CHAPTER – 4
PRICE DETERMINATION IN DIFFERENT MARKETS

UNIT – I
MEANING AND TYPES OF MARKETS

MEANING OF MARKET

It is essential to understand how price is determined. Since this is done in the market, we can define the market simply as all those buyers and sellers of a good or service who influence price.

The elements of a market are:

- Buyers and sellers;
- A product or service;
- Bargaining for a price;
- Knowledge about market conditions; and
- One price for a product or service at a given time.

CLASSIFICATION OF MARKET

Markets are generally classified into product markets and factor markets. Product markets are markets for goods and services in which households buy the goods and services they want from firms. Factor markets, on the other hand, are those in which firms buy the resources they need – land, labour, capital and entrepreneurship- to produce goods and services. While product markets allocate goods to consumers, factor markets allocate productive resources to producers and help ensure that those resources are used efficiently. The prices in factor markets are known as factor prices.

In Economics, generally the classification of markets is made on the basis of:

- Geographical Area
- Time
- Nature of transaction
- Regulation
- Volume of business
- Type of Competition.

ON THE BASIS OF GEOGRAPHICAL AREA:

From the marketing perspective, the geographical area in which the product sales should be undertaken has vast implications for the firm.

On the basis of geographical area covered, markets are classified into:

- ✓ Local Markets: When buyers and sellers are limited to a local area or region, the market is called a local market. Generally, highly perishable goods and bulky articles, the transport of which over a long distance is uneconomical' command a local market. In this case, the extent of the market is limited to a particular locality. For example, locally supplied services such as those of hair dressers and retailers have a narrow customer base.

- ✓ Regional Markets: Regional markets cover a wider area such as a few adjacent cities, parts of states, or cluster of states. The size of the market is generally large and the nature of buyers may vary in their demand characteristics.

- ✓ National Markets: When the demand for a commodity or service is limited to the national boundaries of a country, we say that the product has a national market. The trade policy of the government may restrict the trading of a commodity to within the country. For example Hindi books may have national markets in India; outside India one may not have market for Hindi books.

ON THE BASIS OF TIME:

Alfred Marshall conceived the 'Time' element in markets and on the basis of this, markets are classified into:

Market on the Basis of Time

- ✓ *Very short period market:* Market period or very short period refers to a period of time in which supply is fixed and cannot be increased or decreased. Commodities like vegetables, flower, fish, eggs, fruits, milk, etc., which are perishable and the supply of which cannot be changed in the very short period come under this category. Since supply is fixed, very short period price is dependent on demand. An increase in demand will raise the prices vice versa.

- ✓ *Short-period Market:* Short period is a period which is slightly longer than the very short period. In this period, the supply of output may be increased by increasing the employment of variable factors with the given fixed factors and state of technology. Since supply can be moderately adjusted, the changes in the short period prices on account of changes in demand are less compared to market period.

- ✓ *Long-period Market:* In the long period, all factors become variable and the supply of commodities may be changed by altering the scale of production. As such, supply may be fully adjusted to changes in demand conditions. The interaction between long run supply and demand determines long run equilibrium price or 'normal price'.

- ✓ *Very long-period or secular period:* Very long-period or secular period is one when secular movements are recorded in certain factors over a period of time. The period is very long. The factors include the size of the population, capital supply, supply of raw materials etc.

ON THE BASIC OF NATURE OF TRANSACTIONS:

- Spot or cash Market: Spot transactions or spot markets refer to those markets where goods are exchanged for money payable either immediately or within a short span of time.
- Forward or Future Market: In this market, transactions involve contracts with a promise to pay and deliver goods at some future date.

On the Basis of Nature of Transactions

ON THE BASIC OF REGULATION:

- Regulated Market: In this market, transactions are statutorily regulated so as to put an end to unfair practices. Such markets may be established for specific products or for a group of products Eg. Stock Exchange.
- Unregulated Market: It is also called a free market as there are no stipulations on the transactions.

Markets Based on legality

ON THE BASIC OF VOLUME OF BUSINESS:

- Wholesale Market: The wholesale market is the market where the commodities are bought and sold in bulk or large quantities. Transactions generally take place between traders.
- Retail Market: When the commodities are sold in small quantities, it is called retail market. This is the market for ultimate consumers.

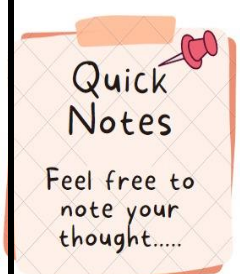
On the Basic of Volume of Business

ON THE BASIC OF COMPETITION:

Based on the type of competition markets are classified into

- perfectly competitive market and
- imperfectly competitive market.

On the basic of competition



TOPIC – 1
MEANING & CLASSIFICATION OF MARKET

Question 1

On the basis of nature of transaction, a market may be classified into:

a) Spot market and future market
b) Regulated market unregulated market
c) Wholesale market and retail market
d) Local market and national market
e)

Question 2

The market for ultimate consumer is known as:

a) Wholesale market
b) Regulated market
c) Unregulated market
d) Retail market
e)

Question 3

Markets refers to those markets where goods are exchanged for money payable either immediately or within a short span of time

a) Spot Market
b) Retail market
c) Wholesale market
d) None

Question 4

In very short period market

a) Supply changes but demand remains same
b) Supply changes but price remain some
c) Supply remains fixed
d) Supply and demand both change
e)

Question 5

On the basis of nature of transaction, a market may be classified into

a) Regulated and unregulated market
b) Wholesale and retail market
c) Spot market and Future market
d) National and international market

Question 6

Which one is not a part of the elements of market?

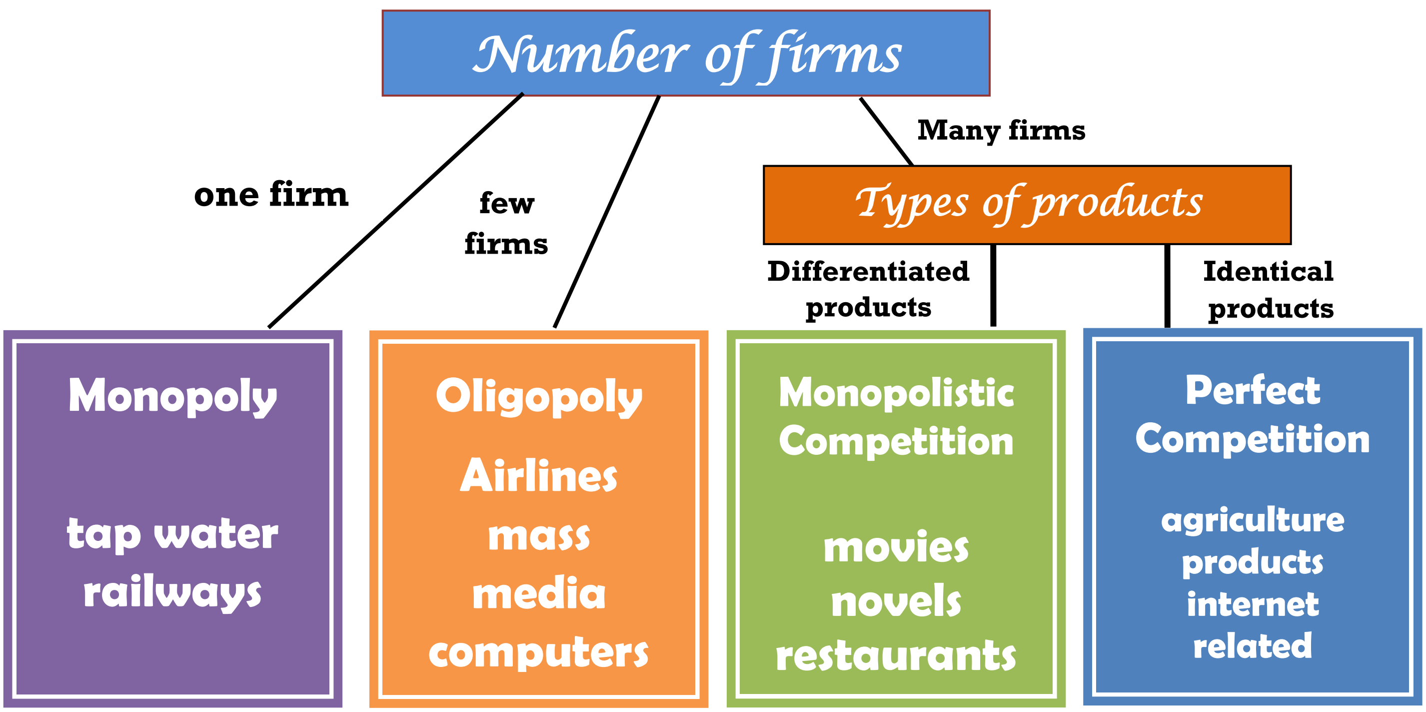
a) Buyers and sellers
b) A product of services
c) Bargaining for a price
d) Volume of a business

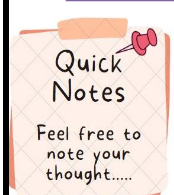
Answer: 1(a), 2(d), 3(a), 4(c), 5(c), 6(d)

TYPES OF MARKET STRUCTURES:

A market consists of those firms from which he can buy a well-defined product; for a producer, a market consists of those buyers to whom he can sell a single well-defined product.

- ***Perfect Competition:*** Perfect competition is characterized by many sellers selling identical products to many buyers.
- ***Monopolistic Competition:*** It differs in only one respect, namely, there are many sellers offering differentiated products to many buyers.
- ***Monopoly:*** It is a situation where there is a single seller producing for many buyers. Its product is necessarily extremely differentiated since there are no competing sellers producing products which are close substitutes.
- ***Oligopoly:*** There are a few sellers selling competing products to many buyers.





TOPIC – 2
TYPES OF MARKET STRUCTURE

Question 1

An industry with significant barriers to entry and a single supplier

a) Perfect competition
b) Monopolistic competition
c) Oligopoly
d) Monopoly

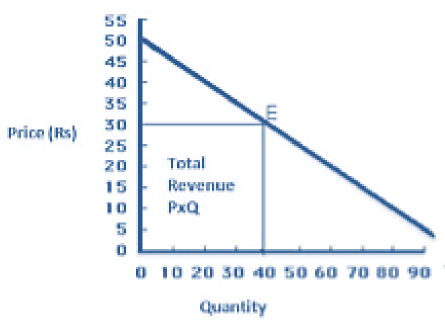
Question 2

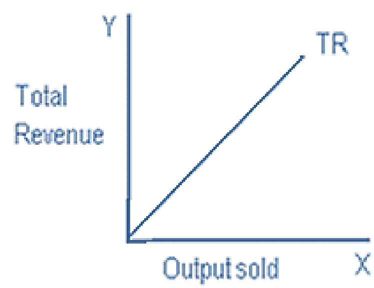
A highly concentrated market with just a few interdependent firms

a) Perfect competition
b) Monopolistic competition
c) Oligopoly
d) Monopoly

Answer: 1(d), 2(c)

CONCEPTS OF TOTAL REVENUE, AVERAGE REVENUE AND MARGINAL REVENUE





Total Revenue

Total Revenue: Total revenue or the total expenditure incurred by the purchasers of the firm's product refers to the amount of money which a firm realises by selling certain units of a commodity. Symbolically, total revenue may be expressed a

TR = P x Q.

