Unit-IV

<u>Market – Classification & Structure:</u>

Meaning & Definition: Earlier the term "market" used to refer to a particular place where goods are purchased and sold. But, in modern era, market is used in a wide perspective. Market is the whole area where buyers and sellers come together or be in the touch for carrying out the activity of purchasing and selling of goods and services.

<u>Features of Market</u>: The essential features of a market are:

(1) An Area: In economics, a market does not mean a particular place but the whole region where sellers and buyers of a product ate spread. Modem modes of communication and transport have made the market area for a product very wide.

(2) Presence of good or service: there should be something for selling or purchasing either good or service.

(3) Buyers and Sellers: The presence of buyers and sellers is necessary for the sale and purchase of a product in the market.

Market Structure: The manner, in which markets or industries are organized, based largely on the number of participants in the market or industry and the extent of market control of each participant.

Three market structure models with varying degrees of market control on the supply side of the market are: monopoly, monopolistic competition, and oligopoly.

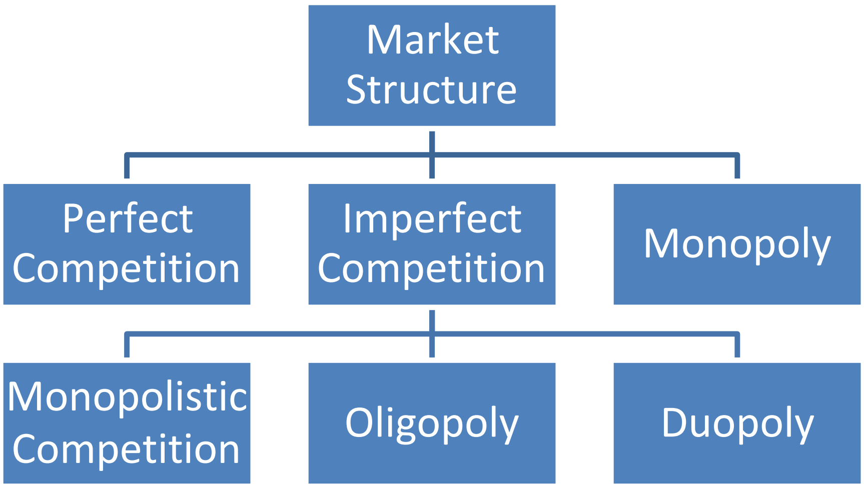


Table 1 : Features of Market Structures

Features	(Market Forms)			
	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
1. No. of Firms	Large	One	Varied but not too many	A few
2. Nature of Product	Homoge-neous	One type	Product Differentiation	Homogeneous or Differentiated
3. Entry of Firms	Free	No entry	Free	Restricted
4. Degree of Mono-poly Power	Zero	Full	Limited	Limited due to product differentiation
5. Price Policy of Firm	Price-taker	Price-maker	Price-maker	Price-maker
6. Market Knowledge	Complete	Incomplete	Incomplete	Incomplete
7. Elasticity of Demand	Perfectly elastic	Less elastic	Less elastic	Less elastic
8. AR and MR	Equal	Different	Different	Different
9. Selling Cost	No	Small	Large	Small

Perfect market: A perfectly competitive market is one in which the number of buyers and sellers are very large, all engaged in buying and selling a homogeneous product without any artificial restrictions and possessing perfect knowledge of market at a time.

<u>Characteristics of Perfect Competition</u>: The following are the conditions for the existence of perfect competition:

(1) Large Number of Buyers and Sellers: The first condition is that the number of buyers and sellers must be so large that none of them individually is in a position to influence the price and output of the industry as a whole. Thus no buyer or seller can alter the price by his individual action. He has to accept the price for the product as fixed for the whole industry. He is a “price taker”.

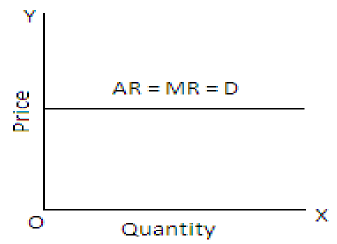
(2) Freedom of Entry or Exit of Firms: The next condition is that the firms should be free to enter or leave the industry. It implies that whenever the industry is earning excess profits, attracted by these profits some new firms enter the industry. In case of loss being sustained by the industry, some firms leave it.

(3) Homogeneous Product: Each firm produces and sells a homogeneous product so that no buyer has any preference for the product of any individual seller over others. This is only possible if units of the same product produced by different sellers are perfect substitutes. In other words, the cross elasticity of the products of sellers is infinite.

