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JAIPURIA INSTITUTE OF MANAGEMENT NOIDA
PGDM (Batch 2016-18) Term-I
Managerial Economics (ECO 101)
End -Term Examination, September 2016

Time: 2 hours | Max. Marks: 40

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Note: Attempt all questions.

**Q: 1** Suppose the general demand function of Good X is $Q_d = 60 - 2P_X + 0.01M + 7P_R$

Where, $Q_d$ = quantity of Good X demanded; $P_X$ = Price of Good X; M = Average consumer income and $P_R$ = Price of related good R.

a. At $P_X$ = \$ 100, M = \$ 40,000 and $P_R$ = \$ 20, what shall be the Price Elasticity of Good X? Is the demand elastic, unit or inelastic? In this circumstance, what do you advise to the marketer to increase revenue?

b. What shall be the impact on demand of Good X in part 'a', if the price of related good R, increases by 5 %.

c. What is Income elasticity in part 'a'. Basis your calculation, is the good inferior, necessity or a luxury?

[ 2 + 2 + 2 = 6 Marks ]

**Q: 2** a. Explain impact of following information on equilibrium price and quantity of the product/ service marked in bold.

i) A new burger variant in **Domino's Pizza** is getting popular amongst kids and Govt. of Kerela has imposed a fat tax on pizzas and burgers in the state.

ii) International crude oil prices have come down. Also, a number of new players have entered the **aviation** industry due to favourable Govt. policy.

iii) New stores have been opened by Govt. for supply of generic medicines to public at low cost as against **branded medicines** of similar formulations but higher costs.

iv) The price to access **"Pokemon Go"** mobile game has increased.

[ 4 X 2 = 8 marks ]

b. In his spare time, Joe Williams makes chain mail using metal rings he buys from a hardware store, a C-clamp, and a pair of pliers. He sells the final product at local crafts fairs and at bikers' annual convention. Being interviewed once by a local newspaper, he said: "The materials cost me \$30, and the rest is just my labor, which is free. One vest sells for about \$150, which gives me net profit of \$120 for three nights of work." **Is he talking about economic profit or accounting profit? Explain the difference between the two.**

[ 2 Marks ]

**Q: 3** **a.** Marie Smith runs a small business specialising in delivering organic fruit and vegetables to the local area. She buys from local farms and packages these together in boxes and delivers them locally. Each box is sold for $12. She has the following costs:

Direct wages are $9 per hour (30 minutes per box on average), Fruit and vegetables cost $4 per box, Other fixed costs incurred each year are as follows:

| | |
|---|---|
| Rent of Delivery Van: | $ 4,500 |
| Rent of Premises: | $ 10,500 |
| Advertising: | $ 2,000 |

**(i).** What is the breakeven point for this business?
**(ii).** Suppose Marie estimates a minimum demand of 6000 boxes every year, what shall be the Margin of Safety and total profit at this point?

**[ 2.5 x 2 = 5 Marks ]**

**b.** State with examples the reasons behind Economies and Diseconomies of Scale for an organisation in long run. **[ 5 Marks ]**

**c.** What do you think why the first degree and second degree price discriminations are less common than third degree price discrimination? An airline company offering low fares during week-days is an example of third degree price discrimination. Do you agree or disagree? Give reasons to support your answer. **[ 5 Marks ]**

**Q: 4** Refer to following news article collection with reference to telecom industry of India:

### Reliance Jio Vs. Bharti Airtel: Corporate duels in the 21st century

Excerpts from ET Bureau | Sep 12, 2016

Great rivalries make great stories. But for multiple reasons, corporate duels no longer feel the same in the digital-led 21st century. Corporate rivalries make battles interesting.

There is one playing out in the telecom sector right now. Bharti Airtel's Sunil Bharti Mittal is readying for a fierce and bruising battle with Mukesh Ambani who has just rolled out Reliance Jio 4G network. In the works since 2010, Ambani has already ploughed in $16 billion - supposedly the biggest greenfield project in India - to get started.

This is the second time the two telecom czars are clashing. The first battle was fought in early 2000s. Mittal is now pacing up to match Ambani's offensive. He will be investing over $9 billion in the next three years to beef up Airtel's network.

Rivalries make things difficult. But good rivals can bring out the best in you. Airtel's Mittal too admitted to The Financial Times in a recent interview "If Reliance was not there on the horizon the pace of our rollout would have been slower."

<u>Excerpts from ET Bureau | Sep 14, 2016</u>

Vodafone is planning an up to $3-billion (Rs 20,100-crore) equity infusion in its India unit to replace debt as competition intensifies with the entry of Reliance Jio Infocomm and bidding for spectrum gets underway in less than a month.
Europe's largest mobile phone operator is also believed to be reviewing the timelines for Vodafone India's initial public offering, wary of value erosion due to a tariff war unleashed by Jio, people familiar with the matter said.

Analysts said Vodafone India may be the most aggressive bidder in the upcoming auction and some expect it to spend as much as $2 billion on acquiring airwaves.

India's second-ranked telco has 4G spectrum in nine of the country's 22 circles, with operations in eight, lagging behind Jio and market leader Bharti Airtel's pan-India holdings. India is set to sell spectrum, valued at Rs 5.6 lakh crore at the reserve price, starting October 1, including airwaves in the 4G and 3G bands. Besides 4G, analysts said Vodafone may buy 3G airwaves to plug coverage gaps.

Apart from the auctions, Vodafone, along with Bharti Airtel and Idea Cellular, is staring at a tariff war brought about by the launch of Jio's 4G services earlier this month, offering free voice for life and data at about a fifth of the market rates.

After Reliance Industries Chairman Mukesh Ambani unveiled Jio's tariff plans on September 1, Bharti lost Rs 12,000 crore in market capitalisation and Idea's market value eroded by Rs 2,800 crore. At the close of the day, their combined losses amounted to about Rs 12,000 crore.

<u>Also, an article from ET Bureau on September 3, 2016 says:</u>

Reliance Jio's entry with disruptive offers of free voice calls, roaming and possibly the world's cheapest data plans will push smaller mobile service providers such as Aircel, Telenor India, Tata Teleservices and Reliance Communications to the fringes, if not to exit altogether, analysts say

"In the medium term, Reliance Jio will ensure the likes of Aircel, Telenor India, Tata Teleservices and RCom will exit," said a UBS note.

This position was seconded by brokerage BNP Paribas, which said Jio's big bang entry is likely to "expedite exit of weaker operators dependent on cheap voice and not invested in data networks. These (weaker operators) still account for 25% of industry revenue and a likely 35%-40% volume share, given their low pricing."

**(i)** Comment on the type of market structure that is represented by current telecom industry in India. What are the salient features of such a market?

**(ii)** How pricing decisions are taken in such a market? According to you, what pricing strategy has Reliance - Jio adopted in the article? How do you expect competitors to respond?

**(iii)** Collusive or Non – Collusive: What according to you can best explain telecom industry's practices in India?

**[3 X 3 = 9 Marks]**

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