Where, TR is total revenue, P is price, Q is quantity of a commodity sold.

Average Revenue: Average revenue is the revenue earned per unit of output. It is nothing but price of one unit of output because price is always per unit of a commodity.

For this reason, average revenue curve is also the firms demand curve. Symbolically, average revenue is:

$$AR = TR/Q$$

Where

* AR is average revenue
* TR is the total revenue
* Q is quantity of a commodity sold

OR

$$AR = \frac{P \times Q}{Q} \text{ or } AR =$$

Marginal Revenue: Marginal revenue (MR) is the change in total revenue resulting from the sale of an additional unit of the commodity.

Where

$$MR = \frac{\Delta TR}{\Delta Q}$$

* MR is marginal revenue,
* TR is total revenue,
* Q is quantity of a commodity sold
* Δ Stands for a small change

For one unit change in output

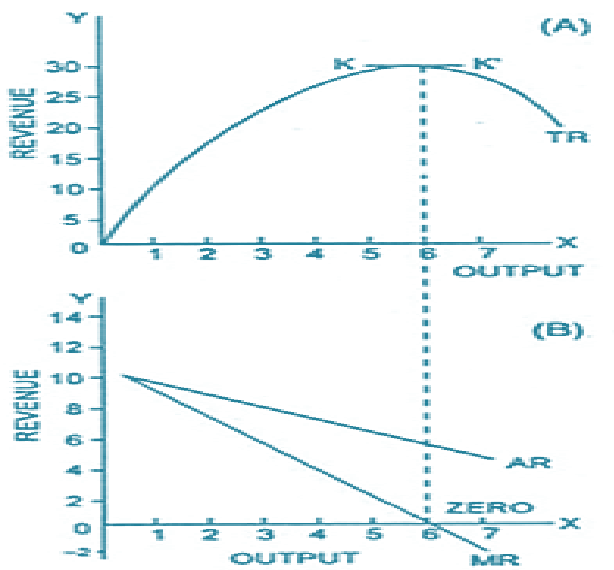
$$MR_n = TR_n - TR_{n-1}$$

* Where TR is the total revenue when sales are at the rate of n units per period.
* TR n-1 is the total revenue when sales are at the rate of (n – 1) units per period.

Quick Notes

Feel free to note your thought.....

Units	Total Revenue	Average Revenue	Marginal Revenue
1	10	10	10
2	18	9	8
3	24	8	6
4	28	7	4
5	30	6	2
6	30	5	0
7	28	4	-2
8	24	3	-4
9	18	2	-6
10	10	1	-8



Total Revenue, Average Revenue and Marginal Revenue Curves of a firm which has downward sloping Demand Curve.

Quick Notes

Feel free to note your thought.....

TOPIC – 3
CONCEPTS OF TR AR & MR

Question 1
Average revenue curve is also known as:
a) Profit Curve
b) Demand Curve
c) Average Cost Curve
d) Indifference Curve

Question 2
Which is the first order condition for the firm to maximize the profit?
a) AC = MR
b) MC = MR
c) AC=AR
d) MR=AR

Question 3
If the price of a commodity is fixed then every increase in its sold quantity the total Will___and marginal revenue will----
a) Increase also increase
b) increase, decline
c) Increase, remain unchanged
d) remain fixed , increase

Question 4
Assume that when price is 20 the quantity demanded is 9 units and when price is 19The quantity demanded is 10 units based on this information what is the marginal revenue resulting from an increase in output from 9 unit to 10 units?
a) 20
b) 19
c) 10
d) 1

Question 5
If e > 1,
a) MR will be negative
b) MR will be highly negative
c) MR will be positive
d) MR will be highly positive
e)

Question 6
ABC ltd realizes total revenue of Rs. 6,000 by the sale of 120 units and Rs. 6050 by the sale of 121 units. What is the average revenue when ABC ltd sells 121 units
a) 6000
b) 6050
c) 50
d) 100

Question 7
In the market structure, demand curve is also known as:
a) Marginal cost curve
b) Average revenue curve
c) Total production curve
d) Marginal utility curve

Question 8

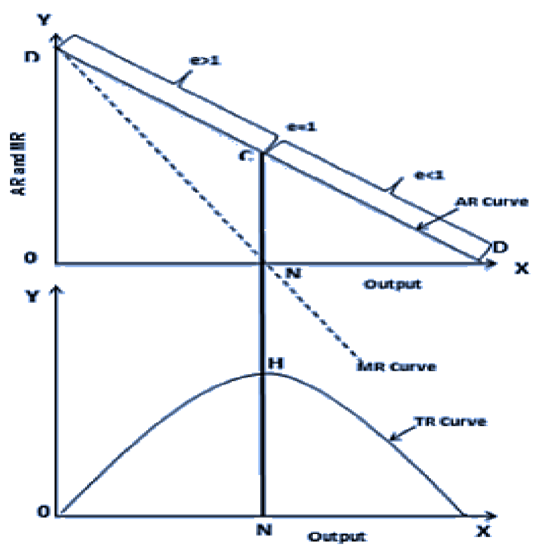
Total revenue curve initially increases at a diminishing rate due to ___

a) **Diminishing average revenue curve**
b) **Diminishing n=marginal revenue curve**
c) **Diminishing average fixed revenue curve**
d) **Diminishing cost curve**

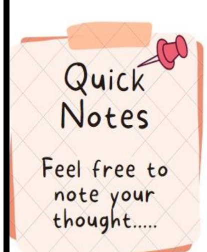
Answer: 1(d), 2(b),3(c),4(c),5(c),6(c),7(b),8(b)

RELATIONSHIP BETWEEN AR, MR, TR AND PRICE ELASTICITY OF DEMAND:

- MR= $\boldsymbol{AR} \times \frac{\boldsymbol{e-1}}{\boldsymbol{e}}$, Where e = price elasticity of demand
- Thus if e = 1, MR= $\boldsymbol{AR} \times \frac{\mathbf{1-1}}{\mathbf{1}} = \mathbf{0}$.
- and if e >1, MR will be positive
- and if e <1, MR will be negative



Relationship between AR, MR, TR and Price Elasticity of Demand



TOPIC – 4
RELATIONSHIP WITH ELASTICITY

Question 1

Which of the following is correct?

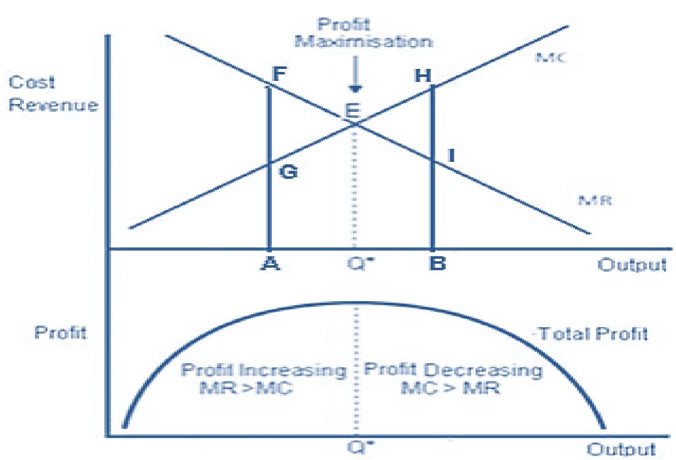
a) **MR = AR (e – 1) / e**
b) **MR = AR (e + 1) /e**
c) **MR = AR (1- e) /e**
d) **None**

Answer: 1(a)

BEHAVIOURAL PRINCIPLES:

- *Principle 1-* A firm should not produce at all if its total variable costs are not met.
  If price (AR) is greater than minimum AVC, but less than minimum ATC, the firm covers its variable cost and some but not all of fixed cost. If price is equal to minimum ATC, the firm covers both fixed and variable costs and earns normal profit or zero economic profit. If price is greater than minimum ATC, the firm not only covers its full cost, but also earns positive economic profit or super normal profit.

- *Principle 2* - The firm will be making maximum profits by expanding output to the level where marginal revenue is equal to marginal cost. In other words, it will pay the firm to go on producing additional units of output so long as the marginal revenue exceeds marginal cost i.e., additional units add more to revenues than to cost. At the point of equality between marginal revenue and marginal cost, it will earn maximum profits.



Equilibrium of the firm: Maximization of profits

TOPIC – 5
BEHAVIOURAL PRINCIPAL

Question 1

Where firms earn normal profit

a) MR = AR
b) MC= MR
c) AC= AR
d) NONE

Question 2

If the average cost is higher than the average revenue, then the firm incurs

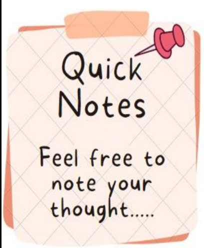
a) Normal profit
b) Abnormal profit
c) Loss
d) No profit no loss

Question 3

A firm should not produce at all if it's total………costs are not met

a) Variable
b) fixed
c) Both
d) None

Answer: 1(c), 2(c), 3(a)



UNIT – 2
DETERMINATION OF PRICES

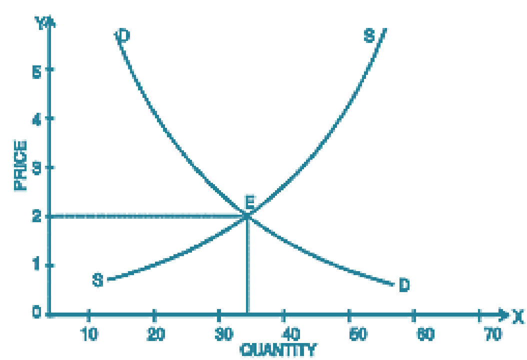
INTRODUCTION:

Prices of goods express their exchange value. Prices are also used for expressing the value of various services rendered by different factors of production such as land, labour, capital and organization in the form of rent, wages, interest and profit.

DETERMINATION OF PRICES:

In an open competitive market, it is the interaction between demand and supply that tends to determine equilibrium price and quantity. In the context of market analysis, the term equilibrium refers to a state of market in which the quantity demanded of a commodity equals the quantity supplied of the commodity.

