3. IMPERFECT COMPETITION

Imperfect competition covers all situations where there is neither pure competition nor pure monopoly. In the actual world it is the region of imperfect competition lying between the above two extreme limits.

A market structure which is lacking of any one of the assumptions of perfect competition is known as imperfect competition. The imperfect competition market consists of the following three markets.

a. Duopoly **b.** Oligopoly **c.** Monopolistic Competition

(a) Duopoly

It is a market structure in which there may be two monopolists instead of one who share the monopoly power. Under duopoly the simplest cases will be those where the two monopolists are supposed to be selling an identical product. Then, there will be collusion between the two. They may agree on a price or assign quotas or divide territory in which each is to market his product. This situation will create conditions like a monopoly if cost curves of the Duopolists are identical. If there is no product differentiation, the consumers are indifferent between the two producers and the same price must be charged by both in the long run. When there is product differentiation, each producer has his own good will. There will be no agreement between them. The firm with better product can earn abnormal profits. These are the important Duopoly models, the Cournot's Duopoly model, Bertrand's Duopoly model, and Stackelberg's Duopoly model.

(b) Oligopoly

It is market structure in which more than two or a few sellers are found in a monopolistic position, is called an oligopoly.

Characteristics

These are important characteristics of an oligopoly market.

(i) Every seller is so influential that his rivals cannot ignore the adverse effect on them of a given change in the price-output policy of any single sellers.

(ii) Every seller can exercise an important influence on the price output policies of his rivals.

(iii) The demand curve is indeterminate because any step taken by his rivals may change the demand curve.

(iv) The rival consciousness as a fact of interdependence is an important feature of oligopolistic market.

(v) Keen rivalry among oligopolists may create conditions of monopolistic competition.

(vi) Sometimes, the oligopolist firms co-operate with each other in the fixing of price and output of goods. To avoid from uncertain circumstances, the collusive oligopoly models have been introduced.

In such models, the firms enter into some type of agreement. The agreement may be open as well as secret.

These agreements are known as cartels and price Leadership models. The cartel is an organization of sellers and its objective is to minimize the role of competitive forces in the market e.g. cartels aiming at joint profit maximization or market sharing cartels. There are also price leadership oligopoly models e.g. price leadership by the low cost firm and dominant firm price leadership. Now an important model of oligopoly is discussed as below.

The Kinked-Demand curve model or Sweezy's Equilibrium Model

In the year 1939, Paul Sweezy introduced the kinked demand curve as an operational tool for the determination of equilibrium in an oligopolistic market.

Conditions of the Model

This model operates under certain conditions as follows.

(i) Aim of the firm is to maximize his profits.

