Demand Analysis

EXERCISE [PAGES 25 - 26]

Exercise | Q 1.1 | Page 25

Complete the following statement:

The relationship between demand for a good and price of its substitute is ______.

1. **direct**
2. inverse
3. no effect
4. can be direct and inverse

Solution: The relationship between demand for a good and price of its substitute is **direct.**

Exercise | Q 1.2 | Page 25

Complete the following statement:

The relationship between income and demandfor inferior goods is ______.

1. direct
2. **inverse**
3. no effect
4. can be direct and inverse

Solution: The relationship between income and demand for inferior goods is **inverse.**

Exercise | Q 1.3 | Page 25

Complete the following statement:

Symbolically, the functional relationship between Demand and Price can be expressed as ______.

1. **Dx = f(Px)**
2. Dx = f(Pz)
3. Dx = f(y)
4. Dx = f(T)

Solution: Dx = f(Px)

Exercise | Q 1.4 | Page 25

Complete the following statement:

When less units are demanded at high price it shows ______.

1. increase in demand
2. expansion of demand
3. decrease in demand
4. **contraction in demand**

   Solution: When less units are demanded at high price it shows **contraction in demand.**

   Exercise | Q 2.1 | Page 25

   Give economic term:

   A situation where more quantity is demanded at lower price ______.

   Solution: A situation where more quantity is demanded at lower price **expansion of demand**.

   Explanation:

   Expansion of demand refers to a rise in quantity demanded due to falling in price alone while other factors like tastes, income of the consumer, size of the population, etc. remain unchanged. Demand moves in a downward direction on the same demand curve.

   Exercise | Q 2.2 | Page 25

   Give economic term:

   Graphical representation of demand schedule _____.

   Solution: Graphical representation of demand schedule **demand curve.**

   Explanation:

   Demand curve is a graphical representation of the individual demand schedule.

   Exercise | Q 2.3 | Page 25

   Give economic term:

   A commodity which can be put to several uses ______.

   Solution: A commodity which can be put to several uses **composite demand**.

   Explanation:

   The demand for a commodity which can be put to several uses is known as composite demand.

   For example:
   Electricity is demanded several uses such as light, washing machines, etc.

   Exercise | Q 2.4 | Page 25

Give economic term:

More quantity is demanded due to changes in the factors determining demand other than price _____.

Solution: More quantity is demanded due to changes in the factors determining demand other than price **increase in demand**.

Explanation:

increase in demand: It refers to increase in quantity demanded due to favourable changes in other factors like tastes, income of the consumer, climatic conditions etc. and price remains constant.
Demand curve shifts to the right-hand side of the original demand curve.

Exercise | Q 2.5 | Page 25

Give economic term:

A desire which is backed by willingness to purchase and ability to pay _______.

Solution: A desire which is backed by willingness to purchase and ability to pay **demand.**

Explanation:

Demand: According to Benham, “the demand for anything at a given price is the amount of it, which will be bought per unit of time at that price.”
In ordinary language, demand means a desire. Desire means an urge to have something. In Economics, demand means a desire which is backed by a willingness and ability to pay.

Exercise | Q 3.1 | Page 25

Distinguish between:

Desire and demand

Solution:

Desire	Demand
Desires refer to those wishes that a human being cherishes.	Demand refers to the quantity of goods that individuals are willing to buy.
They may or may not be backed by financial power.	It should be backed by financial power.
For example: Walking on the moon	For example, a consumer demands 2 kg sugar at Rs 10 per kg and 3 kg sugar at Rs 8 per kg.

Exercise | Q 3.2 | Page 25

Distinguish between the following:

Extension of Demand contraction of Demand

Solution:

EXTENSION OF DEMAND	CONTRACTION OF DEMAND
1. <u>Meaning</u>: - Extension of demand is a case of variation of demand. It takes place when quantity demanded is more due to a fall in price alone. Other factor remaining constant. **2. <u>Movement</u>: -** **The movement** is downwards along the same demand curve.	Contraction is also a case of variation of demand. It takes place when quantity demanded is less due to rise in price alone. Other factors remaining constant. **The movement** is upward along the same demand curve

