

**Ans. Meaning of Demand.** Demand for a commodity refers to the *quantity of a commodity which a consumer is willing to buy at different prices in a given period of time*. Thus demand involves three essential elements namely : (i) price of the commodity; (ii) quantity of the commodity; and (iii) the period of time. It needs to be noted that demand is not only with reference to the price of the commodity but also to the period of time. Thus demand for a commodity is always expressed in relation to a particular price and at a particular time. For instance, statement like a household's demand for milk is 2 litres @ ₹ 20 per litre, is not correct and complete. The meaningful statement would be that @ ₹ 20 per litre a household's demand for milk is 2 litres *today*, because it contains all the three essential elements of demand.

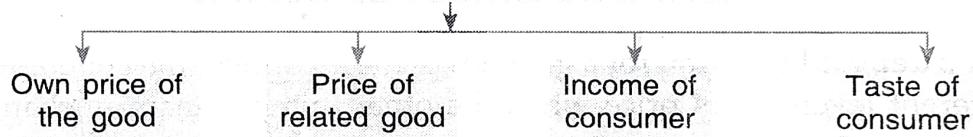
Demand can be at two levels—individual demand and market demand.

**Q. 2.9. • Explain the factors which determine individual demand for a commodity.**

- State any two factors that affect a household's demand of a commodity.

**Ans.** Following are the main factors (determinants) which influence/determine demand for a commodity of the individual consumer (household).

#### Determinants of an Individual Demand



(i) **Price of commodity itself.** It is generally observed when price of the commodity falls, its demand rises and when price rises, its demand falls, other things being equal. Thus there is an *inverse relationship* between the price and the demand for commodity. It is discussed in detail in next question titled 'law of demand'.

(ii) **Price of related goods.** Goods are said to be related when price of one good (say,  $x$ ) causes change in demand for other good (say,  $y$ ). A consumer's demand for a particular good (say coffee) depends upon the price of its related good (say, tea). Related goods are of two types—substitute goods and complementary goods.

(a) **Substitute goods.** Substitute goods are a pair of goods which can be used (substituted) in place of each other to satisfy a given want. For example coffee, is substitute of tea. If price of coffee rises, demand for its substitute tea will rise because consumers will substitute tea for coffee. Thus *demand for a good (here tea) rises with a rise in price of its substitute good (here coffee), i.e., there is direct relationship*.

(b) **Complementary goods.** These are a pair of goods which are used jointly to satisfy a given want. For example car and petrol. If price of complementary good petrol rises, demand for car will fall. Thus *in case of complementary goods, if price of one good falls, demand for the other good rises, i.e., there is Inverse Relationship*.

(iii) **Income of the consumer.** Higher the income, larger will be the demand generally. The effect of change in income on demand depends upon the nature of the good whether the good is normal or inferior. A good whose demand rises with rise in income is called a

normal good whereas a good whose demand falls with rise in income is called an inferior good. If income of a consumer goes up, demand for a normal good (like full cream milk, wheat, fine cloth) will rise but for an inferior good (like toned milk, jowar, coarse cloth) will fall. On the contrary with a fall in income, demand for a normal good will fall but for an inferior good will rise.

(iv) **Taste and preference of consumer.** A favourable change in taste for a good (say, salty eatable) increases its demand whereas an unfavourable change in taste (say, for sweets) decreases its demand at the same price. Similarly, a change in preference also affects demand. For instance a student may demand more of books and pens than utensils.

**Q. 2.10. What is demand function? State a consumer's demand function.**

**Ans. Demand Function.** It explains *the relationship between the demand for a commodity and the factors determining demand*. In a way it gives functional relationship (i.e., cause and effect relationship) between demand and its determinants. The above analysis is presented as demand function in the form of the following equation.

$$D_x = f(P_x, P_R, Y, T)$$

The equation shows that demand for commodity  $x$  ( $D_x$ ) is the function ( $f$ ) of Price of commodity  $x$  ( $P_x$ ); Price of Related goods ( $P_R$ ); Income of consumer ( $Y$ ) and Tastes of consumer ( $T$ ).

**A consumer's demand function** for a good gives the amount of the good that the consumer chooses at different levels of its price when the other things remain unchanged.