S. No	Price (Rs.)	Demand units	Supply (Units)
1	1	60	5
2	2	35	35
3	3	20	45
4	4	15	55
5	5	10	65



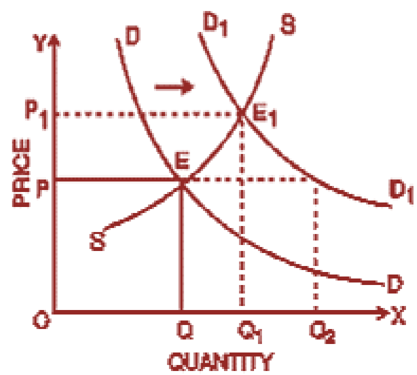
Determination of Equilibrium Price

CHANGES IN DEMAND AND SUPPLY:

The above analysis of market equilibrium was done by us under the ceteris paribus assumption. The facts of the real world, however, are such that the determinants of demand other than price of the commodity under consideration (like income, tastes and preferences, population, technology, prices of factors of production etc.) always change causing shifts in demand and supply. Such shifts affect equilibrium price and quantity. The four possible changes in demand and supply are:

- ### An increase (shift to the right) in demand:

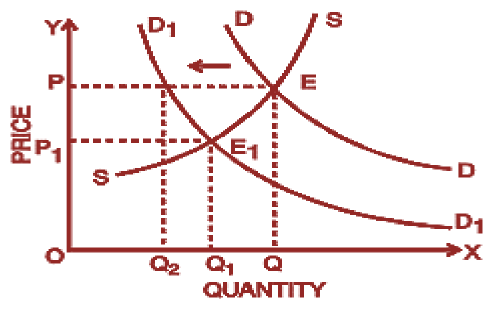
  The original demand curve of a normal good is DD and supply curve is SS. At equilibrium price OP, demand and supply are equal to OQ.



Increase in Demand, causing an increase in equilibrium price and quantity

- ### A decrease (shift to the left) in demand:

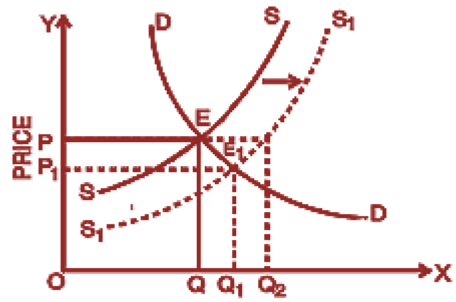
  The opposite will happen when demand falls as a result of a fall in income, while the supply remains the same. The demand curve will shift to the left and become D1D1 while the supply curve remains as it is. With the new demand curve D1D1, at original price OP, OQ2 is demanded and OQ is supplied.



Decrease in Demand Resulting in a Decrease in Price and Quantity Demanded

- ### An increase (shift to the right) in supply:

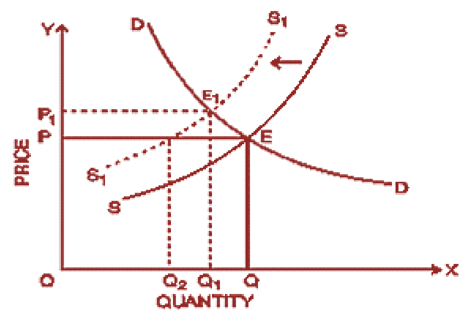
  Let us now assume that demand does not change, but there is an increase in supply say, because of improved technology.



Increase in supply, Resulting in Decrease in Equilibrium Price and Increase in Quantity Supplied

- A decrease (shift to the left) in supply.

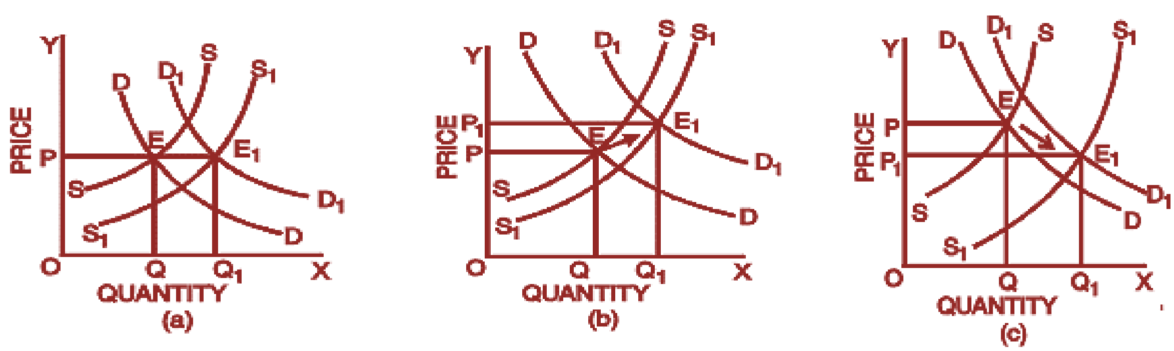
  If because of some reason, there is a decrease in supply we will find that equilibrium price will go up, but the amount sold and purchased will go down.



Decrease in supply Causing an increase in the Equilibrium Price and a fall in Quantity Demanded

SIMULTANEOUS CHANGES IN DEMAND AND SUPPLY

We were considering the effect of a change either in demand or in supply on the equilibrium price and quantity sold and purchased. It sometimes happens that events shift both the demand and supply curves at the same time.

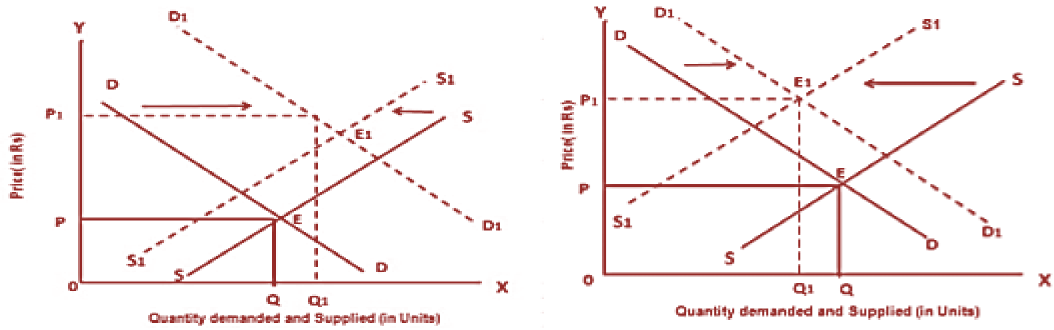


Simultaneous Change in Demand and Supply

What is the effect on equilibrium price and quantity when both demand and supply decrease

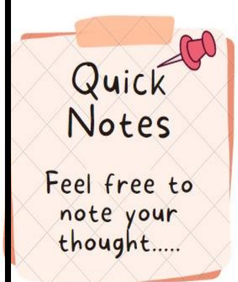
We can summarise the two possible outcomes when the supply and demand curves shift in the same direction as follows:

- ✓ When both demand and supply increase, the equilibrium quantity increases but the change in equilibrium price is uncertain.
- ✓ When both demand and supply decrease, the equilibrium quantity decreases but the change in equilibrium price is uncertain.



(a) (b)

Effect on Equilibrium Price and Quantity when Demand and Supply Curves shift in opposite Directions



TOPIC – 1
DETERMINATION OF PRICE

Question 1

When both demand and supply increase the equilibrium quantity increases but the Change in equilibrium price is uncertain

a) Both demand & supply curve shift in right
b) both demand & supply curve shift in left
c) both demand & supply curve shifts In same direction
d) None

Question 2

An increase in demand and an increase in supply will:

a) Affect equilibrium quantity in an Indeterminate way and price will decrease
b) Affect price in an indeterminate way and quantity will decrease
c) Affect price in an indeterminate way and Quantity will increase
d) Affect equilibrium quantity in an indeterminate way and price will increase

Question 3

What combination of changes would most likely decrease the equilibrium quantity?

a) When supply but demand remains same
b) Supply changes but price remains same
c) When supply increases and demand Increase
d) When supply decreases and demand decreases

Question 4

If the supply of a commodity does not change then with every increase in demand Rise will

a) Remain same
b) Increase
c) Decrease
d) Becomes zero

Question 5

If there is an increase in supply without any change in demand, equilibrium price Will…..

a) Increase
b) Decrease
c) Remain unchanged
d) Becomes zero

Answer: 1(c), 2(d),3(d),4(b),5(b)

QUESTION NO. 6 TO QUESTION NO. 8 ARE BASED ON FIGURE 1

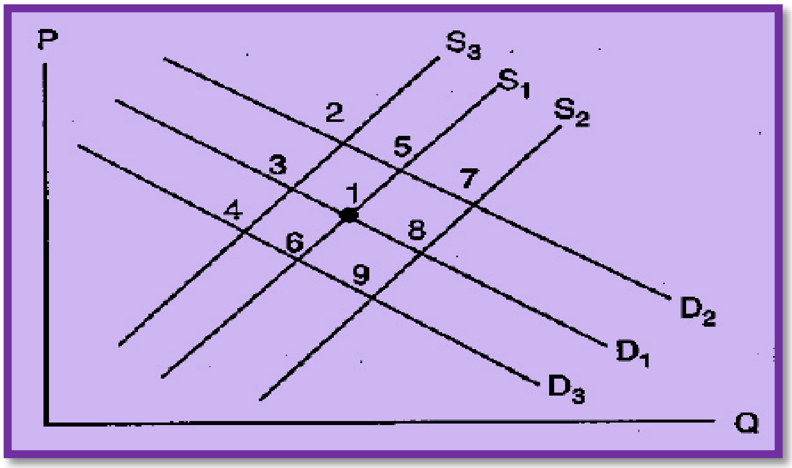


FIGURE 1

Question 6

We are analyzing the market for good Z. the price of a complement good, goods Y Decline At the same time there is a technological advance in the production of good Z What point figure 1 is most likely to be the new equilibrium price and quantity?

a) Point 4
b) Point 5
c) Point 7
d) Point 8

Question 7

Heavy rain in Maharashtra during 2005 and 2006 caused havoc with the rice crop. What point in figure 1 is most likely to be the new equilibrium price and quantity?