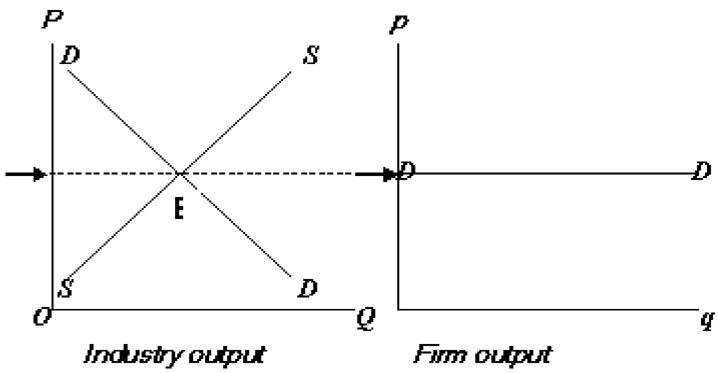
(4) Perfect Mobility of Goods and Factors: Another requirement of perfect competition is the perfect mobility of goods and factors between industries. Goods are free to move to those places where they can fetch the highest price. Factors can also move from a low-paid to a high-paid industry.

(5) Absence of Selling Costs: Under perfect competition, the costs of advertising, sales-promotion, etc. do not arise because all firms produce a homogeneous product.

(6) Price remains constant.
(7) AR = MR & remains constant.
(8) Under perfect market, a firm is price taker but an industry is price maker.
(9) Under perfect market, in short term, there may be a possibility of normal profit or super profit or loss, but in perfect market, in long-run a firm gains a normal profit always.
(10) The demand curve, under a perfect market, is perfectly elastic.



Why under perfect market a firm is price taker not a price maker?

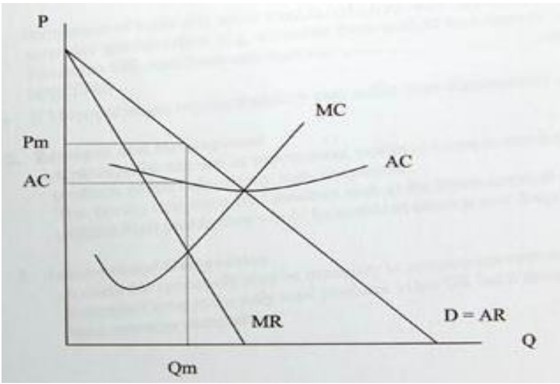


Monopoly Market: In the market structure, monopoly is characterized by a single competitor and complete control of the supply side of the market. Monopoly contains a single seller of a unique product with no close substitutes. Monopoly is a market situation in which there is only one seller of a product with barriers to entry of others. The product has no close substitutes. The cross elasticity of demand with every other product is very low. This means that no other firms produce a similar product. ***Ex. Indian Railway***

Characteristics of Monopoly: The main features of monopoly are as follows:

1. Under monopoly, there is one producer or seller of a particular product and there is no difference between a firm and an industry. Under monopoly a firm itself is an industry.
2. A monopolist has **full control on the supply of a product**. Hence, the elasticity of demand for a monopolist's product is zero.

3. There is **no close substitute of a monopolist's product** in the market. Hence, under monopoly, the cross elasticity of demand for a monopoly product with some other good is very low.
4. There are **restrictions on the entry** of other firms in the area of monopoly product.
5. A monopolist can influence the price of a product. **He is a price-maker**, not a price-taker.
6. Imperfect knowledge about market conditions.
7. Price is variable.
8. There is no difference between firm and industry.
9. Firm is a price maker.
10. AR & MR both are sloping downwards and AR>MR.
11. Presence of price discrimination: since monopolist is price maker he can charge different price for same product in different markets.
12. Under monopoly market in short run, there may be a possibility of normal profit or super profit or loss but in long run firm always gains super profit.



Monopolistic Competition: In the middle of the market structure, closer to perfect competition, is monopolistic competition, characterized by a large number of relatively small competitors, each with a modest degree of market control on the supply side.

Meaning: Monopolistic competition refers to a market situation where there are many firms selling a differentiated product. "There is competition which is keen, though not perfect, among many firms making very similar products." No firm can have any perceptible influence on the price-output policies of the other sellers nor can it be influenced much by their actions. Thus monopolistic competition refers to competition among a large number of sellers producing close but not perfect substitutes for each other.

It's Features: The following are the main features of monopolistic competition

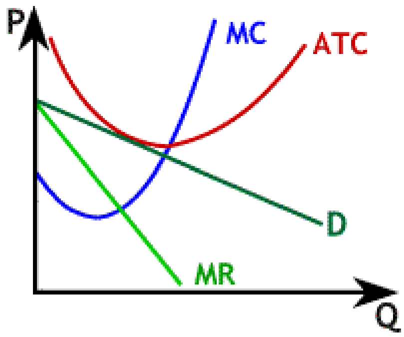
(1) Large Number of Sellers: In monopolistic competition the number of sellers is large (less than Perfect market). They are "many and small enough" but none controls a major portion of the total output. No seller by changing its price-output policy can have any perceptible effect on the sales of others and in turn be influenced by them.

(2) Product Differentiation: One of the most important features of the monopolistic competition is differentiation. Product differentiation implies that products are different in some ways from each other. This differentiation may be artificial or real.Products are close substitutes with a high cross-elasticity and not perfect substitutes. Product "differentiation may be based upon certain characteristics of the products itself, such as exclusive patented features; trade-marks; trade names; peculiarities of package or container, if any; or singularity in quality, design, colour, or style. It may also exist with respect to the conditions surrounding its sales."

