# UNIT-1: INTRODUCTION TO BUSINESS AND ECONOMICS:

## INTRODUCTION:

All of us live in families and depending on the income; we have different standards of living. We require various types of goods and services to satisfy our needs and wants. Some members in your family have to work to earn and provide for the needs of the family. Thus, people engage in different activities which are known as economic activities. In ancient times, people had limited wants to satisfy. In modern times however, we need a large variety of goods and services to satisfy our needs and to raise our standard of living. On the one hand the supply of goods and services has led to various activities. On the other hand, activities of different types are undertaken by people to earn sufficiently to fulfill their increasing wants. Thus we find large numbers of people engaged in business, industry, and profession. Such
Economic and business activities satisfy various needs and demands for goods and services.

## BUSINESS DEFINITION:

An organization or Economic system where goods and services are exchanged for one another or for money. Every business requires some from of investment and enough customers to whom its output can be sold an a consistent basis in order to make profit.

Or

Business is an organization that provides good and services in order to earn profit.

Or

Business is an economic activity carried on with the intention of to earn profit. The main aim of business is to earn profit. Business includes **Industry and Commerce**.

## INDUSTRY:

Industry is the place where goods are manufactured and produced. Industry is the backbone for commerce and trade. Industry is divided into four groups. They are:

* Manufacturing
* Construction
* Mining
* Service

## COMMERCE:

The Exchange and The Distribution of goods and services is called Commerce. Commerce includes Trade and Aids to trade. Commerce is started with Human activities. Human activities are divided into two groups. They are:

1. Economic activities
2. Non-Economic activities

1. **Economic Activities:**

Economic activities are those activities in which money is involved. The Economic activities are divided into three groups. They are:

* Business
* Profession * Employment

**Business:**

Activities connected with the production or purchase and sale of goods or Services with the object of earning profit are called **business activities**. Mining, Manufacturing, trade, transportation, insurance, and banking are business activities. Thus business may be defined as an economic activity involving regular Production or purchase and distribution of goods and services with the object of earning profits.

**Profession:**

Any activity which requires special knowledge and skill to be applied by an Individual to earn a living is known as **profession.** For example doctors, teachers, lawyers, engineers and accountants are engaged in profession. Profession involves intellectual activity. It is not a mechanical or routine operation.

**Employment:**

When a person works regularly for others and gets wages/salary in return, he is said to be in **employment.** Thus factory workers, office assistants and managers are said to be in employment. Those in employment are called **employees**. Employment may be in government department or in private organization. It may be full-time or part-time, permanent or temporary.

**2. Non-Economic Activities:-**

Non-Economic activities are those activates in which money is not involved.

Ex: Love, affection, free service

**OBJECTIVES OF BUSINESS:**

Success in business depends on proper formulation of its objectives. Objectives Must be clear, and attainable. Objectives may be divided into two parts -

(i) Economic objective and

(ii) Social objective

**i. Economic Objectives:**

Economic objectives of business include earning adequate profit or satisfactory Return on capital invested, survival in the case of competition and growth to Maintain progress.

**ii. Social Objectives:**

Social objectives include providing employment opportunities, supply of quality Goods and services at reasonable price, improving the standard of living and contributing to environmental protection. It also includes justice to workers in terms of wages, welfare amenities, improved service conditions and Professional growth.

**NATURE OF BUSINESS:**

The nature of business is best understood on the basis of its characteristics Or features which are as follows:

- Business is an economic activity
- It includes the activities of production or purchase and distribution.
- It deals in goods and services.
- It implies regularity of transactions.
- It aims at earning profits through the satisfaction of human wants.
- It involves risk; it is not certain that adequate profit will be earned.
- It creates utilities.
- It serves a social purpose by improving people's standard of living.

**SIGNIFICANCE OF BUSINESS:**

Business is an integral part of modern society. It is an organized and systematized activity for profit. It is concerned with activities of people working towards a common goal. The modern society cannot exist without business. The need and importance of business in society can be described as follows:

**1. Improvement in standard of living:**

Business helps people in general to improve their standard of living.

**2. Proper utilization of resources:**

It leads to effective utilization of the scarce resources of society. It provides facility of mass production.

**3. Better quality and large variety of goods and services:**

It involves production, purchase and sale of goods and services for price. Customer' satisfaction is the backbone of modern business. Services such as supply of water, electricity etc. may be considered highly significant for the community.

**4. Creates utilities:**

Business makes goods more useful to satisfy human wants. It adds to products the utilities of person, time, place, form, knowledge etc. Thus, people are able to satisfy their wants effectively and economically.