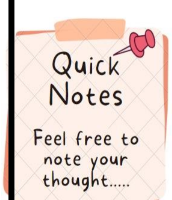
a) Point 6
b) Point 3
c) Point 7
d) Point 8
e)

Question 8

Heavy rain in Maharashtra during 2005 and 2006 caused havoc with the rice crop. What point in figure 1 is most likely to be the new equilibrium price and quantity?

a) Point 6
b) Point 3
c) Point 7
d) Point 8

Answer: 1(c), 2(d), 3(d),4(b),5(b),6(c),7(b),8(b)



UNIT – 3
PRICE-OUTPUT DETERMINATION UNDER DIFFERENT MARKET FORMS

PERFECT COMPETITION:

In general, a perfectly competitive market has the following characteristics:

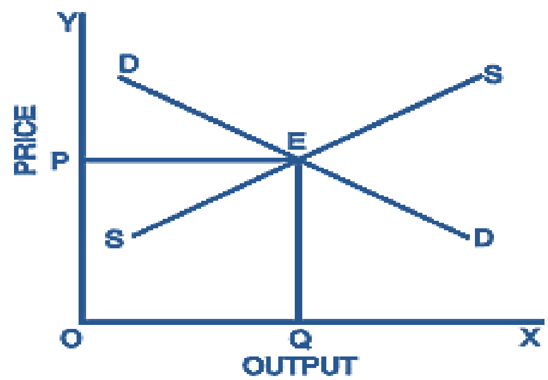
- ✓ There are large number of buyers and sellers who compete among themselves. The number is so large that the share of each seller in the total supply and the share of each buyer in the total demand is too small that no buyer or seller is in a position to influence the price, demand or supply in the market.
- ✓ The products supplied by all firms are identical or are homogeneous in all respects so that they are perfect substitutes. Thus, all goods must sell at a single market price. No firm can raise the price of its product above the price charged by other firms without losing most or all of its business.

- ✓ Every firm is free to enter the market or to go out of it. There are no legal or market related barriers to entry and also no special costs that make it difficult for a new firm either to enter an industry and produce, if it sees profit opportunity or to exit if it cannot make a profit.
- ✓ There is perfect knowledge of the market conditions on the part of buyers and sellers. Both buyers and sellers have all information relevant to their decision to buy or sell such as the quantities of stock of goods in the market, the nature of products and the prices at which transactions of purchase and sale are being entered into.
- ✓ Perfectly competitive markets have very low transaction costs. Buyers and sellers do not have to spend much time and money finding each other and entering into transactions.

- ✓ Under prefect competition, all firms individually are price takers. The firms have to accept the price determined by the market forces of total demand and total supply.

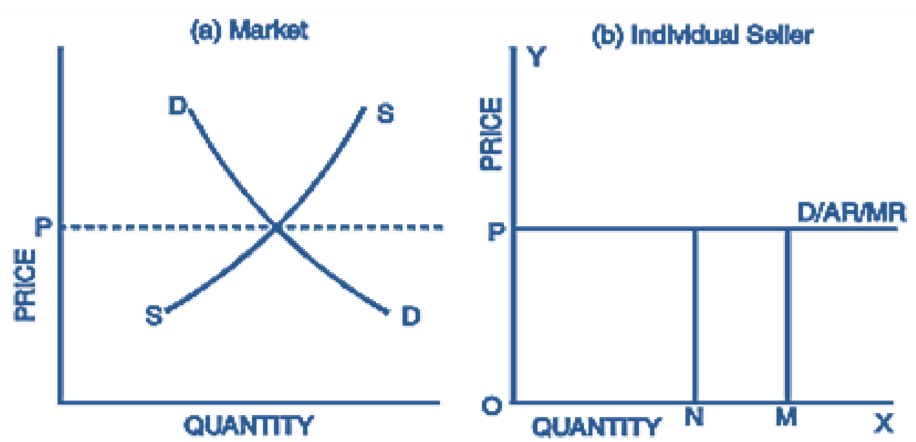
PRICE DETERMINATION UNDER PERFECT COMPETITION

Equilibrium of the Industry: An industry in economic terminology consists of a large number of independent firms. Each such unit in the industry produces a homogeneous product so that there is competition amongst goods produced by different units.



Equilibrium of a Competitive industry

Equilibrium of the Firm: The firm is said to be in equilibrium when it maximizes its profit. The output which gives maximum profit to the firm is called equilibrium output. In the equilibrium state, the firm has no incentive either to increase or decrease its output.



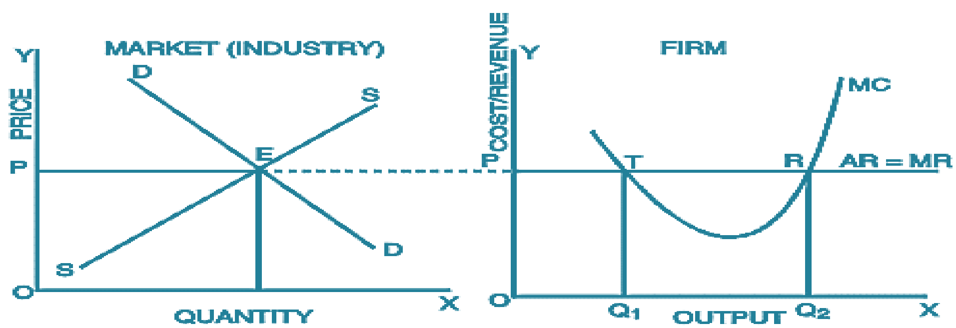
The Firm's demand curve under perfect competition

Conditions for equilibrium of a firm: As discussed earlier, a firm, in order to attain equilibrium position, has to satisfy two conditions as below:

- The marginal revenue should be equal to the marginal cost. i.e. MR = MC. If MR is greater than MC, there is always an incentive for the firm to expand its production further and gain by selling additional units. If MR is less than MC, the firm will have to reduce output since an additional unit adds more to cost than to revenue. Profits are maximum only at the point where MR = MC.
- The MC curve should cut MR curve from below. In other words, MC should have a positive slope.

SHORT-RUN PROFIT MAXIMIZATION BY A COMPETITIVE FIRM

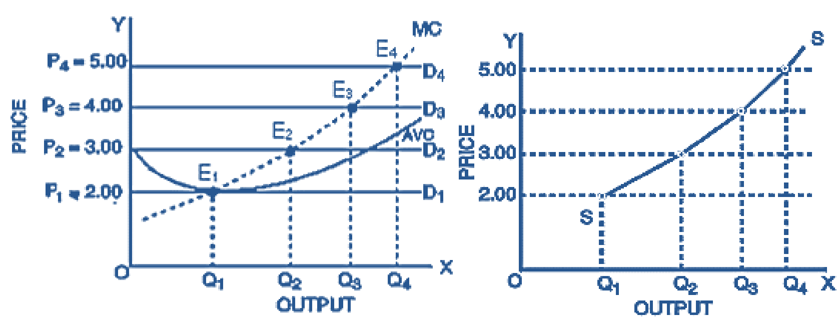
We shall begin with the short-run output decision and then move on to the long run. In the short run, a firm operates with a fixed amount of capital and must choose the levels of its variable inputs so as to maximize profit.



Equilibrium position of a firm under perfect competition

SHORT RUN SUPPLY CURVE OF THE FIRM IN A COMPETITIVE MARKET:

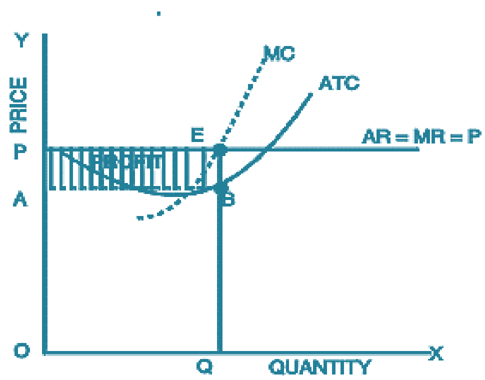
One interesting thing about the MC curve of a firm in a perfectly competitive industry is that it depicts the firm's supply curve.



Marginal cost and supply curves for a price-taking firm

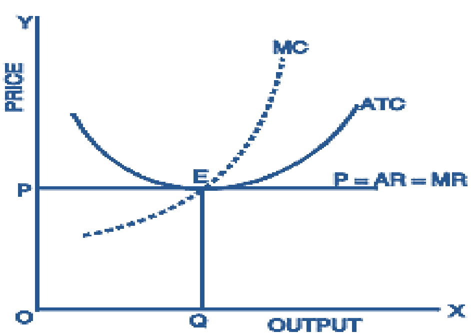
CAN A COMPETITIVE FIRM EARN PROFIT?

Supernormal Profits: There is a difference between normal profits and supernormal profits. When the average revenue of a firm is just equal to its average total cost, a firm earns normal profits or zero economic profits. It is to be noted that here a normal percentage of profits for the entrepreneur for his managerial services is already included in the cost of production. When a firm earns supernormal profits, its average revenues are more than its average total cost. Thus, in addition to normal rate of profit, the firm earns some additional profits.



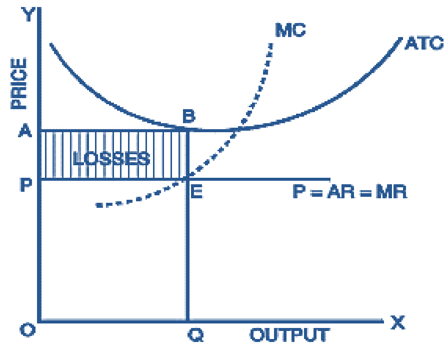
Short run equilibrium: supernormal profits of a competitive firm

Normal profits: When a firm just meets its average total cost, it earns normal profit. Here AR = ATC.



Short run equilibrium of a competitive firm: Normal Profits

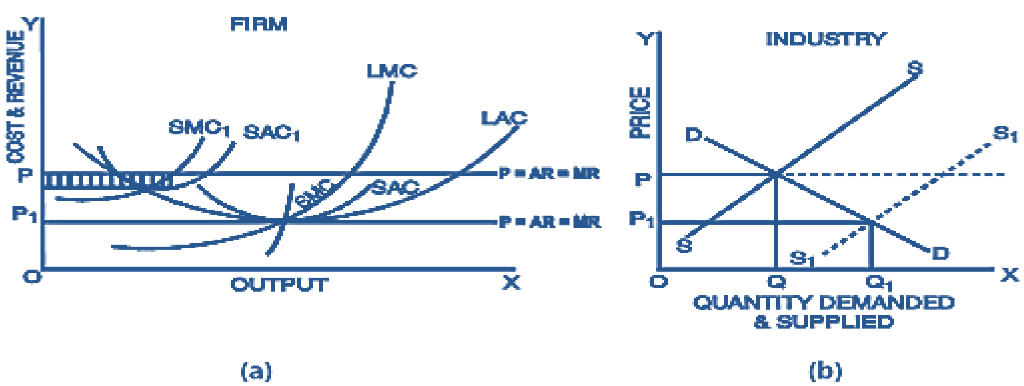
Losses: The firm can be in an equilibrium position and still makes losses. This is the situation when the firm is minimizing losses. For all prices above the minimum point on the AVC curve, the firm will stay open and will produce the level of output at which MR = MC. When the firm is able to meet its variable cost and a part of fixed cost, it will try to continue production in the short run.



