**Question no. 1 Explain Production Possibility Curve**

The production possibility curve represents graphically alternative production possibilities open to an economy.

The productive resources of the community can be used for the production of various alternative goods.

But since they are scarce, a choice has to be made between the alternative goods that can be produced. In other words, the economy has to choose which goods to produce and in what quantities. If it is decided to produce more of certain goods, the production of certain other goods has to be curtailed.

Let us suppose that the economy can produce two commodities, cotton and wheat. We suppose that the productive resources are being fully utilized and there is no change in technology. The following table gives the various production possibilities.

**Alternative Production Possibilities**

| *Production Possi bilities* | *Cotton (in '000 quintals)* | *Wheat (in 000 quintals)* |
|---|---|---|
| A | 0 | 15 |
| B | 1 | 14 |
| C | 2 | 12 |
| D | 3 | 9 |
| E | 4 | 5 |
| F | 5 | 0 |

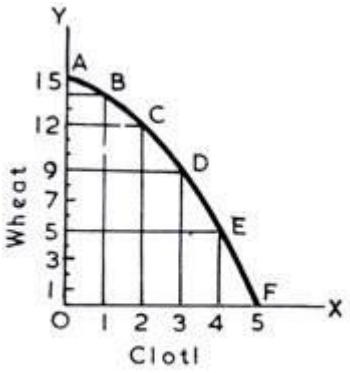
It all available resources are employed for the production of wheat, 15,000 quintals of it can be produced. If, on the other hand, all available resources are utilized for the production of cotton, 5000 quintals are produced. These are the two extremes represented by A and F and in between them are the situations represented by B, C, D and E. At B, the economy can produce 14,000 quintals of wheat and 1000 quintals of cotton.

At C the production possibilities are 12,000 quintals of wheat and 200u quintals of cotton, as we move from A to F, we give up some units of wheat for some units of cotton For instance, moving from A to B, we sacrifice 1000

quintals of wheat to produce 1000 quintals of cotton, and so on. As we move from A to F, we sacrifice increasing amounts of cotton.

This means that, in a full-employment economy, more and more of one good can be obtained only by reducing the production of another good. This is due to the basic fact that the economy's resources are limited.

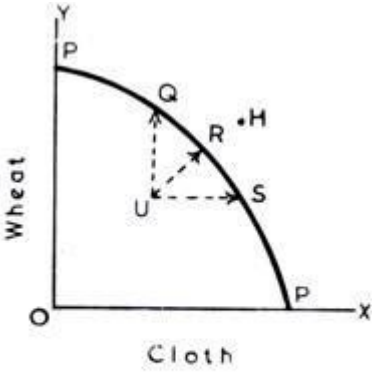
The following diagram (21.2) illustrates the production possibilities set out in the above table.




**Production Possibility Curve**
Fig. 21.2

In this diagram AF is the production possibility curve, also called or the production possibility frontier, which shows the various combinations of the two goods which the economy can produce with a given amount of resources. The production possibility curve is also called transformation curve, because when we move from one position to another, we are really transforming one good into another by shifting resources from one use to another.

It is to be remembered that all the points representing the various reduction possibilities must lie on the production possibility curve AF and not inside or outside of it. For example, the combined output of the two goods can neither be at U nor H. (See Fig. 21.3) This is so because at U the economy will be under-employing its resources and H is beyond the resources available.




**Problem of Under-Utilisation of Resources**

Fig. 21.3

**Question no. 2 Define Demand and explain its determinants.**

Demand for a commodity refers to quantities of a commodity which the consumers are willing and able to purchase at various possible prices during a particular period of time.

Determinants of Demand
The factors that influence the decision of households to purchase a commodity are known as determinants of demand.

We discuss below some of the important determinants of demand for a commodity:

## Price of commodity:

There is an inverse relationship between the price of the commodity and quantity demanded. It implies that lower the price of the commodity, the larger is the quantity demanded; and higher the price, the lesser is quantity purchased.

