INTRODUCTION TO MANAGERIAL ECONOMICS

ECONOMICS:

Economics is a study of human activity both at individual and national level. The economists of early age treated economics merely the science of wealth. Every one of us are involved in efforts aimed at earning money and spending this money to satisfy our wants such as food, clothing, shelter and others. Such activities of earning and spending money are called Economic activities.

DEFINITIONS OF ECONOMICS:

- Adam Smith, the father of economics, defined economics as "the study of nature and uses of national wealth."[Wealth Definition]
- Professor Lionel Robbins defined Economics as "the science which studies human behavior as a relationship between ends and scarce means which have alternative uses."[Scarcity Definition]
- Alfred Marshall writes,"Economics is a study of man's actions in the ordinary business of life; it enquires how he gets his income and how he uses it."

MANAGERIAL ECONOMICS

The managerial economics is concerned with those aspects of economics and its tools of analysis which are used in the process of decision making of business enterprises.

DEFINITIONS OF MANAGERIAL ECONOMICS:

- **Spencer and Siegelman** define "Managerial economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".
- **Brigham** believe that managerial economics is "the application of economic theory and methodology to business administration practice."

  ANOTHER NAMES OF MANAGERIAL ECONOMICS

  - Business economics
  - Micro economics
  - Economics of enterprises
  - Applied economics
  - Managerial economics

Managerial economics lies on the border line between economics and business management and services as a bridge between the two disciplines.

NATURE OF MANAGERIAL ECONOMICS

- **Close to Micro economics:** Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus it is close to micro economics.
- **Operates against backdrop of macro economics:** The macroeconomic conditions of the economy are also seen as limiting factors for the firm to operate. Managerial economics has to be aware of the limits set by the macro economic conditions such as government industrial policy, inflation and so on.
- **Normative statements:** A Normative statement usually includes the words 'ought' or 'should'. They reflect the people's moral attitudes and are expressions of what a team of people ought to do. Example: Government of India should open up the economy. Hence Managerial economics belongs to normative economics; as it is concerned with what management should do under particular circumstances.

- **Prescriptive actions:** Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from available alternatives for optimal solutions. Example: Variable costs and marginal costs can be used to judge the feasibility of an export order.
- **Applied in nature:** 'Models' are built to reflect real life business situations which help in decision making. They are used in inventory control, optimization, project management etc.
- **Offers scope to evaluate each alternative:** Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenues. It can decide which alternative is better to maximize the profits of the firm.
- **Interdisciplinary:** The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology etc.
- **Assumptions and Limitations:** Every concept and theory of managerial economics is based on certain assumptions, so their validity is not universal.

SCOPE OF MANAGERIAL ECONOMICS

The main areas of applications of managerial economics are discussed below:

1. **Demand Decision:** It includes analysis and forecasting of demand for a given product and service. Demand forecasting is an important part of managerial decision making because an estimate of future sales is essential before preparing production schedule and employing productive resources. Demand analysis helps the management in indentifying factors that influence the demand for the products of a firm. Thus demand analysis and fore casting is essential for business planning.
2. **Input-Output Decision:** Here, the cost of inputs in relation to output is studied to optimize the profits. The main focus of this decision is to optimize (maximize) the output and minimize cost (input).
3. **Price-Output Decision:** Here, the task is to determine price for the product in different market situations such as perfect market and imperfect markets ranging from monopoly, monopolistic competition, duopoly and oligopoly. The features of these markets and how price is determined in each of these competitive situations is studied. It includes pricing policies, theories and strategies.
4. **Profit-related Decisions:** Here, we employ the techniques such as break even analysis, cost reduction, cost control and ratio analysis to ascertain the level of profits.
5. **Investment Decisions:** Investment decisions are also called capital budgeting decisions. It includes:
    - Selection of the most suitable investment project.
    - Maximize return on capital invested.
    - Study of cost of capital and capital structure.
    - Minimize the cost of capital.
6. **Economic forecasting and forward planning:** It is necessary to forecast the trends in the economy to plan for the future in terms of investments, profits, products and market. Government policies, competition, social & political factors, employment, income levels etc influence economy of the country. Hence we need to forecast the economy and plan future to minimize risk and uncertainty.

DEMAND ANALYSIS

DEMAND:-

The willingness of buyer to pay money for some quantity of a particular good or service is known as demand. Ex: - I want a car and I cannot pay for it there is no demand for it from my side.

FEATURES OF DEMAND

1. Ability of a customer to purchase a product, 2. Time to purchase, 3. Price of a product

NATURE AND TYPES OF DEMAND

A product with more number of uses is naturally more in demand than one with a single use.

- Individual and Market Demand:
- Organization and Industry Demand
- Autonomous and Derived Demand
- Demand for Perishable and Durable Goods
- Short-term and Long-term Demand
- Price, Income and Cross Demand

i. Individual and Market Demand:

It refers to the classification of demand of a product based on the number of consumers in the market. Individual demand can be defined as a quantity demanded by an individual for a product at a particular price and within the specific period of time. For example, Mr. X demands 200 units of a product at Rs. 50 per unit in a week.

In simple terms, market demand is the aggregate of individual demands of all the consumers of a product over a period of time at a specific price, while other factors are constant. For example, there are four consumers of oil. These four consumers consume 30 litres, 40 litres, 50 litres, and 60 litres of oil respectively in a month. Thus, the market demand for oil is 180 litres in a month.

ii. Organization and Industry Demand:

It refers to the classification of demand on the basis of market. The demand for a product of an organization at given price over a point of time is known as organization demand. For example, the demand for Toyota cars is organization demand. The sum total of demand for products of all organizations in a particular industry is known as industry demand. For example: the demand for cars of various brands, such as Toyota, Maruti Suzuki, Tata, and Hyundai, in India constitutes the industry' demand. The distinction between organization demand and industry demand is not so useful in a highly competitive market.

iii. Autonomous and Derived Demand:

It refers to the classification of demand on the basis of dependency on other products. The demand for a product that is not associated with the demand of other products is known as autonomous or direct demand. On the other hand, derived demand refers to the demand for a product that arises due to the demand for other products.

For example, the demand for petrol, diesel, and other lubricants depends on the demand of vehicles. Apart from this, the demand for raw materials is also derived demand as it is dependent on the production of other products. Moreover, the demand for substitutes and complementary goods is also derived demand.

iv. Demand for Perishable and Durable Goods:

It refers to the classification of demand on the basis of usage of goods. The goods are divided into two categories, perishable goods and durable goods. Perishable or non-durable goods refer to the goods that have a single use. For example: cement, coal, fuel, and eatables. On the other hand, durable goods refer to goods that can be used repeatedly.

For example, clothes, shoes, machines, and buildings. Perishable goods satisfy the present demand of individuals. However, durable goods satisfy both present as well as future demand of individuals. Therefore, consumers purchase durable items by considering its durability.

v. Short-term and Long-term Demand:

It refers to the classification of demand on the basis of time period. Short-term demand refers to the demand for products that are used for a shorter duration of time or for current period. This demand depends on the current tastes and preferences of consumers. **For example**, demand for umbrellas, raincoats, sweaters, long boots is short term and seasonal in nature. On the other hand, long-term demand refers to the demand for products over a longer period of time.

vi. Price, Income and Cross Demand:

PRICE DEMAND: Price demand refers to the quantity of a product or service demanded at a given price. **INCOME DEMAND**: Income demand refers to the quantity of a particular product or service demanded at a given level of income of the consumer or the households. **CROSS DEMAND**: Cross demand refers to the quantity demanded of a particular product or service for a given price of the related goods. The related goods may be complementary or substitute goods.

FACTOR DETERMINING THE DEMAND

1. **Price of the commodities or products**: There is an inverse relationship between price and demand of a commodity if the price increases demand will decrease and vice versa .
   According to the law of demand "A fall in the price of a commodity causes the house hold to buy more of that commodity and less of the other commodity which compete with it, while a rise in price causes the household to buy less of this commodity and more of competing commodities".
2. **Nature of commodity:-**
   - ✓ Necessities , Comforts and Luxuries
3. **Price of related goods:-**
   A. Substitute goods: - These are the goods that can be used as substitute in the place of other goods with equal satisfaction. EX:- coffee (or) tea.
   B. Complementary goods:- these are the goods that are demanded only when their related goods are available. Ex:-ink is complimentary to the pen
4. **Income of the consumers**: - If the income of the consumers increase the demand of commodity will increase the demand of the commodity will also increase because with the increase in income he can also spend more amounts on the purchase of commodity.
5. **Taste and preferences of the consumers**:- Tastes and preferences along with fashion habit and customs of consumers affect the demand for example the demand of goods of fashion goes on increasing at the same price or even if the prices of these goods increase if a consumer is habitual of consuming he will purchase it on all the price levels.
6. **Size of the population**: - The demand of almost all the commodities increases on an increase in the population and it decreases on a decrease in population.

7. **Government policy**:- Government policy affects the demand of the commodity for example if heavy taxes are imposed on the commodity the demand of such commodity will decrease substantially conversely if the government announces the tax concession for certain commodity their demand will increase.
8. **Expectations regarding future prices:** - Expectations of consumers regarding future prices of a commodity affects its demand for example if there is a hope of raise in price of a commodity in future, its demand will increase even at high price because the consumer would like to store such commodity conversely if there is hope of fall in the prices of a commodity in future, the demand of such commodity will decrease.
9. **Quality of the product:** - Demand of the goods of better quality is more than of cheaper quality.
10. **Advertisement:**-Advertisement creates increase and maintains demand of goods advertisement helps in increasing the demand.

DEMAND SCHEDULE

A demand schedule can be constructed to any commodity when the list of price and the quantities purchased at those prices are known. Demand schedule can be divided into two categories. They are:

A. Individual demand schedule

B. Market demand schedule

A. Individual demand schedule: - An individual demand schedule is a list of the various quantities of a commodity which an individual consumer purchases at various levels of price in the market. **EX:-**

PRICE OF THE MANGOES(RS)	QUANTITY DEMANDED
9	1
8	2
7	3
6	4
5	5
4	6
3	7
2	8

B. MARKET DEMAND SCHEDULE:-

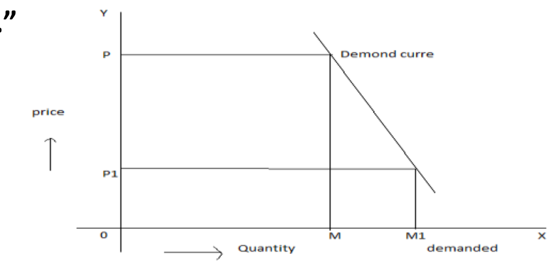
A Market demand schedule shows the total demand for a product at a particular time at different prices in the market. Market demand schedule can be obtained by adding up all the individual demand schedule of all consumers in the market.

Price of Apples	Quantity Demanded			Market demand
	A	B	C	
10	6	6	10	22
9	8	10	15	33
8	10	14	20	44
7	12	18	25	55
6	14	22	30	66
5	16	26	35	77

LAW OF DEMAND

The law of demand explains about the relation between the price of a commodity and its quantity demand in the market. Lower the price, greater is the quantity demanded. The law of demand shows the inverse relationship between the price and quantity demanded.

The law of demand states **"Other things remaining the same, the amount of quantity demanded rises with every fall in the price and vice versa."**



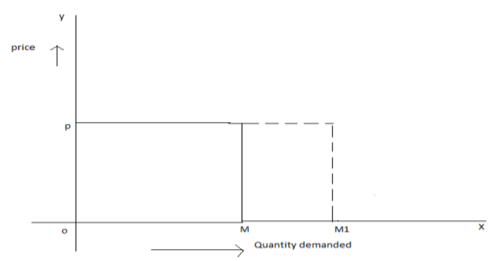
OPERATIONS OF THE LAW OF DEMAND

The law of demand explains that with every fall in the price of a particular product, its demand goes on increasing and vice versa.

1. Increase in demand
2. Decrease in demand
3. Extension and contraction in demand

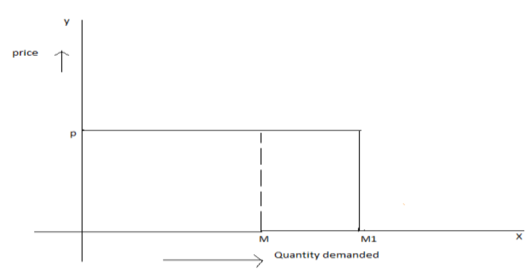
1. **Increase in Demand:-**

   If the consumer is willing and able to buy more of the product or services at the same price, the result will be an increase in demand then the demand curve will shift to the right.



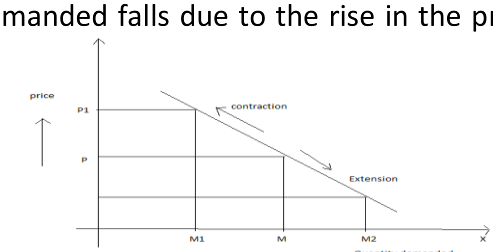
2. **Decrease in Demand:-**

   A decrease in demand occurs when buyers are ready to buy less of a product at the same price because of facts like fall income, rise in price of complimentary goods and so on. Movement along a demand curve indicates that a higher quantity is demand for a given fall in the price of the goods.



3. **Extension and contraction in demand:-**

   When the quantity demanded of a product rises due to the fall in price, it is called extension of demand and when the quantity demanded falls due to the rise in the price, it is called contraction of demand.



EXCEPTIONS TO THE LAW OF DEMAND

Law of Demand is a general statement but there are few exceptions to this general statement. They are:

1. **GIFFEN'S PARADOX:-** According to the law of demand, when the price of a commodity increases its demand must decrease but in some rare occasions, people may buy more when the prices are high. This type of situation was first discovered by the British Economist Sir ROBERT GIFFEN. Goods of this type are called as Giffen's goods. People whose incomes are low purchase more of a commodity such as broken rice, bread etc (which is their staple food) when its price rises. Conversely when its price falls, instead of buying more, they buy less of this commodity and use the savings for the purchase of better goods such as meat. This phenomenon is called Giffen's paradox.
2. **PRESTIGIOUS GOODS:-** Veblen is an American sociologist and economist. He is famous for his book "The Theory of the Leisure Class"1899. A commodity is sometimes bought not because it has any intrinsic worth but because it possession confer a social status for example diamonds precious stones gold etc. Hence the demand for such goods increases with increase in price and vice versa. Such goods are exception to law of demand and are known as Veblen goods.
3. **SPECULATION:-**Sometimes the customers demand more commodity of product when its price increases as they expect further increase in the price of the product. Such expectation about further increase in price of a product is called speculation. This is an exception to Law of Demand.

ELASTICITY OF DEMAND

The law of demand does not tell us by how much or to what extent the quantity demanded of a good will change in response to a change in its price. It will be explained by the concept of "ELASTICITY OF DEMAND".

Definition of Elasticity of Demand

The elasticity of demand is defined as the rate of responsiveness in the demand of a commodity for a given change in price or any other determinants of demand.

In other words, elasticity of demand refers to the degree of sensitiveness or responsiveness in the demand due to change in price.

TYPES OF ELASTICITY OF DEMAND

1. Price elasticity of demand 2. Income elasticity of demand
3. Cross elasticity of demand 4. Advertising elasticity of demand

1. **Price elasticity of demand:-**

   It refers to the quantity demanded of a commodity changed in response to a given change in price of the product. Price elasticity is always negative which indicates that the customer tends to buy more with every fall in the price. There exists inverse relationship between the price and the demand.

   $$\text{Price elasticity of demand} = \frac{\text{Proportional change in the quantity demanded}}{\text{Proportional change in the price}}$$

2. **Income elasticity of demanded:-**

   Income elasticity of demand refers to the quantity demanded of a commodity in response to a given change in income of consumer

   Income elasticity is normally positive which indicates that the consumer tends to buy more and more with every increase in income

   $$\text{Income elasticity of demand} = \frac{\text{Proportional change in the quantity demanded}}{\text{Proportional change in the Income}}$$

3. **Cross elasticity of demand:-**

Cross elasticity of demand refers to the quantity demanded of a commodity in response to a change in the price of a related good which maybe substitute or complement.

$$\text{Cross elasticity of demand} = \frac{\text{Proportional change in the qty demanded of product X}}{\text{Proportional change in the price of Product Y}}$$

Product Y here refers to related good. Complementary goods will have negative cross elasticity of demand where as substitutes will have positive cross elasticity of demand.

4. **Advertising elasticity of demand:-**

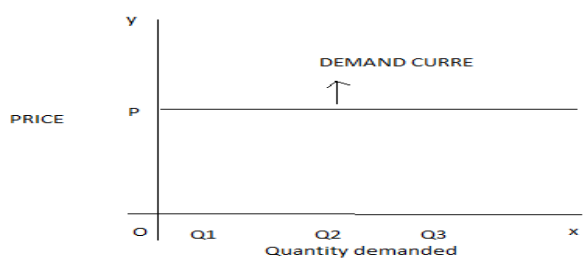
It refers to increase in the sales revenue because of change in the advertising expenditure. There is a direct relationship between the amount of money spent on advertising and its impact on sales. Advertising elasticity is always positive.

$$\text{Advertising elasticity of demand} = \frac{\text{Proportional change in the quantity demanded}}{\text{Proportional change in the advertisement expenditure}}$$

MEASUREMENT OF ELASTICITY OF DEMAND

1. Perfectly elastic demand 2. Perfectly inelastic demand 3. Relatively elastic demand 4. Relatively inelastic demand 5. Unity elasticity of demand

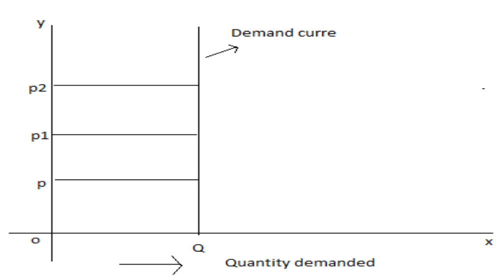
1. **Perfectly elastic demand**: It is a situation where the smallest or no change in price causes the greatest change in the demand. This type of situation called perfect elastic demand. In real life, we will not found any such product which has perfectly elastic demand implying that it remains as an imaginary concept. In this case, The elasticity is infinite (ꝏ).



2. **Perfectly inelastic demand:-**

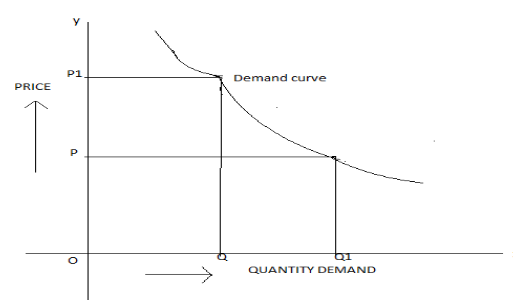
When a significant degree of change in price leads to little or no change in the quantity demanded, then the elasticity is said to be perfectly inelastic.

Here, the elasticity value is 0 (zero).

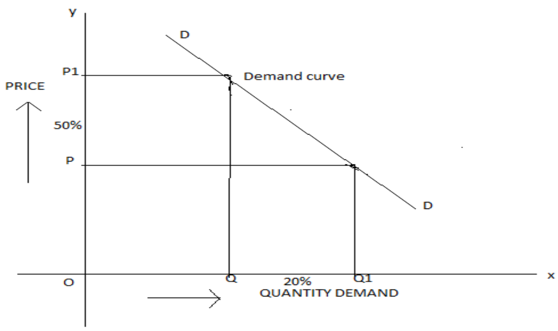


3. **Relative elastic demand:-**

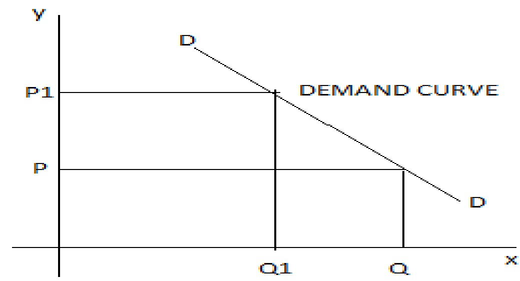
It is a situation when the proportionate change in quantity demanded is greater than the proportionate change in the price of a product. Here the elasticity value is greater than one (>1).



4. **Relative inelastic demand:-**
   The demand is said to be relative inelastic when the change in demand is less than the change in the price. Here the elasticity value is less than one (<1).



5. **Unity elasticity of demand:-**
   The elasticity in demand is said to be unity when the change in demand is equal to the change in price, it is a situation where the proportionate in quantity demand is equally proportionate to change in the price of the goods. Elasticity of demand here is said to be equal to unity or1.



FACTORS GOVERNING THE ELASTICITY OF DEMAND

Elasticity is governed by number of factors. Change in any one of these factors is likely to affect the elasticity of demand these factors are:

1. **Nature of the product**: Based on the nature, the products and services are classified into necessities, comforts and luxuries. Necessaries imply the absolute or basic necessities such a food, clothing housing, comforts refer to T.V, refrigerator and so on. By luxuries, we mean sofa, marble flooring in the house and such others. The meaning and definition of these necessaries luxuries and comforts change from person to person time to time and place
   EX: A scooter may be a comfort or luxury for a student but when he does a part-time job, it may be a necessity for him.
2. **Time factor**: In general the demand is inelastic in the short period and more elastic in the long period, because there will be sufficient time for consumers to know the change in price.
3. **Degree of postponement:** Where the product consumption can be postponed, the product is said to have elastic demand and where it cannot be postponed, it is said to have inelastic demand. The consumption of necessaries cannot be postponed and hence they have in elastic demand.
4. **Number of alternative uses:** If the number of alternative uses is more, the demand is said to be highly inelastic, and vice versa. In the case of electricity or power. It is used for a number of alternative uses.
5. **Tastes and preference of the consumer:** where the customer in particular about his taste and preference, the product is said to be inelastic for the customer who are particular to certain brands such as Colgate, Tata tea and so on price increases do not matter. They tend to by that brand in spite of the price changes.
6. **Availability of close substitutes:** where there are a good number of close substitutes, the demand is said to be elastic and vice versa. If coffee and tea core equally good for me, if there is an increase in price of coffee, I may tend to switch over to tea.
7. **Level of prices:** If the product is very expensive such as diamonds or very cheap such as salt, then the product is likely to have an inelastic demand.

8. **Expectation of the prices:** When people expect a fall in the price, the demand for the product is likely to be inelastic.
9. **Durability of the product:** Where the product is durable in case of consumer durable such as T.V .The demand is elastic. In the case of perishable goods such as milk, the demand is inelastic.

SIGNIFICANCE OF ELASTICITY OF DEMAND

1. **Price determination**:- The individual producer consider the elasticity of demand of his commodity before fixing the price when the commodity has inelastic demand he will fix a lower price to maximum his profit vice versa.
2. **Joint products**: In case of joint products, separate costs are not ascertainable. In such cases the product will be guided mostly by elasticity of demand. So a lower price is fixed in the case of goods having elastic demand and a higher price of inelastic demand.
3. **To government**:- The concept of elasticity of demand also enables the government to decide as what particular industries should be declared as "Public utilities" to be taken over and operated by the state.
4. **International trade:** It is possible to calculate the terms of trade between two countries only by taking into account the elasticity of demand for each other products.
5. **To the finance minister:** The finance minister also takes in to the account elasticity of demand for goods when selecting the goods for taxation. When the government is in need of more revenue it chooses those goods which have inelastic demand.