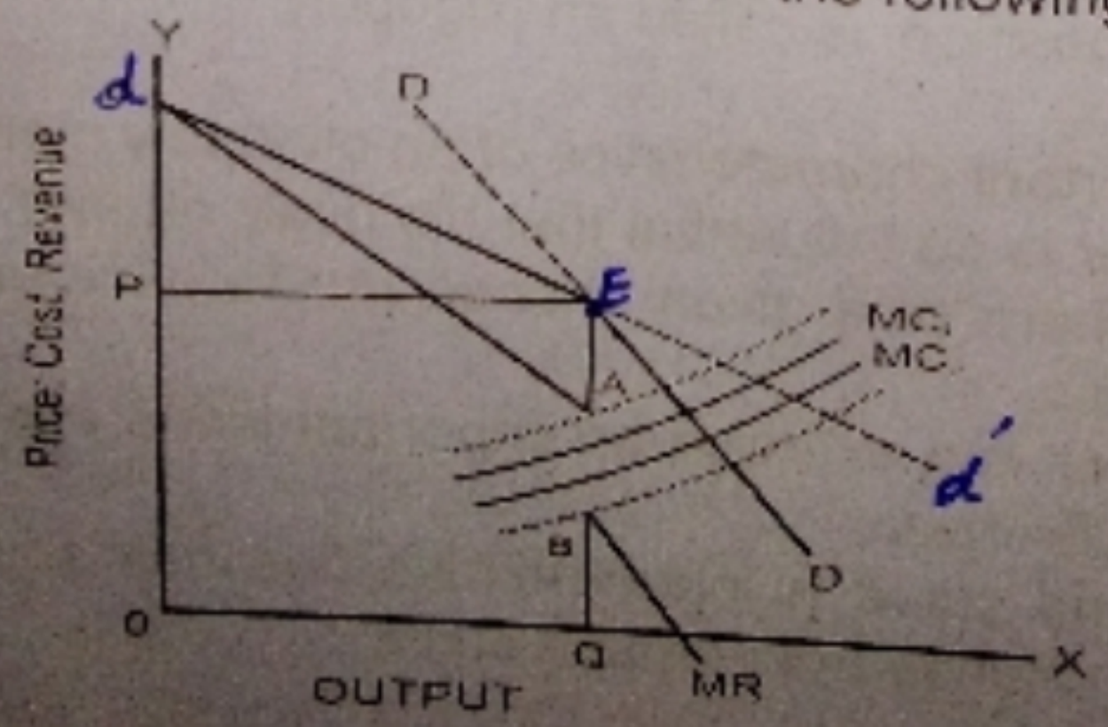
(ii) The demand curve is indeterminate because any step taken by his rivals may change its demand curve.

(iii) If a firm reduces the price of its product to get more buyers, he expects that his competitors will follow him.

(iv) If a firm increases the price of its product, his competitors will not follow the price increase.

(v) A firm has to face two demand curves i.e. an individual demand curve as well as a proportional demand curve.

The above oligopoly theory is explained in the following diagram.



In the diagram, dd' the individual demand and DD the proportional demand curve intersect each other at equilibrium point 'E'.
If the firm increases its price, it will lose its customers and the relevant demand curve is the section dE of the dd' curve. On the other hand, if the firm decreases its price. the relevant section of demand curve is "ED". Hence a new demand curve is dED which has a kink at point 'E'. The upper section is more elastic while the lower section is less elastic. Its MR curve has discontinuation at the level of output and the MR has two segments. The segment dA corresponds to the upper part of demand curve while the segment from point 'B' corresponds to the lower part of the kinked demand curve. The MC curve passes some where through the discontinuous segment AB because the maximize profits are defined by equating MC with MR. At any point to the left of the Kink, MC is below the MR while to the right of the kink" the MC is larger than the MR.
Therefore, there is a stable equilibrium of firm defined by the point of Kink of the kinked demand curve dED.

(c) MONOPOLISTIC COMPETITION

It is a market structure which has the following characteristics.

(i) **Buyers and Sellers**
There are large number of buyers and sellers in this group.

(ii) **Profit Maximization**
A firm is aiming at maximizing its profits in short and long run.

(iii) **Free entry and exit**
There is free entry and exit of firms in the group.

(iv) **Close substitutes**
The products of the sellers are differentiated but are close substitutes of one another. E.g. difference in advertising, attractive packing, brand, attitudes of sellers etc.

(v) **Given Technology**
Prices of factors and technology are given.

(vi) **U-shaped Cost curves**
Cost curves for all producers are identical in nature which are U-shaped.

(vii) **Advertisement**
Every firm tries to attract buyers by using the instruments of advertisement and uses the method of various incentives through advertisement.

(viii) **Negative slope of demand curve**
The down ward sloping the demand curve of a firm is highly elastic because of large number of sellers in the group. So the individual

demand curve is a planned sales curve because it is drawn on the assumption that the competitors will not react to change in the particular firm's price. The consumer's preferences are distributed among the different products due to brand loyality of the consumers and give rise to a negatively sloping demand curve.