## Income of the consumer:

Income of the consumer is the basic determinant of the quantity demanded of a product as it determines the purchasing power of the consumer. There is a direct relationship between the income of the consumer and his demand for a product. With an increase in income, the demand for the commodity increases and vice versa.

## Prices of related goods or services

- *Complementary products* – An increase in the price of one product will cause a decrease in the quantity demanded of a complementary product. Example: Rise in the price of bread will reduce the demand for butter. This arises because the products are complementary in nature.

- *Substitute Product* – An increase in the price of one product will cause an increase in the demand for a substitute product. Example: Rise in price of tea will increase the demand for coffee and decrease the demand for tea.

## Consumer Expectations

Expectations of a higher income or expecting an increase in prices of goods will lead to an increase the quantity demanded. Similarly, expectations of a reduced income or a lowering in prices of goods will decrease the quantity demanded.

## Consumers' Tastes and Preferences

The level of demand is influenced also by the tastes and preferences of the consumers. Tastes and preferences depend on social customs, habits of the people, fashion, general lifestyle of the people, advertisement, new inventions, etc.

**Question no. 3 Explain Change in Demand and Change in Quantity Demanded**

**Changes in Demand and Quantity Demanded – (With Diagram)**

In economics the terms change in quantity demanded and change in demand are two different concepts.

Change in quantity demanded refers to change in the quantity purchased due to increase or decrease in the price of a product.

In such a case, it is incorrect to say increase or decrease in demand rather it is increase or decrease in the quantity demanded

On the other hand, change in demand refers to increase or decrease in demand of a product due to various determinants of demand, while keeping price at constant.

Changes in quantity demanded can be measured by the movement of demand curve, while changes in demand are measured by shifts in demand curve. The terms, change in quantity demanded refers to expansion or contraction of demand, while change in demand means increase or decrease in demand.

1. Expansion and Contraction of Demand:
The variations in the quantities demanded of a product with change in its price, while other factors are at constant, are termed as expansion or contraction of demand. Expansion of demand refers to the period when quantity demanded is more because of the fall in prices of a product. However, contraction of demand takes place when the quantity demanded is less due to rise in the price o a product.

For example, consumers would reduce the consumption of milk in case the prices of milk increases and vice versa. Expansion and contraction are represented by the movement along the same demand curve. Movement from one point to another in a downward direction shows the expansion of demand, while an upward movement demonstrates the contraction of demand.

Figure-11 demonstrates the expansion and contraction of demand:

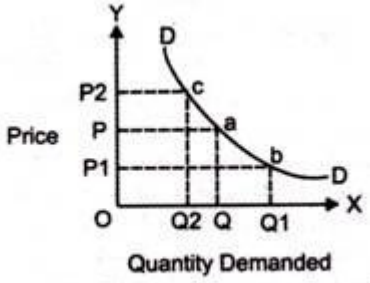



**Figure-11: Expansion and Contraction of Demand**

When the price changes from OP to OP1 and demand moves from OQ to OQ1, it shows the expansion of demand. However, the movement of price from OP to OP2 and movement of demand from OQ to OQ2 show the contraction of demand.

2. Increase and Decrease in Demand:
Increase and decrease in demand are referred to change in demand due to changes in various other factors such as change in income, distribution of income, change in consumer's tastes and preferences, change in the price of related goods, while Price factor is kept constant Increase in demand refers to the rise in demand of a product at a given price

On the other hand, decrease in demand refers to the fall in demand of a product at a given price. For example, essential goods, such as salt would be consumed in equal quantity, irrespective of increase or decrease in its price. Therefore, increase in demand implies that there is an increase in demand for a product at any price. Similarly, decrease in demand can also be referred as same quantity demanded at lower price, as the quantity demanded at higher price.

Increase and decrease in demand is represented as the shift in demand curve. In the graphical representation of demand curve, the shifting of demand is demonstrated as the movement from one demand curve to another demand curve. In case of increase in demand, the demand curve shifts to right, while in case of decrease in demand, it shifts to left of the original demand curve.

