MARKET EQUILIBRIUM

Ql. How market equilibrium is determine under perfect competition?

Ans. Under perfect competition market equilibrium is determined where market demand is equal to market supply. Market equilibrium is determined when the quantity demanded of a good become equal to quantity supply. The price determined corresponding to market equilibrium is known as **Equilibrium Price** and the corresponding quantity is known as **Equilibrium Quantity**.

Price	Market Demand	Market Supply	Remarks
2	100	20	Excess Demand
4	80	40	MD>MS
6	60	60	**Equilibrium**
8	40	80	Excess Supply
10	20	100	MS<MD

Diagram:

Market demand and market supply curve intersect at point E which is the market equilibrium. At this point Rs. 6 is determined as equilibrium price and 60 as equilibrium quantity.

- Any price above 6 is not the equilibrium price as it will result in surplus i.e. supply would cause competition among seller. In order to sell excess stock, the price would come down to the equilibrium price of 6.
- Any price below Rs. 6 is not the equilibrium price as due to excess demand, buyers would be ready to pay higher price to meet their demand. As a result, price would rise up to equilibrium price of Rs. 6.

Q2. Explain the excess demand.

Ans. Excess demand refers to a situation, when quantity demanded is more t an quantity supplied at the prevailing market price.

Diagram:-

- Market equilibrium is determined at point E at which OQ is the equilibrium quantity and OP is the equilibrium price.
- If market price is OP1, then market demand of OQ1 is more than the market supply of OQ2. This situation is termed as excess demand.
- The excess demand of OQ1 — OQ2 will lead to competition among buyer as each buyer wants to have the commodity.
- Buyer would be ready to pay higher price to meet their demand, which will lead to rise in price.
- With increase in price market demand will fall due to law of demand and market supply ill rise due to law of supply.
- Eventually price will increase to a level where market demand become equal to market supply. At OQ and equilibrium price OP.

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Q3. Explain excess supply.

Ans. Excess supply refers to a situation when the quantity supplied is more than quantity demanded at the prevailing market price.

Diagram:

- Market is equilibrium at OP price & OQ quantity.
- If market price is OP1, then market supply of OQ1 is more than the demand of OQ2.
- Excess supply of Q1Q2 leads to competition among seller as each seller wants to sell his product.
- Seller would be ready to charge lower price to sell the excess stock which will lead to fall in price.
- With decrease in price, market supply will fall due to law of supply and market demand will rise due to law of demand.
- The price will continue to fall till excess supply is wipedout.
- Eventually the price will decrease to a level where market demand become equal to market supply at OQ and equilibrium price of OP is attained.

❖ **VIABLE INDUSTRY**: - According to the market, an industry is said to be viable if its Supply and demand curve meets each other on positive axis. As presented in the given diagram, the demand curve (DD) and the supply curve (SS) intersect each other at point `E' and hence the firm its equilibrium price (OP) and quantity (OQ).

Diagram:

❖ **NON-VIABLE INDUSTRY**: - An industry is said to be non viable if its supply and demand curve never intersect each other on positive axis. As presented in the given diagram, the demand curve (DD) and the supply curve (SS) never intersect each other in positive axis. So the firm would never reach the equilibrium.
Diagram:

1. **CHANGE IN DEMAND**: - If the market is in equilibrium, that is the demand and ' supply of the commodity meets each other at a certain point. Now for an equilibrium market, if the demand of the commodity changes, then the following impacts would be seen in the market.

I. **INCREASE IN DEMAND**:

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The above diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if the demand for the good increases, then

- The demand curve will shift parallel to the right (DD to D'D").
- The supply curve will remains as same as earlier (SS).
- The equilibrium price will increase from OP to OP'.
- The equilibrium quantity will increase from OQ to OQ.
- The equilibrium point \\ ill also changes from E to F.

