in units are as follows:

Q	10	20	40	60	100
K	3	6	10	18	45
L	6	10	20	24	35

a) Calculate the long-run total cost (LTC), long-run average cost (LAC), and long-run marginal cost (LMC).

b) Calculate the short-run total fixed cost (TFC), total variable cost (TVC), and average variable cost (AVC) under the assumption that capital is fixed. Express these costs in ₹1,000s in the table.

c) Using the data and insights from the previous part of the question, provide a detailed interpretation of the long-run and short-run cost curves

d) Describe returns to scale for this production function. **(2*4=8 Marks)**

Q4. Case: The Bronco Wine (Making wine in huge quantities keeping production costs low)

"Bronco Wine Company, founded by the Franzia family in 1973, is a well-established and innovative winemaker based in California's Central Valley. With a rich history of producing a wide range of wines, Bronco Wine Company has gained recognition not only for its vast output but also for its commitment to cost-effective winemaking practices. The company's prominence in the industry is exemplified by its partnership with retailers like Trader Joe's, known for offering affordable yet popular wine selections to consumers. Bronco makes an impressive 90 million gallons of wine a year, according to Taber.

Trader Joe's sells very cheap and popular wine produced by Bronco Wine (Hayley Peterson, "The Real Reasons Trader Joe's Wine Is So Cheap," Business Insider, May 6, 2017). When asked why the wine is so cheap, Bronco winemaker Ed Moody emphasizes the volume of output, stating that it is easier to make better wine in a 700,000-gallon tank than in a 700-gallon one because there is less exposure to air, and oxygen is the enemy in winemaking.

The company also uses machines to harvest the grapes, which helps keep labor costs low but also increases the chances that bad grapes end up in the wine, according to Keith Wallace, executive director of the Wine School of Philadelphia."

"Everything is automated," Wallace told Business Insider.

(Excerpt from Hayley Peterson, "The Real Reasons Trader Joe's Wine Is So Cheap," Business Insider, May 6, 2017).

Questions:

In the context of the wine production industry, identify and differentiate between two cost-saving practices mentioned in the case. Elaborate how both cost saving practices would help in production of cheap wine by Bronco Wine **(8 Marks).**

Q5. HealthCare Innovations (HCI) is a well-established healthcare provider with a nationwide network of hospitals, clinics, and specialized treatment centers. HCI offers a comprehensive range of medical services, spanning from routine check-ups to highly specialized surgeries. To cater to the diverse needs of patients and maximize revenue, HCI has developed an exceptionally sophisticated pricing structure. Personalized Health Concierge (PHC) provides patients with 24/7 access to a personal health concierge, VIP treatment at HCI facilities, and expedited access to world-renowned specialists. Prices for PHC memberships range from ₹25,000 to ₹100,000 annually, with exclusive add-on services available. Disease Management Programs (DMP) is designed for patients with chronic conditions such as diabetes, heart disease, or cancer. These programs offer tailored treatment plans, remote monitoring, and access to leading experts. Prices for DMP vary widely, from ₹50,0000 to ₹250,0000 or more annually, depending on the complexity of the condition and treatment. Integrated Health Insurance (IHI) combines HCI's comprehensive health insurance with access to premium healthcare services. Patients have the flexibility to choose coverage levels and deductibles. Premiums for IHI plans range from ₹2,000 to ₹7,000 monthly. Basic Health Coverage (BHC) includes essential medical services such as doctor visits, standard hospital care, and basic diagnostics. Prices for BHC insurance plans start at ₹500 monthly, with variations based on coverage limits and co-pays. HCI offers an array of specialized outpatient services (SOP), including diagnostic tests, minimally invasive procedures, and advanced therapies. Prices for SOP procedures vary widely, ranging from ₹800 to ₹15,000 or more.

Question:

a) Analyze how healthcare providers like HCI implement intricate price discrimination by offering a vast array of services and insurance plans with an extensive pricing range.

b) Discuss the potential challenges and other considerations associated with such a multifaceted multi-tiered pricing structure in the healthcare sector. **(2*4= 8 Marks)**