(3) Freedom of Entry and Exit of Firms: Another feature of monopolistic competition is the freedom of entry and exit of firms. As firms are of small size and are capable of producing close substitutes, they can leave or enter the industry or group in the long run.

(4) Selling Costs: Under monopolistic competition where the product is differentiated, selling costs are essential to push up the sales. Besides, advertisement, it includes expenses on salesman, allowances to sellers for window displays, free service, free sampling, premium coupons and gifts, etc.

(5) Non-price Competition: Under monopolistic competition, a firm increases sales and profits of his product without a cut in the price. The monopolistic competitor can change his product either by varying its quality, packing, etc. or by changing promotional programmes.



6. Here price is variable.
7. AR & MR are sloping downward, but AR>MR.
8. Under monopolistic market in short run, there may be a situation of normal profit or super profit or loss but in long run there will be always normal profit.

Oligopoly Market: Oligopoly is the market which is characterized by a small number of relatively large competitors, each with substantial market control. Oligopoly is a market situation in which there are a few firms selling homogeneous or differentiated products. It is difficult to pinpoint the number of firms in 'competition among the few.' With only a few firms in the market, the action of one firm is likely to affect the others. An oligopoly industry produces either a homogeneous product or heterogeneous products.

The former is called pure or perfect oligopoly and the latter is called imperfect or differentiated oligopoly. Pure oligopoly is found primarily among producers of such industrial products as aluminium, **cement, copper, steel, zinc**, etc. Imperfect oligopoly is found among producers of such consumer goods as automobiles, cigarettes, **TVs, rubber tyres, refrigerators**, typewriters, etc.

<u>Characteristics of Oligopoly</u>: *In addition to fewness of sellers, most oligopolistic industries have several common characteristics which are explained below:*

(1) Interdependence: There is recognised interdependence among the sellers in the oligopolistic market. Each oligopolist firm knows that changes in its price, advertising, product characteristics, etc. may lead to counter-moves by rivals. When the sellers are a few, each produces a considerable fraction of the total output of the industry and can have a noticeable effect on market conditions.

(2) Advertisement: The main reason for this mutual interdependence in decision making is that one producer's fortunes are dependent on the policies and fortunes of the other producers in the industry. It is for this reason that oligopolist firms spend much on advertisement and customer services.

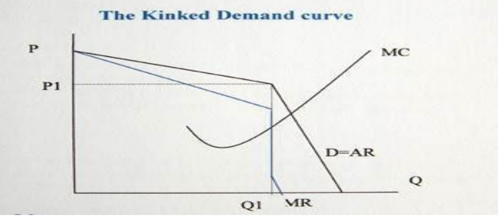
(3) Price Rigidity: In an oligopoly market, a firm is rigid over its prevailing market price because of the reactions of its competitors towards the any price change. If the firm increases the price, its rivals will not increase their price but if the firm decreases the price of its products then rivals will also decrease the price. In both the situations the price change results in loss to the firm. So firm prefers price rigidity in the oligopoly market.

(4) Freedom to Entry of Firms: As there is keen competition in an oligopolistic industry, there are <u>no barriers to entry into or exit</u> from it. However, in the long run, there are some types of barriers to entry which tend to restraint new firms from entering the industry. For example- (a) Economies of scale enjoyed by a few large firms; (b) control over essential and specialised inputs; (c) high capital requirements due to plant costs, advertising costs, etc. (d) exclusive patents and licenses;

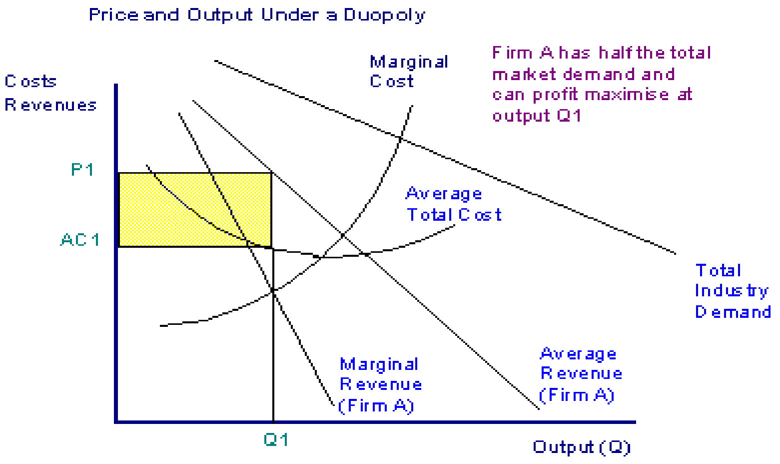
(5) Indeterminate Demand Curve: It is not easy to trace the demand curve for the product of an oligopolist. The chain of action reaction as a result of an initial change in price or output, is all a guess-work. Thus a complex system of crossed conjectures emerges as a result of the interdependence among the rival oligopolists which is the main cause of the indeterminateness of the demand curve.