DEMAND FORECASTING

"Forecasting helps to assess the likely demand for product and services and to plan production accordingly. Demand forecasting is helpful not only at the firm level but also at the national level. "Demand forecasting is an estimation of demand during as specified future period based on a proposed marketing plan and particular uncontrollable and competitive forces."

ADVANTAGES OF FORECASTING

- Production scheduling
- Reducing cost of manufacturing
- Inventory control
- Determination of price policy
- Setting sales targets
- For suitable advertising
- Make a long term investment decision
- Manpower planning

FACTORS GOVERNINIG THE DEMAND FORECASTING

1. **Functional Nature of Demand:** Demand is a function of various factors like Price, Purchasing power of customers, advertisements, etc.
2. **Types of Forecast:** Demand forecasting may be short-term or long-term. A short-term demand may cover a period of three months, six months or one year but not exceeding one year and long forecasting covers a period exceeding 5 years. A business should forecast short term as well as long term sales/demand for its products to have a clear view of business activities.

3. **Forecasting Level:**
   - **Marco level:** It is concerned with business conditions over the whole economy measured by an approximate index of industrial production, national income or expenditure.
   - **Industry level:** This includes the preparations of sales forecasting by different trade associations.
   - **Firm level:** It is an important matter from the managerial view point. Individual firms forecast their sales.
4. **Degree of Orientation:** Forecast can be general or specific. Forecasts in terms of total sales can be viewed as general forecast whereas product wise/ service wise or region or customer segment-wise forecast is referred to as specific forecast.
5. **Established or New Product:** As far as the new products are concerned, methods and problems for forecasting are quite different from products already established in the market as sales trends are known better and the competitive nature is well known. Thus, the methods and problems should be studied accordingly.
6. **Nature of Goods:** Products are to be classified under capital goods and consumer durable or non-durable goods and services. There are distinct patterns of demand for different category of these products.
7. **Degree of Competition:** In every forecast, every product has special factors of its own. If there is competition in the market, situation is complicated up to what extent with uncertainty or unmeasurable risk, error or inaccuracy in the forecast requires consideration
8. **Other Factors:** Other factors include Credit conditions, Demographic, Socio-economic condition of the country, technological, political, cultural environment etc

METHODS OF DEMAND FORECASTING

Forecasting demand is not an easy task, it may be easy only in the case of a very few products or services.

Where the demand for the products does not change from time to time or competition is not significant. It may be relating easy to forecast demand for a particular product or services

There are many methods of forecasting demand some of them is

1. Survey methods.
2. Statistical methods.
3. Other methods.

1. SURVEY METHODS:

A. Survey of buyer intention: To anticipate what buyer are likely to do under a given set of circumstances. Most useful sources of information would be the buyers themselves. It is better to draw a list of all potential buyers approach each buyers to ask how much does he plans to buy of the given product of a given point of time under particular conditions.

B. Sales force opinion method: The sales people are those who are in constant touch with the main large buyers of a particular market and hence they constitute another valid source of information about the likely sales of a product.

2. STATISTICAL METHODS:-

For forecasting the demand for goods and services in the long run, statistical and mathematical methods are used with considering the past data.

A. Trend projection methods:- These are generally based on analysis of past sales patterns. These methods dispense with the need for costly market research because the necessary information is often already available in company files in terms of different time periods, that is a time series data.

B. Barometric Techniques: Under the barometric technique, one set of data is used to predict another set In other words, to forecast demand for a particular product or service, use some other relevant indicator which is known as barometer of future demand.

C. simultaneously equation method: In this method, all variables are simultaneously considered, with the conviction that every variable influences the other variables in an environment. Hence the set of equations equal the number of dependent variable which is also called endogenous variables.

D. Correlation and regression methods:-

Correlation and regression methods are statistical techniques. Correlation describes the degree of association between tow variables such as sales and advertisement experiment. When the two variables tend to change together then they are correlated is measure by correlation co-efficient of these two variables one is a dependent variables and the other is an independent. If the high value of one variable is associated with the high value of another, they are said to be positively correlation.

3. OTHER METHODS:-

A. **Expert opinion method:** well informed person are called expert. Experts constitute yet another source an expert is good at forecasting and analyzing the future trend in a given product or services at a given level of technology.

B. **Test marketing:** It is likely that opinions given by buyers, sales man or other experts may be, at times, misleading. This is the reason why most of the manufacturers prefer to test their products or services in a limited market as test- run before they launch their products nationwide.

   Based on the result of test marketing valuable lessons can be learnt on how consumer reacts to the given product and necessary changes can be introduced to gain wider acceptability.

   To forecast the sales of a new product or the likely sales of an established product in a new channel of distribution or territory, it is customary to find test marketing in practice.

C. **Controlled experiment:** In this method the product is introduced with different package, different prices in different markets or same markets to asses which combination appeals to the customer most. This method cannot provide better result, unless these markets are homogeneous in terms of, tastes and preference of the customers their income so on.

D. **Judgmental approach:** when none of the above the methods are directly related to the given product or services, the management has no alternative other than using its own judgment.

MANAGERIAL ECONOMICS IN RELATION WITH OTHER DISCIPLINES / BRANCHES OF KNOWLEDGE

Managerial economics has a close linkage with other disciplines and fields of study. The subject has gained by the interaction with Economics, Mathematics and Statistics and has drawn upon Management theory and Accounting concepts. Managerial eco-nomics integrates concepts and methods from these disciplines and brings them to bear on managerial problems.

- **Managerial Economics and Economics:**

Managerial Economics is economics applied to decision making. It is a special branch of economics, bridging the gap between pure economic theory and manage-rial practice. Economics has two main branches—micro-economics and macro-economics.

Micro-economics:

'Micro' means small. It studies the behaviour of the individual units and small groups of units. It is a study of particular firms, particular households, individual prices, wages, incomes, individual industries and particular commodities. Thus micro-economics gives a microscopic view of the economy.

The roots of managerial economics spring from micro-economic theory. In price theory, demand concepts, elasticity of demand, marginal cost marginal revenue, the short and long runs and theories of market structure are sources of the elements of micro-economics which managerial economics draws upon. It makes use of well known models in price theory such as the model for monopoly price, the kinked demand theory and the model of price discrimination.

Macro-economics:

'Macro' means large. It deals with the behaviour of the large aggregates in the economy. The large aggregates are total saving, total consumption, total income, total employment, general price level, wage level, cost structure, etc. Thus macro-economics is aggregative economics. It examines the interrelations among the various aggregates, and causes of fluctuations in them. Problems of determination of total income, total employment and general price level are the central problems in macro-economics.

Macro-economies is also related to managerial economics. The environment, in which a business operates, fluctuations in national income, changes in fiscal and monetary measures and variations in the level of business activity have relevance to business decisions. The understanding of the overall opera-tion of the economic system is very useful to the managerial economist in the formulation of his poli-cies. Macro-economic contributes to business forecasting. The most widely used model in modern forecasting is the gross national product model.

- **Managerial Economics and Theory of Decision Making:**

The theory of decision making is relatively a new subject that has significance for managerial economics. In the process of management such as planning, organizing, leading and controlling, decision making is always essential. Decision making is an integral part of today's business management. A manager faces a number of problems connected with his/her business such as production, inventory, cost, marketing, pricing, investment and personnel.

Economist are interested in the efficient use of scarce resources hence they are naturally interested in business decision problems and they apply economics in management of business problems. Hence managerial economics is economics applied in decision making.

- **Managerial Economics and Operations Research:**

Mathematicians, statisticians, engineers and others join together and developed models and analytical tools which have grown into a specialized subject known as operation research. The basic purpose of the approach is to develop a scientific model of the system which may be utilized for policy making.

The development of techniques and concepts such as Linear Programming, Dynamic Programming, Input-output Analysis, Inventory Theory, Information Theory, Probability Theory, Queuing Theory, Game Theory, Decision Theory and Symbolic Logic.

- **Managerial Economics and Statistics:**

Statistics is important to managerial economics. It provides the basis for the empirical testing of theory. It provides the individual firm with measures of appropriate func-tional relationship involved in decision making. Statistics is a very useful science for business execu-tives because a business runs on estimates and probabilities.

Statistics supplies many tools to managerial economics. Suppose forecasting has to be done. For this purpose, trend projections are used. Similarly, multiple regression technique is used. In managerial economics, measures of central tendency like the mean, median, mode, and measures of dispersion, correlation, regression, least square, estimators are widely used.

Statistical tools are widely used in the solution of managerial problems. For eg. Sampling is very useful in data collection. Managerial economics makes use of correlation and multiple regressions in business problems involving some kind of cause and effect relationship.

- **Managerial Economics and Accounting:**

Managerial economics is closely related to accounting. It is recording the finan-cial operation of a business firm. A business is started with the main aim of earning profit. Capital is invested / employed for purchasing properties such as building, furniture, etc and for meeting the current expenses of the business.

Goods are bought and sold for cash as well as credit. Cash is paid to credit sellers. It is received from credit buyers. Expenses are met and incomes derived. This goes on the daily routine work of the business. The buying of goods, sale of goods, payment of cash, receipt of cash and similar dealings are called business transactions.

The business transactions are varied and multifarious. This has given rise to the necessity of recording business transaction in books. They are writ-ten in a set of books in a systematic manner so as to facilitate proper study of their results.

- **Managerial Economics and Mathematics:**

Mathematics is another important subject closely related to managerial economics. For the derivation and exposition of economic analysis, we require a set of mathematical tools. Mathematics has helped in the development of economic theories and now mathematical economics has become a very important branch of economics.

Mathematical approach to economic theories makes them more precise and logical. For the estimation and prediction of economic factors for decision mak-ing and forward planning, mathematical method is very helpful. The important branches of math-ematics generally used by a managerial economist are geometry, algebra and calculus.

The mathemati-cal concepts used by the managerial economists are the logarithms and exponential, vectors and deter-minants, input-out tables. Operations research which is closely related to managerial economics is mathematical in character.

IMPORTANCE OF MANAGERIAL ECONOMICS

1. **Decision Support**: Managerial economics provides a systematic framework for decision-making. Managers often face complex choices regarding production, pricing, resource allocation, and investment. By employing economic principles, managers can make informed decisions that align with the organization's goals.

2. **Optimization of Resources**: A fundamental aspect of managerial economics is the optimization of resources. Through cost-benefit analysis and marginal analysis, managers can identify the most efficient allocation of resources, maximizing output while minimizing costs.

3. **Profit Maximization**: Managerial economics helps businesses pursue profit maximization by analyzing market conditions, determining optimal pricing strategies, and identifying cost-effective production methods. This is crucial for the long-term sustainability and growth of the organization.

4. **Market Analysis and Forecasting**: Managers use managerial economics to analyze market trends, understand consumer behavior, and forecast demand for products or services. This information is essential for formulating effective marketing strategies and staying competitive in the market.

5. **Risk Management**: In a dynamic business environment, managers face uncertainties and risks. Managerial economics assists in assessing and managing risks by incorporating risk analysis and decision-making under uncertainty into the decision-making process.

6. **Policy Formulation**: Managerial economics contributes to the formulation of organizational policies by providing insights into the economic implications of different policy choices. This includes pricing policies, investment policies, and strategies for entering new markets.

7. **Efficiency Improvement**: By focusing on optimization and resource allocation, managerial economics helps improve overall efficiency within an organization. Identifying and addressing inefficiencies leads to cost reduction and improved productivity.

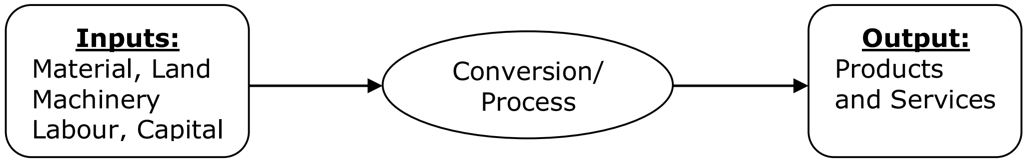
8. **Strategic Planning**: Managerial economics plays a crucial role in strategic planning. Managers use economic analysis to evaluate the long-term impact of various decisions on the organization's competitiveness and sustainability, considering factors such as market trends, technological advancements, and regulatory changes.

9. **Understanding External Environment**: Managerial economics helps managers understand and respond to changes in the external economic environment. Awareness of factors like inflation rates, interest rates, and global economic trends enables organizations to adapt to external conditions.

10. **Performance Evaluation**: Managerial economics provides tools for evaluating the performance of different business units or projects. Performance metrics derived from economic analysis help in assessing the success of strategies and initiatives.

THEORY OF PRODUCTION AND COST ANALYSIS

DEFINITION: Production is the conversion process of Input resources into Output.
Production may be defined as the creation of utility.



Production Function:

The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as.

$$Q= f (L_1, L_2, C, O, T)$$

Where "Q" stands for the quantity of output and L_1, L_2, C, O, T are various input factors such as land, labour, capital, organization and technology. Here output is the function of inputs. Hence output becomes the dependent variable and inputs are the independent variables. It shows that there is a constant relationship between applications of input and the amount of output produced.

Importance/ Significance of Production Function:

1. Helps to estimate the level of production.
2. Helps in ascertaining the changes in output with the results of changes in inputs.
3. It also helps in effective utilization of inputs. (Law of variable proportions and Law of returns to scale)
4. The production function helps in determining the quantity of production.

TYPES OF PRODUCTION

1. Short Run Production

The short run is a period in which at least one input of the factors of production is fixed. It should be noted the fixed factors in production, factory facilities, equipment and machinery including land is fixed, however, the other input variables can be altered by changing the labor, raw material, factory components and etc. Generally a firm or producers have to pay certain production cost (expenses) divided into **i**. the fixed costs (FC), **ii.** The variable cost (VC).

Fixed Costs- The cost of production of the investment utilized by the firm. The fixed cost does not vary regardless of the production output. These are overhead cost, rent of offices and buildings, property tax, amortization and interest.

Variable Cost- These costs will change according the production output, which includes cost of the direct labor, raw materials, supplies and materials. The variable cost is associated in the production of goods.

For determining the price for the product, the average cost can be used, Average cost calculated with dividing the total cost and number of units' produced. Total Costs (TC) presents the sum of the Total Fixed Costs (TFC) and Total Variable Costs (TVC). This is the economic calculation of this presentation and the average cost with that of the Total Costs:

$$AC = (TFC + TVC)/Q$$

AC: average costs, TFC: total fixed costs, TVC: total variable costs, AFC: average fixed costs, AVC: average variable costs

The total production will increase with the use of a variable input. If we add labour the production output will increase at certain point when the marginal product could no longer increase the production output.

Law of variable proportions:

Definition: Law of variable proportions states that when at least one factor of production is changed and all other factors are fixed, the total output in the initial stages will increase at an increasing rate and after reaching certain level of output, the output will increase at declining rate. If variable factor of inputs are added further to the fixed factor inputs, the total output may decline.

This law examines the production function with one factor variable, keeping the quantities of other input factors fixed. It refers to the input-output relation when output is increased by varying the quantity of one input. When the quantity of one factor is varied, keeping the quantity of other factors constant, the proportion between the variable factor and the fixed factor is altered; the ratio of employment of the variable factor to that of the fixed factor goes on increasing as the quantity of the variable factor is increased.

Elements in Law of Variable proportions:

I. The total product is generated from all the factors of production employed by the firm. It is the quantity of output produced per time period given the inputs. The total product can be easily determined. Ex: Total product obtained by employing four laborers is 10 quintals.

II. The average product is computed through the total output divided by the number of units of the variables of the factor of production. For example, the 10 factory workers produce 1000 units of electronic components of a computer; therefore the average product of labor is 10 units of electronic components per worker. This example is generated by the output per worker employed in the factory.

Average Product= Total product/ No. of laborers.

III. The marginal product refers to the additional product obtained by employing an additional labourer.

The law of variable proportions is explained in the following Table and graph. Assume that there is a given fixed amount of land, with which more units of the variable factor labour, is used to produce agricultural output.

Table 1.

Units of Land	Units of Labour	Total Production	Average Production	Marginal Production
10 Acres	0	–	–	–
,,	1	20	20	20 } 1st stage MP > AP
,,	2	50	25	30
,,	3	90	30	40
,,	4	120	30	30 } AP = MP
,,	5	140	28	20 } 2nd stage MP=0 and TP Maximum
,,	6	150	25	10
,,	7	150	21.3	0
,,	8	140	17.5	−10 } 3rd stage MP < 0

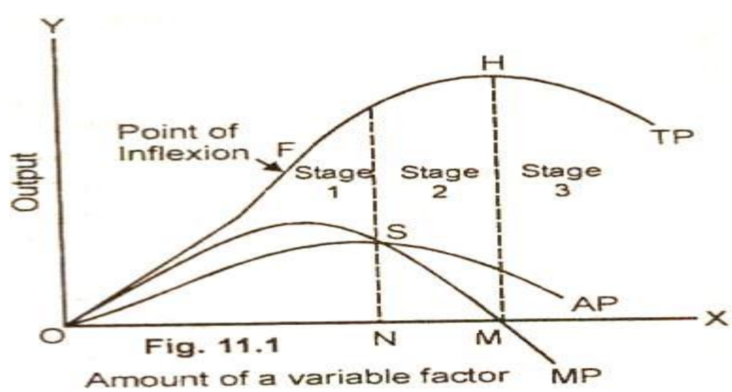


Fig. 11.1

Interpretation:

Stages of Production	Total Product	Marginal product	Average Product
I	Increases at an increasing rate later increase at decreasing rate	Increases and reaches maximum and starts falling	Increases and reaches maximum
II	Increases at a diminishing rate and becomes maximum	Continues to fall and becomes zero	Falls
III	Decreases	Becomes negative	Continues to fall

2. Long Run Production

The period of production in the long run shows the production operation of a certain period of time. Normally, the firm expansion on the average cost of production may result the increase of production inputs.

The reasons to produce more quantity of products:

1. The long run period of production usually analyzes the economies of scale which studies the increasing returns to scale or economies of mass production.
2. The economies of scale primarily directed to reduce the unit costs from the increasing size of the operation.
3. The economy of scale tends to increase in specialization and division of labor. This may lead to increase production inputs and expands the production output.

LAW OF RETURNS TO SCALE

Returns to scale refer to the returns received by the firm as a result of change in all the inputs. It explains the behavior of the returns when the inputs are changed simultaneously. The returns to scale are explained by laws of returns to scale.

1. Law of increasing returns to scale.
2. Law of decreasing returns to scale.
3. Laws of constant return to scale.

Law of increasing returns to scale: This law states that the volume of output keeps on increasing with every increase in the inputs. Where a given increase in inputs leads to a more than proportionate increase in the output, the law of increasing returns to scale is said to operate. We can introduce division of labour and other technologies means to increase production. Hence, the total product increases at an increasing rate.

Law of constant returns to scale: When the scope for division of labour gets restricted, the rate of increase in the total output remains constant, the law of constant returns to scale is said to operate. This law states that the rate of increase/decrease in volume of output is same to that of rate of increase/decrease in inputs.

Law of decreasing returns to scale: Where the proportionate increase in the inputs does not lead to equivalent increase in output, the output increases at a decreasing rate, the law of decreasing returns to scale is said to operate. This results in higher average cost per unit.

Ex: Laws of return to scale

Capital	Labour	% Increase In Inputs	Output	% Increase Outputs	Laws Applicable
1	3	-	50	-	---
2	6	100	120	140	Law of increasing returns to scale.
4	12	100	240	100	Law of constant to scale.
8	24	100	360	50	Law of decreasing returns to scale.

From the above table, it is clear that with 1 unit of capital and 3 units of labour, the firm produces 50 units of output. When the inputs are doubled, 2 units of capital and 6 units of labour, the output has gone up to 120 units. Thus, when inputs are increased by 100 percent, the output has increased by 140 percent. That is, output has increased by more than double. This shows the law of increasing returns to scale.

When the inputs are further doubled that is to 4 units of capital and 12 units of labour, the output has gone up to 240 units. (From 120 units to 240 units). Thus, when inputs are increased by 100 percent, the output has increased by 100 percent. This shows the law of constant returns to scale. When the inputs are further doubled that is to 8 units of capital and 24 units of labour, the output has gone up to 360 units. (From 240 units to 360 units). Thus, when inputs are increased by 100 percent, the output has increased by 50 percent. This is governed by law of decreasing returns to scale.

Cobb-Douglas Production Function

Cobb and Douglas have formulated a production function relating to output of production in American manufacturing industries from 1899 to 1922 with labour and capital as inputs. The **Cobb–Douglas production function** is widely used to represent the technological relationship between the amounts of two or more inputs (particularly physical capital and labor) and the amount of output that can be produced by those inputs. They used the following formula:

$$\mathbf{P = bL^{a}C^{1-a}}$$

Where, P= *total output,* **b**= *total factor productivity*, **C**= *index of fixed capital in manufacturing*, **L**= *index of employment of Labour in manufacturing, and the components* **a, 1-a** = *the elasticity's of production*.

These measure the percentage change in output in response to percentage changes in inputs i.e. labour and capital respectively.

$$\mathbf{P = 1.01L^{0.75}\ C^{0.25}}$$

The production function shows that one percent change in labour input, capital remaining the same, is associated with a 0.75 percent change in output. Similarly, one percent change in capital, labour remaining the same, is associate with a 0.25 percent change in output.

The result of a + 1-a = 1, constant returns to scale

The result of a + 1-a > 1, increasing returns to scale

The result of a + 1-a < 1, decreasing returns to scale

Assumptions:

It has the following assumptions:

1. The function assumes that output is the function of two factors viz. capital and labour.
2. It is a linear homogenous production function of the first degree
3. The function assumes that the logarithm of the total output of the economy is a linear function of the logarithms of the labour force and capital stock.
4. There are constant returns to scale.
5. All inputs are homogenous and there is perfect competition.
6. There is no change in technology.

ISOQUANTS

The term Isoquants is derived from the words 'iso' and 'quant' – 'iso' means equal and 'quant' implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are substitutable for one another within limits. Isoquants are the curves, which represent the different combinations of inputs producing a particular quantity of output. Any combination of the isoquant represents the same level of output. For a given output level firm's production becomes,

$$Q= f(L, K)$$

Where 'Q'= the quantity of output, 'L'= land and 'K' = capital.

Thus an isoquant shows all possible combinations of two inputs, which are capable of producing equal or a given level of output. Since each combination gives same output, the producer becomes indifferent towards these combinations.

Features of an Isoquant:

1. Downward Sloping: Isoquants are downward sloping curves because, if one input increases, the other one reduces. There is no question of increase in both the inputs to yield a given output. Isoquants slope from left to right.