Short run equilibrium of a competitive firm: Losses

LONG RUN EQUILIBRIUM OF A COMPETITIVE FIRM

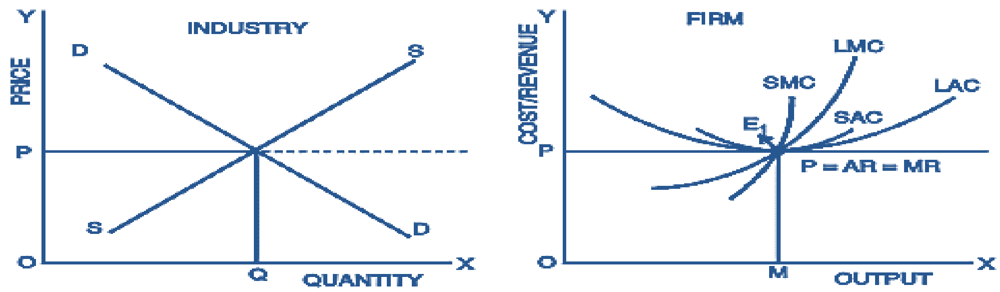
In the long run, firms can alter the scale of operation or quit the industry and new firms can enter the industry. In a market with entry and exit, a firm enters when it believes that it can earn a positive long run profit and exits when it faces the possibility of a long-run loss. Firms are in equilibrium in the long run when they have adjusted their plant so as to produce at the minimum point of their long run ATC curve, which is tangent to the demand curve defined by the market price. In the long run, the firms will be earning just normal profits, which are included in the ATC.



Long run equilibrium of the firm in a perfectly competitive market

LONG RUN EQUILIBRIUM OF THE INDUSTRY

A long-run competitive equilibrium of a perfectly competitive industry occurs when three conditions hold: All firms in the industry are in equilibrium i.e. all firms are maximizing profit. No firm has an incentive either to enter or exit the industry because all firms are earning zero economic profit or normal profit.



Long run equilibrium of a competitive industry and its firms

In the long run, under perfect competition, the market mechanism leads to optimal allocation of resources. The optimality is shown by the following outcomes associated with the long run equilibrium of the industry:

- The output is produced at the minimum feasible cost.
- Consumers pay the minimum possible price which just covers the marginal cost i.e. MC = AR. (P = MC).
- Plants are used to full capacity in the long run, so that there is no wastage of resources i.e. MC = AC.
- Firms earn only normal profits i.e. AC = AR.
- Firms maximize profits (i.e. MC = MR), but the level of profits will be just normal.
- There is optimum number of firms in the industry.
- In other words, in the long run, LAR = LMR = P = LMC = LAC and there will be optimum allocation of resources.

Quick Notes

Feel free to note your thought.....

TOPIC – 1
PERFECT COMPETITION

Question 1

Under perfect competition firm is described as:

a) Price taker and not maker
b) price maker and not price taker
c) neither price maker nor price taker
d) None of the above

Question 2

Under which of the following forms of market structure does a firm have no control over the Price of its product:

a) Monopoly
b) Monopoly Competition
c) Oligopoly
d) Perfect Competition

Question 3

The price elasticity of demand for a product is infinite under:

a) Perfect competition
b) Monopoly
c) Monopolistic competition
d) Oligopoly.

Question 4

Under which Market situation demand curve is linear and parallel to X axis:

a) Perfect competition
b) Oligopoly
c) Monopolistic competition
d) An industry consist of many firms
e)

Question 5

MR Curve = AR = Demand Curve is a feature of which kind of market?

a) Perfect competition
b) Oligopoly
c) Monopolistic competition
d) Monopoly

Question 6

In long run a perfectly competitive firms earns

a) Normal Profits
b) Abnormal Profits
c) Super normal profits
d) Neither profits nor losses

Answer: 1(a), 2(d), 3(a),4(a),5(a),6(a)

MONOPOLY

The word 'Monopoly' means ''alone to sell''. Monopoly is a situation in which there is a single seller of a product which has no close substitute. Pure monopoly is never found in practice. However, in public utilities such as transport, water and electricity, we generally find a monopoly form of market.

FEATURES OF MONOPOLY MARKET:

- Single seller of the product: In a monopoly market, there is only one firm producing or supplying a product. This single firm constitutes the industry and as such there is no distinction between firm and industry in a monopolistic market. Monopoly is characterized by an absence of competition

- Barriers to Entry: In a monopolistic market, there are strong barriers to entry. The barriers to entry could be economic, institutional, legal or artificial.

- No close-substitutes: A monopoly firm has full control over the market supply of a product or service. A monopolist is a price maker and not a price taker. The monopolist generally sells a product which has no close substitutes. In such a case, the cross elasticity of demand for the monopolist's product and any other product is zero or very small. The price elasticity of demand for monopolist's product is also less than one. As a result, the monopolist faces a steep downward sloping demand curve.

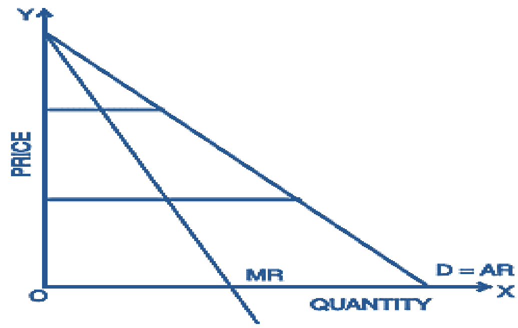
- Market power: A monopoly firm has market power i.e. it has the ability to charge a price above marginal cost and earn a positive profit.

HOW DO MONOPOLIES ARISE?

The fundamental cause of monopoly is barriers to entry; in effect other firms cannot enter the market. A few reasons for occurrence and continuation of monopoly are:

- ♣ Strategic control over a scarce resources, inputs or technology by a single firm limiting the access of other firms to these resources.
- ♣ Through developing or acquiring control over a unique product that is difficult or costly for other companies to copy.
- ♣ Governments granting exclusive rights to produce and sell a good or a service.
- ♣ Patents and copyrights given by the government to protect intellectual property rights and to encourage innovation.
- ♣ Business combinations or cartels (illegal in most countries) where former competitors cooperate on pricing or market share.
- ♣ Extremely large start-up costs even to enter the market in a modest way and requirement of extraordinarily costly and sophisticated technical know-how discourage firms from entering the market.
- ♣ Natural monopoly arises when there are very large economies of scale. A single firm can produce the industry's whole output at a lower unit cost than two or more firms could. It is often wasteful (for consumers and the economy) to have more than one such supplier in a region because of the high costs of duplicating the infrastructure.
- ♣ Enormous goodwill enjoyed by a firm for a considerably long period create difficult barriers to entry.
- ♣ Stringent legal and regulatory requirements effectively discourage entry of new firms without being specifically prohibited.
- ♣ Firms use various anti-competitive practices often referred to as predatory tactics, such as limit pricing or predatory pricing intended to do away with existing or potential competition.

Monopolist's Revenue Curves: In the absence of government intervention, a monopolist is free to set any price it desires and will usually set the price that yields the largest possible profit. Since the monopolist firm is assumed to be the only producer of a particular product, its demand curve is identical with the market demand curve for the product. The market demand curve, which exhibits the total quantity of a product that buyers will offer to buy at each price, also shows the quantity that the monopolist will be able to sell at every price that he sets.



A monopolist's demand curve and marginal revenue curve

The relationship between AR and MR of a monopoly firm can be stated as follows:

- ✓ AR and MR are both negatively by sloped (downward sloping) curves.
- ✓ The slope of the MR curve is twice that of the AR curve. MR curve lies half-way between the AR curve and the Y axis. i.e. it cuts the horizontal line between Y axis and AR into two equal parts.
- ✓ AR cannot be zero, but MR can be zero or even negative.

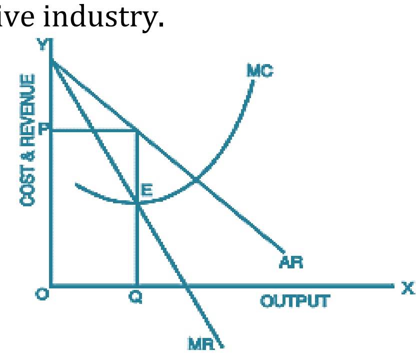
Monopolies are mainly of two types: Simple monopoly where the monopolist charges uniform price from all buyers and discriminating monopoly where the monopolist charges different prices from different buyers of the same good or service. We shall look into equilibrium of a simple monopolist.

- Profit maximisation in a Monopolized Market: Equilibrium of the Monopoly Firm

  Firms in a perfectly competitive market are price-takers so that they are only concerned about determination of output. But this is not the case with a monopolist. A monopolist has to determine not only his output but also the price of his product.

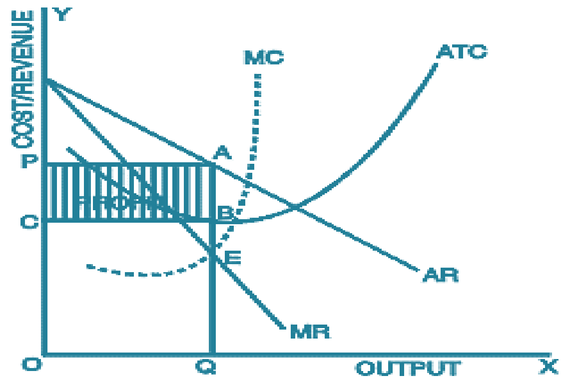
SHORT RUN EQUILIBRIUM

Conditions for equilibrium: The twin conditions for equilibrium in a monopoly market are the same as that of a firm in a competitive industry.

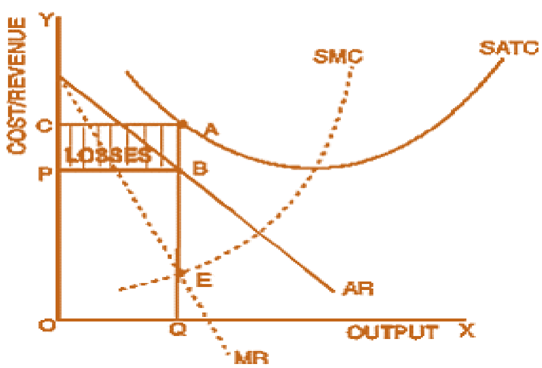


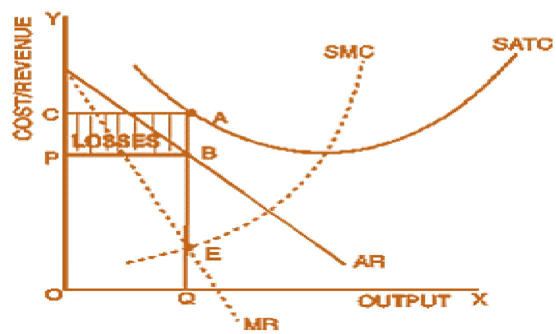
Equilibrium of a monopolist (Short run)

the monopolist is making profits or losses in the short run, we need to introduce the average total cost curve.



