CH.3 DEMAND

Concept of demand

The concept of demand is different from desire or need. A person desires a thing but this desire does not constitute demand when the person's desire is not converted into willing and ability to pay for what he desires. Then desire is changed into demand. So by demand we mean, the quantity of any commodity which a consumer wants to buy and has purchasing power. Therefore, the demand has two conditions i.e. willing to purchase and purchasing power.

Definition

The demand for anything at a given price is the amount of it which will be bought per unit of time at that time. For example a rich person has purchasing power of a car and is willing to buy. Then it is his demand while a poor person expresses his willing to purchase a car but he has no purchasing power. Then it is only his desire but not a demand.

LAW OF DEMAND

When a consumer wants to purchase a commodity and has purchasing power. Then, there exists a relationship between two variables i.e. price and quantity demanded. It is called demand function, law of demand or individual demand. The quantity demanded of a commodity is a function of price of that commodity.

Definition:

"Other things remaining same, when the price of a commodity increases its quantity demanded decreases and when the price of a commodity decreases its quantity demanded increases."

According to Alfred Marshall,

"Other things being equal with fall in price, the demand of the commodity is extended and with a rise in price, demand is contracted".

In other words,

"Other things remaining same, the quantity demanded depends upon price and there exists an inverse relationship between price and quantity demanded".

The functional relationship between quantity demanded and the price of the commodity can be expressed as:

$$Q_d = f(P)$$

Where Q_d = quantity demanded

P = Price of the commodity

ASSUMPTIONS

The assumptions of the law of demand are as under:-

1. **Constant Income**
   The income of the consumer remains constant. If income of consumer increases, the quantity demanded of consumer increases due to increase in purchasing power.
2. **Constant Taste**
   There is no change in the taste, habits and preferences of the consumer. By changing these factors, the demand of commodity changes.
3. **Constant Prices of Substitutes**
   There is no change in the prices of the substitutes. If the prices of substitutes decrease, the tendency of consumer changes towards substitutes.
4. **No Discovery of Substitutes**
   There is no discovery of new substitutes. The demand of the original commodity decreases due to discovery of new substitutes.
5. **No Change in Population**
   If a population increases, then there will be no decrease in demand inspite of rise in price of a commodity because of increase in number of consumers.
6. **No Change in Expectations**
   If the expectations of consumer above circumstances change, then, these expectations effect the quantity demanded. For example if there is expectation of increase in prices, danger of war, danger of draught or flood, then people put the more commodities into store to purchase with high prices.
7. **Homogeneity**
   All the units of commodity should be homogeneous. A consumer prefers superior units of a commodity.
8. **Constant Circumstances**
   It is assumed that circumstances are normal and there is no abnormal change in the circumstances.

Explanation

Regarding the assumptions, the standard demand equation is written as:

$$Q_d = a - b\,P$$

where 'a' and 'b' are parameters, while P and Q_d are independent and

dependent variables. The negative sign represents inverse relationship between P and Q_d.

The demand function is explained with the help of following example

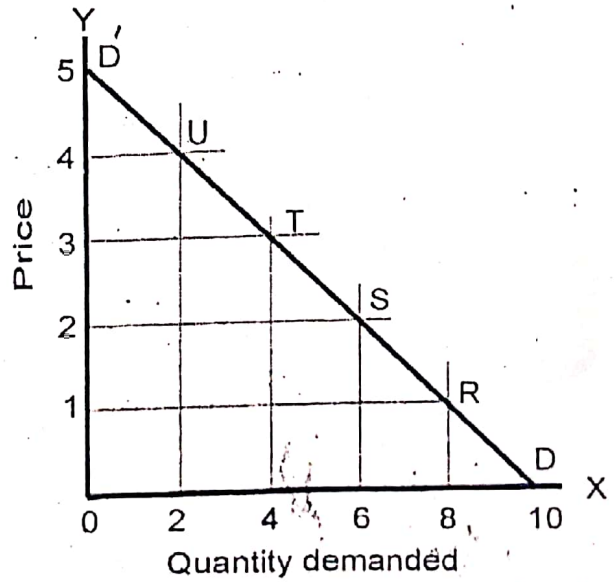
$$Q_d = 10 - 2P$$

By assuming different values of P, we can calculate the different values of Q_d as shown below:

Price (P)	Quantity demanded (Q_d)
0	10
1	8
2	6
3	4
4	2
5	0

As we assume different values of 'P' i.e. 0 to 5, then the calculated values of Q_d decrease from 10 to zero.

The law of demand can be illustrated through the demand schedule as shown in the demand curve DD' in the following diagram.



The quantity demanded is taken on X-axis while the units of price are taken on Y-axis. By plotting the various combinations of price and quantity demanded, we get different points D, R, S, T, U and D' with the help of schedule. By joining these points, we get our desired demand curve DD', having negative slope.

CAUSES OF NEGATIVE SLOPE

Following are the causes of negative slope of demand curve.

1. **INCREASE IN NUMBER OF BUYERS**

Some buyers cannot buy a commodity with the increase in price of it. But this commodity comes in the purchasing power of buyers due to

decrease in price of it. In this way, the number of buyers increases. Therefore, price and quantity demanded move in the opposite direction.

2. **INCOME EFFECT**
The real income of consumers decreases with the increase in price of a commodity and real income increases with the decrease in price. The purchasing power increases due to decrease in price and more quantity of a commodity can be purchased.

3. **SUBSTITUTION EFFECT**
So many commodities are substitutes of each other. When price of a commodity decreases then consumers demand more quantity of it due to decrease the quantity of substitutes of that commodity. It is called substitution effect. For example, consumers consume more wheat due to increase in the price of rice.

Limitations / Exceptions of the Law of Demand

The exceptions / limitations of the law of demand are indicated as:

1. **Change in Taste**
If the consumer's taste has undergone a change inspite of the price of a commodity falls. Then more may not be demanded.

2. **Change in Fashion**
If the commodity has gone out of fashion, more may not be demanded even if price of that commodity falls.

3. **Change in Income**
If the income of consumer has gone up, he may be willing to buy more inspite of the rise in price of a commodity due to increase in purchasing power.

4. **Change in the Prices of Substitutes**
Due to the change in the prices of substitutes, the law of demand may not hold good. If the price of substitutes decreases, consumers divert their purchases towards this substitutes and the demand of original commodity decreases.

5. **Discovery of Substitutes**
The discovery of cheap substitutes may decrease the demand of a commodity without the change in its price.

6. **Unawareness of Consumer**
The market situations change frequently. If consumer is not well aware of these changes, he cannot act upon the law of demand.

7. **Demonstration Effect**
The demonstration effect has its important role in the purchase of precious commodities. The consumers do not decrease their demand inspite of increase in prices.

8. Anticipations

Anticipatory changes in prices may also upset the law of demand. If prices are expected rising in future then there is stock piling even though the prices are rising.

9. Natural Calamities

The law of demand does not hold good in the time of natural calamities like war, floods, earthquake etc.

10. Shortage of Supply

If there is a shortage of supply of a certain commodity, the law may not be applied. For example if the supply of wheat is low due to rain or flood, the demand of wheat will not be decrease inspite of rise in price of it.

11. Necessities

It is not possible to decrease the quantity demanded with the increase in the prices of commodities of daily use. Therefore, there is less application of law of demand on necessities.

MARKET DEMAND OR AGGREGATE DEMAND

The law of demand explains the demand curve of individual for a commodity. But many consumers buy a commodity in a market. Their behaviour gets help from law of demand. The aggregate demand of all consumers can be taken for a commodity. The individual demand of all buyers can be converted into aggregate demand by adding these individual demands. Such derived demand curve is called market demand or aggregate demand curve. It is explained with the help of the schedule.