(6) **Group behavior**: There is a presence of group behavior. Firms use cartelization or group behavior to decide the price or market share.

(7) The demand curve faced by oligopoly is kinked type demand curve.



Duopoly: This is a specific type of oligopoly where only two producers or two firms exist in one market. Duopoly is a special case of the theory of oligopoly in which there are only two



sellers. Both the sellers are completely independent and no agreement exists between them. Even though they are independent, a change in the price and output of one will affect the other, and may set a chain of reactions. A seller may, however, assume that his rival is unaffected by what he does, in that case he takes only his own direct influence on the price.

PRICE DETERMINATION UNDER DIFFERENT MARKETS

Price determination can be seen under two conditions:

- Price determination under short run &
- Price determination under long run

Price determination under short run: In the short run, the size of a firm and the number of firms comprising an industry remain the same. The time is considered to be so short that if demand for product increases, the old firm can use their existing equipments more intensively but new firms cannot enter into the industry. The short run normal price is established at a point where the short period supply curve and the demand curve intersect each other.

Price determination under long run: Long run means the period in which the factors of production can be adjusted to changes in demand. The long run period differs with different industries. In some industries, the preparation of the plan, the expansion, construction of the new building, installation of new machinery, and training of new labour may take only a few months and in others, it may take a few years.

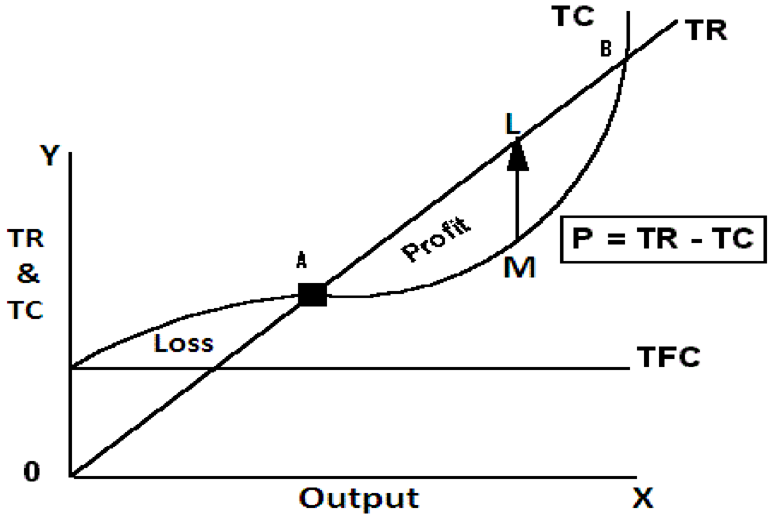
Methods of Price Determination

There are **two methods** for price determination under different markets:

- Total Revenue (TR) and Total Cost (TC) Method
- Marginal Revenue (MR) and Marginal Cost (MC) Method

PRICE DETERMINATION UNDER TOTAL REVENUE (TR) AND TOTAL COST (TC) METHOD

- In this method, producer is in equilibrium point at that time when there is maximum distance between TR & TC and TR > TC. It means producer is in equilibrium at that point where there is a maximum profit. **TOTAL REVENUE (TR) AND TOTAL COST (TC) UNDER PERFECT MARKET** –



According to the Fig., A & B are known as break even points because TR and TC is equal. It means on these points, there is no loss no profit condition because TR & TC are equal.

$$\pi = TR - TC$$

TOTAL REVENUE (TR) AND TOTAL COST (TC) UNDER IMPERFECT MARKET

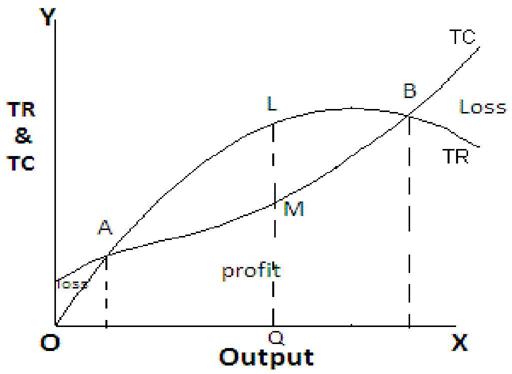


Fig. shows that A & B are break even points because TR & TC are equal. So, producer equilibrium is on OQ output because on OQ output there is maximum profit, which is equal to LM.

$$\pi = TR - TC$$

OR

$\pi = LQ - MQ = LM$ (Maximum Profit)

PRICE DETERMINATION UNDER MARGINAL REVENUE (MR) AND MARGINAL COST (MC)

METHOD – Under MR & MC method, two necessary conditions must be fulfilled to produce equilibrium:

(A) First Order Condition (MR = MC)

(B) Second Order (MC intersect MR from below)

MARGINAL REVENUE (MR) AND MARGINAL COST (MC) UNDER PERFECT MARKET –

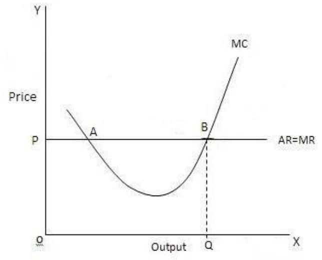


Fig. shows that B is the equilibrium point of the firm because on B point both the conditions are fulfilled. Hence, OP Price & OQ Output is determined.