2. Convex to origin: Isoquants are convex to the origin. It is because the input factors are not perfect substitutes. One input factor can be substituted by other input factor in a diminishing marginal rate. If the input factors are perfect substitutes, the isoquant would be a falling straight line.

3. Do not intersect: Two iso-product curves do not intersect with each other. It is because, each of these denote a particular level of output.

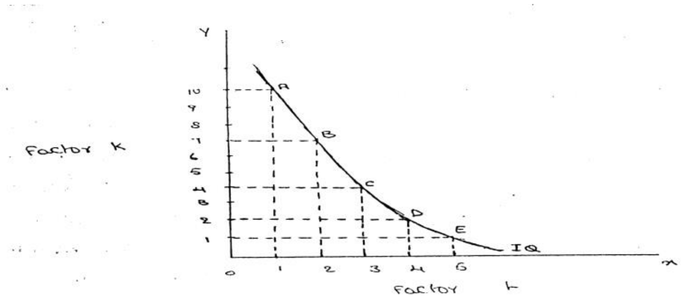
4. Do not touch axes: The Isoquants do not touches neither X axis nor Y axis, as both inputs are required to produce a given product.

Assumptions:

1. There are only two factors of production, viz. labour and capital.
2. The two factors can substitute each other up to certain limit
3. The shape of the Isoquants depends upon the extent of substitutability of the two inputs.
4. The technology is given over a period.

An Isoquants may be explained with the help of an arithmetical example.

Combinations	Capital Rs. In lakh	Number of Laborers	Output
A	1	10	50 quintals
B	2	7	50 quintals
C	3	4	50 quintals
D	4	2	50 quintals
E	6	1	50 quintals



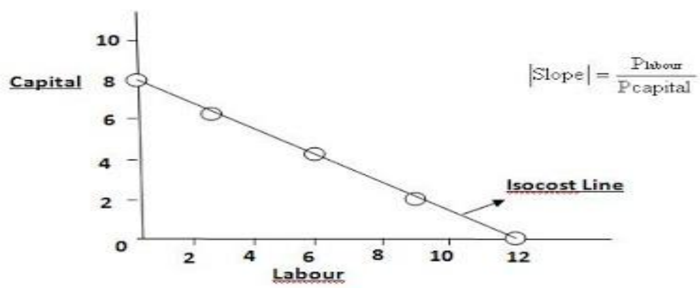
Interpretation (Need to write By Own)

The Isocosts

The isocost line is an important component when analysing producer's behaviour. The isocost line illustrates all the possible combinations of two factors that can be used at given costs and for a given producer's amount. In simple words, an isocost line represents a combination of inputs which all cost the same amount.

For example a producer has a total amount of Rs 120 and for producing a certain level of output; producer has to spend this amount on 2 factors capital and labour. Price of factors Capital and Labour are Rs 15 and Rs. 10 respectively.

Combinations	Units of Capital	Units of Labour	Total expenditure
	Price = 15Rs	Price = 10 Rs	(in Rupees)
A	8	0	120
B	6	3	120
C	4	6	120
D	2	9	120
E	0	12	120



The isocost line shows all the possible combinations of two factors Labour and capital that result in same cost.

MARGINAL RATE OF TECHNICAL SUBSTITUTION (MRTS)

The marginal rate of technical substitution (MRTS) refers to the rate at which one input factor is substituted with the other to attain a given level of output. In other words, the lesser units of one input must be compensated by increasing units of another input to produce the same level of output. The following table presents the ratio of MRTS between the two input factors, i.e., capital and labour. 5 units of decrease in labour are compensated by an increase in 1 unit of capital, resulting in a MRTS of 5:1.

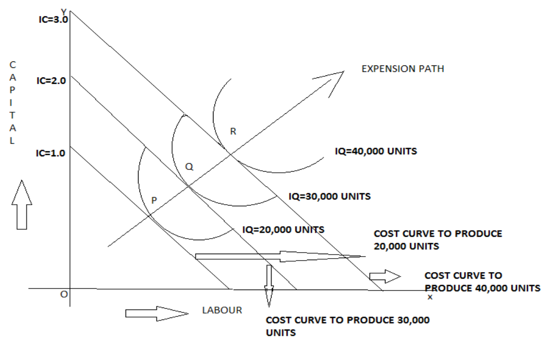
Ratio of MRTS between capital and labour:

Combinations	Labour	Capital	Total Production	MRTS
A	20	1	20000 Units	-
B	15	2	20000 Units	5:1
C	11	3	20000 Units	4:1
D	8	4	20000 Units	3:1
E	6	5	20000 Units	2:1
F	5	6	20000 Units	1:1

Interpretation: (Need to write By Own)

LEAST COST COMBINATION OF INPUTS

The manufacturer has to produce at lower costs to attain higher profits. The isocosts and isoquants can be used to determine the input usage that minimizes the cost of production. The point where the slope of isoquant is equal to that of isocost, is the lowest point of cost of production. This can be observed by super imposing the isocosts on isoquant curves.



ECONOMIES OF SCALE

Production may be carried on a small scale or o a large scale by a firm. When a firm expands its size of production by increasing all the factors, it provides certain advantages known as economies of production. These economies of large-scale production dividend into internal economies and external economies.

Internal economies are those, which are opened to a single factory or a single firm independently of the action of other firms. They result from an increase in the scale of output of a firm and cannot be achieved unless output increases. Hence internal economies depend solely upon the size of the firm and are different for different firms.

External economies are those benefits, which are shared in by a number of firms or industries when the scale of production in an industry or groups of industries increases. Hence external economies benefit all firms within the industry as the size of the industry expands.

Internal Economies:

Internal economies may be of the following types.

A). Technical Economies.

Technical economies arise to a firm from the use of better machines and superior techniques of production. As a result, production increases and per unit cost of production falls. A large firm, which employs costly and superior plant and equipment, enjoys a technical superiority over a small firm. Another technical economy lies in the mechanical advantage of using large machines. The cost of operating large machines is less than that of operating mall machine. More over a larger firm is able to reduce it's per unit cost of production by linking the various processes of production. Technical economies may also be associated when the large firm is able to utilize all its waste materials for the development of by-products industry. Scope for specialization is also available in a large firm. This increases the productive capacity of the firm and reduces the unit cost of production.

B). Managerial Economies:

These economies arise due to better and more elaborate management, which only the large size firms can afford. There may be a separate head for manufacturing, assembling, packing, marketing, general administration etc. Each department is under the charge of an expert. Hence the appointment of experts, division of administration into several departments, functional specialization and scientific co-ordination of various works make the management of the firm most efficient.

C). Marketing Economies:

The large firm reaps marketing or commercial economies in buying its requirements and in selling its final products. The large firm generally has a separate marketing department. It can buy and sell on behalf of the firm, when the market trends are more favorable. In the matter of buying they could enjoy advantages like preferential treatment, transport concessions, cheap credit, prompt delivery and fine relation with dealers. Similarly it sells its products more effectively for a higher margin of profit.

D). Financial Economies:

The large firm is able to secure the necessary finances either for block capital purposes or for working capital needs more easily and cheaply. It can barrow from the public, banks and other financial institutions at relatively cheaper rates. It is in this way that a large firm reaps financial economies.

E). Risk bearing Economies:

The large firm produces many commodities and serves wider areas. It is, therefore, able to absorb any shock for its existence. For example, during business depression, the prices fall for every firm. There is also a possibility for market fluctuations in a particular product of the firm. Under such circumstances the risk-bearing economies or survival economies help the bigger firm to survive business crisis.

F). Economies of Research:

A large firm possesses larger resources and can establish it's own research laboratory and employ trained research workers. The firm may even invent new production techniques for increasing its output and reducing cost.

G). Economies of welfare:

A large firm can provide better working conditions in-and out-side the factory. Facilities like subsidized canteens, crèches for the infants, recreation room, cheap houses, educational and medical facilities tend to increase the productive efficiency of the workers, which helps in raising production and reducing costs.

External Economies:

Business firm enjoys a number of external economies, which are discussed below:

A). Economies of Concentration:

When an industry is concentrated in a particular area, all the member firms reap some common economies like skilled labour, improved means of transport and communications, banking and financial services, supply of power and benefits from subsidiaries. All these facilities tend to lower the unit cost of production of all the firms in the industry.

B). Economies of Information

The industry can set up an information centre which may publish a journal and pass on information regarding the availability of raw materials, modern machines, export potentialities and provide other information needed by the firms. It will benefit all firms and reduction in their costs.

C). Economies of Welfare:

An industry is in a better position to provide welfare facilities to the workers. It may get land at concessional rates and procure special facilities from the local bodies for setting up housing colonies for the workers. It may also establish public health care units, educational institutions both general and technical so that a continuous supply of skilled labour is available to the industry. This will help the efficiency of the workers.

D). Economies of Disintegration:

The firms in an industry may also reap the economies of specialization. When an industry expands, it becomes possible to spilt up some of the processes which are taken over by specialist firms. For example, in the cotton textile industry, some firms may specialize in manufacturing thread, others in printing, still others in dyeing, some in long cloth, some in dhotis, some in shirting etc. As a result the efficiency of the firms specializing in different fields increases and the unit cost of production falls.

Thus internal economies depend upon the size of the firm and external economies depend upon the size of the industry.

DISECONOMIES OF LARGE SCALE PRODUCTION

Internal and external diseconomies are the limits to large-scale production. It is possible that expansion of a firm's output may lead to rise in costs and thus result diseconomies instead of economies. When a firm expands beyond proper limits, it is beyond the capacity of the manager to manage it efficiently. This is an example of an internal diseconomy. In the same manner, the expansion of an industry may result in diseconomies, which may be called external diseconomies. Employment of additional factors of production becomes less efficient and they are obtained at a higher cost. It is in this way that external diseconomies result as an industry expands.

The major diseconomies of large-scale production are discussed below:

Internal Diseconomies:

A). Financial Diseconomies:

For expanding business, the entrepreneur needs finance. But finance may not be easily available in the required amount at the appropriate time. Lack of finance retards the production plans thereby increasing costs of the firm.

B). Managerial diseconomies:

There are difficulties of large-scale management. Supervision becomes a difficult job. Workers do not work efficiently, wastages arise, decision-making becomes difficult, coordination between workers and management disappears and production costs increase.

C). Marketing Diseconomies:

As business is expanded, prices of the factors of production will rise. The cost will therefore rise. Raw materials may not be available in sufficient quantities due to their scarcities. Additional output may depress the price in the market. The demand for the products may fall as a result of changes in tastes and preferences of the people. Hence cost will exceed the revenue.

D). Technical Diseconomies:

There is a limit to the division of labour and splitting down of production processes. The firm may fail to operate its plant to its maximum capacity. As a result cost per unit increases. Internal diseconomies follow.

E). Diseconomies of Risk-taking:

As the scale of production of a firm expands risks also increase with it. Wrong decision by the management may adversely affect production. In large firms are affected by any disaster, natural or human, the economy will be put to strains.

External Diseconomies:

When many firm get located at a particular place, the costs of transportation increases due to congestion. The firms have to face considerable delays in getting raw materials and sending finished products to the marketing centers. The localization of industries may lead to scarcity of raw material, shortage of various factors of production like labour and capital, shortage of power, finance and equipments. All such external diseconomies tend to raise cost per unit.

COST ANALYSIS

Profit is the ultimate aim of any business and the long-run prosperity of a firm depends upon its ability to earn sustained profits. Profits are the difference between selling price and cost of production. In general the selling price is not within the control of a firm but many costs are under its control. The firm should therefore aim at controlling and minimizing cost, it is necessary to understand the meaning of various cost concepts for clear business thinking and application of right kind of costs.

COST CONCEPTS

A managerial economist must have a clear understanding of the different cost concepts for clear business thinking and proper application. The several alternative bases of classifying cost and the relevance of each for different kinds of problems are to be studied. The various relevant concepts of cost are:

1. Opportunity costs and outlay costs:

Out lay cost also known as actual costs obsolete costs are those expends which are actually incurred by the firm these are the payments made for labour, material, plant, building, machinery traveling, transporting etc., These are all those expense item appearing in the books of account, hence based on accounting cost concept.

On the other hand opportunity cost implies the earnings foregone on the next best alternative, has the present option is undertaken. This cost is often measured by assessing the alternative, which has to be scarified if the particular line is followed.

The opportunity cost concept is made use for long-run decisions. This concept is very important in capital expenditure budgeting. This concept is very important in capital expenditure budgeting. The concept is also useful for taking short-run decisions opportunity cost is the cost concept to use when the supply of inputs is strictly limited and when there is an alternative. If there is no alternative, Opportunity cost is zero. The opportunity cost of any action is therefore measured by the value of the most favorable alternative course, which had to be foregoing if that action is taken.

2. Explicit and implicit costs:

Explicit costs are those expenses that involve cash payments. These are the actual or business costs that appear in the books of accounts. These costs include payment of wages and salaries, payment for raw-materials, interest on borrowed capital funds, rent on hired land, Taxes paid etc.

Implicit costs are the costs of the factor units that are owned by the employer himself. These costs are not actually incurred but would have been incurred in the absence of employment of self – owned factors. The two normal implicit costs are depreciation, interest on capital etc. A decision maker must consider implicit costs too to find out appropriate profitability of alternatives.

3. Historical and Replacement costs:

Historical cost is the original cost of an asset. Historical cost valuation shows the cost of an asset as the original price paid for the asset acquired in the past. Historical valuation is the basis for financial accounts.

A replacement cost is the price that would have to be paid currently to replace the same asset. During periods of substantial change in the price level, historical valuation gives a poor projection of the future cost intended for managerial decision. **A replacement cost** is a relevant cost concept when financial statements have to be adjusted for inflation.

4. Short – run and long – run costs:

Short-run is a period during which the physical capacity of the firm remains fixed. Any increase in output during this period is possible only by using the existing physical capacity more extensively. So short run cost is that which varies with output when the plant and capital equipment in constant. **Long run** costs are those, which vary with output when all inputs are variable including plant and capital equipment. Long-run cost analysis helps to take investment decisions.

5. Fixed and variable costs:

Fixed cost is that cost which remains constant for a certain level to output. It is not affected by the changes in the volume of production. But fixed cost per unit decrease, when the production is increased. Fixed cost includes salaries, Rent, Administrative expenses depreciations etc.

Variable is that which varies directly with the variation is output. An increase in total output results in an increase in total variable costs and decrease in total output results in a proportionate decline in the total variables costs. The variable cost per unit will be constant. Ex: Raw materials, labour, direct expenses, etc.

6. Avoidable and unavoidable costs:

Avoidable costs are the costs, which can be reduced if the business activities of a concern are curtailed. For example, if some workers can be retrenched with a drop in a product – line, or volume or production the wages of the retrenched workers are escapable costs.

The unavoidable costs are otherwise called sunk costs. There will not be any reduction in this cost even if reduction in business activity is made. For example cost of the ideal machine capacity is unavoidable cost.

7. Controllable and uncontrollable costs:

Controllable costs are ones, which can be regulated by the executive who is in charge of it. The concept of controllability of cost varies with levels of management. Direct expenses like material, labour etc. are controllable costs.

Some costs are not directly identifiable with a process of product. They are appointed to various processes or products in some proportion. This cost varies with the variation in the basis of allocation and is independent of the actions of the executive of that department. These apportioned costs are called uncontrollable costs.

8. Incremental and sunk costs:

Incremental cost also known as different cost is the additional cost due to a change in the level or nature of business activity. The change may be caused by adding a new product, adding new machinery, replacing a machine by a better one etc.

Sunk costs are those which are not altered by any change – They are the costs incurred in the past. This cost is the result of past decision, and cannot be changed by future decisions. Investments in fixed assets are examples of sunk costs.

9. Total, average and marginal costs:

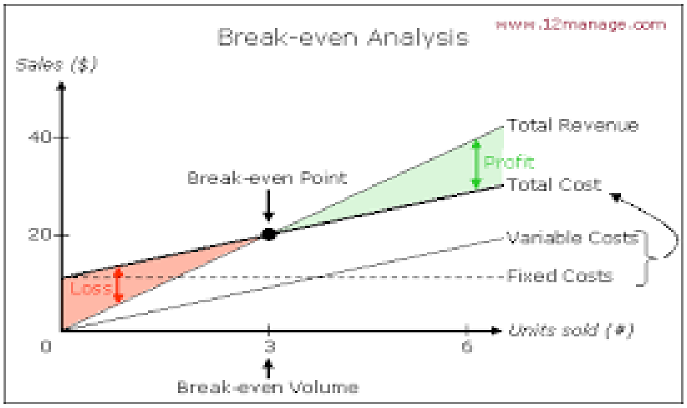
Total cost is the total cash payment made for the input needed for production. It may be explicit or implicit. It is the sum total of the fixed and variable costs. Average cost is the cost per unit of output. If is obtained by dividing the total cost (TC) by the total quantity produced (Q)

$$\text{Average cost} = \frac{TC}{Q}$$

Marginal cost is the additional cost incurred to produce and additional unit of output or it is the cost of the marginal unit produced.

BREAK EVEN ANALYSIS

The study of cost-volume-profit relationship is often refered as BEA. The term BEA is interpreted in two senses. In its narrow sense, it is concerned with finding out BEP; BEP is the point at which total revenue is equal to total cost. It is the point of no profit, no loss. In its broad sense, it determines the probable profit at any level of production.



REQUIRED TERMS TO DETERMINE THE BREAK EVEN POINT

Fixed cost, Variable cost, Contribution, Margin of safety, Angle of incidence, Profit volume ratio, BEP.

1. ***Fixed cost:*** Expenses that do not vary with the volume of production are known as fixed expenses. Eg. Manager's salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity. The concept of fixed overhead is most useful in formulating a price fixing policy. Fixed cost per unit is not fixed.
2. ***Variable Cost:*** Expenses that vary almost in direct proportion to the volume of production of sales are called variable expenses. Eg. Electric power and fuel, packing materials consumable stores. It should be noted that variable cost per unit is fixed.
3. ***Break – Even- Point:*** If we divide the term into three words, then it does not require further explanation.

   Break-divide, Even- equal, Point- place or position

   Break Even Point refers to the point where total cost is equal to total revenue. It is a point of no profit, no loss. This is also a minimum point of no profit, no loss. This is also a minimum point of production where total costs are recovered. If sales go up beyond the Break Even Point, organization makes a profit. If they come down, a loss is incurred.

   Break Even point (Units) = $\frac{\text{Fixed Expenses}}{\text{Contributi on per unit}}$

   Break Even point (In Rupees) = $\frac{\text{Fixed expenses}}{\text{Contributi on}}$ X sales

4. ***Contribution:*** Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit. It helps in sales and pricing policies and measuring the profitability of different proposals. Contribution is a sure test to decide whether a product is worthwhile to be continued among different products.

   Contribution = Sales – Variable cost

   Contribution = Fixed Cost + Profit.

5. ***Margin of safety:*** Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage. It indicates the extent to which the sales can be reduced without resulting in loss. A large margin of safety indicates the soundness of the business. The formula for the margin of safety is:

   Present sales – Break even sales **or** $\frac{\text{Profit}}{\text{P. V. ratio}}$

   Margin of safety can be improved by taking the following steps.

1. Increasing production 2. Increasing selling price 3. Reducing the fixed or the variable costs or both and 4. Substituting unprofitable product with profitable one.

6. ***Profit Volume Ratio*** is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business. The ratio of contribution to sales is the P/V ratio. It may be expressed in percentage. Therefore, every organization tries to improve the P. V. ratio of each product by reducing the variable cost per unit or by increasing the selling price per unit. The concept of P. V. ratio helps in determining break even-point, a desired amount of profit etc.

The formula is, $$\frac{\text{Contributi on}}{Sales} \text{ X } 100$$

Assumptions:

1. All costs are classified into two – fixed and variable.
2. Fixed costs remain constant at all levels of output.
3. Variable costs vary proportionally with the volume of output.
4. Selling price per unit remains constant.
5. There will be no change in operating efficiency.
6. Volume of production is the only factor affecting the cost.
7. Volume of sales and volume of production are equal. Hence there is no unsold stock.
8. There is only one product or in the case of multiple products. Sales mix remains constant.

Merits:

1. Information provided by the Break Even Chart can be understood more easily then those contained in the profit and Loss Account and the cost statement.
2. Break Even Chart discloses the relationship between cost, volume and profit. It reveals how changes in profit. So, it helps management in decision-making.
3. It is very useful for forecasting costs and profits long term planning and growth
4. The chart discloses profits at various levels of production.
5. It serves as a useful tool for cost control.
6. It can also be used to study the comparative plant efficiencies of the industry.
7. Analytical Break-even chart present the different elements, in the costs – direct material, direct labour, fixed and variable overheads.

Demerits/Limitations:

1. Break-even chart presents only cost volume profits. It ignores other considerations such as capital amount, marketing aspects and effect of government policy etc., which are necessary in decision making.
2. It is assumed that sales, total cost and fixed cost can be represented as straight lines. In actual practice, this may not be so.
3. It assumes that profit is a function of output. This is not always true. The firm may increase the profit without increasing its output.
4. A major drawback of BEC is its inability to handle production and sale of multiple products.
5. It is difficult to handle selling costs such as advertisement and sale promotion in BEC.
6. It ignores economics of scale in production.
7. Fixed costs do not remain constant in the long run.
8. It assumes production is equal to sale. It is not always true because generally there may be opening stock.

Examples in Break Even Analysis

1. From the following particulars, calculate:

(i) Break-even point in terms of sales value and in units.

(ii) Number of units that must be sold to earn a profit of Rs. 90,000.

	₹
Fixed Factory Overheads Cost	60,000
Fixed Selling Overheads Cost	12,000
Variable Manufacturing Cost per unit	12
Variable Selling Cost per unit	3
Selling Price per unit	24

Answer:

(i) ***Break-even point*** $= \dfrac{\text{Fixed Cost}}{\text{Selling Price per unit} - \text{Variable Cost per unit}}$

Variable Cost per unit $= ₹\ 12 + 3 = ₹\ 15$

Total Fixed Cost $= ₹\ 60{,}000 + 12{,}000 = ₹\ 72{,}000$

B.E.P. $= \dfrac{72{,}000}{24 - 15} = 8{,}000$ units

B.E.P. (in sales values) $= 8{,}000 \times 24 = ₹\ 1{,}92{,}000$

(ii) ***Number of units that must be sold to earn profit of ₹90,000***

$$= \frac{\text{Fixed Cost} + \text{Profit}}{\text{Selling Price per unit} - \text{Variable Cost per unit}}$$

$$= \frac{72{,}000 + 90{,}000}{24 - 15} = \frac{1{,}62{,}000}{9} = 18{,}000 \text{ units.}$$

2. **From the following particulars, find out the break-even-point:**

	₹
Variable Cost per unit	15
Fixed Expenses	54,000
Selling Price per unit	20

What should be the selling price per unit, if the break-even point should be brought down to 6,000 units? **Answer:**

Contribution per unit = Selling Price–Variable cost per unit
$= ₹\ 20 - 15 = ₹\ 5$

(a) ***B.E.P.*** $= \dfrac{\text{Fixed Expenses}}{\text{Contribution per unit}}$

$= \dfrac{54{,}000}{5} = 10{,}800$ units

(b) ***What should be the selling price pèr unit, if the break–even–point should be brought down to 6000 units:***

B.E.P. $= \dfrac{\text{Fixed Expenses}}{\text{Contribution per unit}}$

Or, $6{,}000 = \dfrac{54{,}000}{\text{Contribution per unit}}$

Or, Contribution per unit $= \dfrac{54{,}000}{6{,}000} = \text{Rs. } 9$

Contribution $= \text{S.P.} - \text{V.C.}$

Or, $9 = \text{SP} - 15$

Or, Selling Price $= ₹\ 24.$

3. From the following data, you are required to calculate:
(a) P/V ratio
(b) Break-even sales with the help of P/V ratio.
(c) Sales required to earn a profit of Rs. 4,50,000
Fixed Expenses = Rs. 90,000
Variable Cost per unit:
Direct Material = Rs. 5
Direct Labour = Rs. 2
Direct Overheads = 100% of Direct Labour
Selling Price per unit = Rs. 12.