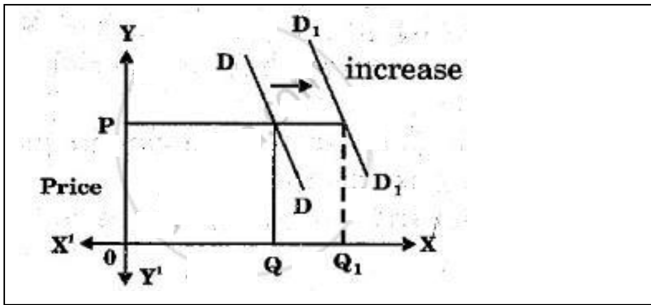
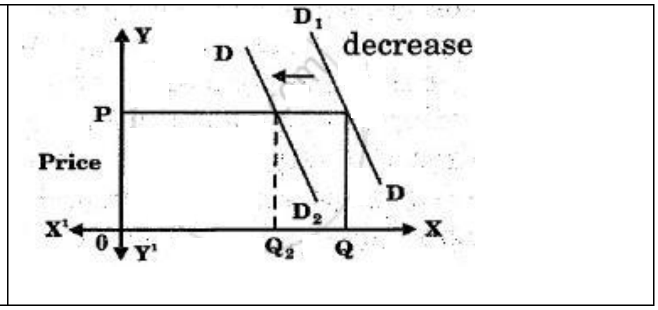
Exercise | Q 3.3 | Page 25

Distinguish between:

Increase in demand and Decrease in demand.

Solution:

Increase in Demand	Decrease in Demand
a) An increase in demand refers to a rise in demand due to changes in other factors, price remaining constant.	a) A decrease in demand refers to fall in demand due to changes in other factors, price remaining constant.
b) An increase in demand occurs when more are purchased at the same price and the same quantity is purchased at a higher price.	b) A decrease in demand occurs when less is purchased at the same price or the same quantity at a lower price.
c) Increase in demand is a result of (1) Increase in income (2) Increase in price of substitutes (3) Decrease in price of complementary goods (4) Increase in population/ (5) When goods are in fashion.	c) Decrease in demand is a result of (1) Decrease in income. (2) Decrease in price of substitutes. (3) Increase in price of complementary goods. (4) Decrease in population. (5) When goods go out of fashion.
d) When there is an increase in demand, the demand curve shifts to the right from DD to D_1D_2 as shown in the figure.	d) When there is decrease in demand the demand curve shift to the left from DD to D_2D_2 as shown in the figure.

Exercise | Q 4.1 | Page 25

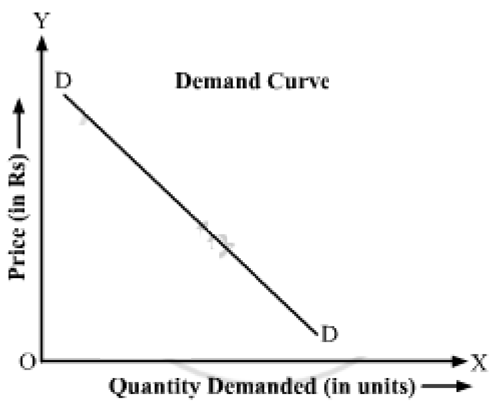
State with reason, whether you Agree or Disagree with the following statement.

Demand curve slopes downward from left to right.

1. **Agree**
2. Disagree

Solution: I **agree** with the given statement.

Yes, we agree that demand curve slopes downward from left to right. Demand curve is the graphical representation of the relationship between the demand for a good and its price, for a given income, price of related goods, tastes, and preferences. This curve slopes downwards from left to right because of the negative relationship between the price of the commodity and its demand.



The following are the main reasons as to why demand curve is downward sloping:
i. Law of diminishing marginal utility- Due to this law, consumer tends to buy more quantity of a good when price falls.
ii. Income effect- With a fall in price, the purchasing power of a person rises. As a result, he demands more of a good.
iii. Substitution effect- With a rise in price, the substitutes of good become cheaper in comparison. As a result, person demands less of that good and more substitute goods.
iv. Multipurpose uses- The demand for goods having multipurpose uses rise with a fall in price and vice-versa.

Exercise | Q 4.2 | Page 25

Explain with reason, whether you agree or disagree with the following statement.