MARGINAL REVENUE (MR) AND MARGINAL COST (MC) UNDER IMPERFECT MARKET –

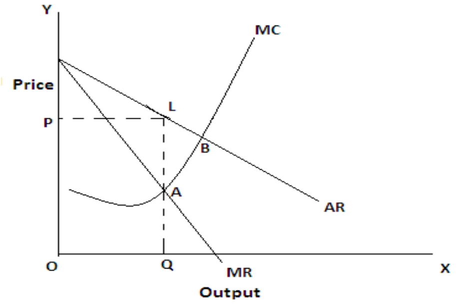
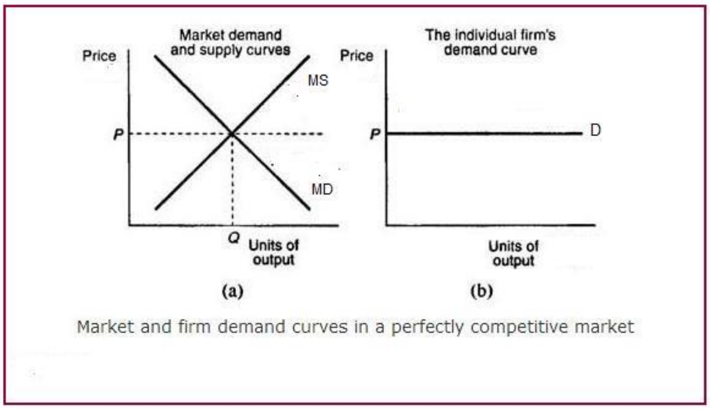


Fig. shows that A is the equilibrium point of the firm because on A point MR = MC and MC cut/intersect MR from below. Hence, OP Price & OQ Output is determined by the firm.

PRICE DETERMINATION UNDER PERFECT MARKET

In perfect competition, the price of a product is determined by the industry at that point at which the demand and supply curve intersect each other. This point is known as equilibrium point. At this point, the quantity demanded and supplied is called equilibrium quantity and price is known as equilibrium price.



Market and firm demand curves in a perfectly competitive market

UNDER SHORT RUN PERIOD – Under short run a competitive firm may gain normal profit or super profit or suffer loss.

(i) **Normal Profit/ Break Even -** It is a situation in which average revenue of a firm is equal to its average cost (AR = AC). It is also known as no loss-no profit situation.

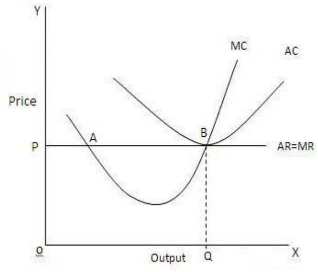


Fig. shows that B is the equilibrium point of the firm where OP Price & OQ Output is determined by the firm.
On OQ output AR = BQ, and AC is also BQ. So, AR = AC = BQ.
Because AR = AC, hence it becomes a situation of Profit (No loss – No Profit)

π = AR – AC
= BQ – BQ
= Zero

(ii) **Super Profit -** It is a situation in which average revenue of the firm is greater than its average cost (AR > AC).

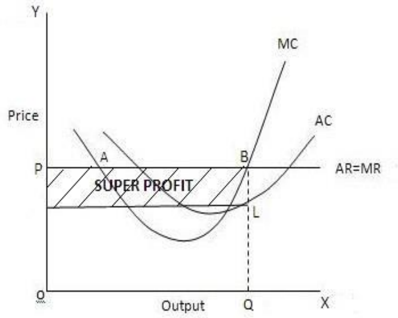


Fig. shows that B is the equilibrium point of the firm where OP Price & OQ Output is determined by the firm.
On OQ output AR = BQ, and AC = LQ. So, AR > AC.
Because AR > AC, hence it becomes a situation of Super Profit (π).

π = AR – AC
= BQ – LQ
= BL (Super Profit)

(iii) **Loss** – It is a situation in which average cost of the firm is greater than its average revenue (AC > AR).

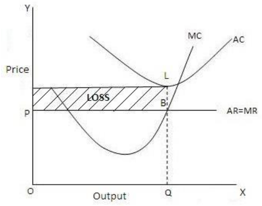


Fig. shows that B is the equilibrium point of the firm where OP Price & OQ Output is determined by the firm.
On OQ output AC > AR, hence it becomes a situation of Loss.