Let us first discuss the relationship between the price and demand which is expressed in the form of 'law of demand' and take up the relationship with other determinants afterward.

**Q. 2.11. • Explain law of demand with the help of a demand schedule.**

- **Explain law of demand and the reasons behind it. Use diagram.**
- **Define demand schedule.**

**Ans. (a) Statement of law of demand.** The Law of Demand states "*other things remaining unchanged, quantity demanded of a commodity is inversely related to the price of commodity.*" In other words, *demand for a commodity rises when price falls and its demand falls when price rises provided other factors remain unchanged*. Thus there is an inverse relationship between price and demand. For instance, an individual may demand one dozen of bananas at ₹ 15 per dozen; he may, however, demand two dozens if the price falls to ₹ 10 per dozen. The law can be illustrated further with the help of hypothetical Demand Schedule and Demand Curve based thereon.

**(b) Demand Schedule.** A *Demand Schedule is a tabular statement which shows different quantities of a commodity demanded at different prices*. Let us suppose that the demand of a household for potatoes at different prices is as shown in the following demand schedule:

### DEMAND SCHEDULE

Price per kg (₹)	Quantity demanded per (kg)
10	1
8	2
6	3
4	4

Note that quantity demanded is shown as a function of price alone.

(c) **Demand curve.** A *demand curve* reflects graphically the relationship between the quantity demanded of a commodity and its price. Thus graphical representation of demand at different levels of price forms demand curve. The above imaginary demand schedule has been depicted as a demand curve in Fig. 2.8.

**Shape of Demand Curve (Negatively sloped).** Demand Curve generally slopes downward from left to the right. It is called a negatively sloped curve which is derived from law of diminishing marginal utility. Clearly demand curve for a commodity is nothing but *marginal utility curve* of an individual for that commodity.

(d) **Assumptions or other things being equal.** The assumptions of law of demand refer to the conditions under which law of demand operates. The law is valid only when *other things remain constant* (unchanged) which means factors other than the price should not change. Thus, it is assumed that (i) price of related goods, (ii) income of the consumer and (iii) tastes and preferences of the consumer etc. should remain constant. These are called assumptions of the law of demand.

(e) **Exceptions to the law of demand.** Exceptions refer to situations when law of demand does not operate. Following are three such exceptions.

1. **Inferior goods or Giffen goods.** In case of certain inferior goods (say, jowar, bajra) when their prices fall, their demand may not rise because consumers divert their extra purchasing power (caused by fall in price) to purchase of superior goods (say, wheat, rice). As a result, demand for such inferior goods whose price has fallen, also falls. Such inferior goods are called Giffen goods because this fact was analysed first of all by Sir Robert Giffen. Mind, *Giffen goods are a special category of inferior goods whose price effect is positive (i.e., when price falls demand also falls).* Between two effects of price change (i.e., income and substitution effect), the negative income effect is so strong that it outweighs the positive substitution effect with the result that with a fall in price of the commodity, its quantity demanded also falls. Mind, inferior goods are those goods whose income effect is negative.

2. **Status symbol goods.** This type of goods are purchased not because of their intrinsic value but because of status or prestige value. The same jewellery when sold at low price sells poorly but offered at five times the price, sells quite well. Similarly, demand for colour

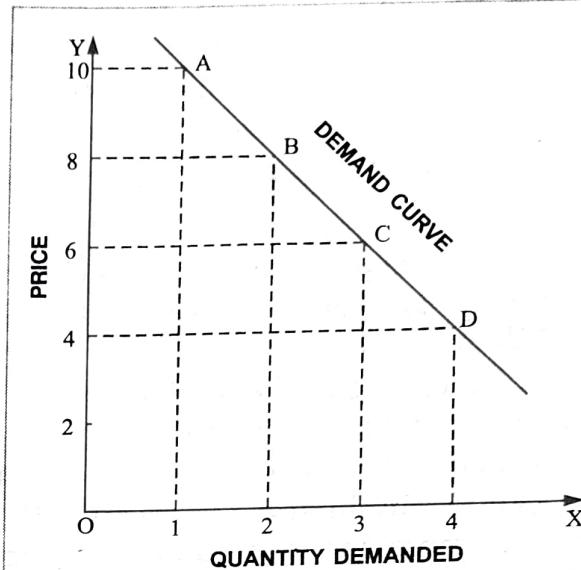


Fig. 2.8

T.V. set, video tape recorders has been rising because of their status symbols in spite of the fact that their prices have also been rising continuously.