Figure-12 shows the increase and decrease in demand:

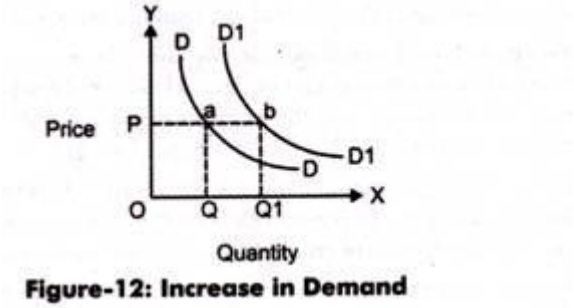


**Figure-12: Increase in Demand**

In Figure-12, the movement from DD to D1D1 shows the increase in demand with price at constant (OP). However, the quantity has also increased from OQ to OQ1.

Figure-13 shows the decrease in demand:

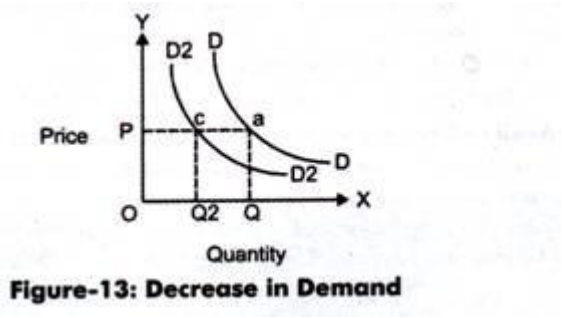


**Figure-13: Decrease in Demand**

In Figure-13, the movement from DD to D2D2 shows the decrease in demand with price at constant (OP). However, the quantity has also decreased from OQ to OQ2.

**Question no. 4: Explain the effect on Market Equilibrium with Change in Demand and Supply.**

**Changes in Market Equilibrium: Impact of Increase and Decrease!**

Changes in either demand or supply cause changes in market equilibrium. Several forces bringing about changes in demand and supply are constantly working which cause changes in market equilibrium, that is, equilibrium prices and quantities.

The demand may increase or decrease, the supply curves remaining unchanged. This would cause a change in equilibrium price and quantity.

Similarly, the increase or decrease in supply, the demand curve remaining constant, would have an impact on equilibrium price and quantity. Both supply and demand for goods may change simultaneously causing a change in market equilibrium.

Supply-demand analysis is an important tool of economics with which we can make forecasts about how prices and quantities will change in response to changes in demand and supply. We explain below the impact of changes in demand and supply on equilibrium price and quantity.

**Impact of Increase in Demand on Market Equilibrium:**

Increase in demand affects prices and quantities. Suppose there is increase in income of the working class due to the enhancement of their salaries by the Pay Commission. As a result of this increase in income, their demand for cloth for shirting will increase causing a shift in the entire demand curve for cloth to the right.

This will raise the equilibrium price and quantity of cloth, the supply curve of cloth remaining unchanged as is shown in Fig. 24.2. It is important to understand the chain of causation which leads to the increase in price and quantity as a result of increase in demand.

Consider Fig. 24.2, in which $D_0D_0$ and SS are the initial demand and supply curves of cloth. The increase in income causes a shift in the entire demand curve to the right to the new position $D_1D_1$ while the supply curve SS remains constant. It will be observed from Fig. 24.2, that with the shift in demand curve to $D_1D_1$ at the old price $OP_0$ excess demand of cloth equal to $E_0A$ has emerged. This excess demand of the good exerts upward pressure on price.