Loss = **AC** – **AR**
= LQ – BQ
= LB (Loss)

UNDER LONG RUN PERIOD – Under perfect market, there is an important feature of free entry and exit of new firm. So, in long-term a perfect competitive firm gains only normal profit because in the situation of Super Profit, some new firms will enter in market. On the other hand, in the situation of loss, some firm exit from market. So, finally firm gains only normal profit.

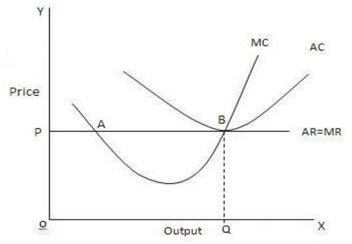


Fig. shows that B is the equilibrium point of the firm where both the conditions (i.e. MR = MC & MC intersects MR from below) are fulfilled. Hence, OP Price & OQ Output is determined by the firm.
On OQ output AR = BQ, and AC is also BQ. This means that AR = AC = BQ. So, it is a situation of Normal Profit.

$$\boldsymbol{\pi} = \mathbf{AR - AC}$$
$$= BQ - BQ$$
$$= \text{Zero}$$

PRICE & OUTPUT DETERMINATION UNDER MONOPOLY MARKET
The form of market in which there is a single seller of goods, restriction on the entry of new firm and presence of price discrimination is known as monopoly market.

UNDER SHORT RUN PERIOD: In short run a monopoly firm may be in the situation of normal profit or super profit or loss.

Normal Profit: - It is a situation in which average revenue or a firm is equal to average cost.

Normal Profit = AR = AC

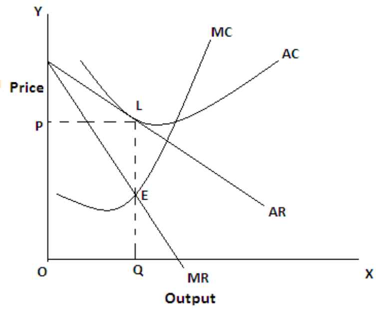


Fig. shows that E is the equilibrium point, where both the conditions of producer equilibrium are fulfilled. Hence, OP (Price) and OQ (Output) is determined.

On OQ output AR = LQ, AC = LQ. It means AR & AC both are equal. Hence, it is a situation of normal profit.

$$\pi = AR – AC$$

$$= LQ – LQ$$

= Zero (Normal Profit)

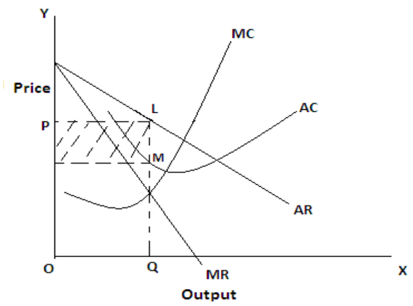
(i) Super Profit: - It is a situation in which average revenue of a firm is greater than its average cost.

Super Profit = AR > AC

Fig. shows that E is the equilibrium point, where both the conditions of producer's equilibrium are fulfilled. Hence, OP (Price) & OQ (Output) is determined.

On OQ output AR=LQ, AC=MQ. It means AR>AC. Hence, it is a situation of super profit.

$$\pi = AR – AC$$



$$=LQ – MQ$$

= LM (Super Profit)

(ii) Loss: - It is a situation in which average cost of a firm is greater than its average revenue.

Loss = AC > AR

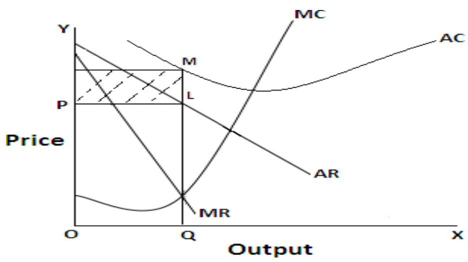


Fig. shows that E is the equilibrium point, where both the conditions of producer's equilibrium are fulfilled. Hence, OP (Price) & OQ (Output) is determined.

On OQ output AR=LG, AC=MQ. It means AC>AR. Hence, it is a situation of loss.

Loss = AC – AR

= MQ – LQ

= ML (Loss)

UNER LONG RUN PERIOD: - In monopoly market there is an important feature of entry of new firm is restricted. So, monopoly gains only super profit in long-run.

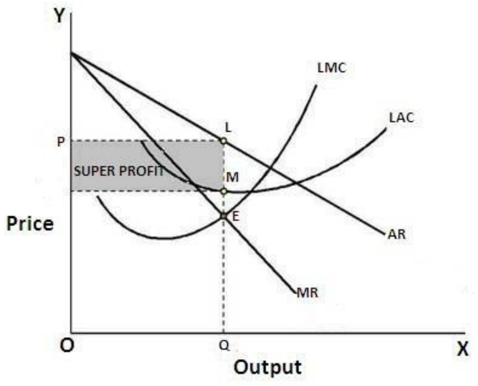


Fig. shows that E is the equilibrium point of the firm, where LMC = MR and LMC intersects MR from below. So, OP (Price) & OQ (Output) AR = LQ, AC = MQ. It means AR > AC. Hence, it is a situation of super profit.

$$\pi = AR - AC$$

$$= LQ - MQ$$

$$= LM \text{ (Super Profit)}$$

PRICE & OUTPUT DETERMINATION UDER MONOPOLISTIC MARKET

It is a form of market in which large no. of buyers and sellers are there, free entry and exit of firm is allowed and presence of product differentiation is known as monopolistic market.