Answer:

		₹
Selling Price per unit		12
Less : Variable Cost per unit :		
Direct Material	5	
Direct Labour	2	
Direct Overheads	2	9
Contribution per unit		3

(a) P/V ratio

$$= \frac{\text{Contribution}}{\text{Sales}} \times 100$$

$$= \frac{3}{12} \times 100 = 25\%$$

(b) Break–even Sales

$$= \frac{\text{Fixed Expenses}}{\text{P/V ratio}}$$

$$= \frac{90{,}000}{\frac{25}{100}} = \frac{90{,}000 \times 100}{25} = \text{Rs. } 3{,}60{,}000.$$

(c) Sales required to earn a profit of ₹4,50,000

$$= \frac{\text{Fixed Expenses} + \text{Desired Profit}}{\text{P/V ratio}}$$

$$= \frac{90{,}000 + 4{,}50{,}000}{25\%} = \frac{5{,}40{,}000}{\frac{25}{100}}$$

$$= \frac{5{,}40{,}000 \times 100}{25} = \text{Rs. } 21{,}60{,}000$$

5. From the following information, ascertain by how much the value of sales must be increased by the company to break-even:

	₹
Sales	3,00,000
Fixed Cost	1,50,000
Variable Cost	2,00,000

Solution:

$$\text{Break–even point} = \frac{\text{Fixed Cost} \times \text{Sales}}{\text{Sales} - \text{Variable Cost}}$$

$$= \frac{1{,}50{,}000 \times 3{,}00{,}000}{3{,}00{,}000 - 2{,}00{,}000}$$

$$= \frac{1{,}50{,}000 \times 3{,}00{,}000}{1{,}00{,}000} = \text{Rs. } 4{,}50{,}000.$$

Hence, Sales to be increased by the company to break-even are = ₹ 4,50,000 – 3,00,000 = ₹ 1,50,000.

4. From the following data, you are required to calculate break-even point and net sales value at this point:

	₹
Direct material cost per unit	10
Direct labour cost per unit	5
Fixed overhead	50,000
Variable overheads @ 60% on direct labour	
Selling price per unit	25
Trade discount	4%

If sales are 10% and 25% above the break even volume, determine the net profits.

Answer:

		₹
Selling price per unit		25
Less : Trade discount (25 × 4/100)		1
Net selling price per unit		24
Less : Variable cost per unit	₹	
Direct material	10	
Direct labour	5	
Variable overheads (5 × 60/100)	3	18
Contribution per unit		6

Break-even point (in units) $= \dfrac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$

$= \dfrac{50,000}{6} = 8,333$ units

Break - even Point (in sales value) $= \dfrac{\text{Fixed Cost}}{\text{P/V Ratio}}$

P/V Ratio $= \dfrac{\text{Contribution}}{\text{Sales}} \times 100$

$= \dfrac{6}{24} \times 100 = 25\%$

Hence, B.E.P. (in sales value) $= \dfrac{50,000}{25\%} = 50,000 \times \dfrac{100}{25}$

= ₹ 2,00,000

Profit when sales are 10% above the break even volume

Sales = 2,00,000 + 10% of 2,00,000 = ₹ 2,20,000

Contribution = Sales × P/V Ratio = 2,20,000 × 25/100 = ₹ 55, 000

Contribution = Fixed Cost + Profit

₹ 55,000 = 50,000 + Profit

Profit = **₹ 5,000**

Profit when sales are 25% above the break even volume

Sales = 2,00,000 + 25% of 2,00,000 = ₹ 2,50,000

Contribution = 2,50,000 × 25/100 = ₹ 62,500.

Contribution = Fixed Cost + Profit

62,500 = 50,000 + Profit

Profit = **₹ 12,500**

6. The fixed costs amount to Rs. 50,000 and the percentage of variable costs to sales is given to be 66 ⅔%. If 100% capacity sales are Rs. 3,00,000, find out the break-even point and the percentage sales when it occurred. Determine profit at 80% capacity:

Answer:

Percentage of Variable Cost to Sales is $66\frac{2}{3}\%$ i.e., $\frac{200}{3}$

$\therefore$ Percentage of Contribution to Sales is $100-\frac{200}{3}=\frac{100}{3}$

$$\text{P/V ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

$$= \frac{100}{3} \times \frac{1}{100} \times 100 = \frac{100}{3} = 33\frac{1}{3}\%$$

$$\text{Break–even Sales} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

$$= \frac{50,000}{33\frac{1}{3}\%} = \frac{50,000}{100} \times 300 = \text{Rs. } 1,50,000.$$

100% Capacity Sales = ₹ 3,00,000

Hence, B.E.P. occurs at $\frac{1,50,000}{3,00,000} \times 100 = 50\%$ capacity.

Profit at 80% Capacity

At 100% Capacity Sales are ₹ 3,00,000

$\therefore$ 80% Capacity Sales $3,00,000 \times \frac{80}{100} = \text{Rs. } 2,40,000$

Total Contribution at 80% capacity $= 2,40,000 \times \frac{100}{3} \times \frac{1}{100}$

= ₹ 80,000

Fixed Expenses = ₹ 50,000

Profit at 80% capacity = ₹ 30,000

7. **A company is making a loss of Rs. 40,000 and relevant information is as follows:**

Sales Rs. 1,20,000; Variable Costs Rs. 60,000; Fixed costs Rs. 1,00,000.

Loss can be made good either by increasing the sales price or by increasing sales volume. What are Break even sales if

(a) Present sales level is maintained and the selling price is increased.

(b) If present selling price is maintained and the sales volume is increased. What would be sales if a profit of Rs. 1,00,000 is required ?

Solution:

(a) Break-even sales = Variable Cost + Fixed Cost = ₹ 60,000 + 1,00,000 = ₹ 1,60,000.

(b) Sales = ₹ 1,20,000

Variable cost = ₹ 60,000

$\therefore$ Contribution = ₹ 1,20,000 – 60,000 = ₹ 60,000

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

$$= \frac{60,000}{1,20,000} \times 100 = 50\%$$

$$\text{Break–even sales} = \frac{\text{Fixed Costs}}{\text{P/V Ratio}}$$

$$= \frac{1,00,000}{50} \times 100 = \text{Rs. } 2,00,000$$

Desired sales to earn a profit of ₹ 1,00,000 :

$$\text{Desired Sales} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P/V Ratio}}$$

$$= \frac{1,00,000+1,00,000}{50\%}$$

$$= \frac{2,00,000 \times 100}{50} = \text{Rs. } 4,00,000$$

8 .Calculate:
(i) The amount of fixed expenses.
(ii) The number of units to break-even.
(iii) The number of units to earn a profit of Rs. 40,000.
The selling price per unit can be assumed at Rs. 100.
The company sold in two successive periods 7,000 units and 9,000 units and has incurred a loss of Rs. 10,000 and earned Rs. 10,000 as profit respectively.
Solution:

	Period I	*Period II*
Sales	₹ 7,00,000	₹ 9,00,000
Profit/Loss (—)	(—) ₹ 10,000	₹ 10,000

Thus for an additional sales of ₹ 2,00,000 there is an additional contribution of ₹ 20,000 which has wiped off the loss or ₹ 10,000 of period I and earned a profit of ₹ 10,000 in period II.

$$\text{P/V Ratio} = \frac{\text{Change in Contribution}}{\text{Change in Sales}} \times 100$$

$$= \frac{20,000}{2,00,000} \times 100 = 10\%$$

$$\text{Contribution of Period I} = 7,00,000 \times \frac{10}{100} = \text{Rs. } 70,000$$

Loss of period I (given) = ₹ 10,000

(i) Fixed Cost = ₹ 80,000

Contribution = Fixed Cost ± Profit/Loss

Fixed Cost = Contribution ± Loss/Profit

$$\textit{(ii) Break–Even Point} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

$$= \frac{80,000}{\frac{10}{100}} = \frac{80,000 \times 100}{10} = \text{Rs. } 8,00,000$$

$$\textit{Number of units to break–even} = \frac{\text{Break– Even Sales}}{\text{Selling Price per unit}}$$

$$= \frac{8,00,000}{100} = 8,000 \text{ units.}$$

(iii) Number of units required to earn a profit of ₹40,000.

$$= \frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{P/V Ratio}}$$

$$= \frac{80,000 + 40,000}{10\%}$$

$$= \frac{1,20,000 \times 100}{10} = \text{Rs. } 12,00,000$$

BUSINESS ORGANISATIONS AND MARKETS

BUSINESS ORGANISATIONS

INTRODUCTION:

Imagine you want to do business. Which business are you interested in? FOR example, you want to get into InfoTech industry. What can you do in this industry? WHICH one do you choose? The following are the alternative you have on hand.

- You can buy and sell.
- You can set up a small/medium/large industry to manufacture.
- You can set up a workshop to repair.
- You can develop software.
- You can design hardware.
- You can be a consultant/trouble shooter.

If you choose any one or more of the above, you have chosen the line of activity. The next step for you is to decide whether.

1) You want to be the only owner.
2) You want to take some more professionals as co-owners along with you.
3) You want to be a global player by mobilizing large resources across the country/world.
4) You want to bring all like-minded people to share the benefits of the common enterprise.
5) You want to involve government in the IT business.

FACTORS AFFECTING THE CHOICE OF FORM OF BUSINESS ORGANISATION

Before we choose a particular form of business organization, let us study what factors affect such a choice? The following are the factors affecting the choice of a business organization.

1) **EASY TO START AND EASY TO CLOSE:-**The form of business organization should be such that it should be easy to start and easy to close. There should not be hassles or long procedures in the process of setting up business or closing the same.
2) **DIVISION OF LAB OUR: -** There should be possibility to divide the work among the available owners. The idea is to pool the expertise of all the people in business and run the business.
3) **LARGE AMOUNT OF RESOURCES:-**Large volume of business requires large volume of resources. Some forms of business organizations do not permit to raise larger resources. Select the one which permits to mobilize the large resources.
4) **LIABILITY: -** The liability of the owners should be limited to the extent of money invested in business. It is better if their personal properties are not brought into business to make up the losses of the business.
5) **SECRECY: -** The form of business organization you select should be such that it should permit to take care of the business secrets.
6) **TRANSFER OF OWNERSHIP: -** There should be simple procedures to transfer the ownership to the next legal heir.
7) **OWNERSHIP, MANAGEMENT AND CONTROL: -** If ownership, management and control are in the hands of one or small group of persons, communication will be effective and co-ordination will be easier. Where ownership, management and control are widely distributed, it calls for a high degree of professional skills to monitor the performance of the business.
8) **CONTINUITY: -** The business should continue forever and ever irrespective of the uncertainties in future.

9) QUICK DECISION MAKING:-Select such a form of business organization which permits you to take decisions quickly and promptly.

10) PERSONAL CONTACT WITH CUSTOMERS: - Most of the times, customers give us clues to improve business. So choose such a form which keeps you close to the customers.

11) FLEXIBILITY:-In times of rough weather, there should be enough flexibility to shift from one business to the other. The lesser the funds committed in a particular business the better it is.

12) TAXATION: - More profit means more tax. Choose such a form which permits to pay low tax.

FORMS OF BUSINESS ORGANISATION

a) Sole trader (or) proprietorship.
b) Partnership.
c) Joint stock company.
d) Co-operative society.
e) Public enterprises.

SOLE TRADER (OR) PROPRIETORSHIP

The sole trader is the simplest, oldest and natural form or business organization. ' **Sole**' means one. **'Sole trader**'implies that there is only one trader who is the owner of the business.

It is one-man form of organization where in the trader assumes all the risk of ownership carrying out the business with his own capital, skills and intelligence. He is the boss for himself. He is responsible for himself. This form of organization is popular all over the world.

Example: Restaurants, supermarkets, medical shops etc.

FEATURES:-

1) It is easy to start and easy to close. 2) He introduced his own capital, sometimes he may borrow.
2) He enjoys all the profits and in case of loss, he alone suffers.
3) As he is alone, he has to look after himself all the activities related to purchase, sale, cash etc.
4) Business secrets can be guarded well.
5) There is no continuity. The business comes to a close with the death, illness or insanity of the sole trader.
6) He has total operational freedom. He is the owner, manager and controller.
7) He can be directly in touch with customers.
8) He can take decisions very fast and implement them promptly.
9) Rate of tax for example, income tax and so on are comparatively very low.

ADVANTAGES:-

1) **Easy to start and easy to close: -** Formation of a sole trader form of organization is relatively easy. Even closing the business is easy.
2) **Personal contact with customers directly:** - Based on the tastes and preferences of the customers, the stocks can be maintained.
3) **Prompt decision making: -** To improve the quality of services to the customers, he can take any decision and implement the same promptly. He is The boss and he is responsible for his business. Decisions relating to growth or expansion can be made promptly.
4) **High degree of flexibility:** Based on the profitability, the trader can decide to continue or change the business, if need be.

5) **Secrecy:-** Business secrets can well be maintained because there is only one trader.
6) **Low rate of taxation:** The rate of income tax for sale traders is relatively very low.
7) **Direct motivation**: If there are profits, all the profits belong to the trader himself. In other words, if he Works max hard, he will get more profits. This is the direct motivation factor. At the same time, if he does not take active interest. He may stand to lose badly also.
8) **Total control:-** The ownership, management and control are in the hands of the sole trader and hence it is easy to maintain the hold on business.
9) **Minimum interference by government**:- Except in matters relating to public interest, Government does not interfere in the business matters of the sole trader. The sole trader is free to fix price for his products/services if he enjoys monopoly market.
10) **Transferability:-** The legal heirs of the sole trader may take the possession of the business.

DISADVANTAGES:

1. **Unlimited liability:-** The liability of the sole trader is unlimited; it means that the sole trader has to bring his personal property to clear off the loans of his business. From the legal point of view he is not different from his business.

2**. Limited amounts of capital:-** The resources a sole trader can mobilize cannot be very large and hence this naturally sets a limit for the sale of operations.

3. No divisions of labour:- All the works related to different such as marketing, production, finance, labour and so on has to be taken care of by the sole trader himself. There is nobody else to take his burden. Family members and relatives cannot share as much interest as the trader takes.

4. Uncertainty:- There is no continuity in the duration of the business on the death, insanity or insolvency the business may come to an end.

5. Inadequate for growth and expansion:- This form is suitable for only small size, one man show type of organizations. This may not really work out for growing and expanding organizations

6. Lack of specialization:- The services at specialists such as accountants, market researchers, consultants and so on, are not within the reach of most of the sole traders.

7. More competition:- Because it is easy to set up a small business, there is a high degree of competition among the small business men and a few who are good in taking care of customer requirements alone can survive.

8. Low bargaining power:-The sole trader is in the receiving end in terms of loans or supply of raw materials. He may have to compromise many times regarding the terms and conditions of purchase of materials or borrowing loans from the finance houses or banks.

PARTNERSHIP

Introduction:- Partnership is an improved from of sole trader in certain respects. Where there are like minded persons with resources, they can come together to do the business and share the profits/loss of the business in an agreed ratio. Person who have entered into such an agreement are individually called 'Partners' and collectively called 'firm'. The relationship among partners is called partnership.

According to Indian partnership Act 1932 partnership is relationship between two or more persons who agree to share the profits of the business carried on by all or any one of them acting for all.

FEATURES

1) Relationship:-Partnership is a relationship among persons. It is a relationship resulting out of an agreement.

2) Two or more persons: - There should be two or more number of persons.

3) There should be a business:- Business should be conducted

4) Agreement:- Persons should agree to share the profit/losses of the business.

5) Carried on by all or any one of them acting for all:- The business can be carried on by all or any one of the persons acting for all. This means that the business can be carried on by one person who is the agent for all other persons every partner is both an agent and a principal. Agent for the other partners and principal for himself.

6) Unlimited liability:-liability of the partners is unlimited. The partnership and partner in the eye of law are not different but one and the same hence the partners have to bring their personal assets to clear laws of the firm, if any.

7) Number of partners:-Minimum: 2 and Maximum: 10 partners in case of banking business, 20 in case of non-business

8) Division of Labour: Because there are more than two persons, the work can be divided among the partners based on their aptitude.

9) Personal contact with customers:-The partners can continuously be in touch with the customers to monitor their requirements.

10) Flexibility:-All the partners are likeminded persons and hence they can take any decision relating to business.

11) Transferability of share: The partners cannot transfer their share/interest in partnership in the firm to others without the consent of the other partners.

12) Dissolution: The closure of partnership is called 'dissolution'. When any of the partners die, becomes insolent or insane, the partnership is to be dissolved. This means that the duration of the partnership is not certain. The remaining partners can, if they are interested, resort their business with a new name.

PARTNERSHIP DEED

The written agreement among the partners is called the partnership deed'. It contains the terms and conditions governing the working of partnership. The following are the contents of the partnership deed.

1. Names and addresses of the firm and partners.
2. Nature of the business.
3. Duration.
4. Amount of capital of the partnership and the ratio for contribution by each of the partners.
5. Their profit sharing ratio.
6. Rate of interest charged on capital contributed,
7. The amount of salary or commission payable to any partner.
8. Allocation of responsibility of the partners in the firm.
9. Special rights, obligations and liability of partners.
10. Procedure for dissolution of the firm.

KINDS OF PARTNERS

1. Active partner: Active partner takes active part in the affairs of the partnership .He is also called working partner.

2. Sleeping partner: Sleeping partner contributes to capital to capital but doesn't take part in the affairs of the partnership.

3. Nominal partner: Nominal partner is partner just for name sake. He neither contributes to capital nor takes part in the affairs of business normally the nominal partners are those who has good business convictions and are well placed in the society.

4. Partner by Estoppels: Estoppels means behavior or conduct. Partner by estoppels gives an impression to outsiders that he is the partner in the firm. In fact he neither contributes to capital nor takes any role in the affairs of partnership.

5. Partner by holding out:- If partners declare a particular person as partner and this person doesn't contradict even after he come to know such declarations he is called a partner by holding out and he is liable for claims of third parties.

6. Minor partner: - Minor has a special status in the partnership. A minor can be admitted and the benefits of the firm. A minor are entitled his status of profits of the firm. The liability of a minor partner is limited to the extent of his contribution of the capital of the firm.

RIGHTS OF PARTNERS

1. To take part in the management of business.
2. To express his opinion.
3. Inspect and copy any book of accounts of the firm.
4. To share equally the profits of the firm in the absence of any specific agreement.
5. To receive interest on capital, if any.
6. To receive on loans, if any.
7. To be indemnified for any loss incurred by him in the conduct of the business.

OBLIGATIONS AND LIABILITIES OF PARTNERS

1. Carry on the business to the maximum advantage of the firm and all the partners.
2. Be just and faithful to one another and to the firm.
3. Give full and correct information and true accounts of the firm to one another.
4. Indemnity the firm or any partner any loss, if any.
5. Share the losses equally, unless differently agreed to.
6. Not to make any benefit or income while dealing with the firm.

ADVANTAGES OF PARTNERSHIP FIRM:

- ✓ **Easy to form:** once there is a group of likeminded persons and good business proposal, it is easy to start and register a partnership.
- ✓ **Availability of larger amount of capital**: more amount of capital can be raised from more number of partners.
- ✓ **Division of labour:** The different partners come with varied backgrounds and skills. This facility division of labour.
- ✓ **Flexibility:** the partner is free to change their decisions, add or drop a particular product or start a new business or close the present one and so on.

- ✓ **Personal contact with customers:** There is scope to keep close monitoring with customers requirement by keeping one of the partner in charge of sale and marketing. Necessary changes can be initiated based on the merit of the proposals from the customers.
- ✓ **Quick decision and prompt actions:** If there is consensus among partners, it is enough to implement any decision and initiate prompt action. Sometimes it may take more time for the partner on strategic issues to reach consensus.
- ✓ **The positive impact of unlimited liability:** Every partner is always alert about his impending danger of unlimited liability. Hence he tries to do his best to bring profit for the partnership firm by making good use of all his contacts.
- ✓ **Tax rate:** when compared to company form, the tax rate is low.

DISADVANTAGES OF PARTNERSHIP:

- ✓ **Formation of partnership is difficult:** only likeminded persons can start a partnership. it is sarcastically said "it is easy to find a life partner but not a business partner".
- ✓ **Liability:** the partner has point and several liabilities besides unlimited liability. Joint and several liability puts additional burden on the partner, which means that even the personal properties of the partner or partners can be attached. Even when all but one partner become insolvents the solvent partner has to bear the entire burden of business loss.
- ✓ **Lack of cohesiveness:** it is likely that partner may not, most often work as a group with cohesiveness. This result in mutual conflicts. Lack of harmony or cohesiveness result in delay in decision and paralysis the entire operation.
- ✓ **Limited growth:** the resource when compared to sole trader, a partnership may rise little more. But when compared to the other forms such as a company, resources raised in this form of organization are limited. Added to this, there restriction on the maximum number of partners.
- ✓ **Instability:** the partner form known for its instability. The firm may dissolve on death, insolvency or insanity of the partners.
- ✓ **Lack of public confidence:** public even the financial institutions look at the unregistered firms with a suspicious eye. Though registration of the firm under the Indian partnership act is a solution for such problems, this cannot revive public confidence into this form of organization overnight. The partnership can create confidence in other only with their performance.
- ✓ **Implied authority misused:** where there is no periodic monitoring, there is a possibility that the active partner may misuse his implied authority.
- ✓ High tax rate: when compared to the sole trader the tax rate is higher

JOINT STOCK COMPANY

According to lord justice, the joint stock company forms of organization is an association of many persons who contribute money or money's worth to a common stock and employ it for a common purpose. The common stock refers to the share capital of the company. The persons who contributed it or to whom it belongs are members. The proportion of capital to which each member is entitled is his share. Shares are always transferable, although the right to transfer is often more or less restricted.

According to company act 1956, "Company is an artificial person created by law with perpetual succession and common seal".