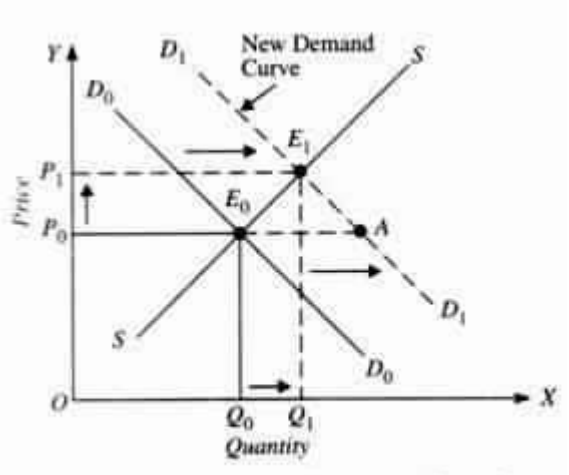



**Fig. 24.2.** *Impact of increase in Demand on Price and Quantity ($P\uparrow$, $Q\uparrow$).*

This will result in rise in price to OP where again quantity demanded equals quantity supplied and new market equilibrium is attained and excess demand is eliminated. It is worth noting that increase in demand is the most

important factor causing inflation, that is, rise in prices and is generally described as demand-pull inflation.

Though the term inflation is used in the context of a rise in general price level, but it has roots at the micro level (i.e., in case of individual goods). Apart from increase in income, a favourable change in consumer's preferences for a particular good, rise in price of its substitutes will also cause an increase in demand for a good.

**Impact of Decrease in Demand on Market Equilibrium:**

Now, take the opposite case of the impact of decrease in demand on market equilibrium, the supply curve remaining the same. The decrease in demand causes a shift in the entire demand curve to the left. This is graphically shown in Fig. 24.3, where originally demand curve $D_0D_0$ intersects the supply curve SS of eggs at point $E_0$ and determines equilibrium price equal to $OP_0$ and equilibrium quantity $OQ_0$. Now, suppose that doctors advise the people to take less eggs as it contains greater quantity of cholesterol which increases the risk of heart disease.

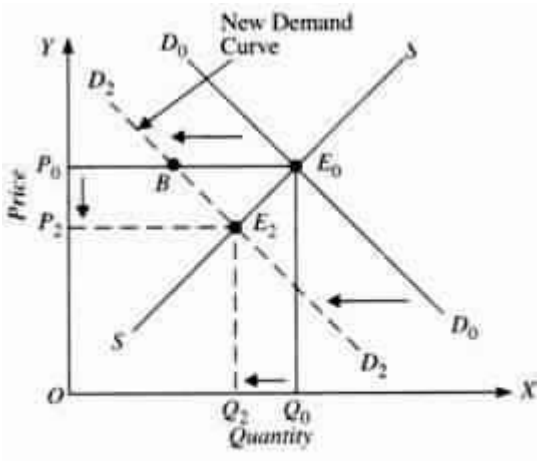



**Fig. 24.3.** *Impact of Decrease in Demand on Price and Quantity. (P↓, Q↓).*

Consequently, demand for eggs decreases causing a shift in the demand curve to the left to the new position $D_2D_2$. The new equilibrium between demand and supply is attained at price P, and quantity $Q_2$ which are lower than the initial equilibrium price $OP_0$ and quantity $OQ_0$.

Thus, the decrease in demand leads to the fall in both price and quantity. How does this come about? With the decrease in demand and consequently leftward shift in the demand curve to $D_2D_2$ supply curve remaining unchanged, at the original price $OP_0$, the surplus $E_0B$ of the quantity supplied over the quantity demanded emerges which exerts a downward pressure on price.

The sellers which cannot sell the quantity which they want to sell at the original price will make offers to sell eggs at a lower price. As a result, price will fall. As price falls, the quantity supplied of eggs is reduced. At the new price $OP_2$ the quantity supplied again equals quantity demand and surplus is eliminated.

Apart from the changes in preferences for a good as in case of eggs considered above, the decrease in incomes of the people such as when a large number of people are rendered unemployed during depression, the reduction of crop production in agriculture due to failure of Monsoon leading to the drop in incomes of the Indian farmers can also cause a decrease in demand for goods resulting in lowering of prices and quantities of goods.

**Impact of Changes in Supply on Market Equilibrium:**

Now, we explain the impact of changes in supply on price and output of commodity, the demand for the commodity remaining the same. Let us first examine the case of increase in supply. Suppose in a year there is good Monsoon in India yielding bumper crop of wheat.