II. **DECREASE IN DEMAND**: -

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The above diagram represents,

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- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if the demand for the good decreases, then

- The demand curve will shift parallel towards left (DD to IT D').
- The supply curve will remains as same as earlier (SS).
- The equilibrium price will decrease from OP to OP'.
- The equilibrium quantity will decrease from OQ to OQ'.
- The equilibrium point will also changes from E to E.

2. **CHANGE IN SUPPLY**: - For an equilibrium market, if the supply of the commodity changes, then the following impacts would be seen in the market. I

I. **INCREASE IN SUPPLY**:

The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

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Now if the demand for the good increases, then

- The demand curve will shift parallel towards right (DD to D'D).
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- he equilibrium quantity will decrease from OQ to OQ'.
- The equilibrium point will also changes from E to F.

Diagram:

❖ **SIMULTANEOUSLY INCREASE IN DEMAND AND SUPPLY**: - Till now, we had learnt that what will be the effects of change in demand or change in supply of the commodity when market in is equilibrium. Now, we shall find out the effect in the market if both demand and supply of the commodity changes at the same time. (simultaneous change).

1. **INCREASE IN DEMAND> INCREASE IN SUPPLY**:

The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if there exist simultaneous increase in both demand and supply of the commodity, but the increase in demand is greater than the increase in supply. Then the following changes will appear in the market.

- The supply curve will shift parallel towards right (SS to S'11/).
- The demand curve will also shift parallel towards right (DD to D'D'). (But the change in demand is greater than that of change in supply)
- The equilibrium price will increase from OP to OP'.
- The equilibrium quantity will also increase from OQ to OQ'.
- The equilibrium point will also changes from E to E'.

Diagram

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2. **INCREASE IN DEMAND = INCREASE IN SUPPLY**:-

Diagram:

The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if there exist simultaneous increase in both demand and supply of the commodity, and the increase in demand is equal to the increase in supply. Then the following changes will appear in the market:-

- The supply curve will shift parallel towards right (SS to S'D').
- The demand curve will also shift parallel towards right (DD to D'D). (But the change in demand must be equal to the change in supply)
- The equilibrium price will remains same (OP).
- The equilibrium quantity will increase from OQ to OV.
- The equilibrium point will also changes from E to E'.

3. **INCREASE IN DEMAND<INCREASE IN SUPPLY**:-

The diagram represents

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.c.. at point E with equilibrium price OP and equilibrium quantity OQ.

Diagram:

Now if there exist simultaneous increase in both demand and supply of the commodity, but the • in grease in demand is less than the increase in supply. Then the following changes will appear in th4 market:-

- The supply curve will shift parallel towards right (SS to S S').
- The demand curve will also shift parallel towards right (DD to D'D'). (But the change in demand is less than that of change in supply)
- The equilibrium price will decreases from OP to OP'.
- The equilibrium quantity will increase from OQ to OQ'.
- The equilibrium point will also changes from E to E'.

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- **SIMULTANEOUS DECREASE IN DEMAND AND SUPPLY**: -

1. **DECREASE IN DEMAND>DECREASE IN SUPPLY**:-

Diagram:

The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if there exist simultaneous decrease in both demand and supply of the commodity, .and the decrease in demand is greater than the decrease in supply. Then the following changes will appear in the market:-

- The supply curve will shift parallel towards right (SS to S S').
- The demand curve will also shift parallel towards left (DD to D'D'). (But the change in demand must be equal to the change in supply)
- The equilibrium price will decrease from OP to OP'.
- The equilibrium quantity will decrease from OQ to OQ'.
- The equilibrium point will also changes from E to E'.

2. **DECREASE IN QUANTITY=DECREASE IN S UANTITY SUPPLY**:-

   The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.c. at point E with equilibrium price OP and equilibrium quantity OQ.