FEATURES:

This definition brings out the following features of the company:

- ✓ **Artificial person:** The Company has no form or shape. It is artificial person created by law. It is intangible Invisible and existing only in the eyes of law.
- ✓ **Separate legal existence:** it has an independent existence. It is separate from its members. It can acquire the assets. It cans borrow for the company. It can sue others if they are in default in payment of dues, breach of contact with it, if any. Similarly, it can be sued by outsiders for any claim. A shareholder is not liable for the act of company. Similarly, the shareholders cannot bind the company by their acts.
- ✓ **Voluntary association of persons:** The Company is a voluntary association of people to the face value of the shares held by him. In other words, the liability of a shareholder is restricted to the extent of his contribution to the share capital of the company. The shareholder need not pay anything, even in times of loss for the company, other than his contribution to the share capital.
- ✓ **Capital is divided into shares:** The total capital is divided into a certain number of units. Each unit is called as a share. The price of each share is priced so low that every investor would like to invest in the company. The companies promoted by the promoter of good standing (i.e., known for their reputation in terms of reliability character and dynamism) are likely to attract huge resources.
- ✓ **Transferability of shares:** In the company form of organization, shares can be transferred from one person to other. A shareholder of a public company can sell his holding of shares ay his will. However, the shares of a private company cannot be transferred. A private company restricts the transferability of the share.
- ✓ **Common seal:** as the company is an artificial person created by the law has no physical form, it cannot sign its name on the paper. So, it has a common seal on which its name is engraved. Every document or contact should be affixed by the common seal, otherwise the company is not bound by such a document or contract.
- ✓ **Perpetual succession:** Members may come and members may go, but the company continues forever and ever. A company has uninterrupted existence of the right given to the shareholders to transfer the shares.
- ✓ **Ownership and management separated:** the shareholder is spread over the length and breadth of the country, and sometimes, they are from different parts of the world. To facilitate administration, the shareholders elect some amount themselves or the promoters of the company as directors to a board, which looks after the management of the business. The board recruits the managers and employees at different levels in the management. Thus the management is separated from the owner.
- ✓ **Winding up:** winding up refers to the putting an end to the company. Because law creates it, only law can put an end to it in special circumstances such as representation from the creditors or financial institutions, or shareholders against the company that their interest is not safeguarded. The company is not affected by the death or insolvency of any of its members.
- ✓ **The name of the company ends with 'limited':** it is necessary that the name of the company ends with limited (ltd.) to give an indication to the outsiders that they are dealing with the company.

KINDS OF COMPANIES

KINDS OF COMPANIES BASED ON INCORPORATION

- ✓ **Chartered Company:** A charter company is created by the royal charter of the state. The charter contains the rights, privileges, and power to be used by the chartered company, for example: British East India Company.
- ✓ **Statutory Corporation:** A statutory corporation is created by an act of the state legislature or parliament. The objective, scope, powers, responsibilities are clearly defined in this act.

Ex: Reserve Bank of India, IDBI, and APSATC.

- ✓ **Registered company:** A registered company is one that is registered under Indian companies act, 1956.

KINDS OF COMPANY BASED ON PUBIC INTEREST

1. Private Limited company: According to companies' act 1956, a private company means that has a minimum paid up capital of one Lakh Rupees (1, 00,000).

Features:

- ❖ Restrict the right of transfer its shares.
- ❖ Maximum number of members is 50.
- ❖ Prohibit any invitation to the public for capital
- ❖ The name of a private company should necessarily end with the words 'private limited' (pvt.ltd.).

2. Public company:

- ❖ It has minimum paid up capital of five Lakh rupees (5, 00,000) such higher paid up capital as may be prescribed.
- ❖ It allows transfer of its shares.
- ❖ Minimum 7 maximum unlimited.
- ❖ It can issue the prospectus to raise the capital.
- ❖ The name of the public company ends with the word 'limited' (LTD).

3) **Government Company: -** According to companies Act 1956, the government company is "Any company in which not less than 51% of the paid up share capital is held by central government or by any state government or partly by central government and partly by one or more state governments."

EX: - (NTPC) National Thermal Power Corporation (BHEL) Bharat Heavy Electrical Ltd etc.

KINDS OF COMPANIES BASED ON LIABILITY:-

1) Unlimited Company: - An unlimited company is a company in which the liability of every member is unlimited. This implies that the personal property of every member is also liable for the debt of the company.

2) **Limited company**: - A company is said to be limited company where the liability of its members is limited by the unpaid amount on the shares respectively held by them.

3) **Companies limited by guarantee**:-A company is said to be limited by guarantee where the liability of the members is limited to such an amount as they agreed upon to contribute to the assets of the company in the event of being wound up.

KINDS OF COMPANIES BASED ON NATIONALITY:-

1) Foreign company: - foreign company is a company incorporated outside India but established a place of business within India.

2) India company:- A company incorporated in India under the Indian companies Act 1956.

FORMATION OF A JOINT STOCK COMPANY

There are two stages in the formation of a joint stock company. They are:

a) To obtain certificate of Incorporation

b) To obtain certificate of commencement of Business.

The certificate of Incorporation is just like a 'date of birth' certificate. It certifies that a company with such and such a name is born on a particular day. Certificate of commencement of Business authorizes a public company to start its commercial operations officially.

A public company has to comply with certain requirements to obtain certificate of commencement of Business. A private company need obtain the certificate of commencement of business. It can start its commercial operations immediately after obtaining the certificate of Incorporation.

The persons who conceive the idea of starting a company and who organize the necessary initial resources are called 'promoters'. The vision of the promoters forms the backbone for the company in the future to reckon with.

The promoters have to file the following documents, along with necessary fee, with the register of joint stock companies to obtain certificate of Incorporation.

For Certificate of Incorporation

1) Memorandum of Association:- The memorandum of Association is also called the charter of the company. It outlines the relations of the company with the outsiders. IT furnishes all its details in six clauses such as

A. name clause

B. situation clause

C. objects clause

D. capital clause

E. liability clause

F. subscription clause

2) Articles of Association:- Articles of Association furnishes the bye-laws or internal rules governing the internal conduct of the company.

3)Details about directors:- The list of names and addresses of the proposed directors and their willingness in writing to act such in case of registration of a public company.

4) Statutory declaration: - A statutory declaration that all the legal requirements have been fulfilled. The declaration has to be duly signed by any one of the following : company secretary in whole time practice, the proposed director, chartered accountant or advocate of high court.

The Registrar of joint stock companies per uses and verifies whether all these documents are in order or not. If he is satisfied with the information furnished, he will register the documents and then issue a certificate of Incorporation. If it is private company, it can start its business operations immediately after obtaining certificate of Incorporation.

If it is a public company the following formalities are to be completed further:

For the Certificate of commencement of Business

1) Seek permission from SEBI:- The promoters have to make an application furnishing the details of certificate of Incorporation to securities Exchange Board of INDIA, seeking permission to issue prospects.

Prospectors are a notice, letter or circular noting the general public to subscribe to the share capital of the company.

2) File prospectus with Registrar: - After seeking permission from SEBI, file the prospectors with the Registrar of joint stock companies.

3) Collecting minimum subscription:- Minimum subscription refers to the minimum amount of capital required to start the business operations such as acquiring fixed assets, working capital, payment of share issue expenses such as brokerage, underwriting commission and soon.

It is necessary that the amount of minimum subscription is raised within 70 days from the date of issue of prospectors. If the company fails to raise the minimum subscription with the said time limit, the company is bound to refund entire share application money.

4) Allotting shares: - Normally shares are allotted as applied for. In case of over subscription, the basis of allotment is finalized in consultation with the stock exchange under which it is proposed to be listed and the allotment is made on lottery basis. In case of unsuccessful applicants, the money received with the share application will be refunded within a specified time, failing which the company is bound to pay with interest and also liable for legal action.

5) Apply To the Registrar for the certificate of commencement of Business:-

After raising minimum subscription, the company has to make an application again with the following declaration that:

a) Minimum subscription as stated in the prospectus has been collected,

b) All the legal formalities have been fulfilled.

The registrar will once again verify the exactness of the details of the above declarations. If he is satisfied, he will then issue certificate of commencement of business.

A public company can short its operations immediately from the date of obtaining the certificate of commencement of Business.

MAIN DOCUMENTS IN COMPANY FORMATION

The main documents in company formation are

1. Memorandum of association
2. Articles of association
3. Prospectus

While drafting the contents of these documents the promoters should take a special care to fit their vision into the contents of these documents. Otherwise, it will be difficult to change its contents at a later date.

1. MEMORANDUM OF ASSOCIATION: Memorandum of association is also called the charter or constitution for the company. It is because it lays down in precise and clear terms. The objectives of the company, defines the scope of its operations and its relations with the investors and outside world. The company has to necessarily conduct its operations within the limits set by the memorandum of association. It is a public document and hence it should be printed and made available to the public for a price. The contents of memorandum of association are classified into six clauses. They are

(a) **Name clause** This clause deals with the name particulars of the company. It is necessary that the name of a private company should end with the words ‘private limited’ and that of a public company should end with ‘limited’.

(b) **Registered or situation clause** This clause deals with the particulars of state in which registered office is proposed to be situated.

(c) **Objects clause** The objectives of the company, in the short run and long run, are furnished here. The promoters should take special care to draft the objects clause in particular. The objects should be drafted in such a way that they provide high degree of operational freedom.

(d) **Liability clause** This clause specifies that the liability in respect of shares issued by the company is limited to the face value of the shares.

(e) **Capital clause** It specifies the details of authorized capital with which it plans to get registered. This clause explains the particulars of the amounts of equity and preference share of capital to be issued by the company.

(f) **Subscription clause** Here a declaration has to be made that 'the persons signing this Clauses have interest to form this company and they have taken the number of shares as indicated against their names. The declaration is to be signed by two members in case of a private company and seven members in case of a public company and duly witnessed.

2. ARTICLES OF ASSOCIATION: Articles of the association contains the rules of procedure for the internal management and control of affairs of the company. The memorandum defines the relationship of the company with the outside world, while the Articles of association refer to the rules of procedure in the internal management and control of the affairs of the company. The main contents of articles of association are as follows

i. Amount of share capital and different types of capital.
ii. Methods to increase or decrease capital.
iii. Different types of shares, their respective rights.
iv. Procedure in respect to transfer of shares.
v. Procedure to conduct board meetings and general body meeting.
vi. Powers, rights and duties of directors in the board.
vii. Procedure in appointment and removal of a director.
viii. Remuneration of directions.
ix. Matters relating to accounts and audit.
x. Procedure for amending the contents of memorandum of association.
xi. Procedure for distribution of dividend.
xii. Procedure for winding up.
xiii. Rules regarding common seal of the company.

3. PROSPECTUS: A prospectus is defined as a 'notice, circular, advertisement or any other document inviting offers from the public for the subscription or purchase of any shares in or debentures of the body corporate.

Prospectus is the first and basic document that supports the structure of the company. An investor will go through prospectus to assess the feasibility of his investment in the company.

Contents of prospectus:

The following are the contents of the Prospectus:

a) The name of the company and address of its registered office.
b) The nature and business of the company.

c) The main objectives of the company.
d) The number and types of shares and debentures issued in the past.
e) The list of promoters with their names, addresses and their past record.
f) The list of directors with their names, addresses and occupations.
g) The list of signatories to the memorandum of association and their names, addresses.
h) Details of the brokers, underwriters, merchant bankers, bankers to the public.
i) Rights and restrictions as applicable to each class of share or debenture.
j) Amount of minimum subscription to be received before the allotment of shares.
k) Opening date and closing date of public offer.
l) Minimum number of shares to be applied and how much is to be paid per share on application.
m) Preliminary expenses incurred.
n) Property purchase or proposed to be purchased.
o) Amount of reserve fund and how it is to be utilized.
p) The names of auditors, bankers and solicitors.

Prospectus is a sensitive document of the company. It is so because for any mistake in the prospectus, the promoters and directors responsible for issue of prospectus will personally be liable, for any misstatement in prospectus, civil and criminal proceedings can be initiated against them as per the provisions of the companies Act. Most of the companies, for this reason, restrict their liability by announcing the prospectus given in the newspapers as a 'Statement but not a prospectus'. For the exact information, the public is directed to see the official document issued by the company.

ADVANTAGES:

The following are the advantages of a Joint Stock Company:

1. **Mobilization of larger resources:** A Joint Stock Company provides opportunity for the investors to invest, even small sums, in the capital of large companies. This facilitates rising of larger resources.
2. **Separate legal entity:** The Company has separate legal entity. It is registered under Indian companies Act, 1956.
3. **Limited liability:** The share holder has limited liability in respect of the shares held by him. In no case, does his liability exceed more than the face value of the shares allotted to him.
4. **Transferability of shares:** The shares can be transferred to others. However, the private company shares cannot be transferred.
5. **Liquidity of investments:** By providing the transferability of shares, shares can be converted into cash.
6. **Inculcates the habit of savings and investments:** Because the share face value is very low, this promotes the habit of savings among the common man and mobilizes the same towards investments in the company.
7. **Democracy in management:** The directors are elected by the shareholders in a democratic way in the general body meeting. The shareholders are free to make any proposals, question the practices of the management, suggest the possible remedial measures as they perceive. The directors respond to the issues raised by the shareholders and have to justify their actions.
8. **Economies of large scale production:** Since the production is in the large scale with large funds at its disposal, the company can enjoy the internal economies of large scale production.

9. **Continued existence:** The Company has perpetual succession. It has no natural end. It continues forever and ever unless law puts an end to it.
10. **Institutional confidence:** Financial institutions prefer to deal with companies in view of their professionalism and financial strengths.
11. **Professional management:** With the large funds at its disposal, the board of directors recruits competent and professional managers to handle the affairs of the company in a professional manner

DISADVANTAGES:

1. **Formation of company is a long drawn procedure:** Promoting a joint stock company involves a long drawn procedure. It is expensive and involves large number of legal formalities.
2. **High degree of government interface:** The government brings out a number of rules and regulations governing the internal conduct of the operations of a company such as meetings, voting, audit and so on, and any violation of these rules results into statutory lapses, punishable under the Companies Act.
3. **Inordinate delays in decision making:** As the size of the organization grows, the number of levels in the organization also increases in the name of specialization. The more the number of levels, the more is the delay in decision making. Sometimes, so called professionals do not respond to the urgencies as required. It promotes delay in administration which is referred to 'red tape and bureaucracy'. With all these, the company form of organization tends to be an inflexible organization.
4. **Lack of initiative:** In most of the cases, the employees of the company at different levels show slack in their personal initiative with the result, the opportunities once missed do not recur and the company loses the revenue.
5. **Lack of responsibility and commitment:** In some cases, the managers at different levels are afraid to take risk and more worried about their jobs rather than the huge funds invested in the capital of the company. Where managers do not show up willingness to take responsibility, they cannot be considered as committed. They will not be able to handle the business risks.
6. **Conflicting interest:** The Company has divergent groups of people associated with it. The shareholders want maximum dividends. The company wants to maintain good amount of reserves. It is not possible to pay larger dividends, and yet, to maintain good amount of reserves. It is necessary to reconcile such conflicting interests. The board of directors usually justifies their actions of declaring low or high rate of dividend.

PUBLIC ENTERPRISES

Public enterprises occupy an important position in the Indian economy. Today public enterprises provide the substance and heart of the economy. Its investment is over rupees ten thousand (10, 000) Crore in heavy and basic industry, and infrastructure like power, transport and communications.

Forms of public Enterprises:-

A. Departmental undertaking
B. Public corporation.
C. Government Company.

Departmental Undertaking:

Under this form the affairs of the public enterprises are carried out under the overall control of one of the departments of the government. The government department appoints a managing director for the departmental undertaking. He will be given the executive authority to take necessary decisions. The departmental undertaking does not have a budget of its own. As and when it wants it draws money from the government exchequer and when it has surplus money, it deposits it in the government exchequer. However it is subject to budget accounting and audit controls. **Example:** Department of Posts, Railways, Defense etc.

Public Corporation:

"A public corporation is defined as a body corporate created by an act of parliament or legislature and notified by the name in the official gazette of the central or state government. It is a corporate entity having perpetual succession and common seal with powers to acquire, hold, dispose of property, and sue and to be sued by its name".

Ex. 1.Life Insurance Corporation of India. 2. Unit trust of India. 3. Industrial Finance Corporation of India.

Government Company:

"Any company in which not less than 51 percent of the paid up share capital is held by the central government or by any state government or Government or partly by central government and partly by one or more of the state governments and includes a company which is subsidiary of government company". **Example:** Hindustan Machine Tools, Hindustan Aeronautics Ltd.

ADVANTAGES:

1. Large employment opportunities
2. Development of backward regions
3. Promotion of exports
4. Rapid Industrialization
5. Development of Infrastructure
6. Restricting monopolies
7. Development of Sick industrial units

DISADVANTAGES:

1. Political Interference
2. Inadequate return on capital and huge accumulated losses
3. Problems in project execution
4. Unrealistic production schedules and excess capacity
5. Over capitalization
6. Over Staffing
7. Lack of progressive personnel policies
8. Lack of professional approaches

MARKETS INTRODUCTION:

Markets constitute an important phase in the economic activity. All the goods and services that are produced need to be sold to the consumer for a price. Markets facilitate this process.

We cannot imagine a society without markets even for a while. Markets primarily provide possession utility for the goods and services. In other words the seller sells the goods to the buyer and thus transfers ownership of the goods.

DEFINITION: Market is defined as a place or point at which buyers and sellers negotiate their exchange of well defined products or services.

MARKET STRUCTURE OR CLASSIFICATION OF MARKETS

There are three important factors in classification of markets

1. The number of buyers and sellers. 2. The area coverage and 3.Time periods.

I. Competition based Markets:

1. **Perfect competition**: It is a market with a very large number of buyers and sellers market conditions are favorable to promote competition such market is called as perfect competition.
2. **Imperfect competition**: Market with a limited number of buyers and sellers come under imperfect competition. Based on the number of producers, monopolistic competition and oligopoly.

II. Area Based Market: Market based on area broadly classified into local, national, international market. It depends on size of the market.

1 .**Local market: -** sometimes a particular commodity is exchanged in the locality where it is produced. Then the commodity is said to have a local market. **Ex:** - Vegetables, flowers, fruits may be produced and marketed in the same area.

2. **National market**: - A commodity will have national market if it is demanded and supplied by people in different parts of the country. **Ex**: - wheat, sugar, cotton etc.

3. **International market**:-If a commodity is sold and purchases in different countries it is said to have international market. **Ex: -** gold, silver, cotton.

III. Time based Market:

1 .**Market period or very short period**:-A producer cannot make any changes in the supply of a good during this period. As we know, supply can be a changed by market changes in the inputs. Inputs cannot be changed in the very short period. **Ex: -** A farmer on a particular day supplies whatever vegetables gets from the field.

2. **Short period: -** It is a period in which supply can be changed to same extent. This is possible by changing certain inputs. **Ex: -** in a period of two to three weeks a farmer may use more fertilizer, water to increase his supply.

3. **Long period: -** A producer makes changes in all inputs depending upon the demand in the long period. It is possible to make adjustments in supply in this period.

TYPES OF COMPETITION

1. Perfect competition 2. Imperfect competition

PERFECT COMPETITION: Among different markets, markets based on competition are important. Perfect competition is a market with a large number of sellers and buyers. The conditions under it promote competition among producers. There will be a single price throughout the market.

Features of perfect competition: The following are features of perfect competition:

1**. Large number of buyers and sellers**:- There should be significantly large number of buyers and sellers in the market. The number should be so large that it should not make any difference in terms of price or quantity supplied even if one enters that market or one leave the market.

2. **Homogeneous product or services:** The product and services of each seller should be homogeneous. They cannot be differentiated from that of one another. It makes no difference to the buyer whether he buys from firm x or firm z. The price is one and the same in every firm. There are no concessions or discounts.

3. **Freedom to enter or exit the market**:- There should not be any restrictions on the part of the buyers and sellers to enter the market or leave the market. There should not be any barriers. The buyers can enter market whenever they want.

4. **Perfect information available to the buyers and sellers:-** Each buyers and seller has total knowledge of the prices prevailing in the market at every given point of time, quantity supplied, costs, demand, nature of product, and other relevant information. There is no need for any advertisement expenditure as the buyers and sellers are fully informed.

5**. Perfect mobility of factors of production**:- There should not be any restrictions on the utilization of factor of production such as land, labor, and capital and so on.

6**. Each firm is a price taker**:-An individual firm can alter its rate of production or sales without significantly affecting the price of the product. A firm in a perfect market cannot influence the market through its own individual actions. It has no alternative other than selling its products at the price prevailing in the market. It cannot sell as much as it wants at its own set price.

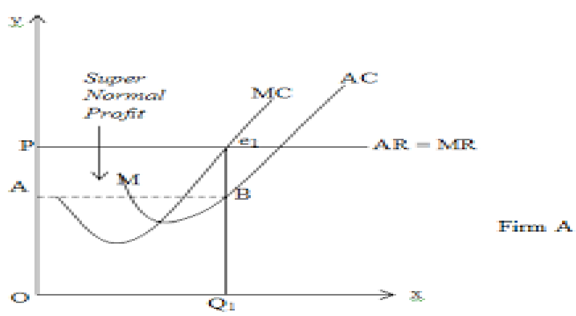
Under such market, no single buyer or seller can play a significant role in determining the price. In other words, the price is determined by the industry as a whole, which comprises both buyers and sellers.

PRICE-OUT PUT DETERMINATION UNDER PERFECT COMPETITION

Perfect competition is a market where sellers are large in number. They sell goods at the perfect competition, any quantity of output at the market price. **For Example:** All the units of output are sold at the same price i.e. Rs.10/- output multiplied with price is the total revenue. Total revenue is increased in equal amounts every time. One important aspect is that average and marginal revenue are same. These are equal to price of the goods. Therefore, in this market, the price, the average and marginal revenue are one and the same.

Price =AR= MR

The following figure explain the average cost (AC) and marginal cost (MC) are the firms average and marginal cost curves. AR and MR are average and marginal revenue curves.



In the above figure, the firm satisfies both the conditions: (a) MR=MC and (b) MC curve must cut MR curve from below. The firm attains equilibrium at point e1 where MR=MC. The firm gets higher profits as long as the price exceeds the average cost of production.

OP=Q_1e_1, which is the price

OA=Q_1B, which is the average cost

OQ_1= AB which is equilibrium output

Average Profit= Price minus Average cost.

Here, Be_1 is the average profit and the area Pe_1BA is the total profit which constitutes the 'super normal' or 'abnormal' profits. Based on its cost function and market condition, the firm may make profits, losses, or just break even in the short-run.

IMPERFECT COMPETITION

1. MONOPOLY **2.** MONOPOLISTIC COMPETITION **3.** OLIGOPOLY

MONOPOLY

Monopoly refers to a situation where a single firm is in a position to control either supply or price of a particular product or service. It cannot control or determine both price and supply, as it cannot control demand. If it decides on the price, it can determine the quantity supplied at the given price, or if the quantity is decided, the price can be determined. If the firm sets the price higher it may have to lose sales, and such it can either fix the output or price not both. What it can decide-depends on the demand and costs.