Firm's Equilibrium under Monopolistic Competition

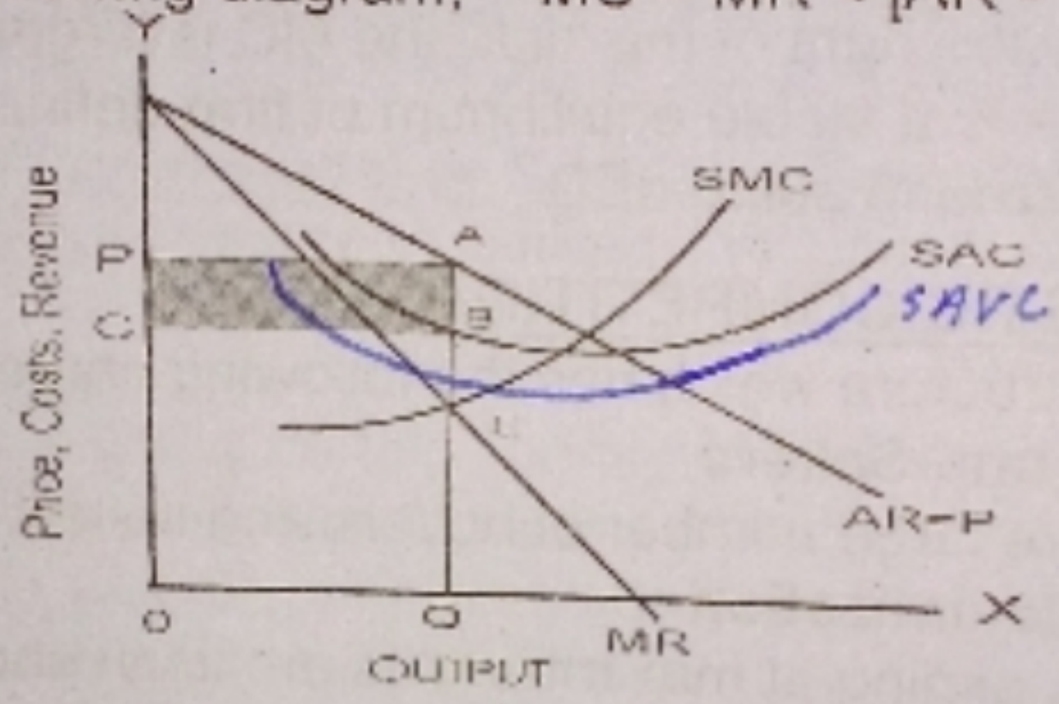
There are two types of equilibrium of firm under monopolistic competition regarding the time period.

A. Short-run Equilibrium

These are the various possible situations of firm's equilibrium relating to its profits and losses in the short run.

1. Abnormal profits.

The firm is in equilibrium at point E where SMC = MR, OQ output sold at price OP. In the following diagram, MC = MR < [AR = P] > AC



Therefore, firm is obtaining abnormal profit i.e.

$$TR = P \times Q = OP \times OQ = OQAP$$
$$TC = AC \times Q = BQ \times OQ = OQBC$$
$$\pi = TR - TC$$
$$= OQAP - OQBC = ABCP$$

