ASSUMPTIONS

Law of supply is valid if and only if the following conditions/ assumptions are met:

1. No Change in Technology:

This law is valid only if technology remains the same. If technology improves, supply increases while price remains the same or even price may decrease.

2. No Change in Cost of Production:

There should be no change in cost of production otherwise this law will not be valid. For instance, if cost of production increases price will rise but this rise in price will not lead to rise in supply.

3. No Change in the Price of Inputs:

If there is an increase in the price of inputs, there will be an increase in cost of production which in turn will lead to negate the statement of the law. Hence this law is valid only when prices of inputs do not change.

4. No Change in Weather Conditions:

This law is valid only when weather conditions do not change. For example, if winter season is off, quantity supplied of the products of this season will not be higher because of higher prices.

5. No New Substitutes:

If new and better substitute is available, the supply of original product decreases though its price remains the same.

6. No Change in Number of Producers:

When more producers enter in the market to produce the same commodity, supply increases though its price remains the same.

7. No Emergency:

If emergency like war, flood etc appears, supply of basic necessities decreases even at higher prices.

8. No Change in Price of Related Goods:

This law is not valid if price of related good, either substitute or complement, does not change. Let Pepsi and Coke are substitutes and price of Coke increases. Now supply of Pepsi increases to meet the increased demand for Pepsi though the price of Pepsi remains the same.

9. No Change in Taxes:

If new tax is imposed on the production of some commodity, its supply does not increase in spite of increase in its price.

10. No Change in Political Situations:

If political instability appears, supply does not increase though prices increase.

SUPPLY VS STOCK

SUPPLY

The product which a seller is willing and able to sell at a particular set of prices during a specific period of time is called supply.

STOCK

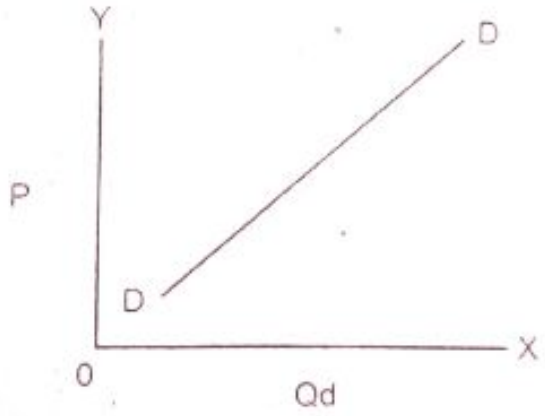
The product which a seller is able to sell but he is not willing to sell at a particular set of prices during a given time period, is called stock.

For instance, if a seller has 100 units of a product to sell but he is willing to sell only 60 units at a particular set of prices and he is not willing to sell the remaining 40 units, then 60 units are termed as supply and 40 units will be termed as stock.

In a nutshell, supply is the product which is offered for sale at a particular set of prices, during a specific time period. On the other hands, stock is the product which is not offered for sale at the given set of prices, during a specific time period.

EXCEPTIONAL DEMAND CURVE

It is a locus of points which shows positive relationship between price and quantity demanded. This positively sloped demand curve is called exceptional demand curve. See the figure:



This curve is observed in an exceptional situation i.e. a situation in which conventional law of demand does not operate. A brief list of these exceptions is as under:

MARKET EQUILIBRIUM

Definition:

In general,

"An equilibrium is a situation in which there is no tendency to change."

In economics literature,

"By equilibrium, we mean the best possible situation within the given conditions."

In an economy, we have various markets, i.e. goods market, money market etc. In all the markets, the general principle for equilibrium is that demand and supply forces of the respective market should be equal. For example, if we are interested in equilibrium in labour market, we find equilibrium when demand for labour is equal to supply of labour. At present we are concerned with goods market equilibrium.