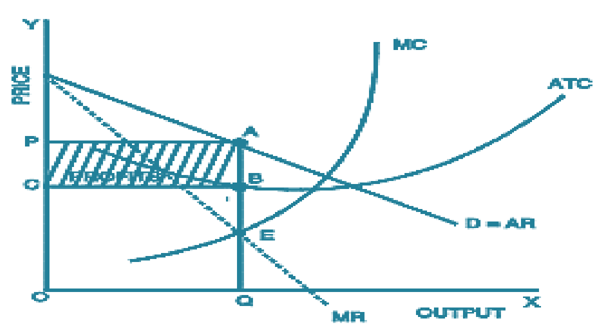
Can a monopolist incur losses? One of the misconceptions about a monopoly firm is that it makes profits at all times. It is to be noted that there is no certainty that a monopolist will always earn an economic or supernormal profit. It all depends upon his demand and cost conditions. If a monopolist faces a very low demand for his product and the cost conditions are such that ATC >AR, he will not be making profits, rather, he will incur losses.





Equilibrium of the monopolist: Losses in the short run

Long Run Equilibrium: Long run is a period long enough to allow the monopolist to adjust his plant size or to use his existing plant at any level that maximizes his profit. In the absence of competition, the monopolist need not produce at the optimal level. He can produce at a sub-optimal scale also.



Long run equilibrium of a monopolist

PRICE DISCRIMINATION:

Price discrimination is a method of pricing adopted by a monopolist in order to earn abnormal profits. It refers to the practices of charging different prices for different units of the same commodity.

Further examples of price discrimination are:

- Railways separate high-value or relatively small-bulk commodities which can bear higher freight charges from other categories of goods.
- Some countries dump goods at low prices in foreign markets to capture them.
- Some universities charge higher tuition fees from evening class students than from other scholars.
- A lower subscription is charged from student readers in case of certain journals.
- Lower charges on phone calls at off peak time.

Price discrimination cannot persist under perfect competition because the seller has no influence over the market determined price. Price discrimination requires an element of monopoly so that the seller can influence the price of his product.

Conditions for price discrimination: Price discrimination is possible only under the following conditions:

- The seller should have some control over the supply of his product i.e. the firm should have price setting power. Monopoly power in some form is necessary (not sufficient) to discriminate price.
- The seller should be able to divide his market into two or more sub-markets
- The price-elasticity of the product should be different in different sub-markets. The monopolist fixes a high price for his product for those buyers whose price elasticity of demand for the

product is less than one. This implies that, when the monopolist charges a higher price from them, they do not significantly reduce their purchases in response to high price.

- It should not be possible for the buyers of low-priced market to resell the product to the buyers of high-priced market i.e there must be no market arbitrage.

Objectives of price Discrimination:

- to earn maximum profit
- to dispose off surplus stock
- to enjoy economics of scale
- to capture foreign markets and
- to secure equity through pricing

- Price discrimination may be related to the consumer surplus enjoyed by the consumers. Prof. Pigou classified three degrees of price discrimination. Under the first degree price discrimination, the monopolist separates the market into each individual consumer and charges them the price they are willing and able to pay and thereby extract the entire consumer surplus.

- Under the second degree price discrimination, different prices are charged for different quantities of sold. The monopolist will take away only a part of the consumers' surplus. The two possibilities are:

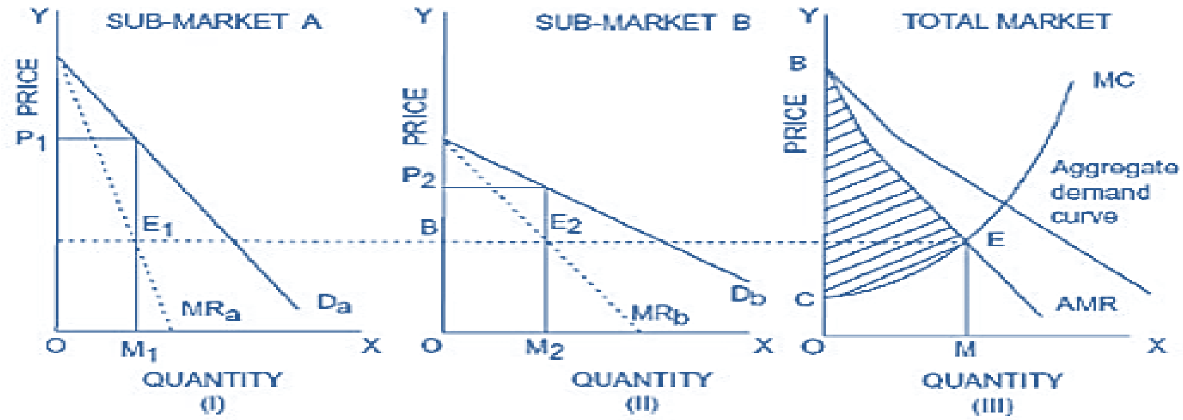
a) Different consumers pay different price if they buy different quantity. Larger quantities are available at lower unit price.
b) Each consumer pays different price for consecutive purchases. For example, suppliers of services such as telephone, electricity, water, etc., sometimes charge higher prices when consumption exceeds a particular limit.

- Under the third degree price discrimination, price varies by attributes such as location or by customer segment. Here the monopolist will divide the consumers into separate sub-markets and charge different prices in different sub-markets.

EQUILIBRIUM UNDER PRICE DISCRIMINATION:

Under simple monopoly, a single price is charged for the whole output; but under price discrimination the monopolist will charge different prices in different sub-markets. First of all, the monopolist has to divide his total market into various sub-markets on the basis of differences in elasticity of demand. In order to reach the equilibrium position, the discriminating monopolist has to make three decisions:

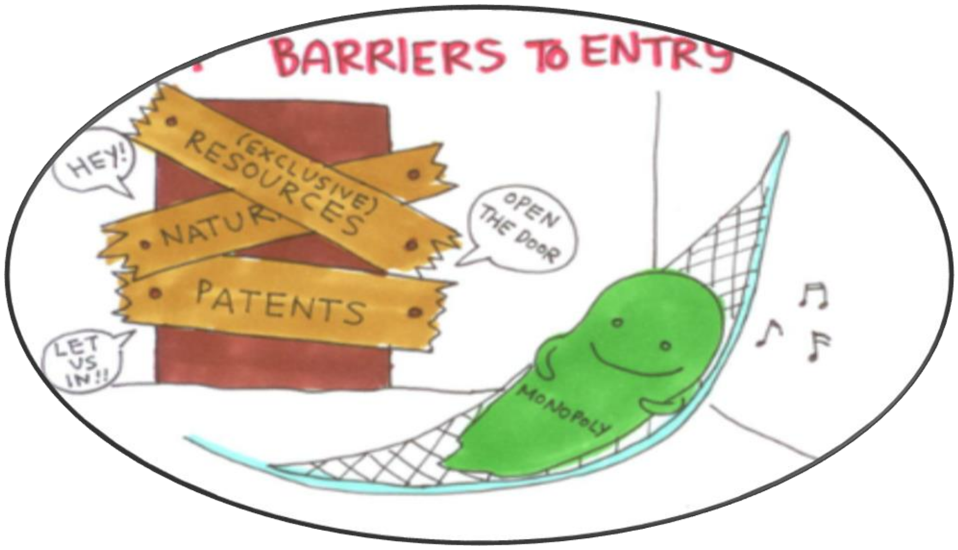
- How much total output should he produce?
- How the total output should be distributed between the two sub-markets? and
- What prices he should charge in the two sub-markets?



Fixation of total output and price in the two sub-markets by the discriminating monopolist

ECONOMIC EFFECTS OF MONOPOLY:

- Monopoly is often criticized because it reduces aggregate economic welfare through loss of productive and allocative efficiency.
- Monopolists charge substantially higher prices and produce lower levels of output than would exist if the product were produced by competitive firms.
- Monopolists earn economic profits in the long run which are unjustifiable.
- Monopoly prices exceed marginal costs and therefore reduces consumer surplus. There is a transfer of income from the consumers to the monopolists. Not only that consumers pay higher prices, but they would also not be able to substitute the good or service with a more reasonably priced alternative.
- Monopoly restricts consumer sovereignty and consumers' opportunities to choose what they desire.
- Monopolists may use unjust means for creating barriers to entry to sustain their monopoly power. They often spend huge amount of money to maintain their monopoly position. This leads increases average total cost of producing a product.
- A monopolist having substantial financial resources is in a powerful position to influence the political process in order to obtain favourable legislation.
- Very often, monopolists do not have the necessary incentive to introduce efficient innovations that improve product quality and reduce production costs.
- Monopolies are able to use their monopoly power to pay lower prices to their suppliers.
- The economy is also likely to suffer from 'X' inefficiency, which is the loss of management efficiency associated with markets where competition is limited or absent.



Quick Notes

Feel free to note your thought.....

TOPIC – 2
MONOPOLY

Question 1

Which is not characteristic of monopoly?

a) The firm is price taker
b) There is a single firm
c) The firm produces a unique product
d) The existence of some advertising.

Question 2

If a firm under monopoly wants to sell more its average revenue curve will be a line

a) Horizontal
b) Vertical
c) Downward slopping
d) Upward slopping

Question 3

An industry with significant barriers to entry and a single supplier.

a) Perfect competition
b) Monopolistic competition
c) Oligopoly
d) Monopoly

Question 4

Monopolists are able to practice discrimination because

a) They have constant marginal cost
b) OF differing price elasticity of supply
c) They have constant average cost
d) OF differing average willingness to pay among customer

Question 5

No close – substitution is characteristic of

a) Monopoly
b) Oligopoly
c) Pure competition
d) None

Question 6

Monopoly is undesirable due to follow:-

a) It has prices higher than competitive firms
b) It produces less output than competitive firm
c) It discriminates on prices
d) All of the above

Question 7

In the long Run, monopolist

a) Incur
b) Want to short down
c) Must earn super normal profit
d) Earns only normal profits
e)

Answer: 1(a), 2(c), 3(d), 4(d), 5(a), 6(d), 7(c)

IMPERFECT COMPETITION –

1. MONOPOLISTIC COMPETITION

The practice of product and service differentiation gives each seller a chance to attract business to himself on some basis other than price. This is the monopolistic part of the market situation. Thus, this market contains features of both the markets discussed earlier – monopoly and perfect competition. In fact, this type of market is more common than pure competition or pure monopoly. The industries in monopolistic competition include clothing, manufacturing and retail trade in large cities. There are many hundreds of grocery shops, shoe stores, stationery shops, restaurants, repair shops, laundries, manufacturers of women's dresses and beauty parlours in a medium sized or large city.