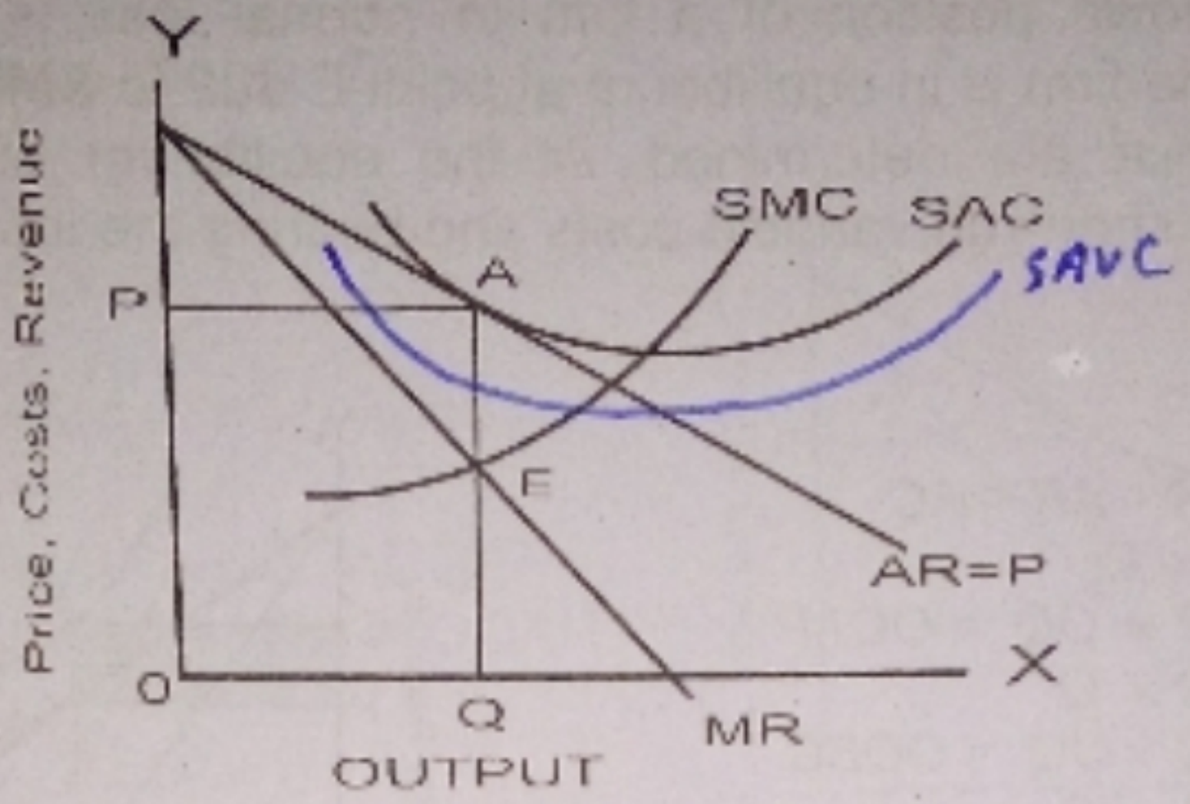
Therefore, the firm is obtaining abnormal profit equal to the shaded area ABCP.

2. Normal Profit

The normal profit of the firm is explained in the diagram.

In the diagram SMC = MR at point E. Then the equilibrium output OQ is sold at price OP. At point A, AR=P=SAC and at point E, MC=MR<[AR=P=SAC]. Therefore, firm is obtaining normal profit including

in SAC which is not shown as shaded area in the diagram.



$$TR = P \times Q$$
$$= OP \times OQ$$
$$= OQAP$$
$$TC = AC \times Q$$
$$= AQ \times OQ = OQAP$$
$$\pi = TR - TC$$
$$= OQAP - OQAP = 0$$

Therefore, the abnormal profit is nil, which is not shown as shaded area in the diagram but normal profit is included in SAC.