This will increase the supply of wheat in the market causing a shift in its supply curve to the right. The impact of increase in supply of wheat on equilibrium price and quantity is graphically depicted in Fig. 24.4. Originally, demand curve DD and supply curve 55 of wheat intersect at point E and determine equilibrium price equal to OP and equilibrium quantity OQ exchanged between the sellers and buyers.

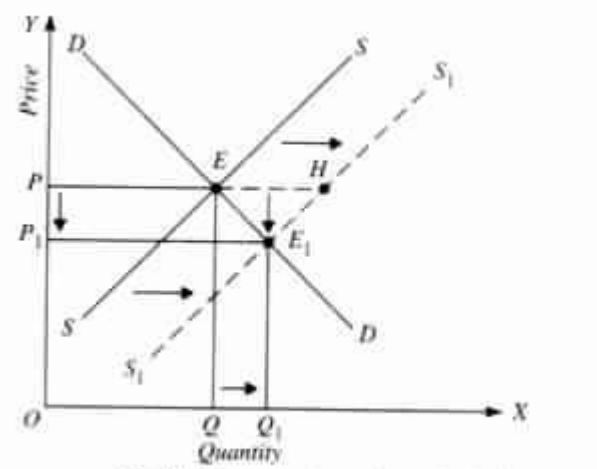



**Fig. 24.4.** *Increase in supply results in lowering of price and increase in quantity*

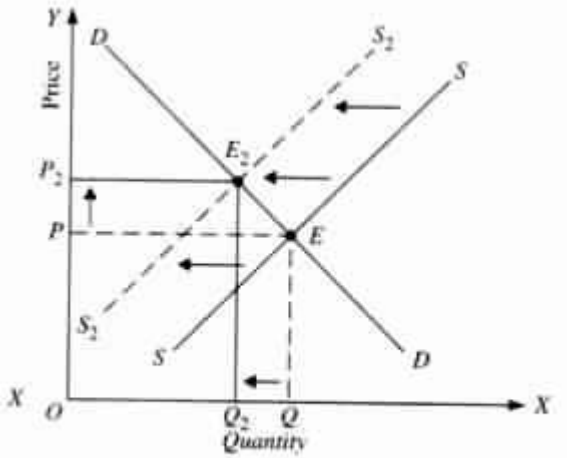



**Fig. 24.5.** *Decrease in supply cause rise in price and fall in quantity.*

Now, due to good monsoon resulting in bumper crop of wheat the supply curve of wheat shifts to the right from SS to the new position $S_1S_1$. The new supply curve $S_1S_1$ intersects the given demand curve DD at point $E_1$, at which the new lower equilibrium price $OP_1$ and larger quantity $OQ_1$ are

determined. Thus, the increase in supply leads to the fall in price and increase in equilibrium quantity.

Improvements in technology, reduction in the prices of factors and resources used in the production of a commodity or lowering of excise duty on a commodity also leads to the increase in supply of the commodity.

**Question no. 5 What is Law of Demand? What are its exceptions?**

The law of demand expresses a relationship between the quantity demanded and its price. It may be defined in Marshall's words as **"the amount demanded increases with a fall in price, and diminishes with a rise in price".** Thus it expresses an inverse relation between price and demand. The law refers to the direction in which quantity demanded changes with a change in price.

On the figure, it is represented by the slope of the demand curve which is normally negative throughout its length. The inverse price- demand relationship is based on other things remaining equal. This phrase points towards certain important assumptions on which this law is based.

the law of demand is explained in terms of Table 3 and Figure 7.