Price of commodity	Individual demand of consumers			Market demand or aggregate demand
	A	B	C	
1	10	12	14	36
2	8	10	12	30
3	6	8	10	24
4	4	6	8	18
5	2	4	6	12

When the price of commodity is Rs.1, the demand of consumer 'A' is 10 units, demand of consumer 'B' is 12 units and the demand of consumer 'C' is 14 units. By adding the demand of three consumers, the market or aggregate demand is 36 units. In this way, the aggregate demand in market decreases with the increase in price of commodity.

(11) Changes in Money Supply

The quantity of money in money market is called money supply. If the supply of money increases, more quantity of money circulates in market and the purchasing power of people will increase and it will cause to increase in quantity demanded.

(12) Changes in Savings

Saving is that portion of income which is not consumed. The propensity to consume of consumers decreases with the increase in the level of savings and the quantity demanded of commodities decreases.

ELASTICITY OF DEMAND/ PRICE ELASTICITY

Introduction

The elasticity of demand is a technical term used by Economists to describe the degree of responsiveness of the demand for a commodity to the change in its price.

Definition:

"The price elasticity is a measure of responsiveness in quantity demanded in corresponding to the change in price of a commodity."

According to Stonier and Hague:

"Elasticity of demand is a technical term used by economists to describe the degree of responsiveness of the demand for a good to change in its price".

In other words,

"It is a relationship *between the proportionate change in quantity demanded and the proportionate change in price of a commodity".*

Symbolically, it is written as:

$$E_p = \frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in price}}$$

$$= \frac{\frac{\Delta Q}{Q}}{\frac{\Delta P}{P}} = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

Where ΔQ = change in quantity demanded

$\frac{\Delta Q}{Q}$ = Proportionate change in quantity demanded

ΔP = change in price and $\frac{\Delta P}{P}$ = Proportionate change in price

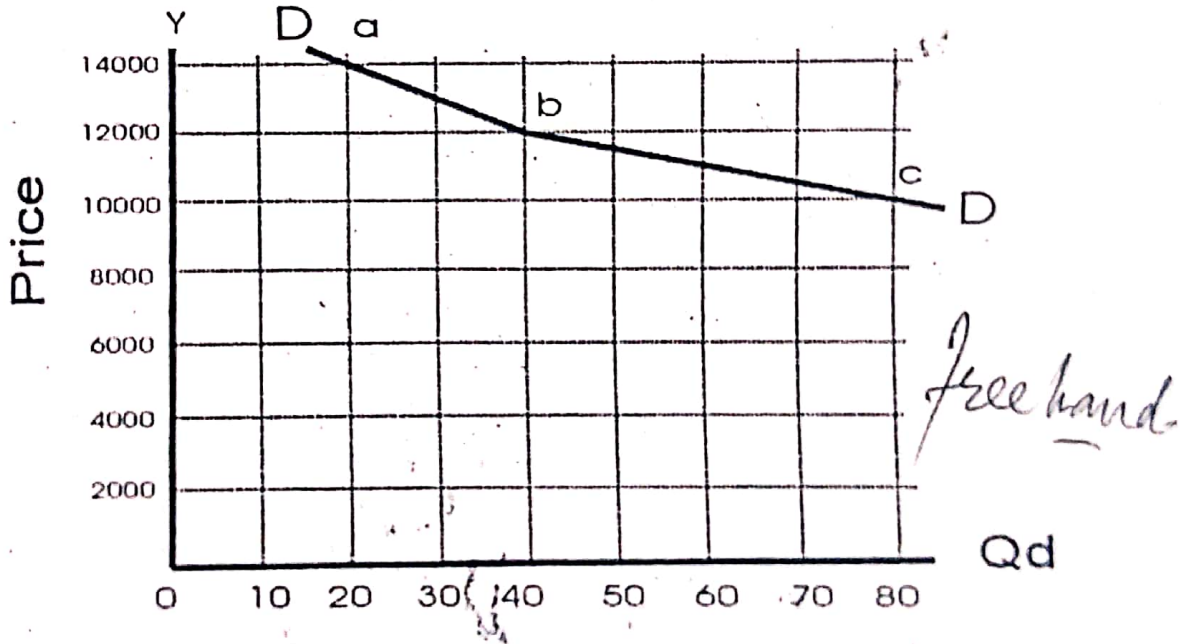
The elasticity of demand of all commodities is not same. It can ad... the following types.