Price is the only determinant of demand

1. Agree
2. **Disagree**

Solution: No, we do not agree with the given statement. This is because there are various factors that determine demand other than price. The following are a few determinants:

- **Income of the consumer**- Change in the income of the consumer also affects the market demand for goods. The effect of the change in income on the market demand depends on the type of the good.
- **Type of Good-** The market demand for normal goods shares a positive relationship with the consumer's income. The market demand for inferior goods (such as coarse cereals) has a negative relationship with the consumer's income. The market demand for Giffen goods also has a negative relationship with the income.
- **Consumer's tastes and preferences**- Consumers' tastes and preferences highly influence the demand for goods. Other things being constant, if all consumers prefer a commodity over another, then the market demand for that commodity increases and vice versa.
- **Population size**- The market demand for a commodity is also affected by the population size. Other things being equal, an increase in the population size increases the market demand for a commodity and vice-versa. This is because with the change in population size, the number of consumers in the market changes.

Exercise | Q 4.3 | Page 25

State with reason whether you agree or disagree with the following statement:

When price of Giffen goods fall, the demand for it increases.

1. Agree
2. **Disagree**

Solution: I **Disagree** with the statement.

Explanation:

When price of Giffen goods falls, the demand for it's decreases.

Inferior goods or low-quality goods are those goods whose demand does not rise even if their price falls. At times, demand decreases when the price of such commodities fall. Sir Robert Giffen observed this behaviour in England in relation to bread declined, people did not buy more because of an increase in their real income or purchasing power. They preferred to buy superior-good like meat. This is known as Giffen's paradox.

Exercise | Q 5.1 | Page 26

Observe the following table and answer the following question:

Quantity demanded				
Price per kg. in ₹	**Consumer A**	**Consumer B**	**Consumer C**	**Market demand (in kgs) (A + B + C)**
25	16	15	12	
30	12	11	10	
35	10	09	08	
40	08	06	04	

Complete the market demand schedule.

Solution:

Quantity demanded				
Price per kg. in ₹	**Consumer A**	**Consumer B**	**Consumer C**	**Market demand (in kgs) (A + B + C)**
25	16	15	12	43
30	12	11	10	33
35	10	09	08	27
40	08	06	04	18

Exercise | Q 5.1 | Page 26

Observe the following table and answer the following question:

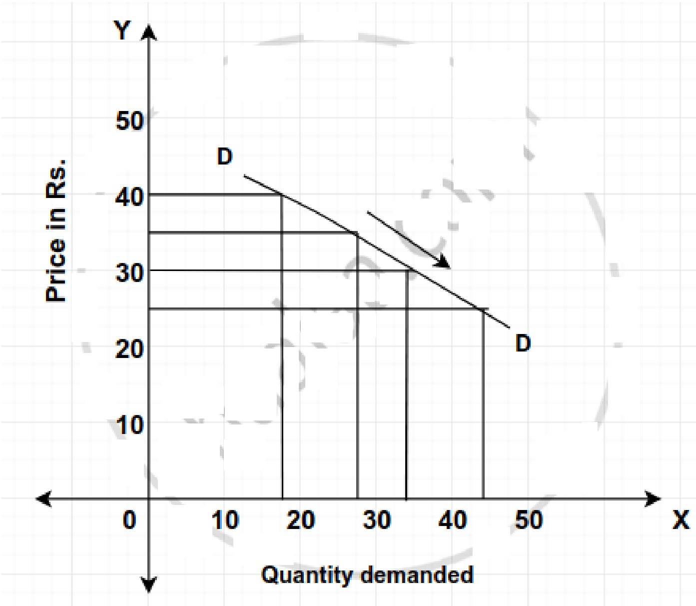
Quantity demanded				
Price per kg in ₹	**Consumer A**	**Consumer B**	**Consumer C**	**Market demand (in kgs.) (A + B + C)**
25	16	15	12	
30	12	11	10	
35	10	09	08	
40	08	06	04	

Draw market demand curve based on above market demand schedule.

Solution:

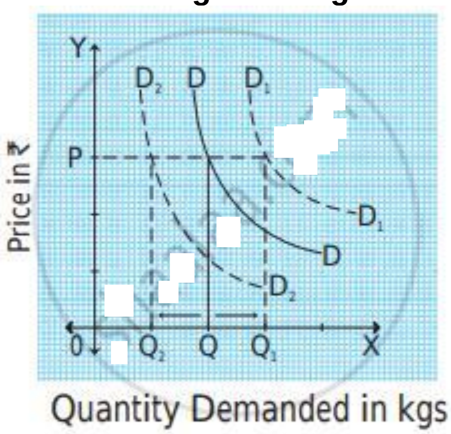
Quantity demanded				
Price per kg in ₹	**Consumer A**	**Consumer B**	**Consumer C**	**Market demand (in kgs.) (A + B + C)**