**Table 3.**
**Demand Schedule**

| Price (Rs) | Quantity Demanded |
|---|---|
| 5 | 100 Units |
| 4 | 200 Units |
| 3 | 300 Units |
| 2 | 400 Units |
| 1 | 600 Units |

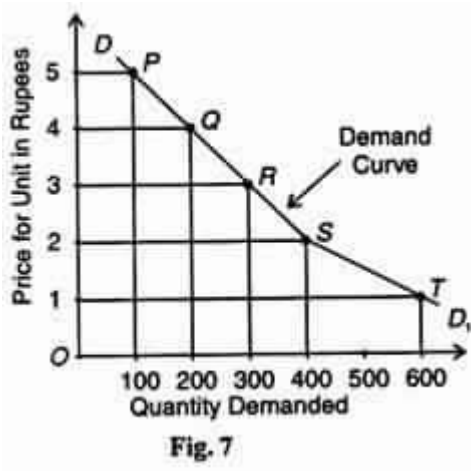


Fig. 7

The above table shows that when the price of say, orange, is Rs. 5 per unit, 100 units are demanded. If the price falls to Rs.4, the demand increases to 200 units. Similarly, when the price declines to Re.1, the demand increases to 600 units. On the contrary, as the price increases from Re. 1, the demand continues to decline from 600 units.

In the figure, point P of the demand curve $DD_1$ shows demand for 100 units at the Rs. 5. As the price falls to Rs. 4, Rs. 3, Rs. 2 and Re. 1, the demand rises to 200, 300, 400 and 600 units respectively. This is clear from points Q, R, S, and T. Thus, the demand curve $DD_1$ shows increase in demand of orange when its price falls. This indicates the inverse relation between price and demand.

*Exceptions to the Law of Demand:*

In certain cases, the demand curve slopes up from left to right, i.e., it has a positive slope. Under certain circumstances, consumers buy more when the price of a commodity rises, and less when price falls, as shown by the D curve in Figure 8. Many causes are attributed to an upward sloping demand curve.

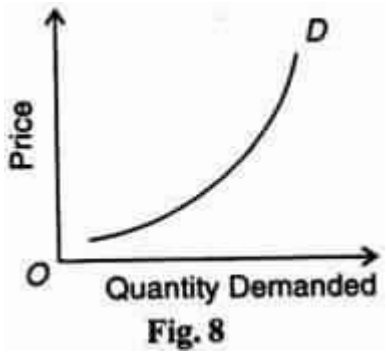


Fig. 8

**(i) War**

If shortage is feared in anticipation of war, people may start buying for building stocks or for hoarding even when the price rises.

**(ii) Depression:**
During a depression, the prices of commodities are very low and the demand for them is also less. This is because of the lack of purchasing power with consumers.

**(iii) Giffen Paradox:**
If a commodity happens to be a necessity of life like wheat and its price goes up, consumers are forced to curtail the consumption of more expensive foods like meat and fish, and wheat being still the cheapest food they will consume more of it. The Marshallian example is applicable to developed economies.

In the case of an underdeveloped economy, with the fall in the price of an inferior commodity like maize, consumers will start consuming more of the superior commodity like wheat. As a result, the demand for maize will fall. This is what Marshall called the Giffen Paradox which makes the demand curve to have a positive slope.

**(iv) Demonstration Effect:**

If consumers are affected by the principle of conspicuous consumption or demonstration effect, they will like to buy more of those commodities which confer distinction on the possessor, when their prices rise. On the other hand, with the fall in the prices of such articles, their demand falls, as is the case with diamonds.

**(v) Ignorance Effect:**
Consumers buy more at a higher price under the influence of the “ignorance effect”, where a commodity may be mistaken for some other commodity, due to deceptive packing, label, etc.

**(vi) Speculation:**
Marshall mentions speculation as one of the important exceptions to the downward sloping demand curve. According to him, the law of demand does not apply to the demand in a campaign between groups of speculators. When a group unloads a great quantity of a thing on to the market, the price

falls and the other group begins buying it. When it has raised the price of the thing, it arranges to sell a great deal quietly. Thus when price rises, demand also increases.

**(vii) Necessities of Life:**

Normally, the law of demand does not apply on necessities of life such as food, cloth etc. Even the price of these goods increases, the consumer does not reduce their demand. Rather, he purchases them even the prices of these goods increase often by reducing the demand for comfortable goods. This is also a reason that the demand curve slopes upwards to the right.