Diagram:

Now if there exist simultaneous decrease in both demand and supply of the commodity, and the decrease in demand is equal to the decrease in supply. Then the following changes will appear in the market:-

- The supply curve will shift parallel towards left (SS to S'S').
- The demand curve will also shift parallel towards left (DD to D'D). (But the change in demand must be equal to the change in supply)
- The equilibrium price will remains same (OP).

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- The equilibrium quantity will decrease from OQ to OQ'. The equilibrium point will also changes from E to E'.

3. **<u>DECREASE IN QUANTITY DEMAND < DECREASE IN QUANTITY SUPPLY</u>**:-

The diagram represents,

- The demand curve DD which slopes downward from left to right.
- A supply curve SS slopes upward from left to right.
- When demand and supply of the commodity are equal, the firm finds its equilibrium i.e. at point E with equilibrium price OP and equilibrium quantity OQ.

Now if there exist simultaneous decrease in both demand and supply of the commodity, and the decrease in demand is less than the decrease in supply. Then the following changes will appear in the market:-

- The supply curve will shift parallel towards left (SS to S'S').
- The demand curve will also shift parallel towards left (DD to D'D'). (But the change in demand must be equal to the change in supply)
- The equilibrium price will increase from OP to OP'.
- The equilibrium quantity will decrease from OQ to 0Q". • The equilibrium point will also changes from E to E'.

❖ **<u>SPECIAL CASES</u>**: - In this case, we assume either demand or supply of the commodity be perfectly elastic or perfectly inelastic. (students are advised just to overview this topic, and not get in detail of this topic as this could be a part of your knowledge only. That is why only diagram are made, no explanation is given, in case any question comes in the paper, then the explanation would be given in accordance to the above explanations.)

1. **<u>CHANGE IN DEMAND WHEN SUPPLY IS PERFECTLY ELASTIC</u>**: - **INCREASE DECREASE**

2. **<u>CHANGE IN DEMAND WHEN SUPPLY IS PERFECTLY INELASTIC</u>**: - In case when supply curve is perfectly inelastic, the curve would be parallel to y-axis. Which means that the supply curve doesn't react to the change in price.
   INCREASE **DECREASE**

3. **<u>CHANGE IN SUPPLY WHEN DEMAND IS PERFECTLY ELASTIC</u>: -**
   INCREASE **DECREASE**

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4. CHANGE IN SUPPLY WHEN DEMAND IS PERFECTLY INELASTIC: -

- **<u>PRICE CEILING</u>**:- Government plays an important role in controlling the prices or essential commodities (wheat. sugar. kerosene etc.) when the equilibrium price, determined by free play of demand and supply is too high for the poor people. Price **Ceiling refers to fixing the maximum price of a commodity at a level lower than the equilibrium price.**
  Let us clear this point by considerim2, the commodity 'wheat" and its price determination in fig.
  In the diagram, demand curve DD and supply curve SS of wheat intersect each other at point E and, as a result, equilibrium price of OP is determined.
- Suppose, the equilibrium price of OP is very high and many poor people are unable to afford wheat at this price.

- As wheat is an essential commodity, government interferes and fixes the maximum price (known as Price Ceiling) at OP] which is less than the equilibrium price OP.
- At this controlled price (OP1), the quantity demanded (OQd) exceeds the quantity supplied (0()s) by QsQd.
- It creates a shortage of MN and some consumers of wheat go unsatisfied. o meet excess demand. government may enforce the rationing system.
- *Rationing is U technique adopted by the government to sell a minimum quota of essential commodities at a price less than equilibrium price to supply goods to the poor commodity at a cheaper price.*

  Under this system, consumers are given ration cards coupons to buy commodities at cheaper price from ration shops.
  But, price ceiling through rationing system has certain drawbacks:

a. **<u>BLACK MARKETS</u>**:- A black market is any market in which the commodities are sold' at a price higher than the maximum price fixed by the government. Black markets exist because consumers are ready to pay a price more than the price fixed by the government to get more of the limited amount of commodity available.

b. **<u>DEFFICULTY IN OBTAINING GOODS FROM RATION SHOPS</u>**:- Consumers have to stand in long queues to buy goods from ration shops. Sometimes. commodities not available in the ration shops or goods are of inferior quality.