Monopoly exits where there are certain restrictions on the entry of other firms in to business or where there are no close substitutes for a given product or service. These factors determine the degree of hold for the monopolist on the market in terms of influencing the price and ability to earn super normal profits.

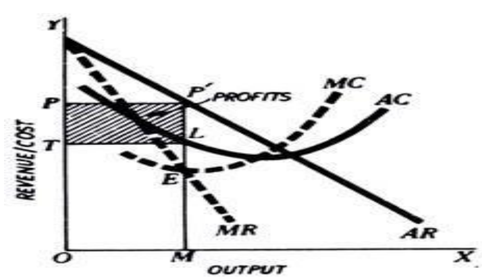
Features of monopoly:

1. There is a single firm dealing the product & service. 2. There are no close substitute and no competitors.
3. The monopolist can decide the price or quantity, not both. 4. Firm and industry are the same.
5. Producer is a price maker.

PRICE OUTPUT DETERMINATION UNDER MONOPOLY

Under monopoly, the average revenue curve for a firm is a downward sloping one. It is because, if the monopolist reduces the price of the product, the quantity demanded increases and vice versa. In monopoly, marginal revenue is less than the average revenue. In other words, the marginal revenue cure lies below the average revenue cure. The monopolist always wants to maximize the profits. To achieve maximum profits, it is necessary that the marginal revenue should be more than the marginal cost.

The monopolist can continue to sell long as the marginal revenue exceeds marginal cost. At the point 'F' where MR=MC, Profit will be maximized. Profit will diminish if the production is continued beyond this point.



Price-output Equilibrium Under Monopoly
Fig. 29.1

From the above figure it can be seen that the demand curve or average revenue by AR, marginal revenue curve by MR, average cost by AC, and marginal cost by MC. OM is the equilibrium output, OP is the equilibrium price, ML is the average cost, and P'L is the average profit (AR-AC = Average profit).

Up to OM output, MR is greater than MC and beyond OM, MR is less than MC. Therefore, the monopolist will be in equilibrium at output OM where MR=MC and profits are maximum. OP is the corresponding price to the output level of OM. The rectangle PP'LT represents the profits earned by the monopolist in the equilibrium position in the short-run.

PRICE DISCRIMINATION: When a firm sells its product to its customers of different profile at different prices with no corresponding in cost, price discrimination is also called as differential pricing. Customers may differ in their profile in terms of their education, knowledge about the prevailing prices, quality of the competitive products income groups' quality of life. Through price discrimination some customer can take advantages of a situation where in some customers may be prepared to pay more.

The following are the factors that determine the degree of price discrimination

1. **Purchasing power**: The firm is likely to charge a high price from a customer who has the ability to pay a higher price. Urgency quality consciousness, high quality living and so forth are some of the factors that compel the rich customers to pay a high price.

2. Quality bought: A customer buying large number of units is relatively charged a lower rate per unit.

3. Customer from different market conditions: If the goods are brought for further processing or resale, the buyer maybe charged a lower price. If the goods are bought for ultimate consumption, the buyer may be charged relatively higher.

Comparison between perfect competition and monopoly:

Perfect competition	Monopoly
1. AR=MR	1. AR> MR
2. Normal profit in long run	2. Supernormal profits in long run also
3. Large number of sellers	3. Single seller.
4. Free entry and exist as there are no barriers	4. There are strong barriers.
5. The seller is only the price taker	5. Monopolists are the price maker.
6. Perfect elastic demand	6. Inelastic demand
7. Each firm is a part of industry	7. Firm and industry are one and the same.

MONOPOLISTIC COMPETITION

The common experience for all of us is most of the commodities/Products are produced by several firms. But each firm produces the commodity with small differences. Monopolistic competition is a market with many sellers for a product but the products are different in certain aspects.

The main features of monopolistic competition

1. Considerable number of producers but no one control the price. **2**. Product differentiation.

3. Entry and exist are free **4.** Selling cost is more to increase the sales**. 5.** Imperfect knowledge about all products. **6.** Price decision: Each firm product a commodity with small differences, due to this reason that a firm will decide the price for its product.

OLIGOPOLY

A market with a small number of producers is called oligopoly. The product may be homogenous or there may be differences. Since producers are a few, each firm producers a large portion of the output. It is a market with less competition among the producers. It is difficult for new firm to enter in this market because of huge investments required for it. Ex: Automobiles, Electricals etc.

Features of oligopoly

1. Less number of firms 2. Interdependence 3. Selling cost is more. 4. Uncertainty in pertaining to demand.

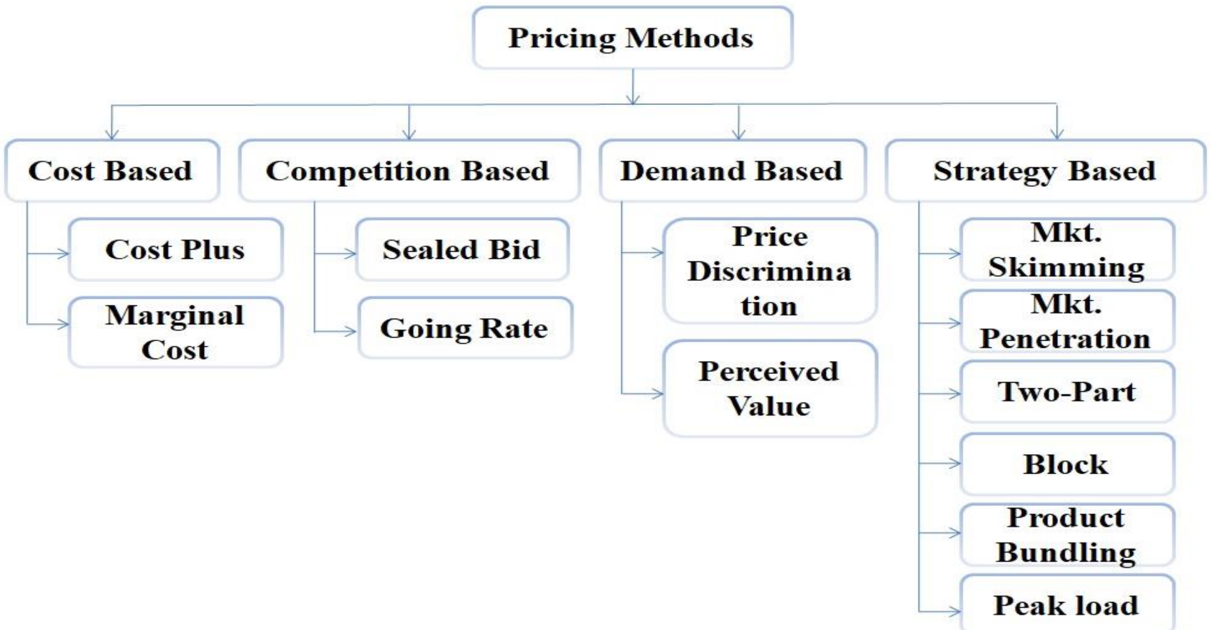
PRICING

Pricing is an important exercise. Under-Pricing will result in losses and over-Pricing will make the customers run. Hence, to determine pricing, it is necessary to understand pricing objectives, pricing methods, pricing policies.

PRICING OBJECTIVES:

1. To maximize profits 2. To increase the sale 3. To increase the market share 4. To satisfy customers
5. To meet the competition

PRICING METHODS:



I. COST BASED PRICING METHODS

1. Cost plus pricing: This is also called "full cost or mark up" pricing. Hence the average cot at normal capacity of output is ascertained and then a conventional margin of profit is added to the cost to arrive at the price in other words find out the product units total cost and add a percentage of profit to arrive at the selling price.

2**. Marginal cost pricing**:- In marginal cost pricing selling price is fixed in such a way that it covers fully the variable or marginal cost and contributes towards recovery at fixed costs or partly depending upon the market situations.

II. COMPETITION –ORIENTED PRICING

1. Sealed bid pricing: This method is more popular in tenders and contract, each contracting firm quotes its price in a sealed cover called "tender" All the tenders are opened on a schedule in date and the person who quotes the lowest price other things remaining the same is awarded the contract.

2. Going rate price:- Here the price charge by the firm is in tune with the price charged in the industry as whole. In other words the prevailing market price at a given point of time is the guiding factor. When one wants to buy or sell gold, the prevailing market rate at given point of time is taken as the bas to determine the price.

III. DEMAND ORIENTED PRICE

1. Price discrimination:- It refers to the practice of charging different prices to the customers for the same good. The firm uses it discretion to charge differently eh different customer it is also called as "differential pricing".

2. Perceived value pricing:- it refers to where the price is fixed on the basis of the perception of the buyers of the value of the product.

IV. STRATEGY-BASED PRICING

1. Market skimming:- When the product is introduced for the first time in the market, the company follows this method. Under this method the company fixes a very high price for the product. The main idea is to charge the customer maximum possible. This strategy is most found in case of technology products. When Sony introduces a particular TV model, it fixes a very high price. When new series of Pentium is released in to market, it is priced very high. Initially all cannot afford except a very few. As the time passed by the price comes down and more people cannot to buy.

2. Market penetration:- This is exactly opposite to the market skimming method. Here the price of the product is fixed so low that the company can increase its market share. The company attains profits with increasing volumes and increase in the market share. More often, the companies believe that it is necessary to dominate the market in the long run than marketing profits in the short run. This method is more suitable where market is highly price sensitive.

3. Two part pricing:- The firms with market power can enhance profits by the strategy of two port pricing. Under this strategy, a firm charges a fixed fee for the right to purchase its goods, plus a per unit charge for each unit purchased. Entertainment houses such as country clubs, athletic clubs and health clubs usually adopt this strategy.

4. Block pricing: Block pricing is another way a firm with market power can enhance its profit. We see block pricing in our day to day life very frequently. Six lox soaps in a single pack illustrate this pricing method. By selling certain number of units of a product as one package, the firm earns more than by selling unit wise. The block pricing is a profit maximization price on each package.

5.Commodity bundling:- commodity bundling refers to the practice of bundling two or more different product together and selling them at a single 'bundle price' commodity bundling is a viable price strategy to enhance profits when consumers differ with respect to the amounts they are willing to pay for multiple products sold by a firm. Ex: Tourism packages.

6. Peak-load pricing: During seasonal period when demand is likely to be higher a firm may enhance profit by peak load pricing. The firm's philosophy is to charge a higher price during peak times than is charged during off peak times.

PRICING STRATEGIES IN TIMES OF STIFF COMPETITION

1. **Price matching:** In price matching strategy, a firm promises to match a lower price offered by any competitor, while announcing its own price. If all the firms maintain the same price, the firms share the market and charge monopoly price, which results in high profits.
2. **Promoting brand loyalty:** This is an advertising strategy where the customers are frequently reminded by the brand value of a given product or service. Firms spend more money on advertising to draw the attention of consumers. Once they get brand loyalty, they charge high prices. Ex: Coke, Pepsi.
3. **Time to time pricing, 4. Promotional Pricing, 5. Target Pricing, 6. Cross Subsidization.**

3. **Time to time pricing:** This is also called randomized pricing strategy where the firm varies its price from time to time, say hour to hour or day to day. Example: markets of bullion, currency, bank deposits, gold etc.
4. **Promotional Pricing:** To promote a particular product, at times, the price of a particular product is kept intentionally lower to attract the attention of the customer to other products of the firm. Here the main objective is to increase the sales of the entire product.
5. **Target Pricing:** Here the company operates with a particular targeted profit in mind. The higher the risk and investment, the higher is the targeted profits and so is the price.

6. Cross Subsidization: is the practice of charging higher prices to one type of consumers to artificially lower prices for another group. State trading enterprises with monopoly control over marketing agricultural exports are sometimes alleged to cross subsidize, but lack of transparency in their operations makes it difficult, if not impossible, to determine if that is the case.

UNIT IV: **CAPITAL & CAPITAL BUDGETING**: Capital, significance, Types, Components of working capital, Factors determining working capital, Methods and sources of rising finance.

Capital Budgeting: Nature and scope of capital budgeting, features, Capital budgeting Methods - Payback Method, Accounting Rate of Return (ARR), Net Present Value, Profitability Index, Internal rate of return,(Simple Problems).

Definition of capital:

"According to economist, the capital is the value of total wealth available with the business".

"According to an accountant, the capital is the difference between the assets and liability".

"According to finance the capital is the total amount required by the business to conduct its business operations both in the short run and long run".

In general terms the amount useful to starts the business and run the business is called as capital.

Significance or Need for capital:

Capital plays a very significance role in the modern production system. It is very difficult to imagine the process the process of production without capital. The business needs for capital are varied. They are:

1. **To promote a business:** Capital is required at the promotion stage. A large variety of expenses have to be incurred on project reports, feasibility studies and reports, preparation and filing of various documents and for meeting various other expenses in connection with the raising of capital from the public.
2. **To conduct business operations smoothly:** Business firms also need capital for the purpose of conducting their business operations such as research and development, advertising, sales promotion, distribution and operating expenses.
3. **To expand and diversity:** The firms require lot of capital for expansion and diversification purposes. This includes development expense such as purchase of sophisticated machinery and equipment and payment towards sophisticated technology.
4. **To meet contingencies:** A firm needs funds to meet contingencies such as a sudden fall in sales, major litigation, natural calamities like fires.
5. **To pay expenses without interruption:** The firm has to meet its statutory such as income tax and sales tax, excise duty and so on.
6. **To pay interest and dividends**: The business has to make payment towards dividends and interest to share holders and financial institutions respectively.
7. **To Purchase/replace the assets:** The business needs to replace the assets like plant and machinery after certain period of use. For this purpose the firms need funds to make suitable replacement of assets in place of old and worn out assets.
8. **To support welfare programs:** The Company may have to take up social welfare programs such as literacy drive, and health camps. It may have to donate to charitable trusts, educational institutions or public service organizations.
9. **To wind up:** At the time of winding up, the company may need funds to meet the liquidation expenses.

Types of capital

Capital can broadly divided into two types:

I. Fixed capital
II. Working capital

I. Fixed capital: Fixed capital is that portion of capital which is invested in acquiring long term assets or fixed assets such as **land and buildings, plant and machinery, furniture and fixtures and soon**. Fixed capital forms he skeleton of the business. It provides the basic assets as per the business needs. The assets are not generating revenues.

The following are the features of fixed assets:

1. Permanent in nature.
2. Profit generation.
3. Low liquidity.
4. Amount of fixed capital.
5. Utilized for starting and expansion of the business.

TYPES OF ASSETS:

A. Tangible assets: These are physical items which can be seen and touched. Most of the common fixed assets are land, buildings, machinery, motor vehicles, furniture etc.

B. Intangible assets: These do not have physical form. They cannot be seen or touched. But these are very valuable to business. Ex; Goodwill, brand names, trademarks, patents, copy rights etc.

C. Financial assets: These are investments in shares, foreign currency deposits government bonds, shares held by business in other companies.

II. Working capital:

Working capital is the flesh and blood of the business. It is the portion of capital which is used to regular operations. The regular operations/ activities are purchase of material, payment of wages and salaries, expenses like rent, advertising, power etc. It is not just possible to carry on the business with only fixed assets. Working capital is must. Working capital is also known as circulating capital.

"Which is the amount we require to fulfill day-to-day financial obligations of the company is called as working capital"

Features of working capital:

1. **Short life span:** Working capital changes its form from cash to stock, stock to debtors, debit or cash. Ra w materials are held for a short time until they go into production, finished goods are held for a short for a short time until they are sold.
2. **Smooth flow of operations:** Adequate amount of working capital enables that business to conduct its operations smoothly. It is therefore called as the 'flesh and blood' of the business.
3. **Liquidity:** The assets represented by the working capital can be converted into cash quickly within a short period of time unlike fixed assets.
4. **Amount of working capital:** The amount of working capital of a business depends on many factors such as size and nature of the business, production and marketing policies, business cycles and so on.

5. **Utilized for payment of current expenses:** The working capital is used to pay for current expenses such as suppliers & raw materials, payment of wages and salaries, rent and other expenses and so on.

Components of working capital

From the accounting point of view, working capital is the difference between current assets and current liabilities.

Working capital=current assets-current liabilities

Current assets:

* Cash/Bank Balances
* Raw materials/ Stock
* Debtors/ Bills receivable
* Prepaid expenses

Current liabilities:

* Creditors/ Bills payable etc.
* Salaries payable
* Wages payable

Factors determining the requirements of working capital:

1. **Promotional and formation stage**: If the business is in formation stage, it may require more funds for launching the project.
2. **Position of business cycle**: The changes in the have to be watched carefully. The economy is subject to ups and downs in the business activity. The upward swing is associated with spurt in sales and increase in levels in inventory and debts. During the period, the business may require relatively larger funds.
3. **Nature of business**: The nature of business has a profound effect on the volume of working capital. In general, manufacturing companies require less working capital when compared to the trading organizations. For instance, super markets require large working capital.
4. **The length of manufacturing cycle**: Longer the manufacturing cycle is more is the requirement of working capital. Length of manufacturing cycle refers to the time taken from the point of first stage to the last stage of the manufacturing process.
5. **Terms and conditions of purchase and sale**: If the firm buys the raw materials for the credit and sells the finished goods for cash, it can manage with the lower volume of working capital. It is necessary to monitor the accounts receivable and accounts payable.
6. **Bottlenecks in the supply of raw materials**: The more the bottlenecks, the more need for working capital.
7. **Fluctuations in the demand**: Seasonal fluctuations are common phenomenon for most of the types of business. The demand forecasting exercise is done at the beginning of the year will provide a basis to determine the need for working capital during the months of season and off-season.

8. **Production policies**: It is better to produce the main product during the peak season.

9. **Degree of competition**: Where there is a high degree of competition, product of large variety has to be offered at competitive terms and conditions. All these means a drain on the working capital resources. 'Buy now and pay later 'schemes no doubt increase the sales.

10. **Growth and expansion plans**: Growth and expansion are two different phenomena. Growth means increasing the scale of operations of say one product where as expansion set up to setting up more branches or additional products to the existing product mix and so on. If the company plans for growth and expansion it has to find additional working capital.

11. **Profit margin**: Higher profit margins contribute to higher volumes. When it is retained in business, profit is the significant source of working capital.

METHODS AND SOURCES OF FINANCE

The source of finance would be where the money was obtained from a bank while the mortgage may be obtained from a critic society.

- **I.** Long-term finance
- **II.** Medium-term finance
- **III.** Short-term finance

I. Long-term finance: Long term finance refers to that finance available for a long period say three years and above. The long term methods outlined below are used to purchase fixed assets such as land and buildings etc.

1) Own capital: Irrespective of the form of organization such as sole trader, partnership of a company, the owners of the business have to invest their own finance to start with. Money invested by the owners, partners or promoters is permanent and will stay with the business throughout the life of the business.

2) Share capital: Normally in the case of company, the capital is raised by issue at shares. The share holder is emitted to dividend in case the company makes profits. The share capital can be of two types: (a) Preference share capital **and** (b) Equity share capital

a) Preference share capital: The preference shares are the shares issued by the company to the prospective share holders at a fixed rate of dividend. A preference a preference share holder enjoys two rights over equity share holders. They are: 1. Right to receive fixed rate of dividend and 2. Right to return of capital. Preferences share holders do not have any voting right in the annual general meetings of the company.

b) Equity shares: Capital raised through issue of equity share is called as ordinary share. Equity shares are the shares issued by the company to the prospective shareholders with voting. They are the real owners to the company.

3. Retained profits: the retained profits are the profits remaining after all the claims. They form a very significant source of finance. Retained profits from good source of working capital.

4. Long term loans: These are specialized financial institutions offering long term loans provided the business proposal is feasible. The promoters should be able to offer assets to offer assets of the business as security to avail of this source.

5. **Debentures**: Debenture is a certificate acknowledging the money lends by the debenture holder to the company at a fixed rate of interest. The debentures are of different types based on the terms and conditions.

6. **Government grants and loans**: Government may provide long term finance directly to the business houses or by indirectly subscribing to the shares of the companies. The government gives loans only if the project satisfies certain conditions.

II. **Medium term finance:** Medium term finance refers to such sources of finance where the repayment is normally over one year and less than three years.

1) **Bank loans**: Bank loans are extended at a rate of interest
2) **Leasing or Renting:** When there is a need of fixed assets, the asset need not be purchased. It can be taken on lease or rent for specified number of years.
3) **Venture capital:** This form of finance is available only for limited companies. Venture capital is normally provided in such projects where there is relatively a higher degree of risk. For such projects, finance through the conventional sources may not be available. Many banks after such finance through their merchant banking divisions.

III. **Short term finance:** Short term finance is that finance which is available for a period of less than one year. The following are the sources of short term finances:

1) **Commercial paper (CP):** It is a new money market instrument introduced in India in recent times. CP's are issued usually in large denominators by the leading, nationally reputed, highly rated and credit worthy, large manufacturing and finance companies in the public and private sectors.
2) **Bank overdraft**: This is a special arrangement with the banker where the customer can draw more than what he has in his savings/current account subject to a maximum limit. Interest is changed on a day-to-day basis on the actual amount overdrawn. This source is utilized to meet the temporary shortage of funds.
3) **Trade credit:** This is short term credit facility extended by the creditors to the debtors. Normally, it is common for the traders to buy the materials and other supplies from the supplies on credit basis. After selling the stocks, the traders pay the cash and buy fresh stocks again on credit.
4) **Advance from customers**: It is customary to collect full or part of the order amount from the useful to meet the working capital needs.
5) **Internal funds**: Internal funds are generated by the firm itself by way of secret reserves, depreciation provisions, taxation provisions, retained profits and so on and these can be utilized to meet the urgencies.

CAPITAL BUDGETING

"Capital budgeting is the long term investment decision for functioning of acquires, upgrades, replaces the assets such as land and buildings, plant and machinery and different types of long term projects."

"According to Charles T Horngren "Capital budgeting is the long term planning to make and finance proposed capital analysis."

“The capital budgeting decisions involve long term planning for selection and also financing the investment proposals. Capital budgeting is the process of evaluating the relative worth of long term investment proposals on the basis of their respective profitability.

NATURE OF CAPITAL BUDGETING:

Nature of capital budgeting can be explained in brief as under:

- Capital budgeting is a long-term investment decision.
- Capital budgeting is irreversible in nature.
- Capital budgeting decisions requires a large amount of funds.
- Capital budgeting is most critical and complicated decision for a finance manager.
- Capital budgeting decisions involve the exchange of current funds for the benefits to be achieved in future.
- The funds are invested in non-flexible long term funds.
- In view of the investment of large amount for a fairly long period of time, any error in the evaluation of investment projects, may lead to serious consequences, the problem will be followed a series of years.

SIGNIFICANCE OF CAPITAL BUDGETING:

Capital budgeting assumes special significance for the following reasons:

i. **Substantial capital outlays**: Capital budgeting decisions involve substantial capital outlays.
ii. **Long term implications**: Capital budgeting proposals are of longer and hence have long term implications. For instance the cash flows for next 5 to 15 years have to be forecast.
iii. **Strategic in nature**: Capital budgeting decisions can affect the future of the company significantly as it constitutes the strategic determinant for the success of the company. A right investment decision is the secret of the success of many business enterprises.
iv. **Irreversible**: Once the funds are committed to a particular project, we cannot take back the decision. If the decision is to be reversed, we may have to lose a significant portion of the funds already committed. If many involve loss of time and efforts. In other words, the capital budgeting decisions are irreversible or may not be easily reversible.