"In goods market, equilibrium is the best possible situation, i.e. the situation in which quantity demanded is exactly equal to quantity supplied." Symbolically:

$$E \equiv Qd = Q_s$$

In other words, goods market equilibrium is a situation in which excess demand is equal to zero i.e. $Qd - Q_s = 0$

EQUILIBRIUM PRICE ($\bar{P}$)

The price at which goods market is in equilibrium (i.e $Qd = Q_s$), is called equilibrium price thus

$$\bar{P} \Rightarrow Qd = Q_s$$

Equilibrium price is the best possible price within given conditions and it is determined by the equality of demand and supply forces. Price is the pivot of goods market and all the economic decisions in both the key wings of an economy i.e. consumption wing and production wing are taken on the basis of price of goods and services. "In determination of price, demand and supply are like blades of scissors which together cut cloth." If $Qd > Q_s$, it indicates shortage and there will be upward pressure on price. If $Qd < Q_s$ it represents surplus and it leads to downward pressure on price. The third possibility is that $Q_d = Q_s$ and it is the best one and there is no tendency to change in price. In other words, it is the equilibrium price and both households (buyers) and firms (sellers) are satisfied with their plan and they haven't any tendency to change the price.

EQUILIBRIUM QUANTITY ($\bar{Q}$)

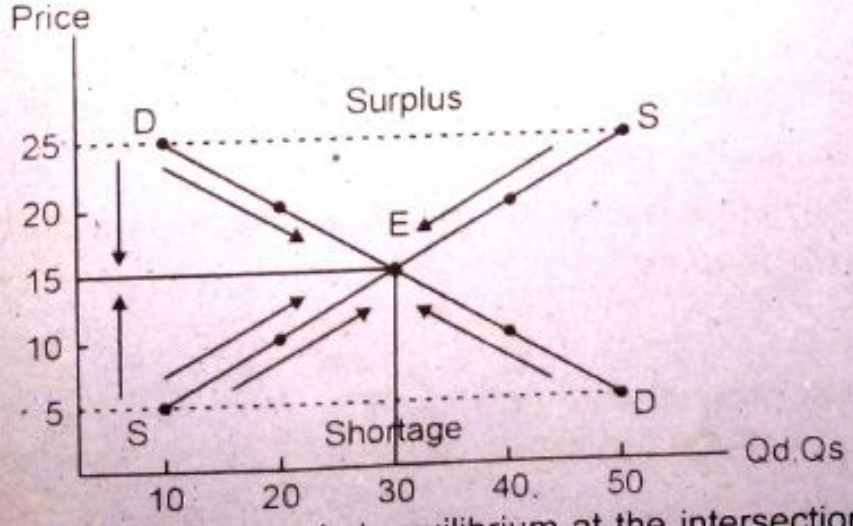
"The quantity at which goods market is in equilibrium (i.e. $Q_d = Q_s$), is called equilibrium quantity."

It is the best possible quantity within given conditions because it is the quantity at which the pivot of goods market, i.e. price has no tendency to change and there is neither shortage nor surplus in goods market.

Now we explain the above – mentioned concepts with the help of a table and diagram:

Price (P) Rs.	Quantity Demanded (Q_d) kgs.	Quantity Supplied (Q_s) kgs.	Market Condition
5	50	10	Qd > Qs
10	40	20	(Shortage)
15	**30**	**30**	**$Q_d = Q_s$ (Eqm)**
20	20	40	$Q_d < Q_s$
25	10	50	(Surplus)

The table shows that in case of shortage, there is upward pressure on price and in case of surplus, there is downward pressure on price. Eventually we find a price, i.e. Rs.15 at which there is zero pressure and there is no tendency to change. This situation appears when $Q_d = Q_s$ Hence Rs.15 is the equilibrium price. It is also called market clearing price. As far as the equilibrium quantity is concerned, it is obviously 30 kgs because 30 kgs is the quantity at which there is neither shortage nor surplus[18]. For graphical explanation, see the following figure:



The diagram shows that we find market equilibrium at the intersection point of demand curve and supply curve. We get the intersection point by the interaction of demand and supply forces. This interaction has been depicted by the arrows. In case of surplus, there is downward pressure on price and vice versa. Due to change in price, Q_d and Q_s also

change and we move along demand curve and supply curve. Finally we find an intersection point of demand and supply curves which reflects equilibrium of goods market. By drawing perpendiculars on quantity-axis and price-axis, we can find equilibrium quantity and equilibrium price respectively. In the given figure E is equilibrium point and Rs.15 and 30kgs are equilibrium price ($\bar{P}$) and equilibrium quantity ($\bar{Q}$) respectively.