1. More Elastic

When, there is more measure of responsiveness in quantity demanded due to change in price of a commodity, it is called more elastic. All luxurious goods are more elastic for example, car, T.V, freezer, air-conditioner etc. Following schedule is presented to explain it. It represents the price and quantity demanded of TVs.

Price (P)	Quantity demanded (Q_d)
Rs.14,000	20
Rs.12,000	40
Rs.10,000	80

In the above schedule, the prices of T. Vs change with low rate and changes in quantity demanded with greater rate. It is also explained with the help of diagram.



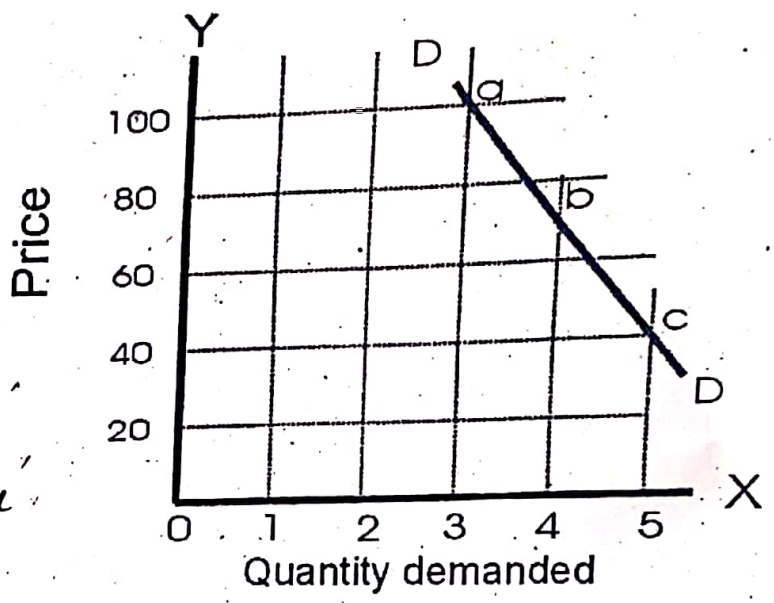
'a' , b and 'c' points are taken with the help of schedule. By joining these points, we get our desired demand curve which is more elastic because it is flatter.

2. Less Elastic

When, there is less measure of responsiveness in quantity demanded in corresponding to the more change in price of a commodity, it is called less elastic. All basic necessities are less elastic demand. It is represented into the following schedule.

Price per Kg of Ghee (P)	Quantity demanded (Qd) Kg
Rs.100	3
Rs.70	4
Rs.40	5

The price of ghee decreases with higher rate in the above schedule but measure of responsiveness in quantity demanded is with low rate. It is also explained with the diagram.



