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PROGRAM: MBA-72
SUBJECT: MANAGERIAL ECONOMICS (MID-TERM)

Q#1 (a)

Managerial economics is the branch of economics in which economics theories are applied and integrated with business practice. It is the amalgamation of economic theories with business practices of a firm to simplify the decision making processes and make future predictions by the management by applying the economic theories on the running of the business in order for the management of the firm to reach to the best desired results by analyzing and applying those theories which best help in the facilitation of the decision making process. The purpose of reading this subject in MBA or MS is very pertinent for a graduate who is going to be a part of a business organization or to start his own business for that matter to know how the economic theories work and can be applied to business making decisions, by formulation of strategies and forecasting the desired results and monitoring and evaluating those outcomes with the pre-set baseline, making them more worthwhile. Economic theories encompass a variety of topics which are very useful for the manager to analyze and apply to his decision making process.

So, in order to equip the graduating students with practical knowledge which would come to use in their tough life after graduation, it is imperative that they know about managerial economics and its applications so that they are able to take precise decisions by combining the economics theories with the business unit and it's functioning. For instance, if a student after graduation wants to start his own business, he has to know in detail about this subject so he is able to formulate a business and financial model, forecasting its sales and revenue and the capital he requires to start his new venture.

Q#1 (b)

Managerial economics integrate the theory of economics with the business practices and it can help us in many ways by getting an empirical data on the basis of which, we would be able to take a decision based on the lying empirical facts in front of us and take decisions accordingly in order to reach the optimal results. Managerial economics helps guide a manager to take decisions not just based on intuition, rather it provides him with the knowledge through which he would be better equipped to make strong and optimal decisions because of the data and keen knowledge about working of a business unit economically that we derive from economic theories and practices by integrating and amalgamating them with business practices and it's functioning. It takes the following steps which would then lead a manager to take the best optimal decision.

- Allocating the scarce resources in the optimal manner
- Helping in overall development of a firm
- Assisting in achieving other objectives of a firm like expansion of the market share etc.
- To minimize risk and uncertainty
- To help in demand and sale forecasting
- To help in operations of the firm by supporting in planning, organizing, controlling etc.
- To help in formulating business policies
- To help in profit maximization

More importantly, it helps us reach to an optimal conclusion of the decision making process by identifying:

- What should be the product mix
- Which is the least cost production technique and input mix
- What should be the level and price of the output
- How to take investment decisions by forecasting through application of economic theories
- What should be the selling cost in order to gain the maximum profitability

By keeping all of the above mentioned factors into consideration, it can help us in better understanding the dynamics of the market and take our decisions related to financial aspects by having an answer and solution for all the matters related to the business firm and to obtain maximum level of productivity. Managerial economics helps us in taking the best optimal decision by critically analyzing these factors and getting to their answers through applying the application of economic theories on them and thus attain the optimal result.

Q#2 (a)

Utility is a psychological phenomenon which could be anything from which a consumer gets pleasure and satisfaction. Utility refers to the usefulness or the value that consumers experience from a good or product. Utility doesn't necessarily have to be something positive which is useful for the consumer. Utility is a relative term and can be applied to any good or product which satisfies the need of the consumer keeping the moral and ethical values aside- i.e. because utility is subjective, relative, not essentially useful and ethically neutral. It basically is the quality of a good to satisfy a want of the consumer in question. There are three types of utility- Initial Utility, Total utility and Marginal Utility. Our main focus will be on marginal utility as it the main concept used in order to explain different approaches to utility. Marginal utility is the total utility resulting from the change in consumption of one more unit of the good or commodity.

Although, it is quite difficult measuring a qualitative concept as utility, yet the economists have tried to quantify it in two different ways. There are two different approaches to utility which are defined below:

1. **Cardinal Utility approach**

It was formulated by Alfred Marshall and is also known as Marshalling approach. He proposed his theory of **Marginal Utility Analysis** based on certain assumptions. It elaborates the spending process of a consumer of his income as to achieve maximum level of satisfaction. It states that utility could be measured and the measuring parameter according to this theory is money. It assigns a numerical value to utility and the unit in which it is measured is termed as 'Util'. It also assumes that Marginal Utility of money remains constant which is also unrealistic. Another assumption to it is that the total utility that is derived from the whole collection of goods is equal to the sum of the individual and separate utilities of the good. There is also another concept in the cardinal approach propagated by Alfred i.e. of Law of Diminishing Marginal Utility.