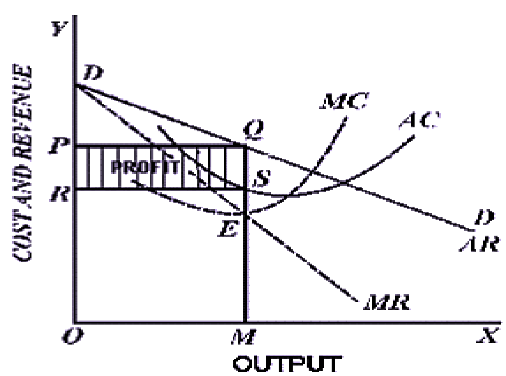
FEATURES OF MONOPOLISTIC COMPETITION

- *Large number of sellers:* In a monopolistically competitive market, there are large number of independent firms who individually have a small share in the market.
- *Product differentiation:* In a monopolistic competitive market, the products of different sellers are differentiated on the basis of brands. Because competing products are close substitutes, demand is relatively elastic, but not perfectly elastic as in perfect competition. Firms use size, design, colour, shape, performance, features and distinctive packaging and promotional techniques to make their products different.

- Freedom of entry and exit: Barriers to entry are comparatively low and new firms are free to enter the market if they find profit prospects and existing firms are free to quit.

- Non-price competition: In a monopolistically competitive market, firms are often in fierce competition with other firms offering a similar product or service, and therefore try to compete on bases other than price.

Price –output determination under monopolist competition: Equilibrium of a firm:

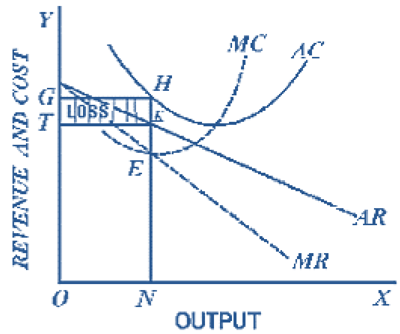


Short run equilibrium of a firm under monopolist competition: Supernormal profits

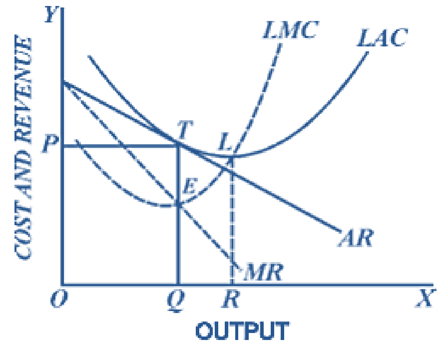
Conditions for the Equilibrium of an individual firm: The conditions for price-output determination and equilibrium of an individual firm may be stated as follows:

(i) MC = MR

(ii) MC curve must cut MR curve from below.



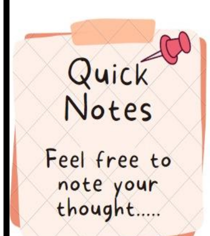
Short run equilibrium of a firm under Monopolistic Competition – With losses



Short run equilibrium of a firm under Monopolistic Competition – With losses

Perfect Competition	Monopoly	Monopolistic Competition
Large number of buyers and large number of firms in the industry	Single seller, no difference between firm and industry	Large Number of buyers and large number of firms in the industry
Homogenous products which are perfect substitutes	No Close substitutes	Differentiated products which are close substitutes, but not perfect substitutes
Insignificant market share	Command over the whole market	Each firm is small relative to the market.
Competition among firms is perfect	Absence of competition	Imperfect competition
Complete absence of monopoly	High degree of monopoly power prevalls	Some degree of Monopoly power due to perfect differentiation
Free entry and exit	Strong barriers to entry	Free entry and exit
Price – taker	Price maker	Some Control over price
Price is equal to marginal cost	Price is Higher than marginal cost	Price is higher than marginal cost
Price less than other market forms	High equilibrium price	Price is high compared to perfect competition
Demand curve is Infinitely	Downward sloping and	Downward sloping and

elastic	highly Inelastic demand curve	more elastic demand curve
MR and AR represented by the same curve	MR starts at the same point as AR, and is twice steep when compared to AR	MR starts at the same point as AR, and is Twice steep when compared to AR
TR Straight line positively sloping through the origin	TR inverted U shaped	TR inverted U shaped
No Price discrimination- same price for all units	Can practice price discrimination by selling a product at different prices	Depends on the extent of monopoly power the firms has
No Supernormal profits in the long run	Supernormal profits both in the short run and long run	No supernormal profits in the long run
No Selling Costs	Generally low selling costs, only for informing the consumers	Due to severe Competition, selling costs are vital to persuade buyers
Price being given, decides only quantity of output	Decides on both price and output	Decides on both price and output
Product is produced at the minimum average cost	Produced at the declining portion of average cost curve	Product at the declining portion of average cost curve
Equilibrium quantity is highest and produced at least cost	Equilibrium quantity less than other market forms	Equilibrium quantity less than optima, there is excess capacity
No Consumer exploitation	Consumers can be exploited by charging high prices	Consumers are influenced through price and non price competition
Efficient allocation of resources	Inefficient allocation of resources	Inefficient allocation of resources
No Wastage of resources	Wastage of resource	Huge wastage of resources for advertisements



TOPIC – 3
MONOPOLISTIC COMPETITION

Question 1

Which of the following is NOT a feature of monopolistic competition?

a) Numerous seller
b) Product differentiation
c) Numerous buyers
d) Homogenous products

Question 2

Large price elasticity of demand available in

a) Monopoly
b) Perfect competition
c) Monopolistic
d) Oligopoly

Question 3

The structure of the Toothpaste industry in India is best described as:

a) Perfectly competitive
b) Monopolistic
c) Monopolistically competitive
d) Oligopolistic

Question 4

Product differentiation is the main features of which market?

a) Oligopoly
b) Monopolistic
c) Discriminating Monopoly
d) Perfect competition

Question 5

The long run equilibrium outcomes in monopolistic competition and perfect competitions are similar, because in both market structures:

a) The efficient output level will be produced
b) Firms will be producing at minimum average cost
c) Firms realize all economies of scale
d) Firms will only earn normal profit

Answer: 1(b), 2(c), 3(b)4(b),5(d)

OLIGOPOLY

Oligopoly is an important form of imperfect competition. Oligopoly is often described as ‘competition among the few’. Prof. Stigler defines oligopoly as that “situation in which a firm bases its market policy, in part, on the expected behaviour of a few close rivals”.

❖ TYPES OF OLIGOPOLY

- *Pure oligopoly or perfect oligopoly:* Pure oligopoly or perfect oligopoly occurs when the product is homogeneous in nature, e.g. Aluminium industry. This type of oligopoly tends to process raw materials or produce intermediate goods that are used as inputs by other industries.

- *Open and closed oligopoly:* In an open oligopoly market new firms can enter the market and compete with the existing firms. But, in closed oligopoly entry is restricted.

- *Collusive and Competitive oligopoly:* When few firms of the oligopoly market come to a common understanding or act in collusion with each other either in fixing price or output or both, it is collusive oligopoly. When there is absence of such an understanding among the firms and they compete with each other, it is called competitive oligopoly.

- *Partial or full oligopoly:* Oligopoly is partial when the industry is dominated by one large firm which is considered or looked upon as the leader of the group. The dominating firm will be the price leader. In full oligopoly, the market will be conspicuous by the absence of price leadership.

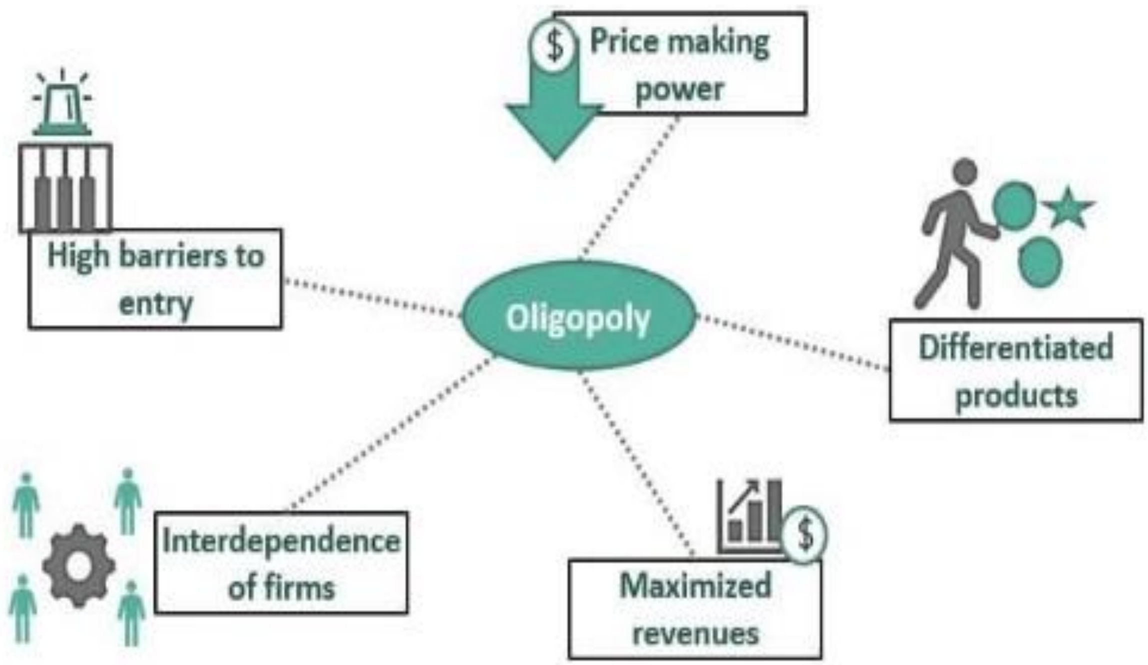
- *Syndicated and organized oligopoly:* Syndicated oligopoly refers to that situation where the firms sell their products through a centralized syndicate. Organized oligopoly refers to the situation where the firms organize themselves into a central association for fixing prices, output, quotas, etc.