SCOPE OF THE CAPITAL BUDGETING:

- Construction of new building.
- Renovation of existing building.
- Building a production facility.
- Buying a new delivery truck.
- Making a new product or Starting a new business.
- Expansion decision of existing plant and equipment.

PROCESS OF CAPITAL BUDGETING:

The process of capital budgeting involves following steps

1. Project Generation: In the first step, projects for investments are identified. This projects may be undertaken to increase revenue or to reducing cost. for this, proposals for expanding production capacity, proposals for replacement of plant etc. could be undertaken.

2. Project Evaluation: In this step, costs and benefits from such projects are evaluated. Projects are judged on the basis of profitability and returns it offers to the firm. To evaluate the different proposals in term of the cost of capital the expected returns from alternative investment opportunities and the life of the assets with any of the following evaluation techniques.

I. Traditional Methods - PBP & ARR **II. Modern Methods (DCF)** – NPV, PI and IRR.

3. Project Selection: The projects generated and evaluated are then screened at various levels of management. After screening, the top management may decide whether to select or reject the proposal.

4. Project Execution: A project is executed after final selection is made by the management. Required funds are allocated to execute the project.

5. Follow-up: Executed projects are then followed-up. Actual performance of the project is compared with the expected performance and deviations are found out. With the help of which future decisions are taken.

Kinds of capital Budgeting Decisions

1. Replacement
2. Expansion
3. Diversification
4. Research and development

METHODS OF CAPITAL BUDGETING

Capital budgeting decision is made under different criteria. How are these criteria determined? These criteria differ in concepts. Some use thumb rules and some use logic and scientific approach. So based on these criteria, the methods of capital budgeting can be classified as

1. Traditional methods

a. Payback Period

b. Accounting Rate of Return

2. Discounted cash flow methods or modern methods

a. Internal Rate of Return (IRR)

b. Net Present Value (NPV)

c. Profitability Index (PI)

PAYBACK PERIOD

Payback period is the time period which we require to recover our initial investment.

Payback period refers to the period within which the original cost of the project is recovered. It is calculated by dividing the cost of the project by the annual cash inflows. Where the cash flows are uniform (even) throughout, then we can measure the payback period like.

Payback period = Cost of the project/ Annual Cash Flows

The shorter the length of the payback period, the better is the project in terms of paying back the original investment particularly where the future is uncertain the companies favour this method the better it is in terms of safety and liquidity.

Where the cash flows are uneven

$$\textbf{\textit{Payback period}} = \text{based year} + \frac{\text{Amount to be recouped}}{\text{Next year cash flows}}$$

ADVANTAGES

1) **Easy to calculate an understand**:- calculation of payback period does not involve any complicated formulae. It is easy to calculate and understand.

2) **Liquidity is emphasized**:- it emphasizes on the earlier cash flows which are more likely to be accurate than later cash flow, in other words a short payback period also reduces the risk.

3) **Reliable technique in volatile business conditions**:- it is a reliable technique for projects appraisal, particularly in the areas of volatile business conditions such as change in technology, changing fashions or customers fasts /preferences.

DISADVANTAGES

1) **Post-payback earnings ignored**:- This method ignores the earnings after the payback period. It ignores the total life of the project and the total profitability of the investment.

2)**Timing of cash flows ignored**:- This method does not consider the timing of cash flows, all the cash flows are given equal weight age.

3) **Liquidity is over-emphasized**:- The liquidity of the proposal is over-emphasized by choosing only the cash inflows. Other factors such as cost of the proposal or cost of the proposal are ignore. Despite the above limitations the payback method continues to be very popular and widely put to use particularly where there is a high degree of uncertainty.

ACCOUNTING RATE OF RETURN

Accounting rate of return refers to the ratio of annual profits after taxes to the average investment. The average investment equal to half of the original investment. According rate of return is also called average rate of return.

Accounting Rate of Return = Average income (Returns) /Average investment

Where the average investment is half of the outlay. Average capital employed is calculated to the usual accounting convention that the original investment gets exhausted steadily to zero over the life of the project.

It is assumed that the asset is depreciated as per straight line method usually it is expressed in terms of percentage. The higher the ARR is the better is the profitability and hence the projects with higher accounting rate of return are short listed for implementation.

ADVANTAGES

1) It is easy to understand and calculate.

2) ARR compared with the cutoff point of return the decision to accept or reject is made easier.

3) It considers all the cash inflows during the life of the projects, not like payback method.

DISADVANTAGES

1. The concept of time value of money is ignored.
2. Unless we have a cutoff point of return, ARR cannot be meaningful and effective.
3. ARR is not reliable particularly in terms of high or wild fluctuations in the returns.
4. The average concept dilutes the profitability of the project.

DISCOUNTED CASHFLOW METHODS

Discounted cash flows are the future cash inflows reduced to their present value based on a discounting factor. The process of reducing the future cash inflows to their present value based on a discounting factor or cut-off return is called discounting.

NET PRESENT VALUE

Net present value refers to the excess of present value of future cash inflows over and above the cost of original investment.

NPV= Present Values of Cash inflows MINUS Present Values of Cash Outflows (Investment)

The concept of NPV is a logical extension to the concept of present value. Here the decision is based on the size of net present value. The projects with higher NPV'S are selected. If the NPV is negative, that means the projects is not profitable.

In other words, the NPV should always be positive and should be maximum. The present value factor tables are used here to determine the present value of the future cash inflows.

Steps involved in Calculating Net Present Value

The following are the stages in the determination of NPV

1) From the PV factor table, identify the PV factors of Re 1 for the given discount rate.

2) Multiply the cash flows with the corresponding PV factor to find the product **DCF= (PV)*(CFAT)**

3) Find the sum of products.

4) If the sum is positive, that means the project is profitable. In case of projects with different NPV'S choose the project with higher NPV because the higher the NPV, the higher is the profitability.

ACCEPTANCE RULE

According to NPV method the project should be accepted, if the NPV is positive or equal to zero. If the NPV is negative the project should be rejected.

NPV >1 which means that the project earns more than the discount rate.

NPV = 1 which means that the project earns the same as the discount rate.

NPV < 1 which means that the project earns less than the discount rate.

ADVANTAGES

1. Since the PV factor tables are available determination of NPV is relatively easier. It is easy to understand.

2. The goal of the financial management is wealth maximization and this method enables the finance manager to pursue this goal.

3. It is based on the concept of time value and considers the total earnings and expenses of the project.

4. NPV is a superior technique to IRR in case of mutually exclusive proposals.

5. Each project can individually be evaluated.

DISADVANTAGES

1. It is difficult to determine the appropriate discount rate.

2. The calculations are easier when compared to IRR, but is beyond the comprehension of a common businessman. 3. Where projects differ in their duration and their cash flows, this method cannot be used.

INTERNAL RATE OF RETURN

Internal rate of return is that rate of return at which the present value of expected cash flows of a project exactly equals the original investment. In other words, it equals the present value of a given project with its outlay. This is the cut –off point at which the income equals the expenditure or the investment breaks even.

At IRR, the net present value of a project is zero. The net present value refers to the excess of the present value of the future cash flows over and above the original investment.

EVALUATON OF IRR:

The internal rate of return is compared with the cost of the capital. If the IRR is more than the cost of the capital the project is profitable otherwise it is not where there are two projects with different IRR'S select the project with higher IRR.

Internal Rate of Return = $r_l + (P.V.Ci_h – P.V.Co/P.V.Ci_h – P.V.Ci_l) * \Delta r$

ADVANTAGES

1. IRR is based on the time value of money.
2. It is based on the earnings of all the years of the project.
3. It is a valuable tool to compare the projects with different cash flows and different life span.
4. It is independent of cost of capital.
5. Such projects with higher IRR are recommended. Hence it directly contributes to the "wealth maximization goal" of the finance manager.

DISADVANTAGES

1. It is difficult to understand and tedious to calculate IRR by even trial and error.
2. It is based on certain assumptions one of which is that the intermediate cash flows are reinvested at IRR. This assumption may not hold good.
3. There could be cases of non-conventional projects with multiple IRR'S which are difficult to understand.
4. There are cases where higher IRR does not necessarily contribute to wealth maximization.

Calculation of IRR if the Cash inflows are Annuities:

Step1: Determine the Payback Period of the proposed investment.

Step2: In Table-D (Present Value of an annuity) look for the payback period that is equal to or closest to the life of the proposal.

Step3: From the year's row, find two Present Values or Discount Factors that closest to Payback period but one bigger value and other smaller than it.

Step4: From the top row of the table note the interest rate (r) corresponding to the present values**.**

Step5: Calculate the P. V. Cash inflows with the noted the discount factors (Interest rates).

Step6: Determine the actual IRR by interpreting values in formula.

Calculation of IRR if the Cash inflows are Uneven or Mixed stream:

Step1: Calculate the average annual cash inflows to get "Fake Annuity".

Step2: Determine the "Fake Payback Period" dividing the initial outlay by "fake annuity" determined in **Step1**.

Step3: In Table-D (Present Value of an annuity) look for the payback period that is equal to or closest to the life of the proposal.
Step4: From the year's row, find two Present Values or Discount Factors that closest to Payback period but one bigger value and other smaller than it.
Step5: From the top row of the table note the interest rate (r) corresponding to the present values**.**
Step6: Calculate the P.V. Cash inflows with the noted discount factors (interest rates).
Step7: If the P.V.Cash inflows of proposal are equal that is the IRR. Otherwise repeat the **Step 6** to calculate the P.V. Cash inflows with the noted discount factors (interest rates).
Step8: Determine the actual IRR by interpreting values in formula.

PROFITABILITY INDEX

This is the ratio of the present value of cash inflows and the present value of cash outflows. It is used to indicate the profitability at a glance. Where the projects differ in their duration and the cash flows these can be compared based on the profitability index.

Calculation of Profitability Index

Profitability Index = Present Value of Cash inflows / Present Value of Cash Outflows

If the profitability index is less than one (1) reject the proposal.

LIMITATIONS OF CAPITAL BUDGETING

Uncertainty in the future: The capital budgeting proposals are invested with the uncertainty in the future .All data is used in evaluation of proposals is the estimates .the data is error phone more with human judgment, bias or discretion in the identification of cash inflows and outflows.

Qualitative factors ignored: in capital budgeting, we consider only such factors which can be qualified in terms of money. Factors such as improved morale employees as a result of implementation of proposals are not focused the other factors in the business environment such as social, political, economic conditions etc.are not reflected.

Volatile business conditions: the factors influencing investment decision include technological advancements, government policies (such as fiscal policy, monetary policy) sales forecast, attitude of management (conservative &progressive), estimated cash flows, discount factor &rate of return.

Unrealistic assumptions: There are certain unrealistic assumptions underlying capital budgeting processes they are

1. There is no risk in uncertainty in the business environment this is not correct the future of business is full of uncertainty &we apply the management techniques to minimize the risks.
2. The cash flows are received in lump sum at the end of given period.
3. The key variables such as sales revenue, cost, price or investment&….are taken based on past data particularly in terms of rising prices , these seldom hold good for future.
4. The cost of the capital & discount rate are one and the same.

Examples in Capital Budgeting Techniques:

Pro.1: The following details are available in respect of the cash flows of two projects A & B

Year	**C_0**	**C_1**	**C_2**	**C_3**	**C_4**	**C_5**
Project A	(40000)	12500	12500	12500	12500	12500
Project B	(50000)	10000	20000	30000	40000	20000

Compute the Pay Back Period, Accounting Rate of Return, Net Present Value, and PI. With the discount rate of 10 %.

Pro.2: Compute the Pay Back Period, Accounting Rate of Return, Net Present Value, and PI. For the following projects, with the discount rate of 10 %.

Year	**C_0**	**C_1**	**C_2**	**C_3**	**C_4**	**C_5**
Project X	(10000)	3000	3000	3000	3000	3000
Project Y	(10000)	2000	3000	4000	3000	2000
Project Z	(10000)	1000	2000	3000	4000	5000

Pro.3: ABC ltd. is proposing to mechanize their operations. Two proposals M and N in the form of quotations have been received from two different vendors. The proposal in each case costs Rs. 500000. A discount factor of 12% is used to compare the proposals Cash Flows after Taxes are likely to be as follows;

Years	Proposal M	Proposal N
1	150000	50000
2	200000	150000
3	250000	200000
4	150000	300000
5	100000	200000

Which one you recommended under **Net Present Value** method and **Internal Rate of Return.**

Pro.4: The cost of the project A and B is Rs.50000. Project A generates annual cash inflows for the next 4 years are Rs.25000. Project B generates the cash flows for the next 4 years are Rs. 20000, Rs.26000, Rs.20000, and Rs.17000 respectively. Calculate the. **i. Payback Period, ii. ARR, iii.NPV, iv.PI and v. IRR.** With discount rate at 10%.

Pro.5. One of three projects of a company is doing poorly and is being considered for replacement. The projects (A, B and C) are expected to require Rs. 200000 each, have an estimated life of 5 yrs, 4 yrs, and 3 yrs respectively and have no salvage value. The rate of return is 10% p.a. The anticipated cash flows after taxes (CFAT) for the three projects are as follows;

Years/Projects	1	2	3	4	5
Project A	60000	60000	60000	60000	60000
Project B	70000	70000	70000	60000	***
Project C	90000	90000	60000	***	***

Rank the each project applying the methods of **i. Payback Period, ii. ARR, iii.NPV, iv. PI and v. IRR.**

UNIT-V: INTRODUCTION TO FINANCIAL ACCOUNTING AND ANALYSIS : Accounting Principles-Concepts, Conventions, Double Entry Book Keeping, Journal, Ledger, Trail Balance – Final Accounts with simple adjustments. **Financial Analysis through Ratios**: Importance, types- Liquidity Ratios, Activity Ratios, Turnover Ratios and Profitability ratios. (Simple problems).

Introduction:

Every business organization wants to know whether it has made profit or not at the end of a given period. For this purpose, it has to prepare a statement containing profit or loss. If also wants to know what it owns (Assets) and how much it owns (liabilities) to its suppliers and others. For this purpose it prepares a statement showing its assets and liabilities. In order to prepare these statements, the business organization has to maintain a set of accounts.

Definition:-

American institute of certified public accountants(AICPA) defines "accounting as an art of recording, classifying, and summarizing the financial transaction in a significant manner, and in terms of money and events which are in part at least of a financial character and interpreting the result there of.

SIGNIFICANCE OF ACCOUNTING:

1. Maintaining its records of business 2. Monitor the business activities 3. Calculate profit or loss for a given period 4. Fulfill legal obligations 5. Show financial position for a given period

6. Communicate the information to the interested parties.

USERS OF ACCOUNTING INFORMATION:

1. **Owners:** Owners want to know about the profit. They want to know how their business going on.

2. **Creditors or Banks**: Creditors or financial institutions are those who lend finances to the business firm. They want to know whether their funds ar safe or not. They use accounting information to judge the credit worthiness of a business firm. They wish to know whether the firm is capable of paying interest from time to time or not.

3. **Managers:** Managers use accounting information to report t the owners or shareholders. From accounting information, they can know whether their decisions are effective or not.

4. **Government or tax authorities**: Government is interested in taxes. From accounting information it assesses the tax liability of a firm, based on the net profit earned for a particular period.

5. **Employees:** Employees are personally interested in the accounting information to know if they can put forth their claims for better wages or better facilities.

6**. Investors:** Both present and potential investors need the information to judge the prospects of present and potential investment in the business. Present investors need the information to decide whether they should continue in the present investment or not. Prospective investors need the information to decide whether to invest in the business or not.

7. **Public:** The public as consumers is interested in accounting statements in order to know whether the control is exercised on controlling the expenses of the business and the price fixed is reasonable.

FUNCTIONS OF ACCOUNTING

1. Recording 2. Classifying 3. Summarizing 4. Analyzing 5. Interpretation 6. Communication

ADVANTAGES OF ACCOUNTING:

1. It helps in ascertaining profit/loss for the financial year
2. It facilitates to ascertain financial position of the business
3. It facilitates to replace human memory by maintaining complete record of financial transactions.

4. It facilitates to comply with legal requirements which require an enterprise maintain books of accounts.
5. It facilities the users to take decisions.
6. It helps in determining cost of product/services
7. It helps the management in planning and controlling business activities and in taking decision.
8. It helps in comparing performance of business also its own performance in the past.
9. It helps in determining income tax liability, sales tax, commercial tax etc.
10. Facilitates in raising loans and also in ascertainment of value business.

DISADVANTAGES OF ACCOUNTING:

1. It ignores qualitative elements, like quality of its manpower, managerial skills of its administrators, public relations etc.
2. The financial statements are prepared on historical cost basis. It ignores the price on changes i.e time value and purchasing power of money.
3. It is also not free from personal bias when exercise the choice out of alternatives available.

ACCOUNTING PRINCIPLES

Accounting principles are **the rules and guidelines that companies must follow when reporting financial data**. The Financial Accounting Standards Board (FASB) issues a standardized set of accounting principles in the U.S. referred to as generally accepted accounting principles (GAAP). The accounting principles will understand easily with help of **accounting concepts and conventions.**

ACCOUNTING CONCEPTS

1. Business entity concept: Which recording the transactions in the books of accounts, should be noted that business and owners are separate distinct entities in the eyes of accounting. All the books of accounts from the point of view of the business.

2. **Money measurement concept**: According to this concept, only those monetary transactions which are capable of being expressed in terms of money are included in the accounting records.

3. Cost concept: According to this concept the transactions are recorded "at cost" in the books of accounts. For example, if building is purchased for Rs 80,000/- but its market value is Rs 1, 00,000/- it is to be recorded at Rs 80,000/- only.

4. Going concern concept: This concept assumes that business will continue to exist for a fairly long period of time.

5. Accounting period concept: The life of the business is considered to be indefinite, but the measurement of income cannot be postponed for a very long period of time. Therefore, it is necessary to have a period for which the operational results are assessed for external reporting. April 1^{st} to march 31^{st}.

6. Dual aspect concept: This is one of the most fundamental concepts of accounting. It may be stated that for every debit there is a corresponding credit. Every business transaction has a dual effect. One is receiving aspect and the other is giving aspect. Therefore for every debit there is an equal corresponding credit.

7. Realization concept: The revenue should be considered only when it is realized.

8. Matching concept: This concept is based on accounting period concept which requires that here should be a periodic matching of cost incurred and revenues earned during the accounting period.

Accounting Conventions:

1) Convention of consistency: The convention of consistency provides that the business shall follow the same accounting principles and methods for upcoming accounting periods.

2) Convention of conservatism: The convention of conservatism provides that the company shall provide for all the probable losses and anticipate no profit unless realized.

3) Convention of materiality: The convention of materiality states that businesses shall include all the relevant and material facts separately in the financial statements.

4) Convention of full disclosure: The Convention of full disclosure provides that all the relevant and material information shall be properly disclosed in the preparation and presentation of financial statements.

BOOK-KEEPING

In financial accounting there are two systems of book-keeping

a. Single entry book-keeping b. Double entry book-keeping

(a) Single entry book-keeping system:- Single entry system is an unscientific sector maintain their books of account under single entry system of book-keeping.

(b) Double entry book-keeping system:- Double entry book-keeping is a scientific way of recording transactions based on the fact for every debit, there is a corresponding credit. Under double entry system, both debit and credit aspects of the transactions are being recorded. This chapter deals with only double entry system of book-keeping.

ADVANTAGES OF DOUBLE ENTRY BOOK-KEEPING:

1. **Information about every account**:- under double entry system, both aspects of transactions are being recorded in the books of accounts. Hence information about every account is available in this book of account as all accounts are to be found in the ledger under double entry system. Under single entry system, only a few accounts such as cash account, debtor's accounts and creditor's accounts are maintained.

2. Help to know the receivables and payables: It helps to know how much is owed to the creditors and how much is due from debtors. Also it focuses on the bills payable and receivables.

3. Arithmetic accuracy: It can be ascertained by preparing a statement of debits and credits called trail balance and this is possible because both aspects of every transaction are recorded.

4. Helps to local errors: trail balance can reveal the errors that creep in accounts while recording the business information.

5. Helps to ascertain profit/loss: the profit and loss statement can be prepared without much difficulty under double –entry system unlike in single-entry system.

6. Helps to know the financial business: double entry system helps to prepare balance sheet that reveals the financial position of business as on a particular date.

TYPES OF ACCOUNTS &RULES GOVERNING EACH ACCOUNT

1. Personal account: these are accounts opened in the name of persons, firms and companies with whom the firm deals.

<u>**Rule**: **Debit:** the receiver – **Credit:** the giver.</u>

Ex: suppose x buys good worth Rs.5000 from us. This is not a cash transaction. This is credit transaction. So x is our debtor as he is receiving the goods. So debit "x" accounts in our books.

2. Real account: these are accounts opened in the name of assets such as land, buildings, plant and machinery, furniture, and fixtures etc.…

<u>**Rule**: **Debit:** what comes in (Receipts) – **Credit:** what goes out (Payments).</u>

3. Nominal account: this is also called factious account .it exists only for namesake. Nominal accounts cannot be seen. Nominal accounts are those which are opened in the name of expense, losses, profits, incomes and gain. These cannot be physically seen.

<u>**Rule**: **Debit**: all expenses and losses – **Credit:** all incomes and gains.</u>

JOURNAL

It is called a book of prime entry, because of the transaction are entered first in a book.

Journalizing: the process of recording transactions in journal is called 'journalizing'. The entry made in the journal is called journal entry.

The format of a journal:

Date	Particulars	L.F	Debit Amount Rs.	Credit Amount Rs.

Explanation:

Date column: in this column the table the date on which the transaction took place is entered. The transactions must be recorded in choronological order ,i.e transactions are to be entered date wise. the year and month is wriiten once, till they change.

Particular column: in this column the names of accounts to be debited is written in the first line and then the name of account to be credited is recorded in the second line. They are followed by narration given in bracket. Narration is a brief explanation of the transaction entered.

L.F. column: this is called ledger folio column. In this column the page number of the ledger will be entered when it is posted into its relevant account in the ledger. This helps in verification of books of accounts in case of any error.

Debit account column: in this column the amount to be debited is written.

Credit account column: in this column amount to be credited is written.

Ex: journal the following transaction.

Furniture is purchased to Rs.1000 jan-5

Date	Particulars	Amount Dr Rs	Amount Cr. Rs
5-Jan	Furniture A/C Dr To Cash A/C (Furniture Purchased)	1000	 1000

ADVANTAGES OF JOURNAL ENTRIES:

- **Chronological order**: transactions are recorded in a choronological (date wise) order in journal. hence, when any information is required the information can be traced out quickly and easily.
- **Explanation of transaction**: each journal entry entered in the journal gives brief narration or explanation.
- **Record of both aspects (debit &credit)**: both debit and credit aspects of a transaction are recorded in journal. since the amount recorded in debit amount column and credit amount column must be equal. Therefore the possibility of committing errors in reduced and the detection of errors, if any, committed becomes easy.