25	16	15	12	43
30	12	11	10	33
35	10	09	08	27
40	08	06	04	18



Exercise | Q 5.2 | Page 26

Observe the given diagram and answer the following question:



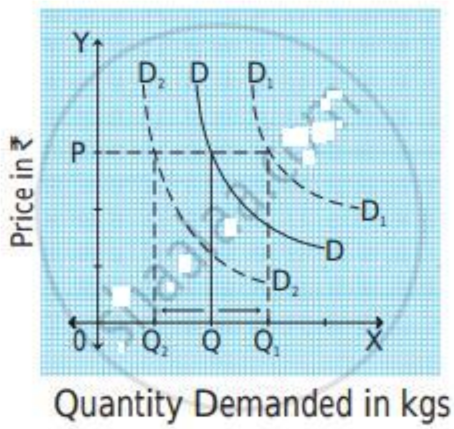
Rightward shift in demand curve ______.

Solution:

Rightward shift in demand curve **increase in the quantity demanded.**

Exercise | Q 5.2 | Page 26

Observe the given diagram and answer the following question:



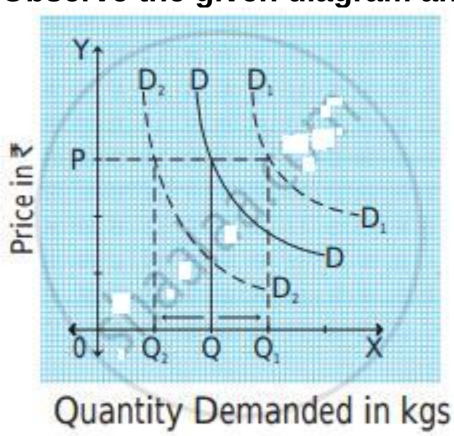
Leftward shift in demand curve ______.

Solution:

Leftward shift in demand curve **decrease in the quantity demanded.**

Exercise | Q 5.2 | Page 26

Observe the given diagram and answer the following question:

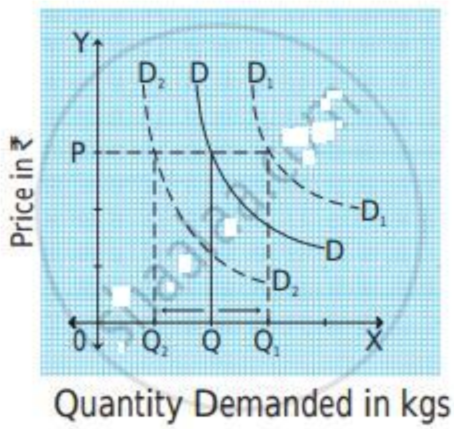


Price remains _______.

Solution: Price remains **constant.**

Exercise | Q 5.2 | Page 26

Observe the given diagram and answer the following question:

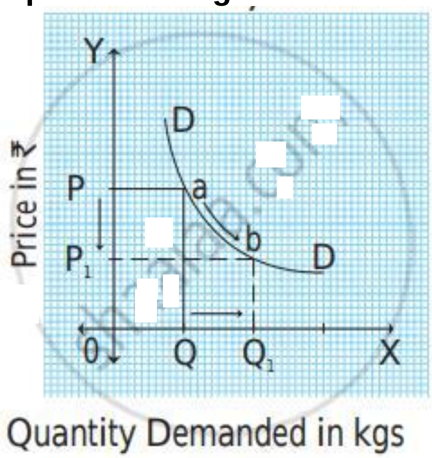


Increase and decrease in demand comes under ______.

Solution: Increase and decrease in demand comes under **changes in demand.**

Exercise | Q 5.3 | Page 26

Explain the diagram:



1) The diagram represents _______ in demand.

2) In the diagram, A movement of the demand curve is in ______ direction.

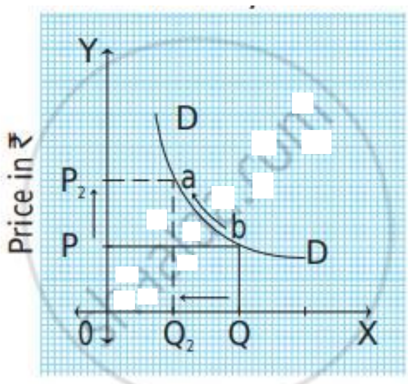
Solution:

1) The diagram represents **expansion** in demand.