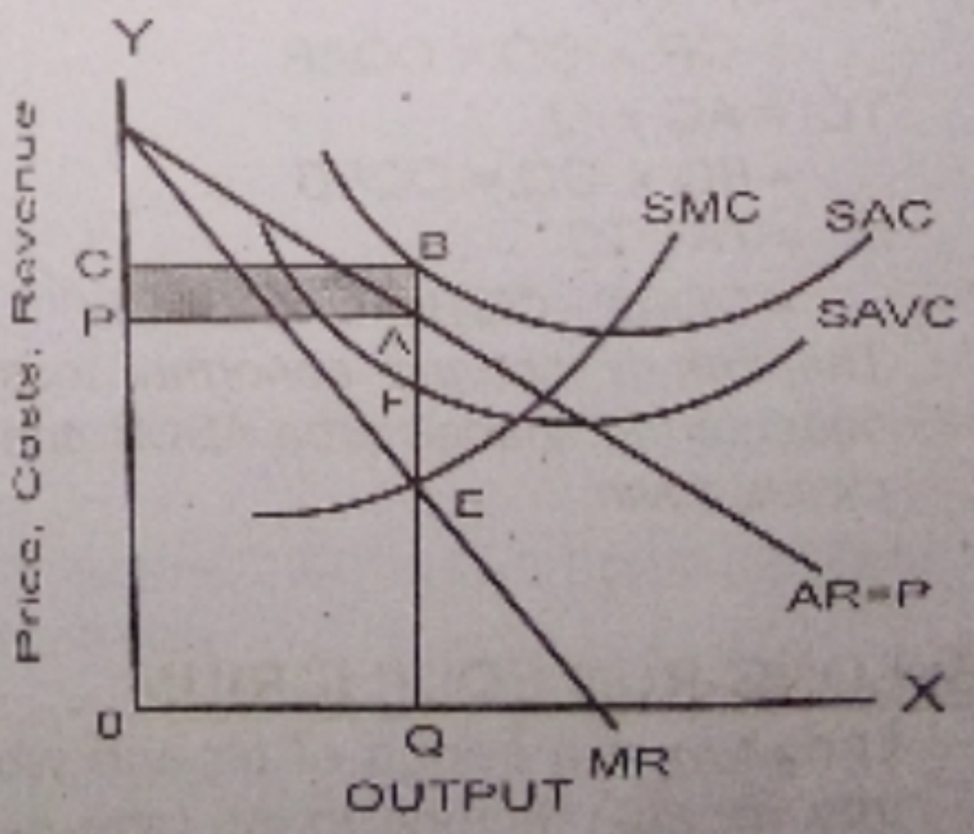
3. Normal loss

The normal loss of a firm is explained in the figure which is equal to a portion of average fixed cost. In the diagram, SMC = MR at point E. SAC curve is above the point 'A' but SAVC cuts BQ at point F.

Therefore, a firm is covering average variable cost as well as a portion of average fixed cost.

$$TR = P \times Q$$
$$= OP \times OQ$$
$$= OQAP$$
$$TC = AC \times Q$$
$$= BQ \times OQ = OQBC$$
$$\pi = TR - TC$$
$$= OQAP - OQBC = -(ABCP)$$

Therefore, ABCP is the loss of a firm which is equal to a portion of AFC and it is shown as shaded area in the diagram.



4. Shut Down

The shut down position of a firm or normal loss is explained in the diagram. The firm is in equilibrium at point E due to SMC=MR, OQ output and OP price are determined. At the equilibrium output firm is only covering its short-run variable costs and bearing the loss of average fixed cost AFC.