CHARACTERISTICS OF OLIGOPOLY MARKET

- Strategic Interdependence: The most important feature of oligopoly is interdependence in decision making of the few firms which comprise the industry. Since there are only few sellers, there will be intense competition among them. Under oligopoly, each seller is big enough to influence the market. A firm has to necessarily respond to its rivals' actions, and simultaneously the rivals also respond to the firm's actions.

- Importance of advertising and selling costs: A direct effect to interdependence to oligopolist is that the firms have to employ various aggressive and defensive marketing weapons to gain greater share in the market or to maintain their share. For this, firms have to incur a good deal of costs on advertising and other measures of sales promotion.

- Group behaviour: The theory of oligopoly is a theory of group behaviour, not of mass or individual behaviour and to assume profit maximizing behaviour on the oligopolists' part may not be very valid. There is no generally accepted theory of group behaviour. The firms may agree to pull together as a group in promotion of their common interest.



PRICE LEADERSHIP:

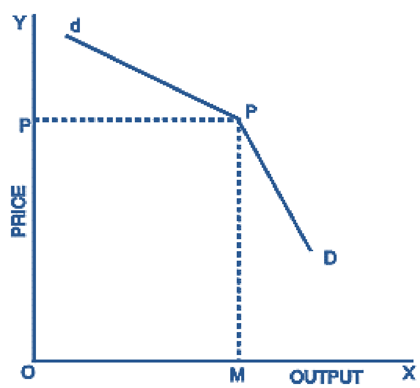
Cartels are often formed in industries where there are a few firms, all of which are similar in size. A group of firms that explicitly agree (collude) to coordinate their activities is called a cartel. Most cartels have only a subset of producers. If the participating producers stick to the cartel's agreements, the cartel will have high market power and earn monopoly profits especially when the demand for the product is inelastic.

But it is possible that there is a dominant or a large firm surrounded by a large number of small firms. If these firms are numerous or too unreliable, the large firm has to decide how to set its price, taking into account the behaviour of these fringe firms. One strategy is to adopt a 'live and let live philosophy'. Specifically, the dominant firm accepts the presence of fringe firms and sets the price to maximize its profit, taking into account the fringe firms' behaviour. This is called price-leadership by dominant firm. Another type of price leadership is by a low cost firm. Here, the price leader sets the price in such a manner that it allows some profits to the followers also. Then there could be barometric price leadership under which an old, experienced, largest or most respected firm acts as a leader and assesses the market conditions with regard to the demand, cost, competition etc. and makes changes in price which are best from the view point of all the firms in the industry. Whatever price is charged by the price leader is generally accepted by the follower firms.

Thus, we find that fixing of price under oligopoly is very tricky affair and involves a number of assumptions regarding the behaviour of the oligopolistic group.

KINKED DEMAND CURVE:

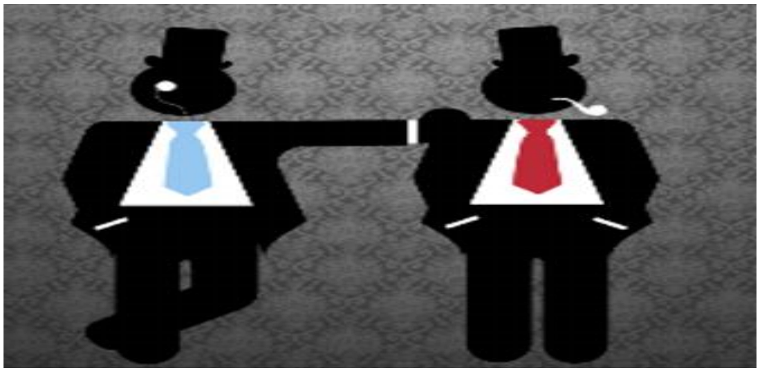
It has been observed that in many oligopolistic industries prices remain sticky or inflexible for a long time. They tend to change infrequently, even in the face of declining costs. Many explanations have been given for this price rigidity under oligopoly and the most popular explanation is the kinked demand curve hypothesis given by an American economist Paul



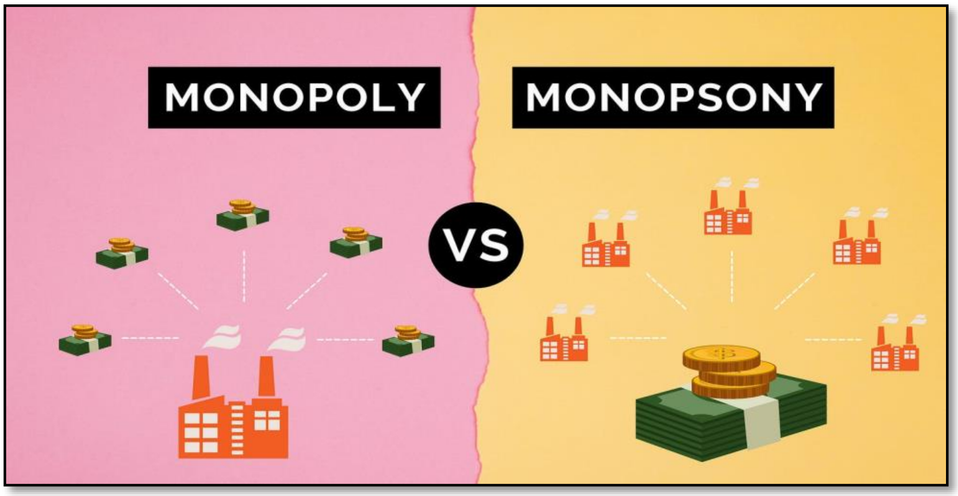
Kinked Demand Curve under Oligopoly

OTHER IMPORTANT MARKET FORMS

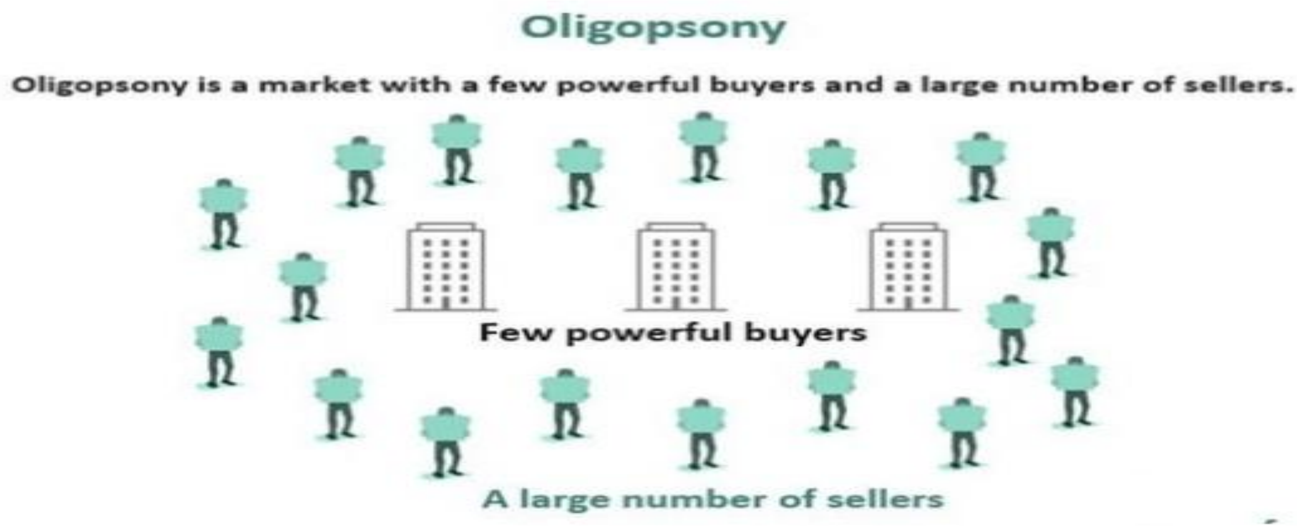
- **Duopoly**, a subset of oligopoly, is a market situation in which there are only two firms in the market.



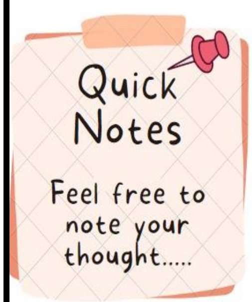
- **Monopsony** is a market characterized by a single buyer of a product. Or service and is mostly applicable to factor markets in which a single firm is the only buyer of a factor.



- **Oligopsony** is a market characterized by a small number of large buyers and is mostly relevant to factor markets.



- **Bilateral monopoly** is a market structure in which there is only a single buyer and a single seller i.e. it is a combination of monopoly market and a monopsony market.



TOPIC – 4
OLIGOPOLY

Question 1

When the industry is dominated by one large firm which is considered as the leader of the group the market is described as:

a) Open oligopoly
b) Perfect oligopoly
c) Partial oligopoly
d) Organized oligopoly

Question 2

The reason for the kinked demand curve is that:

a) The oligopolist believe that competitors Will follow output increases but not output reduction
b) The oligopolist believe that competitors will follow price increases but not output reductions
c) The oligopolist believe that competitors will follow price cuts but not price rises
d) The oligopolist believe that the price increases but not output increases

Question 3

A highly concentrated market with just a few interdependent firms

a) Perfect competition
b) Monopolistic competition
c) Oligopoly
d) Monopoly

Question 4

Collusion most frequently occurs in industries that are

a) Oligopolistic
b) Monopolistically competitive
c) Monopolistic
d) Perfectly competitive

Question 5

Which types of Oligopoly occurs when the product is homogeneous in nature

a) Open
b) Pure
c) Full
d) None

Question 6

What is / are feature (s) of oligopoly

a) Kinked Demand curve
b) Cartel
c) Downward sloping demand curve
d) both (a) and (b) are correct

Question 7

Which market is having a single seller and single buyer?

a) Duopoly
b) Monopoly

c) Bilateral Monopoly
d) One of the above

Question 8

Which one of the following is not a feature of oligopoly?

a) Inter dependence
b) Selling cost
c) Group behavior
d) Free entry

Question 9

Oligopolist will try to maximize profits by:

a) by charging more than perfect competition
b) by charging less than monopoly
c) by charging more than perfect competition & less than monopoly
d) none of the above

Question 10

Kinked demand model is also known as

a) hypothesis model
b) Keynes model
c) sweezy model
d) none of the above

Question 11

In kinked demand curve, the upper part has which type of elasticity?

a) Less than 1
b) zero
c) greater than 1
d) none of the above

Answer: 1(c),2(c),3(c),4(a),5(b),6(d),7(c),8(d),9(c),10(c),11(c)