Law of diminishing Marginal Utility states that "the additional benefit which a person derives from a given increase in stock of a good diminishes with every increase in stock that he already has." For instance, if a person is really thirsty, the first glass would give him more utility than the 2nd glass and so on and it keeps on diminishing. Total Utility will be maximum when the Marginal Utility of any good would decrease to zero.

2. **Ordinal Utility Approach**

It was propagated by Hicks & Ellen and it states that utility cannot be measured but it can only be ranked according to the preference of the consumer in question or at large. It ranks choices of the consumers according to their preference and it does not give the exact numerical figures unlike in the previous Marshalling approach. Hicks & Ellen introduced a tool to analyze the consumer behaviors known as indifference curve(IC). A single indifference curve shows different combinations of two substitutes yielding the same level of satisfaction and utility on an IC. An indifference curve is a combination of goods, each of which yield the same level of total utility to which the consumer is indifferent.

Q#2 (b)

Law of equi marginal utility takes into consideration the buying power of the consumer and elaborates the behavior of the consumer while distributing his resources at hand or income. It states that how an individual assigns his income among various goods as to obtain the maximum level of satisfaction. It is via the application of this principle that consumer's equilibrium is explained. It is pertinent to mention here that for this theory to work, the consumer has to be rational and should aim for the maximum utility. For instance, there are two goods X and Y and the customer has to spend his income on these two goods to obtain the maximum level of satisfaction. The consumers' behavior will be influenced by two factors i.e. **The marginal utility of the goods** and **the price of each good.** The consumer will be in equilibrium when the marginal utility of money spent on each good is the same along the Indifference curve (IC). That point will be the equilibrium point and the consumer will be getting the maximum level of satisfaction at that point. The marginal utility of expenditure on a good is equal to the marginal utility of the good divided by the price of the respective good.

MU_e= Mux/P_x ; $MU_{y=}$ MU_y/P_y

Let's suppose that our income to be spent on two commodities is 29. There are 2 commodities X and Y which are apple and oranges respectively. The price of one unit of X is 5 and the price of one unit of Y is 3.

TABLE 1

UNITS	**MU_x**	**MU_y**
1	50	27
2	45	24
3	35	18
4	25	12
5	20	6
6	15	3
7	0	0

Now, we divide them by their respective price to find out the equilibrium and gauge the consumer behavior as what would be his preference in buying these two commodities

TABLE 2

UNITS	**MU_X/P_X**	**MU_Y/P_Y**
1	10	9
2	9	8
3	7	6
4	5	4
5	4	2
6	3	1
7	0	0

The total expenditure to be spent on these two commodities is 37. The consumer will be most satisfied and the Marginal Utility of both the commodities will be at equilibrium when both the marginal utilizes w.r.t price are same in both the commodities. The marginal utility divided by its price in commodity X is equal to commodity Y when 5 units of X are consumed and 4 units of

Y. So, the total income spent on obtaining the maximum level of satisfaction among these two commodities according to equi marginal utility will be (5*5)+(4*3) =37. So, this explains the consumer behavior that he would go first for the commodity which gives him the maximum marginal utility in terms of money and buy that commodity first and will achieve equilibrium and maximum satisfaction when the marginal utility of all the commodities in question w.r.t price are same as others. That would be our equilibrium point at which the consumer will have the maximum satisfaction.

Q#3

Demand is the phenomenon of a consumers' willingness and affordability to buy a certain good or commodity while **Desire** are the whims and wishes of a person which may lie outside his budget limit and affordability. For instance, a person with a below par salary wants to buy a mobile. He desires to have IPhone but he cannot afford it so his demand would be of Q mobile or any other cheap and reasonable alternative.

Market Demand is the horizontal sum of all individual demands for a particular good or commodity. When we add up all the individual demands of a specific commodity, we get the Market Demand of it. Market Demand is derived by summing up all the individuals demands of consumers of one specific commodity. For example, if we add up the individual demand of Pepsi for all the people and sum it up, then that would be the market demand.

Law of Demand states that as the price of a commodity increases, its quantity demanded decreases while keeping all the other factors constant. It was also proposed by Alfred Marshall. The price of the commodity and quantity demanded are inversely proportional to one another. The law of demand takes into consideration the income of a consumer, his choice and taste along with his expectations, the availability of its substitute goods and their price, the total number of consumers and the future prediction of the price. For instance, the price of tea increases so its quantity demanded will decrease because people might look for other substitutes like coffee etc.