3. *Goods expected to become scarce or costly in future* are purchased by the households in increased quantities even when their prices are soaring upwards.

4. *Fashion*. The demand for goods which are in fashion does not fall even when their prices increase.

**Q. 2.12.** • Explain the causes behind law of demand.

- Why is there inverse relationship between price of the commodity and its demand?

**Ans.** According to Classical approach, the most important reason behind law of demand is '*law of diminishing marginal utility*' but the modern economists believe income effect and substitution effect as the main causes. These are explained below:

1. **Law of diminishing marginal utility.** Briefly, this law states that when a consumer consumes more and more units of a commodity, marginal utility derived from successive units goes on decreasing. As for example, a hungry man gets maximum utility from first chapati, lesser utility from second chapati, still lesser from third chapati and so on. Demand depends on utility or usefulness of a commodity to the consumer, i.e., if he gets more satisfaction, he will pay more and if he gets less utility, he will buy at a lower price. Since additional (or successive) units give him lesser utility, he will buy additional units only at lower price. And this is Law of Demand which states that demand for a commodity is more at a lower price and less at a higher price. Thus law of diminishing marginal utility explains the downward slope of demand curve. Indeed *demand curve is essentially the downward sloping portion of the marginal utility curve*.

2. **Income effect.** A change in quantity demanded as a result of change in real income caused by change in price of a commodity is called income effect. Any change in the price of a commodity affects the purchasing power or real income of the consumer although his money income remains the same. When price of a commodity falls, less has to be spent on purchase of same quantity of that commodity or same quantity can be purchased with less money. With money thus saved, a consumer can purchase more quantity of the commodity whose price has fallen. This is called income effect of change in price of the commodity.

In short, a fall in price increases the real income (purchasing power) of a consumer with the result that he buys more quantity with the same money income. Similarly, a rise in price virtually amounts to fall in real income of the consumer leading to contraction of his demand. This part of increase in demand is called income effect. Mind, income effect is related to *change in income caused due to change in price* and not due to change in money income.

3. **Substitution effect.** Substituting a cheaper commodity for the relatively expensive commodity is called substitution effect. Alternatively, it refers to substitution of one commodity in place of other commodity when it becomes relatively cheaper. How? A rise in the price of a commodity, say coffee, also means that price of its substitute, say tea, has fallen in relation to that of coffee even though price of tea remains unchanged. So people are induced to buy more of tea and less of coffee when price of coffee rises. In other words, consumers will substitute tea for coffee. This part of increase in demand is called substitution effect.

The effect operates reverse when the price of the commodity falls. A fall in the price of a commodity induces the consumer to substitute other commodities with this commodity whose price has fallen. This leads to rise in demand. Clearly substitution effect is based on concept of relative prices of substitute goods.

Thus, according to modern economists, the *combined operation of income effect and substitution effect causes increase in demand with a fall in price*.

It may be noted that the combined effect of income effect and substitution effect is called *price effect*.

**Why inverse relationship between price and demand?** We have read in Utility Approach of consumer's equilibrium that a consumer buys only that much of a commodity at which its marginal utility in money terms is equal to its price. Under such a situation suppose price falls, it makes marginal utility greater than price. This induces the consumer to buy more of the commodity. Clearly it shows inverse relationship between price and demand.

**Q. 2.13. Distinguish between 'Change in demand' and 'Change in quantity demanded of a commodity'.**

**Ans.** To simplify let us divide all the determinants of demand in two categories, namely, 'price of commodity itself' in first category and 'factors other than the price' of the commodity, (such as price of related goods, income of consumer and taste of consumer) in the second category.

(i) **Change in quantity demanded.** When change (rise or fall) in demand for a commodity is caused by change in its own price, it is called *change in quantity demanded*. It shows specific quantity of a commodity purchased against its specific price. It is expressed in the form of either extension or contraction of demand. A change in quantity demanded is graphically represented in the form of *movement along a given demand curve*.