LEDGER

Ledger is a book of many accounts .the process of preparation of accounts from the journal into ledger is called posting in the ledger. **Ex**: it may includes sales account, purchase account, sales returns account, purchase returns account, bills payable account, bills receivable account, cash account, debtors account, creditors account, and so on….

The format of ledger account: It is of two parts:

- Left-hand side called debit side. And Debit starts with 'to'.
- Right-hand side called credit side. And Credit starts with 'by'.

Name of the Account							
Debit side (Dr)				Credit side (Cr)			
Date	particulars	L.F	Amount	Date	Particulars	L.F	Amount

BALANCING OF AN ACCOUNT.

There may be any number of entries on the debit or credit side or both sides of the given account. Among the various accounts in business, if both sides tally on both the debit and credit side, the amount is settled. If the account shows more entries on one side it is necessary to balance the account to find out whether the account shows debit balance or credit balance.

Calculate the totals on each side of the account. Check up on which side the total is higher. Put the total on the higher side of the account first. Then see by how much the other side is lesser. Put the difference on the lesser side writing clearly balance carried down or balance C/D . This is the closing balance for the end of the given period. The same difference becomes the opening balance for the next period.

The opening balance will be written in the beginning of the next period on the higher side of the account. It should be noted that the closing balance will be put on the lesser side where as the opening balance will come on the higher side of the account.

TRIAL BALANCE

Trial balance is a statement containing debit and credit balances of various accounts taken out from ledger books as on a particular date. A trial balance must agree as on that date.

Significance:-

The trial balance must agree as on a given date i.e the total of debit balances must be equal to the total of credit balances. If it does not agree, that means there are certain arithmetical errors in the books of accounts.

Preparation of trial balances

Accounts showing the debit balance

- Debit accounts
- Asset accounts such a plant, furniture, etc…
- Expense accounts such a rent paid etc…
- Losses accounts such as goods destroyed in fire
- Purchaser accounts
- Sales returns accounts
- Drawing account

Accounts showing credit balance

- Creditors account
- Liabilities account
- Incomes account
- Gain account
- Profit account
- Loan account
- Bank overdraft account
- Sales account
- Purchasereturns account
- Provisions account
- Reserves account

Format of TRIAL BALANCE		
PARTICULARS	Debit balances	Credit balances
Total	****	****

S.No.	Terms of accounting	Entry	Nature
1	Capital	Credit	Loan
2	Openig stock	Debit	Asset
3	Purchasers	Debit	Expense
4	Sales	Credit	Income
5	Return in wards	Debit	Loss
6	Return out wards	Credit	Gain
7	Wages	Debit	Expense
8	Freight	Debit	Expense
9	Transport expenses	Debit	Expense
10	Gas , fuel	Debit	Expense
11	Discount received	Credit	Loss
12	Discount allowed	Debit	Loss
13	Bad debts	Debit	Gain
14	Bad debts provision	Credit	Revenue
15	Commission received	Credit	Expense
16	Repairs	Debit	Expense
17	Rent	Debit	Expense
18	Salaries	Debit	Loan
19	Loan taken	Credit	Liability
20	Interest Received	Credit	Income
21	Interest paid	Debit	Expense
22	Insurance	Debit	Expense
23	Carrage outwards	Debit	Expense
24	Advertisements	Debit	Expense
25	Petty Expenses	Debit	Expense
26	Trade Expenses	Debit	Expense
27	Petty receipts	Credit	Income

S.No.	Terms of accounting	Entry	Nature
28	Income tax	Debit	Expense
29	Office expenses	Debit	Expense
30	Customs Duty	Debit	Expense
31	Sales tax	Debit	Expense
32	Debtors	Debit	Asset
33	Creditors	Credit	Liability
34	Goodwill	Debit	Asset
35	Plant, machinery	Debit	Asset
36	Land , buildings	Debit	Asset
37	Furniture, fittings	Debit	Asset
38	Investments	Debit	Asset
39	Cash in hand	Debit	Asset
40	Cash at Bank	Debit	Asset
41	Reserve Fund	Credit	Liability
42	Advances	Debit	Asset
43	Vehicles	Debit	Asset
44	Excise duty	Debit	Expense
45	General Reserve	Credit	Liability
46	Bills Receivable	Debit	Asset
47	Bills payable	Credit	Liability
48	Depreciation	Debit	Loss
49	Bank over Draft	Credit	Liability
50	Outstanding salaries	Credit	Liability
51	Prepaid insurance	Debit	Asset
52	Patents and trade marks	Debit	Asset
53	Motor vehicle	Debit	Asset
54	Outstanding rent	Credit	Liability

FINAL ACCOUNTS

INTRODUCTION:

Final accounts are prepared at the end of the year to find out results of the business during the year of profit or loss and financial position of the position of the business at the yearend in terms of assets and liabilities.

To find out profit or loss trading and profit and loss accounts is prepared where as to find out assets and liabilities.

To find out profit or loss trading and profit and loss accounts is prepared where a to find out assets and liabilities balance sheet I prepared.

In preparing the final accounts the accounting principle of showing all the revenue expenditure and receipts in the trading or profit and loss account where as the capital expenditure and receipts in balance sheets are followed.

Before preparation of final accounts it is necessary to know that something about

Revenue and capital expenditure and receipts:

Revenue expenditure: any amount spent in earning revenue /profit is called as revenue expenditure and includes the expenses like salaries, rent ,wages, repairs, maintenance , stores, depreciation, materials etc…… All the items of revenue expenditure are to be debited to trading or profit or loss amount.

Capital expenditure: any amount spent in increasing the earning capacity of business like purchase, installation, improvement of fixed assets and repayment of loans. all the items of capital expenditure are to be shown as an asset or to be devoted from the liability in the balance sheet.

Revenue receipts: any amount received in this normal course of business is called revenue receipts and includes sale of goods, interest, discount, commission, rent received. All of the items of revenue receipt are to be credited to trading or profit and loss account.

Capital receipts: any amount received as investment by the owners, raised by the way of loans and ale proceeds of fixed assets is called as capital receipt. The entire item of capital receipts is as to be shown as liability or to be deducted from the assets in the balance sheet.

DEFERRED REVENUE AND EXPENDITURE

any amount of revenue expenditure nature spent in huge sum and its benefits will be spread over more than one year is called deferred revenue expenditure and includes the expenses like preliminary expenses, discount on issue of shares and debentures, heavy advertisement and shifting of business promises etc. All the items of differed revenue expenditure are to be shown as an asset in the balance sheet where as a part of expenditure should be debited to profit and loss account.

MEANING OF FINAL ACCOUNTS: any business is started with an objective of earning profit. As such the business concerns are interested to know.

- Results of business are profit earned or loss incurred during the year will be calculated by preparing trading and profit and loss account which I also called as income statement.
- Financial position of business is assets and liabilities at the yearend will be calculated by preparing balance sheet.
- The above two cases are called financial statements they show financial results in financial position of business.

ADVANTAGES OF FINAL ACCOUNTS:

- Reveals financial results of business either profit or loss.
- Reveals financial results of business either assets or liabilities.

- Liquidity and solvency of business can be understood.
- Helps in tax calculation.

LIMITATIONS OF FINAL ACCOUNTS:

The final accounts are suffering from

- Profit or loss true picture cannot be calculated.
- Assets and liabilities values also not accurate.
- Window dressing is possible in preparing final accounts.
- Personal opinion of accountants/owners will influence final accounts to some extent.

PARTS OF FINAL ACCOUNTS OR ELEMENTS:

- Trading account
- Profit and loss account
- Balance sheet

TRADING ACCOUNT:

It is the account prepared to find out trading profit or loss of the business is gross profit or loss during the period. This is the nominal account in its nature hence all the trading expenses should be debited where as all the trading incomes should be credited to trading account. The balance of trading account will be considered as gross profit (credit balance) or gross loss (debit balance) and will be transferred to profit and loss account.

We preparing the trading account the following equation also can be used

- **Gross profit/loss =sales less returns-cost of goods sold**
- **Sales=total (cash + credit) sales**
- **Cost of the goods sold = opening stock of goods +purchasers (cash + credit) less returns +direct expense +closing stock of goods.**

  Advantages of trading account:

  - It reveals trading profit or loss business.
  - Gross profit ratio is percentage of gross profit to net sales can be neglected.
  - Gross profit and related items like purchasers, sales, direct expenses , opening ,and closing stock , of the current year can be compared with that of previous period.

Trading account Proforma

Dredit side (Cr)		Credit side (Cr)	
Particulars	Amount	Particulars	Amount

PROFIT AND LOSS ACCOUNT

Meaning: It is the account prepared to find out net profit or loss of the business during the period. This is the nominal account in its nature hence all the other expenses should be debited where as all the other incomes and gains should be credited to profit account. The balance of profit account will be considered as net profit (credit balance) or net loss (debit balance) and will be transferred to capital account.

We preparing the profit account the following equation also can be used:

Gross profit +other incomes /gain –indirect expenses/loses =net profit or net loss.

IMPORTANCE OF PROFIT AND LOSS ACCOUNT:

- It reveals net profit or net loss business.
- Net profit ratio is percentage of net profit to net sales can be calculated.
- Net profit and related items like operating expenses, non operating expenses, operating and non operating incomes of the current year can be compared with that of previous period.
- It helps in the preparation of balance sheet.

PROFIT AND LOSS ACCOUNT PROFORMA

Dredit side (Cr)		Credit side (Cr)	
Particulars	Amount	Particulars	Amount

BALANCE SHEET

It is the statement prepared to find out financial position i.e. assets and liabilities of a concern of a given date. It is a statement (not an account) prepared by taking all the real accounts of personal account.

In preferring the balance sheet liabilities are shown on the left hand side where as the assets are shown on right side.

Importance of balance sheet:

- Financial position of the business can be known.
- Financial solvency of the business can be known.

BALANCE SHEET PROFORMA:

Liabilities	Amount Rs.	**Assets**	Amount Rs.
Total	****	Total	****

FINANCIAL ANLYIS THROUGH RATIO

Ratio analysis: - Ratio analysis is the process of determining and interpreting numerical relationship based on financial statements by computing ration it is easy to understand the financial position of the firm

What Is ratio: - Ratio is simply a number expressed in terms of another. It refers to the numerical or quantitative relationship b/w two variables which are comparable.

TYPES OF RATIOS

- Liquidity ratios
- Activity ratios
- Capital structure (or) leverage ratios
- Profitability ratios

I. LIQUIDITY RATIOS

Liquidity ratios express the ability of the firm to meet its short-term commitments as and when they become due.

Creditors are the interested to know whether the firm will be in a position to meet its commitments on time or not. If the firm is not in a position to meet its short-term commitments such as payments of taxes wages and salaries and so on then it cannot continue in business for long despite its strong capital base

Liquidity ratios can be classified in to two types

1. Current ratio 2. Quick ratio

Current ratio:- current ratio is the ratio b/w current asset and current liabilities the firm is said to be comfortable in its liquidity position if the current ratio is 2:1 it is almost considered as a yardstick to as short-term liquidity however, it may vary from one industry sector to the other

Current ratio = current asset/current liabilities

Quick ratio:- Quick ratio is also called acid test ratio it measure the firm's ability to convert its current assets quickly into cash in order to meet its current liabilities it is the ratio b/w liquid assets and liquid liabilities

Quick Ratio = Quick Assets / Current Liabilities

Quick assets = Current Assets- (stock +prepaid expenses)

II. ACTIVITY RATIOS:

1. Inventory turnover ratio
2. Debtor's turnover ratio
3. Creditors turnover ratio

1. Inventory turnover ratio:- it is also called stock turnover ratio it indicates the number of items the average stock is being sold during a given accounting period it establishes the relationship b/w the cost of goods sold during a given period and the average amount of inventory outstanding during that period. The higher the inventory turnover ratio the better is the performance of the firm in selling its stocks.

It helps in determining the liquidity of the firm by giving the rate at which inventory are converted into sales and then to cash it also helps the financial manager to design an appropriate inventory policy so as to avoid pilling of inventories.

Inventory turnover ratio= cost of goods sold/average inventory

Cost of the goods sold =sales –cross profit

Average stock=opening stock + closing stock/2

Inventory holding period = 365 days/ inventory turnover ratio

2. Debtors turnover ratio:- debtors turnover ratio reveals the number of times the average debtors are collected during a given accountant period in other words it shows how quickly the firm is in a position to collect it debts it is necessary to keep close monitoring of realization of debits because it directly affects the working capital position. In case the firm is not in a Position to collect its debits o meets the working capitals requirements it has to borrow paying interest

Debtors turnover ratio=credit sales/average debtors

Average debtors=(opening+closing) of debtors/2

Debt collection period = 365 days/ debtors turnover ratio

3. Creditors turnover ratio: - Creditors turnover reveals the numbers of times of the creditors are paid during a given accounting period in other words it shares how promptly the firm is in a position to pay its creditors its necessary to keep close.

III. CAPITAL STRUCTURE RATIOES

1. Debt-Equity Ratio
2. Interest coverage ratio
3. Ratio of proprietors funds to total Asset

1. Debt-equity ratio: - Debt equity ratio is the ratio between outsiders funds and insiders funds i.e, debt and equity. This is used to measure the firm's obligations to creditors in relation to the owners funds. It is a measure of solvency. The yardstick for this ratio is 1:1 in other words, for every rupee of debt; there should be one rupee worth internal fund.

Debt-Equity Ratio = Debt/Equity (or) **Outsider's funds/insiders funds or shareholders funds**

2**. Interest coverage ratio**: - Interest coverage ratio is calculated to judge the firm's capacity to pay the interest on debt it borrows. It give an idea of the extent the firm's earning may contract before it is unable to pay interest payments out of current earning. It is a very important ratio for the financial institutions to judge the ability of the borrower to service the loan from the current year's profits. The higher ratio, better it is in other words, a higher ratio implies that the company has no problems in paying interest.

Interest coverage ratio= net profit before interest and taxes/fixed interest charges.

3**. Ratio of proprietors funds to total assets**:-

This establishes the relationship between proprietor's funds and the total assets. Here the total assets include the tangible fixed assets plus current assets. As a guideline a ratio of around 0.5:1 or 50% is considered as the minimum desirable.

IV. PROFITABILITY RATIOS:-

1. Gross profit ratio, 2. Net profit ratio, 3. Operating ratio, 4. Earnings per share (EPS) Ratio

5. Dividend yield ratio

1. **Gross profit ratio**:- Gross profit ratio is the ratio between gross profit to sales during a given period. It is expressed in terms of percentage. Gross profit is the difference between the net sales and the cost of goods sold.

Gross profit ratio = (Gross profit/sales)*100

2. **Net profit ratio**:- Net profit ratio is the ratio between net profits after taxes and net sales. It indicates what portion of sales is left to the owners after operating expenses. Non operating income such as interest on investment, gain on sale of fixed assets and so on are added to the operating profit and non operating expenses such as laws on sale of fixed assets and so on are deducted from such profit. This is the net profit after adjusting non operating income and non operating expenses.

Net profit ratio= (Net profit after taxes/net sales)*100

3**. Operating ratio**:- Operating ratio is the ratio between costs of goods sold plus operating expenses and the net sales. This is expressed as a percentage to net sales. The higher the operating ratio, the lower is the profitability and vice versa.

Operating ratio= (operating expenses/net sales)*100

4. Earnings per share (EPS):- EPS is the relationship between net profit and the number of shares outstanding at the end of the given period. This can be compared with previous years to provide a basis for assessing the company's performance

EPS= (Net profit after taxes/Number of shares outstanding)

5. Dividend yield ratio: - Yield refers to the amount of total return the investor will receive for a given period of time for the amount of his investment. Dividend yield refers to the percentage return on the price paid for shares.

Dividend yield Ratio = (Nominal (or) face value of the share/cost or market price of the share)* (%dividend per annum)

Importance, Significance, and Merits of Ratio Analysis

The main points of importance are as follows:

1. Test of solvency. Ratios can illuminate the solvency of a firm. For example, when the ratio of current assets to current liabilities is increasing, this indicates sufficient working capital. Thus, creditors can be paid easily.

2. Helpful in decision-making. The main aim of financial statements is to inform users about the financial position of the company, as well as to serve as a decision-making aid for managerial personnel.

3. Helpful in financial forecasting and planning. Ratios are critical in financial planning and forecasting. For example, if a firm's current ratio is 5:1, this means that capital is blocked up. As the ideal ratio is 2:1, we have 5:1, meaning that $3 is unnecessarily blocked.

4. Useful in discovering profitability. Ratios are also useful when comparing the profitability of different companies. Present and past ratios can be compared, for example, to discover trends in the historical and future performance of companies.

5. Liquidity position. With the use of ratio analysis, meaningful conclusions can be obtained about the sound liquidity position of the firm. A firm's liquidity position is sound if it can pay its debts when these are due for payments.

6. Useful for operating efficiency. From a management perspective, ratios enable managers to measure the efficiency of assets. When sales and their contribution to net profit increase every year, this is a test of higher efficiency.

7. Business trends. Ratio analysis can expose trends that managers may use to take corrective actions.

8. Helpful in cost control. Ratios are useful to measure performance and facilitate cost control.

9. Helpful in analyzing corporate financial health. Ratio analysis can provide information about liquidity, solvency, profitability, and capital gearing. Thus, they are valuable for learning about financial health.

Limitations of Ratio Analysis

Although ratios are useful tools, they should be used with the utmost care. This is because they can suffer from drawbacks and limitations, including:

1. Need for technical knowledge. Ratios are quantitative and not qualitative indicators. Thus, to use them, one needs some knowledge of quantitative analysis.

2. Lack of reliable data. When figures are incorrect (e.g., value of closing stock is overstated), ratios will give misleading results.

3. Different basis. Different methods are available for the valuation of closing stock: LIFO and FIFO. In both, profit will differ. Similarly, profit has different meanings.

For example, some companies may take profit before tax and interest, while others may take profit after tax and interest. Similarly, different methods of depreciation will show different amounts of profit.

4. Different accounting policies. Different firms follow different policies with regard to depreciation (e.g., fixed installments or diminishing balance method, or stock valuation). Therefore, unless adjustments for profit are made, profit will not be comparable.

5. Effect of price level change. When ratios are calculated, no thought is given to inflationary measures that are responsible for changes in price. Thus, the utility of ratio analysis becomes questionable in these cases.

6. Bias. Ratios are only tools. They depend on the user for practical shape. For example, profit has different meanings, including EBIT (earnings before interest and taxes). Thus, personal opinion differs from business to business.

7. Lack of comparison. Different firms adopt different procedures, records, objectives, and policies. Due to this, comparisons become complex.

8. Evaluation. There are different tools for ratio analysis. The question of which tool to use in a particular situation depends upon the skill, training, knowledge, and expertise of the analyst.

EXAMPLES for Practice:

1. Examples in Writing Journal Entries.
2. Examples in Posting in Ledger.
3. Examples in Preparation of Trail Balance.
4. Examples in Ratios: like,

Current Ratio, Quick Ratio, Gross Profit Ratio, Net Profit Ratio, Debt-Equity Ratio.

1. Calculate: i) Current ratio ii) Quick ratio iii) Gross Profit Ratio and iv) Net Profit Ratio v) Deb-Equity Ratio. From the following information on 31.3.2021. **Gross Profit = 200000, Net profit = 84000 and Net Sales = 500000.**

Liabilities	Amount (Rs.)	Assets	Amount(Rs.)
Equity share capital	11,00,000	Goodwill	6,00,000
6%Preference Share Capital	7,00,000	Plant & Machinery	8,00,000
General Reserve	3,00,000	Land & Building	9,00,000
P&L A/c	5,00,000	Furniture	2,00,000
12%Debentures	7,00,000	Inventory	2,00,000
Creditors	3,80,000	Bills Receivables	1,00,000
Bank O.D	70,000	Debtors	8,00,000
Bills Payable	1,24,000	Bank Balance	3,00,000
Provision for Taxation	76,000	Marketable Securities	50,000
	39,50,000		**39,50,000**

2. A Firm sold goods worth Rs 5, 00,000 and its gross profit is 20 percent of sales value. The inventory at the beginning of the year was Rs 16,000 and at end of the year were 14,000.compute inventory turnover ratio and also the inventory holding period?

1. Prepare Journal Entries for the given financial transactions.
   - **January 1- 2021**-Ganesh commenced business with cash Rs.20, 000
   - **January 2- 2021**-purchased furniture for Rs.1000
   - **January 3- 2021** -Borrowed from Mr. Raju Rs.2000
   - **January 4- 2021** -Purchase of goods on credit from Mr.Murali for Rs.800
   - **January 5- 2021** -Sold goods to Mr.Rajesh on credit Rs.2500
   - **January 6- 2021** -Purchase of goods for cash Rs.900
   - **January 7- 2021** -Sold goods for cash Rs.5000

- **January 8- 2021** -Cash deposited into bank Rs.1000
- **January 9 -2021** -Rent paid Rs.400
- **January 11-2021** -Received commission Rs.200
- **January 12- 2021** -Received cash from Mr.Santhosh Rs.2100.

2. Prepare Journal Entries for the following transactions.
   - ✓ **August 1**-Krishna commenced business with cash Rs.50, 000
   - ✓ **August 2**-Deposited with bank 10, 000
   - ✓ **August 3**-Sold goods to Kiran is the customer Rs.20, 000
   - ✓ **August 4**- Goods Sold for cash 5, 000
   - ✓ **August 5**-Purchasers Rs.2, 000
   - ✓ **August 12**-Returned goods by Kiran Rs.1000
   - ✓ **August 15**-Paid telephone bill Rs.500
   - ✓ **August 16-**Bought furniture &paid by cheque Rs.12, 000
   - ✓ **August 18**-Paid for advertisements Rs.1500
   - ✓ **August 19-**Commission received Rs.450
   - ✓ **August 28**-Received cash from kiran Rs.4,000
3. From the following trial balance of Vikram foundry works, prepare trading account profit and loss account for the year ended December 31, 2001. Prepare a balance sheet on that date.

Trial Balance			
Debit balance (Dr)	**Rs**	**Credit Blance(Cr)**	**Rs**
Opening stock	5,000	Capital	20,000
purchasers	29,200	Sales	62,500
Sundry debtors	25,000	Sundry creditors	13,400
Bills receivable	2,800	Bills payable	5,000
Plant	10,000	Loan and Mortgage	18,000
Interest on Loan	300	Bank over Draft	2,400
Wages	15,000		
Buildings	24,000		
Loose Tools	600		
Cash on hand	600		
Stationery	500		
Salaries	8,200		
Discount	100		
	1,21,300		**1,21,300**

Adjustments:

1. Closing stock Rs .5, 600/- 2. Write off loose tools Rs.540/- 3. Interest on mortgage @15% per annum.
4. Provide interest on capital @5% per annum 5. Provide 5%reserve for doubtful debts.