$MC = MR < AR < AC$

$TR = P \times Q$

$= OP \times OQ = OQAP$

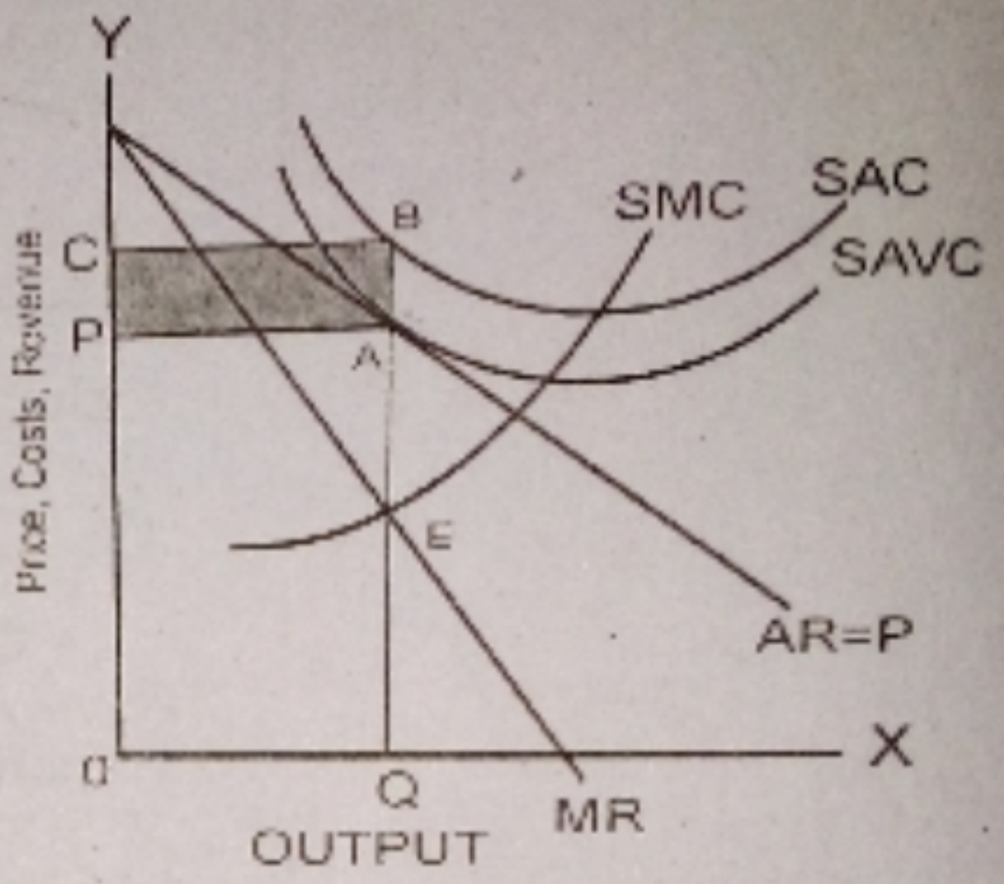
$TC = AC \times Q$

$= BQ \times OQ = OQBC$

$\pi = TR - TC$

$= OQAP - OQBC = -(ABCP)$

Therefore, firm is bearing the loss equal to the shaded area ABCP. Point A is shut-down point of the firm. By decreasing price from P, firm has to close down.



5. Close-Down

In the following figure, firm is in equilibrium at point E where SMC=MR. Equilibrium output is OQ and equilibrium price is OP. The SAVC is also above the shut-down point A, the firm is bearing abnormal loss and it closes down immediately i.e.