2) In the diagram, A movement of the demand curve is in **downward** direction.

Exercise | Q 5.3 | Page 26

Explain the diagram:



Quantity Demanded in kgs

1) The diagram represents _______ in demand.

2) In the diagram, a movement of the demand curve is in ______ direction.

Solution:

1) The diagram represents **contraction** in demand.

2) In the diagram, A movement of the demand curve is in **upward** direction.

Exercise | Q 6.1 | Page 26

Answer in detail:

State and explain the 'law of demand' with its exceptions.

Solution1:

Law of Demand:-

Law of demand is one of the important basic laws of consumption. Dr Alfred Marshall, in his book "Principles of Economics", has explained the law of demand as follows.

"Other things being constant the higher the price of the commodity, smaller is the quantity demanded arid lower the Mice of the commodity larger is the quantity demanded."

The law of demand explains a change in the behaviour of consumer demand due to various changes in price. Marshall's Law of demand describes the functional relation between demand and price. It can be expressed as D = f (P) that is demand is a function of price. The relation between price and demand is inverse because larger quantity is demanded when a price falls and smaller quantity will be demanded when the price rises. The law of demand is explained with the help of the following schedule and diagram.

Table No. 3.3 = Demand Schedule

Price of Mangoes Per Kg. (Rs.)	**Demand for Mangoes (Kg.)**
50	1
40	2
30	3
20	4
10	5

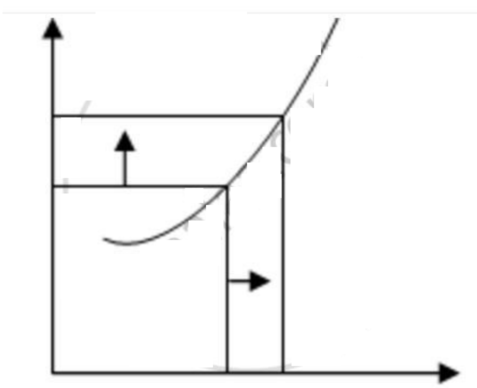
As shown in the schedule when the price of mangoes is Rs. 5O/- per kg. demand is 1 kg. When the price falls to the level of Rs. 40/- per kg. and demand rises to 2 kg. Similarly, at the price Rs. 10/- per kg. the demand for mangoes is 5 kg., whereas 4 kg. of mangoes are demanded at price Rs. 20/- per kg. This shows an inverse relationship between price and demand.

In this diagram, X-axis represents demand for mangoes, whereas Y" axis represents the price of mangoes. DD is demand! a curve which slopes downwards from left to right. In other words, its slope is negative because of an inverse relationship between price and demand.

Exceptions to the Law of Demand:-

The Law of Demand explains's an inverse relationship between the price of a commodity and the quantity demanded of it. Sometimes, however, we see a direct relationship between price and quantity demanded of a commodity.

Under exceptions to the Law of Demand, the demand curve slopes upwards from left to right which shows a direct relationship between price and quantity demanded. It can be shown in the following diagram.



1. Giffen goods:-

Certain inferior goods are-ca1Md Giffen goods, when the price falls, quite often less quantity will be purchased than before because of the negative income effect and people's increasing preference for a superior commodity with the rise in their real income. Sir Robert Giffen observed the situation related to demand for bread & meat in England. When the price of bread was decreasing, less bread was purchased. Here surplus money was transferred to purchase meat, as a result, demand for meat increased.

This behaviour is known as Giffen's paradox. Thus Giffen goods are inferior goods which have a direct relationship between price and quantity demanded, In this case, the demand curve slopes \ upwards from left to right as shown in the above diagram.

2. Prestige goods:-

Diamonds, high priced motor cars, luxurious bungalows are prestige goods. Such goods have a "snob appeal". Rich people consume such goods as a status symbol. Therefore, when the price of such goods rises their demand also rises.

3. Price illusions or Consumers Psychological bias:-

Consumers have an illusion that high priced goods are of a better quality. Therefore the demand for such goods tends to increase with a rise in their price. e.g. Branded products which are expensive are demanded at a high price

4. Demonstration effect:-

The tendency of the low-income group to imitate the consumption pattern of high-income groups is known as Demonstration effect. For example demand for consumer durables such as washing machine, latest mobile etc.

5. Ignorance:-

Sometimes people do not have proper market knowledge. They may not be aware of the fall in the price of a commodity and thus they tend to purchase more at a higher price.