ASSUMPTIONS OF LAW OF DEMAND:

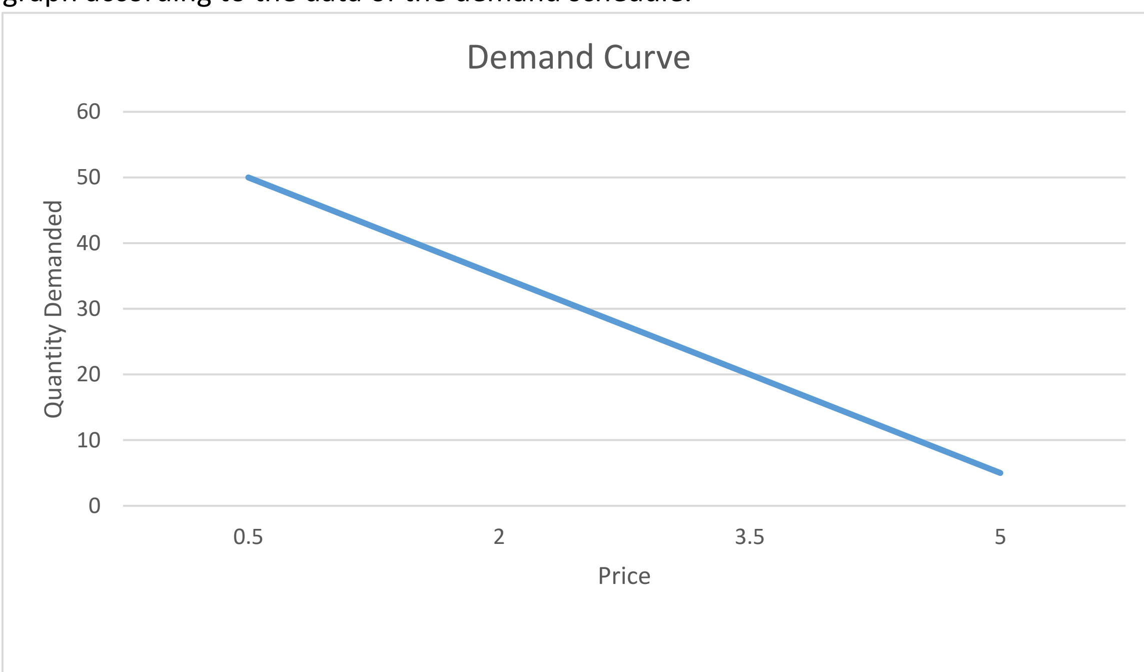
- There is no change in the income of the consumer
- There is no change in the price of substitutes
- There is no change in the price of complementary goods
- There are no changes in taste and habits of the consumer
- No change in the size of the population
- There are no such expectations regarding the fluctuation in price in the future

The law of demand holds a significant value in Managerial Economics. It determines the price of a certain commodity and subsequently affects the demand of the commodity. We make decisions in managerial economics while keeping all these factors in mind. The importance of the law of demand is the **Determination of the Price**. The deep and analytical study of the law of demand helps an economist or a business manager to fix the price of a certain good or commodity by knowing through interpreting the level of fall in demand by the increase in price and the level of increase in demand by the reduction of price.

Demand Schedule is a tabular form representing the relationship between the price of a good and quantity demanded. Let's take a hypothetical example and data to make a demand schedule of a commodity let's assume bananas. Below is the data of the price of a banana and it's quantity demanded.

S.No	Price	Quantity Demanded
1	0.5	50
2	2	35
3	3.5	20
4	5	5

While **Demand Curve** is the graphical representation of the demand schedule and is always sloping downwards because of the inverse relationship between the two. Now let's plot the graph according to the data of the demand schedule.



The horizontal axis or X-axis indicates the quantity demanded while the vertical or the Y-axis represents the price. By going through and analyzing the demand schedule and graph, it could be assessed as to whether raise the price of a specific good or commodity or decrease it depending on the data available and hence we could use the importance of the market demand to our advantage as to maximize the profit by taking the best optimal decision considering the circumstances and determining a price accordingly. For instance, if the price of a commodity rises, its demand will fall and the manager of the firm manufacturing that commodity will lessen its output or reduce its price to compete with his rival competitors because of the fact that it’s demand has decreased and manufacturing more at the same price would cause the company to face a loss. While on the other hand, if the demand of a commodity increases, then more of that commodity will be introduced into the market as to fulfil the demands of the people and also achieving maximum profit. It also helps the management decide the price of the commodity by analyzing how much increase or decrease in the price of a commodity is desirable keeping in mind all the factors of the law of demand.