$MR = MC < AR < AC$

$TR = P \times Q$

$= OP \times OQ = OQAP$

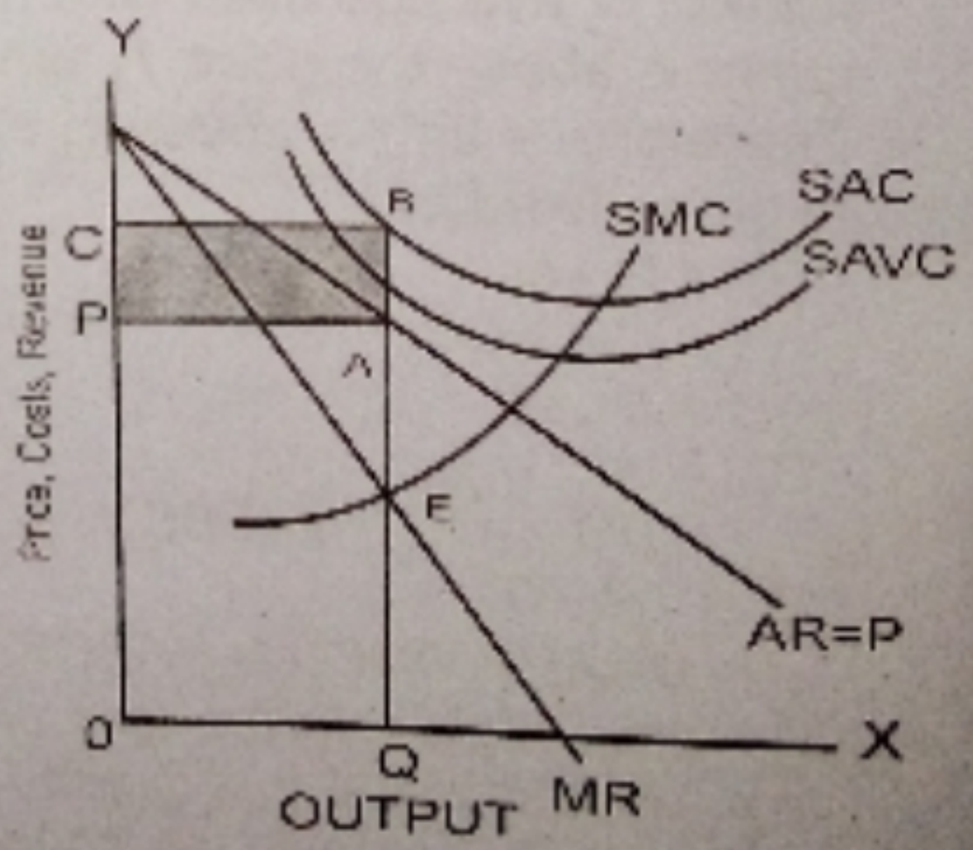
$TC = AC \times Q$

$= BQ \times OQ = OQBC$

$\pi = TR - TC$

$= OQAP - OQBC = -(ABCP)$

The firm is bearing abnormal loss equal to the shaded area ABCP and closes down.



B: LONG-RUN EQUILIBRIUM

Long-run is a period of time in which a firm can change its fixed factors into variable factors. In the long-run there is free entry into the industry or

group. Therefore firm is obtaining normal profits including in LAC. At point E, LMC is equal to MR and cuts the MR curve from below. Then output OQ is determined at price OP.

At point A,

$LAC = AR = P$

But at point E,

$LMC = MR < [AR = P = LAC]$

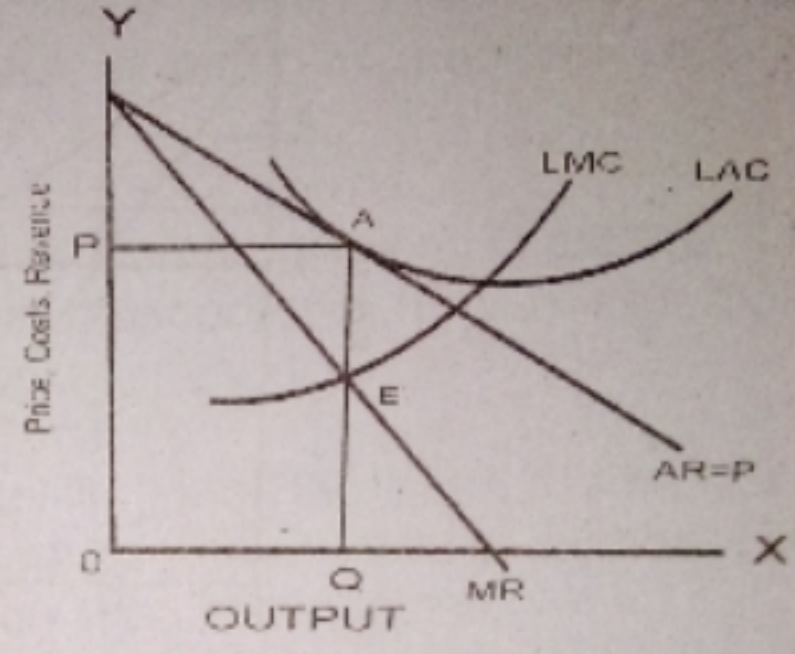
Therefore

$TR = P \times Q = OP \times OQ = OQAP$

$TC = AC \times Q = AQ \times OQ = OQAP$

$\pi = TR - TC$

$= OQAP - OQAP = 0$



Therefore, firm is obtaining normal profit which is not shown in the figure as shaded area but included in LAC. In monopolistic competition, there will be too many firms in the industry or group each producing an output less than the optimal scale because demand occurs at the falling part of the LAC, so that LAC has not reached its minimum level but LAC touches at point A with its negative slope.