**5. Employment opportunities:**

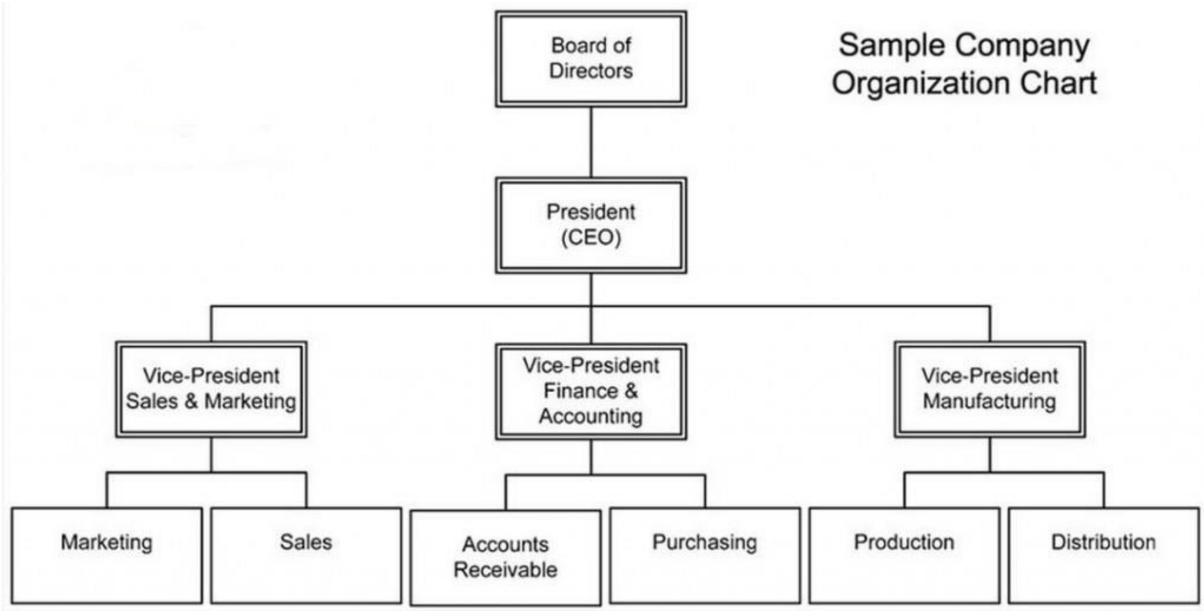
It provides employment opportunities to large number of people in society.