UNDER SHORT-RUN PERIOD: In monopolistic market during the short-run time a firm may be in a situation of Loss or Normal Profit or Super Profit.

(i) Normal Profit: - It is a situation in which average revenue of a firm is equal to the average cost.

Normal Profit = AR=AC

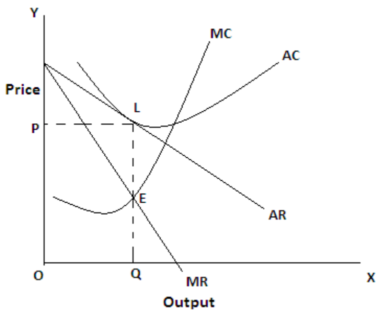


Fig. shows that E is the equilibrium point, where both the conditions of producer's equilibrium are fulfilled. Hence, OP (Profit) & OQ (Output) is determined.

On OQ (Output) AR = LQ & AC = LQ. It means that AR & AC are equal. Hence, it is a situation of normal profit.

$$\pi = AR - AC$$
$$= LQ - LQ$$
$$= \text{Zero (Normal Profit)}$$

(ii) Super Profit: - It is a situation in which average revenue of a firm is greater than its average cost.

Super Profit = AR>AC

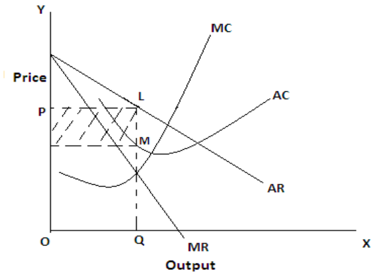


Fig. shows that E is the equilibrium point, where both the conditions of producer's equilibrium are fulfilled. Hence, OP (Price) & OQ (Output) is determined.

On OQ output AR = LQ, AC = MQ. It means AR>AC. Hence, it is a situation of super profit.

$$\pi = AR - AC$$
$$= LQ - MQ$$
$$= \text{LM (Super Profit)}$$

(iii) Loss: - It is a situation in which average cost of a firm is greater than its average revenue.

Loss = AC > AR

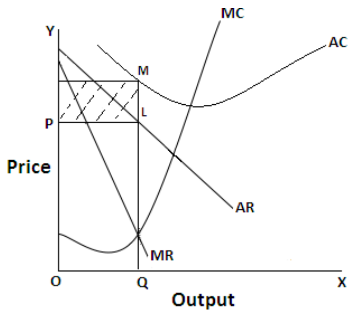


Fig. shows that E is the equilibrium point, where both the conditions of producer's equilibrium are fulfilled. Hence, OP (Price) & OQ (Output) is determined.

On OQ output AR = LQ, AC = MQ. It means AC > AR. Hence, it is a situation of loss.

$$\text{Loss} = AC - AR$$
$$= MQ - LQ$$
$$= \text{ML (Loss)}$$

UNDER LONG-RUN PERIOD: Under monopolistic market there is an important feature of free entry and exit of firms. So, in long-run in monopolistic firm there is only a situation of normal profit because in a situation of super profit, some new firm enter in market and on the other hand in a situation of loss some firms exit from market. Firm gain only normal profit.

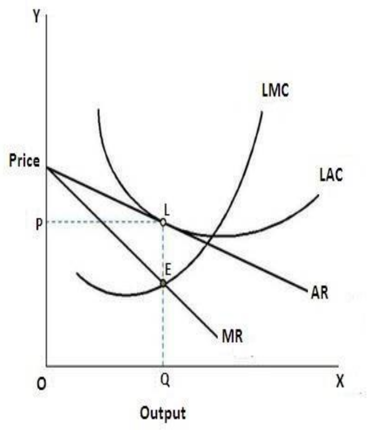


Figure 9.16: Showing Normal Profit for long term under Monopolistic Market

Fig. 9.16 shows that E is the equilibrium point of the firm, where both the conditions of producer equilibrium are fulfilled by the firm. Hence, OP (Price) & OQ (Output) is determined by the firm.

On OQ (Output) AR=LQ & AC=LQ. It means AR=AC=LQ. Hence, it is a situation of normal profit.

$$\pi = AR - AC$$

$$= LQ - LQ$$

$$= \text{Zero (Normal Profit)}$$

PRICE & OUTPUT DETERMINATION UNDER OLIGOPOLY MARKET

The form of market in which there are few sellers, interdependent to each other and presence of group behavior is known as oligopoly market.