- P**<u>RICE FLOOR OR MINIMUM SUPPORT PRICE (MSP)</u>**;- Government intervenes in the process of price determination through Price Floor. **Price Floor refers to the maximum price (above the equilibrium price), fixed by the government, which the producers must be paid for their produce.**
- When government feels that the price fixed by the forces of demand and supply is not remunerative from the producers' point of view, then it fixes a price (known as Price Floor) which is more than the equilibrium price.

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EXAMPLES;- Imposition of Price Floor are agricultural price support programmes and minimum wage legislation.
Diagram:

Equilibrium is determined at point E when demand curve DD and supply curve SS of wheat intersect each other. The equilibrium price of OP is determined.

- Suppose. to protect the producers' interest and to provide incentive For further production. government declares OP2 as the minimum price (known as Price Floor) which is more than the equilibrium price of OP.
- At this support price (0P2). the quantity supplied (OQs) exceeds the quantity demanded (QQd) by QsQd.
- This creates a situation of surplus in the market which is equivalent to MN in the diagram. The excess supply may be purchased by the government either to increase its buffer stocks or for exports.

❖ **SUMMARY**:-

- **Market equilibrium** refers to the situation when the quantity demanded of a commodity becomes equal to the quantity supplied.
- **Equilibrium Price** refers to the •price at which the quantity demanded of a commodity •
equal to the quantity supplied.
- **Equilibrium Quantity** refers to the quantity at which the quantity demanded or commodity is equal to the quantity supplied.
- **At Equilibrium Price,** there is neither shortage nor excess of demand and supply .
- **Excess Demand** refers to a situation when the quantity demanded is more than the quantity supplied at the prevailing market price.
- **Excess Supply** refers to a situation when the quantity supplied is more than the quantity demanded at the prevailing market price.
- **Viable Industry** refers to an industry in which the supply curve and demand curve intersect each other in the positive axes.
- **Non-Viable industry** refers to an industry in which the supply curve and demand cur \ C never intersect each other in the positive axes.
- **Effect on Equilibrium** Price and Quantity when demand and / or Supply changes.

Equilibrium price remains the same

a. Increase in demand = Increase in Supply
b. Decrease in demand— Decrease in Supply
c. Increase in demand when the supply is perfectly elastic
d. Decrease in demand when the supply is perfectly elastic
e. Increase in supply when the demand is perfectly elastic
f. Decrease in supply when the demand is perfectly elastic

Equilibrium quantity remains the same

a. Increase in demand = Decrease in Supply
b. Decrease in demand = Increase in Supply
c. Increase in demand when the supply is perfectly elastic
d. Decrease in demand when the supply is perfectly elastic

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e. Increase in supply when the demand is perfectly elastic
f. Decrease in supply when the demand is perfectly elastic

Equilibrium price and equilibrium quantity rise

a. Increase in demand when supply remains the same
b. Increase in demand > Increase in supply
c. Increase in demand > Decrease in supply

Equilibrium price and determination quantity fall

a. Decrease in demand when supply remains the same
b. Decrease in demand > Decrease in supply
c. Decrease in demand > Increase in supply

Equilibrium price rises and equilibrium quantity falls

a. Decrease in supply when demand remains the same
b. Decrease in demand < Decrease in supply
c. Increase in demand < Decrease in supply

Equilibrium price falls and equilibrium quantity rises

a. Increase in supply when demand remains the same
b. Increase in demand < Increase in supply
c. Decrease in demand < Decrease in supply

- **Price Ceiling** refers to fixing the maximum price of commodity at a level lower than the equilibrium price.
- **Price Floor** refers to the minimum price (above the equilibrium price). fixed by the government, which the producers must be paid for their produce.

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