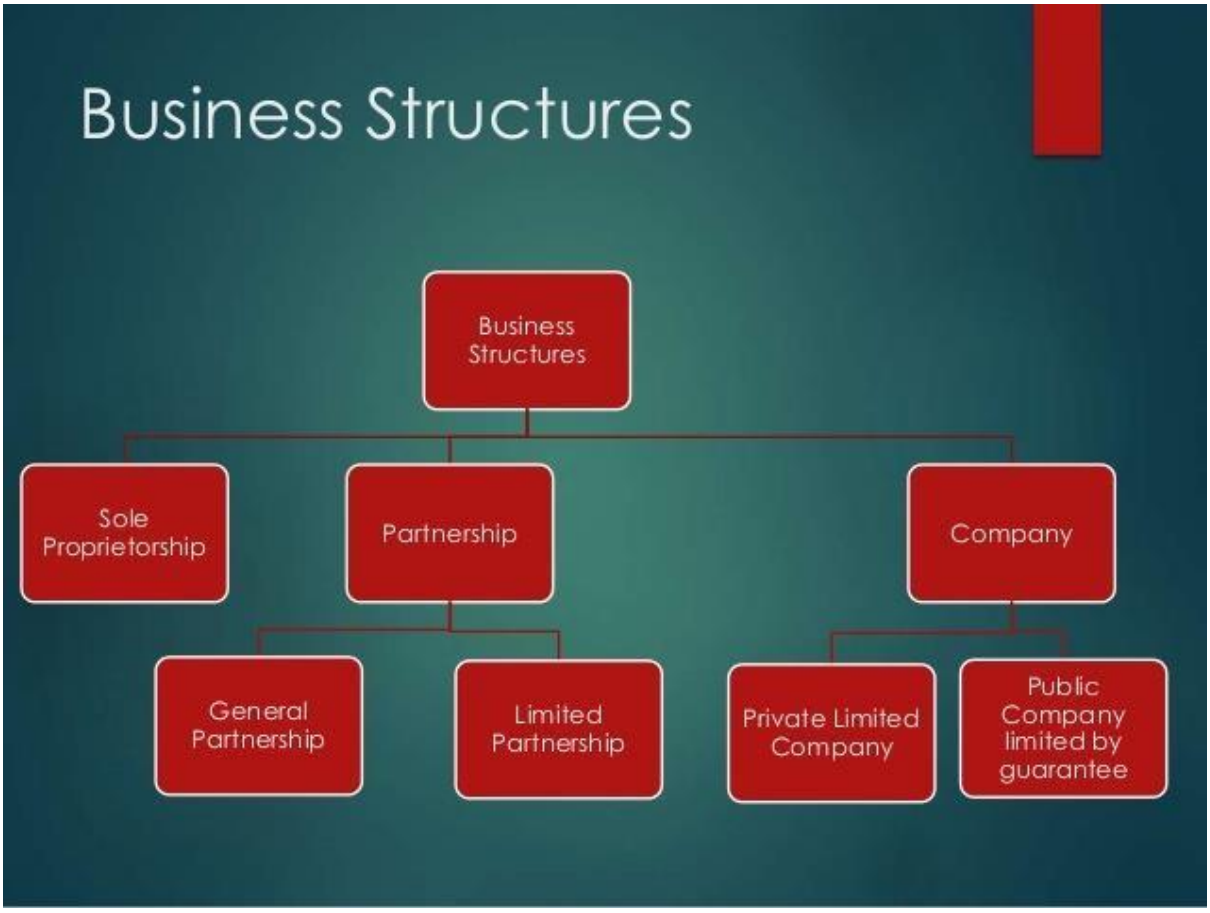
**6. Workers' welfare**

Business organizations these days take care of various welfare Activities for workers. They provide safer and healthier work environment for employees.

**STRUCTURE OF BUSINESS FIRM:**

Organizational structure is a system that consists of explicit and implicit institutional rules and policies designed to outline how various work roles and responsibilities are delegated, controlled and coordinated. Organizational structure also determines how information flows from level to level within the company. For example, in a centralized structure, decisions flow from the top down, while in a decentralized structure, the decisions are made at various different levels.




**Organization structure:**


Levels of Management

**TYPES OF BUSINESS ENTITIES:**

- Sole trader business
- Partnership business  Joint stock company
- Cooperative business
- Public enterprises

1. **Sole Trader Business:**

The sole trader is the simplest, oldest and natural form of business organization. It is also called sole proprietorship. ‘Sole’ means one. ‘Sole trader’ implies that there is only one trader who is the owner of the business. It is a one-man form of organization wherein the trader assumes all the risk of ownership carrying out the business with his own capital, skill and intelligence. He is the boss for himself. He has total operational freedom. He is the owner, Manager and controller. He has total freedom and flexibility. Full control lies with him. He can take his own decisions. He can choose or drop a particular product or business based on its Merits He need not discuss this with anybody. He is responsible for himself. This form of organization is popular all over the world. Restaurants, Supermarkets, pan shops, medical shops, hosiery shops etc.

**Features:**

- It is easy to start a business under this form and also easy to close.  He introduces his own capital. Sometimes, he may borrow, if necessary  He enjoys all the profits and in case of loss, he lone suffers.
- He has a high degree of flexibility to shift from one business to the other.
- Business secretes can be guarded well

- There is no continuity. The business comes to a close with the death, illness or insanity of the sole trader He has total operational freedom. He is the owner, manager and controller.
- He can be directly in touch with the customers.
- He can take decisions very fast and implement them promptly.

**Advantages of sole trader:**

The following are the advantages of the sole trader from of business organization:

1. **<u>Easy to start and easy to close</u>**: Formation of a sole trader form of organization is relatively easy even closing the business is easy.
2. **<u>Personal contact with customers directly:</u>** Based on the tastes and preferences of the customers the stocks can be maintained.
3. **<u>Prompt decision-making:</u>** 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. **<u>High degree of flexibility:</u>** Based on the profitability, the trader can decide to continue or change the business, if need be.
5. **<u>Secrecy:</u>** Business secrets can well be maintained because there is only one trader.
6. **<u>Low rate of taxation:</u>** The rate of income tax for sole traders is relatively very low.
7. **<u>Direct motivation:</u>** If there are profits, all the profits belong to the trader himself. In other words. If he works more hard, he will get more profits. This is the direct motivating factor. At the same time, if he does not take active interest, he may stand to lose badly also.
8. **<u>Total Control:</u>** 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. **<u>Minimum interference from government:</u>** 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. **<u>Transferability:</u>** The legal heirs of the sole trader may take the possession of the business.