6. Speculation:-

When people speculate a change in the price of a commodity in the future, they may not act according to the Law of demand. People may tend to buy, more at rising price, when they anticipate further price rise. For example, in the stock market, people tend to buy more shares at rising prices. Even if prices of some goods like sugar, oil etc. are rising before Diwali, people go on purchasing more of these things at rising prices, because they think that prices of these goods may increase further during Diwali.

7. Habitual Goods:-

Due to a habit of consumption certain goods like tobacco, cigarettes etc are purchased even if prices are rising. Thus it is an exception.

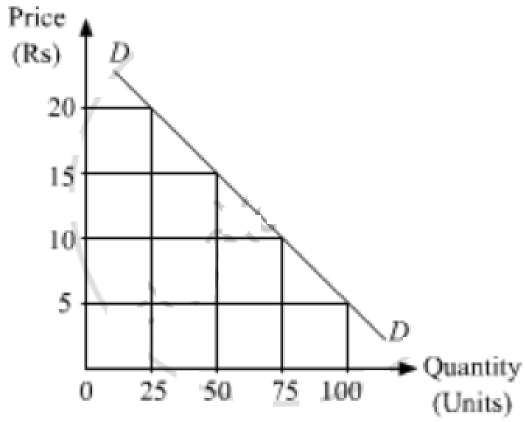
Solution2:

The law of demand states that a consumer's demand shares an inverse relationship with the price of a good and vice-versa, with other things being constant.

The law of demand can be explained with the help of the following demand schedule:

Price of Commodity (X) (Rs)	**Quantity Demanded of X (Units)**
5	100
10	75
15	50
20	25

The schedule shows that as the price of commodity X increases from Rs 10 to Rs 15, the quantity demanded X falls from 75 units to 50 units. Thus, there is a negative relationship between demand and price.



Let us plot the above schedule on a graph. On the x-axis, we represent the quantity demanded; and on the y-axis, we represent the price of the good. Joining the different combinations of price and quantity demanded, we get a curve DD. This curve is the demand curve showing the inverse relationship between the price and the quantity demanded.

Following are a few cases of exceptions to the law of demand.

- **Giffen goods**: These are extremely inferior goods. With a fall in the price of the Giffen goods, their demand falls.
- **Emergency situations**: In case of emergency situations such as war, curfew, natural calamities etc consumers purchase the commodities even at a higher price.
- **Articles of distinction**: Articles such as diamonds, jewellery, etc. are accorded high prestige and status as these are very costly. Such articles enjoy a high demand because of their high price. Consequently, the demand for such goods shares a positive relationship with price.

Exercise | Q 6.2 | Page 26

Answer in detail:

Explain in detail the determinants of demand.

Solution:

In ordinary language, demand means a desire. Desire means an urge to have something. In Economics, demand means a desire which is backed by a willingness and ability to pay.

Definition of Demand:
According to Benham, “the demand for anything at a given price is the amount of it, which will be bought per unit of time at that price.”

The demand for goods is determined by the following factors:

1. **Price:** Price determines the demand for a commodity to a large extent. Consumers prefer to purchase a product in large quantities when the price of a product is less and they purchase a product in small quantities when the price of a product is high.
2. **Income**: Income of a consumer decides purchasing power which in turn influences the demand for the product. The rise in income will lead to a rise in demand for the commodity and a fall in income will lead to a fall in demand for the commodity.
3. **Prices of Substitute Goods:** If a substitute good is available at a lower price then people will demand cheaper substitute good than costly good. For example, if the price of sugar rises then demand jaggery will rise.
4. **Price of Complementary Goods:** Change in the price of one commodity would also affect the demand for other commodities. For example, car and fuel. If the price of fuel rises, then demand for cars will fall.
5. **Nature of product:** If a commodity is a necessity and its use is unavoidable, then its demand will continue to be the same irrespective of the corresponding price. For example, medicine to control blood pressure.
6. **Size of population:** Larger the size of population, greater will be the demand for a commodity and smaller the size of population smaller will be the demand for a commodity.
7. **Expectations about future prices:** If the consumer expects the price to fall in future, he will buy less in the present at the prevailing price. Similarly, if he expects the price to rise in future, he will buy more in the present at the prevailing price.
8. **Advertisement:** Advertisement, sales promotion scheme, and effective sales-manship tend to change the preferences of the consumers and lead to demand for many products. For example, cosmetics, toothbrush, etc.