(ii) **Change in demand.** When change (rise or fall) in demand is caused by factors other than the own price of the commodity, it is merely called *change in demand*. It is expressed in the form of either *increase* or *decrease* in demand. In fact, change (increase or decrease) in demand is graphically represented by *shift of a demand curve upward or downward*.

**Comparison.** 1. Change in 'quantity demanded' is caused by change in price of commodity (i.e., demand curve does not shift) whereas 'change in demand' is caused by factors other than the price i.e., demand curve shifts rightward or leftward.

2. Change in quantity demanded graphically implies movement along a demand curve whereas change in demand graphically implies shift in demand curve.

**Q. 2.14. (a) Distinguish between extension of demand and contraction of demand with the help of a diagram.**

(b) What is 'movement along a demand curve'? Show it with the help of a diagram.

(c) What causes an upward movement along a demand curve of a commodity?

**Ans. (a) Extension and contraction of demand.** Rise in demand due to fall in price of a commodity itself, other things remaining the same, is called *extension of demand*. It results in downward movement along a demand curve. On the other hand, fall in demand due to rise in price of a commodity itself, other things remaining the same, is called *contraction of demand*. It results in upward movement along a demand curve. The following demand schedules and curve further clarify it.

EXTENSION OF DEMAND		CONTRACTION OF DEMAND	
Price per unit (₹)	Demand (units)	Price per unit (₹)	Demand (units)
5	10	1	20
3	15	3	15
1	20	5	10

(b) Movement along a demand curve. A demand curve showing change in demand due to change in price (i.e., extension and contraction of demand) is graphically called movement along a demand curve. In Fig. 2.9 when price is  $OP$ , demand is  $OQ$ . But when price falls from  $OP$  to  $OP_2$ , demand expands from  $OQ$  to  $OQ_2$  and we move downward along the demand curve. When price rises from  $OP$  to  $OP_1$ , demand falls from  $OQ$  to  $OQ_1$  and we move upward along the demand curve. Thus a change in demand due to change in price of the commodity graphically means movement along the demand curve.

(c) Rise in price or fall in demand causes an upward movement along a demand curve.

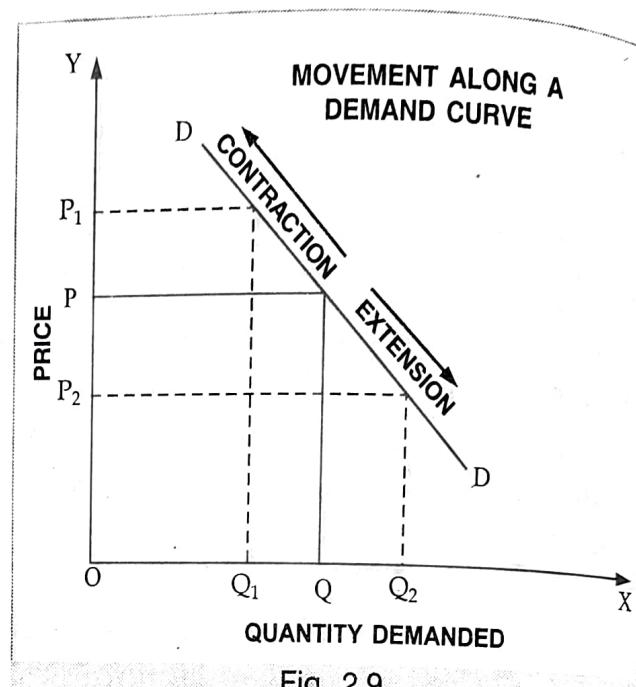


Fig. 2.9

Q. 2.15. • Distinguish between increase in demand and decrease in demand. (D)

- What is shift in demand curve?
- Define change in demand and represent the same graphically. State three factors responsible for change in demand.

Ans. Increase and decrease in demand (*Shift in demand curve*).

(a) Increase in demand. *Rise in demand due to change in factors other than the price of the commodity is called increase in demand.* Briefly put it refers to more demand at same price or same demand at a higher price. In other words when more quantity is demanded at the same price or same quantity at a higher price, it is called increase in demand as shown in the following schedule. Diagrammatically rise in demand is represented in rightward (or upward) shift of demand curve as shown in Fig. 2.10 in which demand curve  $DD$  shifts rightward from its original position to new demand curve  $D_2D_2$ . Demand curve  $D_2D_2$  showing its rightward shift indicates that the demand for the commodity at the same price has increased.