(3) Unit elastic from lecture

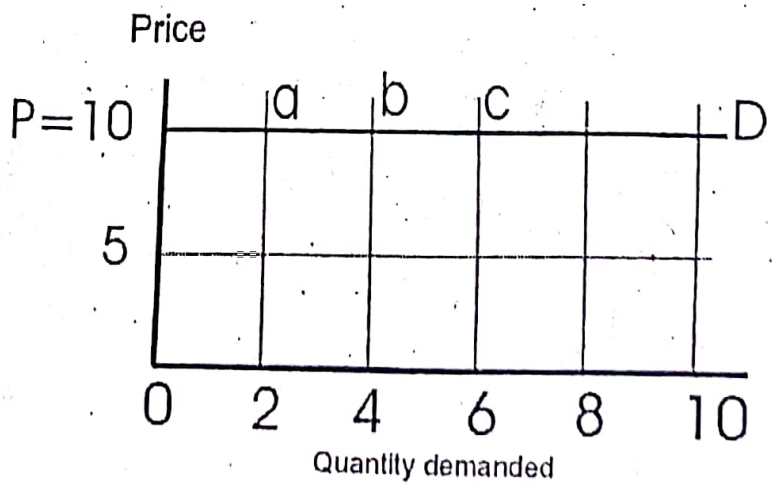
a, b and c points are taken with the help of above schedule. By joining these points, we get our desired demand curve which is less elastic and it is steeper.

3. Infinite or Perfect Elastic

If such situation appears that there is no change in price of a commodity but quantity demanded changes. This type of elasticity of demand is called infinite or perfect elastic. It is represented with the schedule.

Price	Quantity demanded
Rs.10	2 Kg
Rs.10	4 Kg
Rs.10	6 Kg

In the above schedule, the quantity demanded increases without any change in price of the commodity. It is also explained with the following diagram.



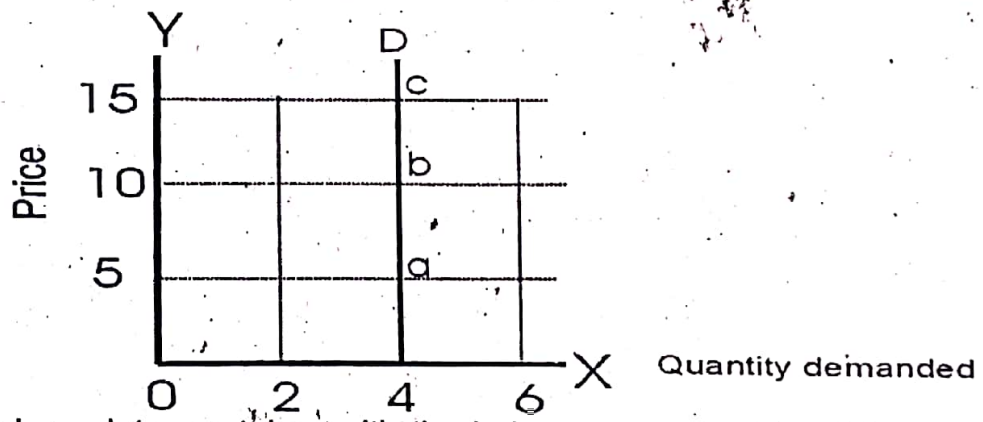
a, b and c points are taken from the schedule. By joining these points, we get a demand curve which is parallel to x-axis. It is perfect elastic demand curve because price Rs.10 per Kg remains constant and quantity demanded increases.

4. Zero Elastic or Perfect In-Elastic

If such situation appears that there is no measure of responsiveness in quantity demanded inspite of change in price of a commodity. This type of elasticity is called zero elasticity or perfect un-elastic. It is explained with the help of following schedule.

Price (P)	Quantity demanded (Q_d)
Rs.5	4 Kg
Rs.10	4 Kg
Rs.15	4 Kg

In the above schedule, the price increases but there is no change in quantity demanded. It is also explained with the diagram.



a, b and c points are taken with the help of schedule. By joining these points we get a demand curve which is parallel to Y-axis. The quantity demanded remains constant inspite of change in price of a commodity. This demand curve is perfectly in-elastic

MEASUREMENT OF ELASTICITY OF DEMAND

There are three methods of measuring the elasticity of demand.

1. Outlay method or total expenditure method

According to this method of measuring the elasticity of demand, there are three ways as below.

a) Equal to unity

When the price of a commodity decreases the quantity demanded will increase but the total expenditure remain constant; on the other hand when the price of a commodity increases the quantity demand will decrease but the total expenditure also remain constant the elasticity