ASSUMPTIONS

Goods market equilibrium is discussed under perfect competition; hence we observe the following assumptions of perfect competition in this regard.

i. Product is homogeneous, i.e. all the units are identical in taste, volume, colour, packing etc.
ii. There is large number of buyers and sellers and no individual buyer or seller can disturb the price by individual action.
iii. Entry and exit is free.
iv. Both buyers and sellers have perfect knowledge.
v. The factors of production are perfectly elastic i.e. all factors of production are available at their market price and there is no question of shortage.
vi. The factors of production are perfectly mobile.

Keeping in view these assumptions, market equilibrium is discussed in a situation in which both the buyers and sellers are price – takers.

Mathematical Explanation

We know that market equilibrium is a situation in which market in clear, i.e. excess demand is zero. This situation appears when $Qd = Q_s$. Symbolically:

$$E \equiv Qd = Q_s$$
$$\Rightarrow Q_d - Q_s = 0$$

Where R.H.S $(Q_d - Q_s)$ indicates excess demand. The price at which market is clear, i.e. $Q_d = Q_s$ is termed as eqm. Price (denoted by $\bar{P}$).

The quantity at which market is clear, i.e $Q_d = Q_s$ is called eqm quantity (denoted by $\bar{Q}$).

We can find $\bar{P}$ and $\bar{Q}$ as under:

Example:

$$Q_d = 15 - 2P$$
$$Q_s = -3 + 4P$$

Goods market is in equilibrium when $Q_d = Q_s$.

Putting the values of demand and supply equations in market eqm condition, we have:

$$15 - 2P = -3 + 4P$$
$$-2P - 4P = -3 - 15$$
$$-6P = -18$$
$$\bar{P} = 3$$

We can find eqm quantity ($\bar{Q}$) by putting the value of $\bar{P}$ in either of the equation.

$$\bar{Q} = 15 - 2(3) = -3 + 4(3) = 9$$

It reveals that equilibrium price ($\bar{P}$) is 3 and equilibrium quantity($\bar{Q}$) is 9 in the given example.

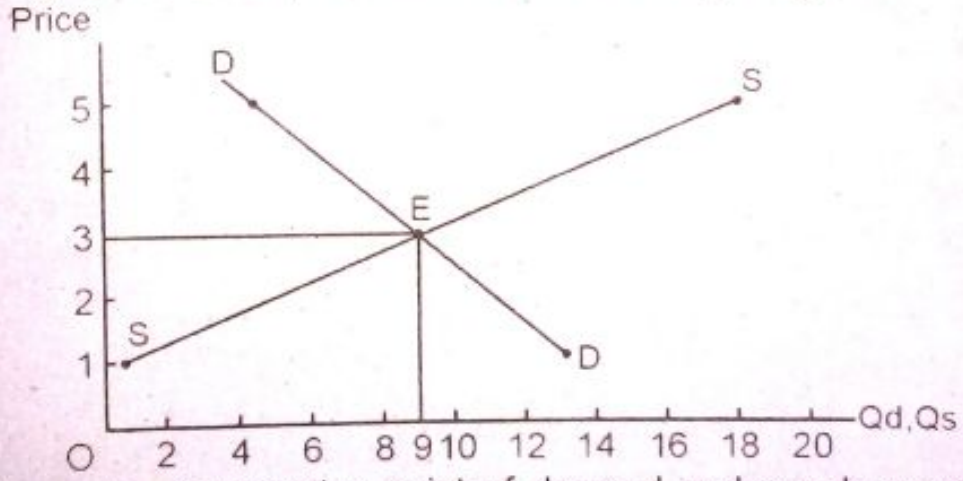
Geometrical Explanation

In this connection first we construct a schedule on the basis of the given demand and supply equations.

Schedule

Price	Q_d	Q_s
1	13	1
3	**9**	**9**
5	5	17

In the light of the given schedule, we construct the following diagram:



In the given figure, the intersection point of demand and supply curves, i.e. point E reflects market equilibrium point because it is the point at which $Q_d = Q_s$. By drawing perpendicular on quantity-axis we find $\bar{Q} = 9$ and on price-axis we find $\bar{P} = 3$.