INCREASE IN DEMAND (More demand at same price)		DECREASE IN DEMAND (Lesser demand at same price)	
Price (₹)	Demand (units)	Price (₹)	Demand (units)
5	15	5	25
5	20	5	20
5	25	5	15

(b) **Decrease in demand.** Fall in demand due to change in factors other than the price of the commodity is called decrease in demand. Briefly put, it refers to lesser demand at same price or same demand at lower price. In other words, when less quantity is demanded at the same price or same quantity at a lower price, it is called decrease in demand as shown in the above schedule. Diagrammatically decrease in demand is represented in leftward (or downward) shift of demand curve as shown in Fig. 2.10.

In this figure, demand curve DD shifts leftward from its original position to new demand curve  $D_1D_1$ . Thus demand curve  $D_1D_1$  showing its leftward shift indicates that demand for the commodity at the same price has decreased.

**Factors responsible for change (increase and decrease) in demand** are (i) Price of related goods, (ii) Income of consumer and (iii) Taste of the consumers. Remember that increase or decrease in demand is graphically called shift in demand curve.

(c) *Shift in demand curve refers to the shifting of original demand curve to the right when demand increases at the same price (curve DD shifts to curve  $D_2D_2$  in Fig. 2.10) and to the left when demand falls at the same price (curve DD shifts to curve  $D_1D_1$  in Fig. 2.10).* Mind, in a shift a new demand curve is drawn.

#### Q. 2.16. (a) Distinguish between decrease in demand and contraction of demand.

- (b) • Distinguish between increase in demand and extension of demand.
- Distinguish between increase in demand and increase in quantity demanded of a commodity.

#### (c) Differentiate between movement along a demand curve and shift in demand curve.

**Ans. (a)** Distinction between decrease in demand and contraction of demand. Both indicate fall in quantity demanded but the reasons are different. (i) Decrease in demand is at the same price due to change in factors other than the price (e.g., price of related goods, income and taste of the consumer etc.) whereas contraction of demand is due to change (rise) in the price of the commodity. (ii) In case of decrease in demand, demand curve shifts leftward (see Fig. 2.10) whereas in case of contraction of demand, we move up along the demand curve (see Fig. 2.9).

(b) **Distinction between increase in demand and extension of demand.** Both reflect rise in quantity demanded but the causes are different. (i) Increase in demand is at the same price caused by change in factors other than the price of the commodity (e.g., price of related goods, income and taste of consumer etc.) whereas extension of demand is caused by change (fall) in price of the commodity. (ii) In case of increase in demand, demand curve shifts rightward (see Fig. 2.10) whereas in case of extension of demand, we move downward along the demand curve (see Fig. 2.9).

When rise in demand is caused by factors other than the price (e.g., increase in income, fall in price of complementary good etc.), it is called increase in demand. As against it when rise in demand is caused by change (i.e., fall) in its own price of the commodity, it is called increase in quantity demanded of a commodity.

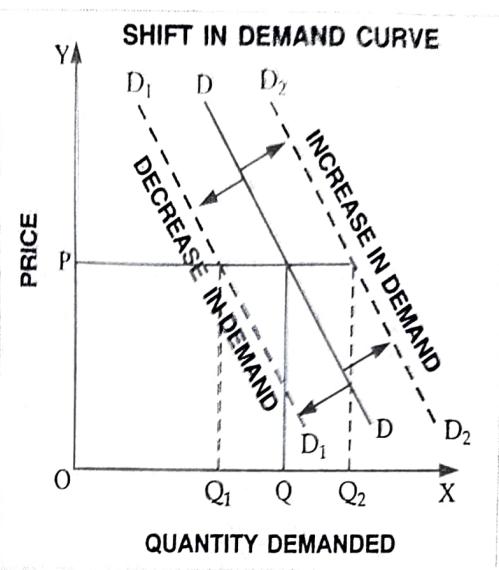


Fig. 2.10