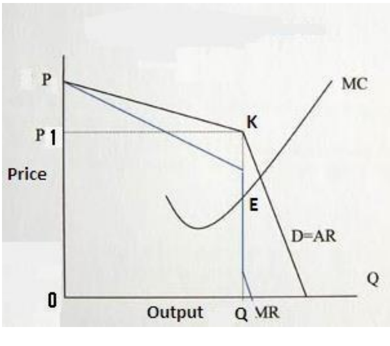


Fig. shows that E is the equilibrium point where MR=MC and MC intersects MR from below. It means E point fulfills both the conditions of producer equilibrium. Hence, OP (Price) & OQ (Output) is determined by the firm on K point the demand curve is kinked. So, K is known as kinked point. Now OP (Price) remains constant. It shows the price rigidity.

Suppose monopoly divides market into two parts namely A & B market. A has greater elastic demand & B has less elastic demand and there is proper distance between both the markets, so there is no possibility of resale of product from one market to another market.

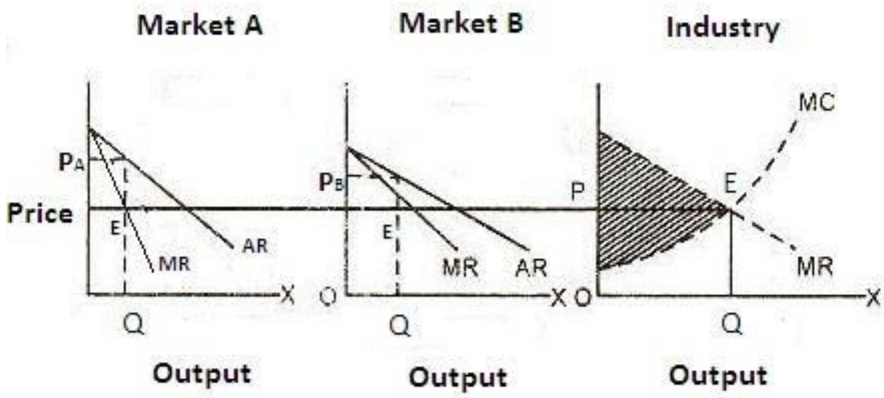


Fig. shows that E is the equilibrium point of monopoly industry, where OP (Price) & OQ (Output) is determined. On the other hand monopoly divides market into two parts A & B. EA is the equilibrium point of market A & EB is the equilibrium point of market B, where monopoly charges QPA price in market A & PB Price in market B for OQA & OQB quality respectively.

Market B has less elasticity of demand. So, producer charges higher price but market A has less elastic demand so producer charges less price (because OPB > OPA).

This is called the price discrimination.

Dumping

It is the process of price discrimination by which a monopoly seller charges different prices in abroad and within the country for the same goods.

It is assumed that in domestic area/economy, there is monopoly but in foreign economy, there is perfect competition. So, in domestic economy, monopoly charges higher prices but in foreign economy monopoly charges lower prices.

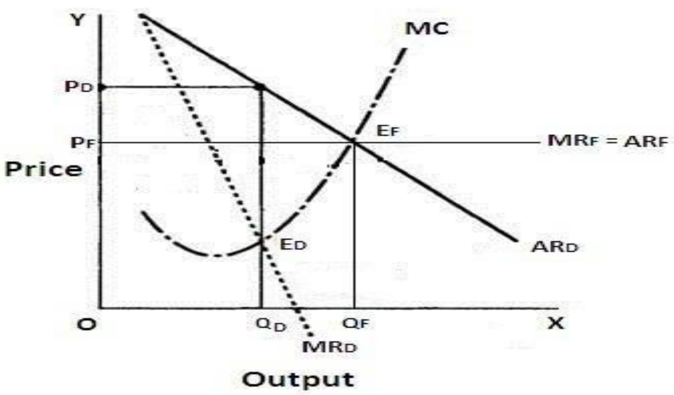


Fig. shows that AR_F & MR_F represents the foreign market, but AR_D & MR_D represents domestic monopoly market. E_F is the equilibrium point of the foreign market, where producer charges OP_F price for OQ_F output. Similarly, E_D is the equilibrium point of domestic economy, where producer charges OP_D price at OQ_D output. It means domestic market producer charges higher price but in foreign market, the producer charges lower price. (Because $OP_D > OP_F$). This process is called **Dumping.**

Dumping is illegal under international trade agreements of World Trade Organization (WTO). A nation can impose anti dumping duties only on production that are being dumped.

Reasons of Dumping

A firm may resort to dumping for a number of **reasons** which in brief are as under:

(1) Price discrimination: The first reason of dumping is price discrimination. If a firm has monopoly of a good in home market, but faces strong competition in foreign market, the firm will naturally charge a higher price in home market and lower competitive price in foreign market.

(2) Predatory pricing: The second major reason is predatory pricing. It is the practice of cutting prices of goods in an attempt to derive rival firms out of business.

(3) Surplus stock: A firm may resort to dumping to dispose off surplus stock.

(4) Economies of large scale production: The big firms where huge fixed capital is required for producing the goods may resort to dumping to avail of the economies of large scale production.