**Disadvantages of sole trader:**

The following are the disadvantages of sole trader form:

1. **<u>Unlimited liability:</u>** 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 scale of operations.
3. **No division of labour:** All the work related to different functions 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 show as much interest as the trader takes.
4. **Uncertainty:** There is no continuity in the duration of the business. On the death, insanity of insolvency the business may be come to an end.
5. **Inadequate for growth and expansion:** This from is suitable for only small size, oneman-show type of organizations. This may not really work out for growing and expanding organizations.
6. **Lack of specialization:** The services of 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 businessmen and a few who are good in taking care of customer requirements along can service.
8. **Low bargaining power:** The sole trader is the 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

**2. Partnership Business:**

Partnership is an improved from of sole trader in certain respects. Where there are likeminded persons with resources, they can come together to do the business and share the profits/losses of the business in an agreed ratio. Persons who have entered into such an agreement are individually called **'partners'** and collectively called **'firm'**. The relationship among partners is called a partnership.

Indian Partnership Act, 1932 defines partnership as the 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 of partnership**

1. **Relationship:** Partnership is a relationship among persons. It is 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 profits/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 other partners and principal for himself. All the partners are agents and the 'partnership' is their principal.

**The following are the other features:**

(a) **Unlimited liability:** The liability of the partners is unlimited. The partnership and partners, in the eye of law, and not different but one and the same. Hence, the partners have to bring their personal assets to clear the losses of the firm, if any.

(b) **Number of partners:** According to the Indian Partnership Act, the minimum number of partners should be two and the maximum number if restricted, as given below:

- 10 partners is case of banking business
- 20 in case of non-banking business

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

(d) **Personal contact with customers:** The partners can continuously be in touch with the customers to monitor their requirements.

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

**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 contents of the partnership deed.

1. Names and addresses of the firm and partners
2. Nature of the business proposed
3. Duration
4. Amount of capital of the partnership and the ratio for contribution by each of the partners.
5. Their profit sharing ration (this is used for sharing losses also)
6. Rate of interest charged on capital contributed, loans taken from the partnership and the amounts drawn, if any, by the partners from their respective capital balances.
7. The amount of salary or commission payable to any partner
8. Procedure to value good will of the firm at the time of admission of a new partner, retirement of death of a partner
9. Allocation of responsibilities of the partners in the firm
10. Procedure for dissolution of the firm
11. Name of the arbitrator to whom the disputes, if any, can be referred to for settlement.
12. Special rights, obligations and liabilities of partners(s), if any.

**KIND OF PARTNERS:**

The following are the different 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 but does not take part** in the affairs of the partnership.
3. **Nominal Partner:** Nominal partner is partner just for namesake. He neither **contributes to capital nor takes part in the affairs of business**. Normally, the nominal partners are those who have good business connections, and are well places 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 is neither contributes to capital, nor takes any role in the affairs of the partnership.
5. **Partner by holding out:** If partners declare a particular person (having social status) as partner and this **person does not contradict** even after he comes to know such declaration, he is called a partner by holding out and he is liable for the claims of third parties. However, the third parties should prove they entered into contract with the firm in the belief that he is the partner of the firm. Such a person is called partner by holding out.
6. **Minor Partner:** Minor has a special status in the partnership. A minor can be admitted for the benefits of the firm. A minor is entitled **to his share 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.

**Advantages of partnership**

The following are the advantages of the partnership from:

1. **Easy to form:** Once there is a group of like-minded persons and good business proposal, it is easy to start and register a partnership.
2. **Availability of larger amount of capital:** More amount of capital can be raised from more number of partners.
3. **Division of labour:** The different partners come with varied backgrounds and skills. This facilities division of labour.
4. **Flexibility:** The partners are free to change their decisions, add or drop a particular product or start a new business or close the present one and so on.
5. **Personal contact with customers**: There is scope to keep close monitoring with customers requirements by keeping one of the partners in charge of sales and marketing.

   Necessary changes can be initiated based on the merits of the proposals from the customers.
6. **Quick decisions and prompt action:** If there is consensus among partners, it is enough to implement any decision and initiate prompt action. Sometimes, it may more time for the partners on strategic issues to reach consensus.

7. **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 profits for the partnership firm by making good use of all his contacts.

**Disadvantages of partnership:**

The following are the disadvantages of partnership:

1. **Formation of partnership is difficult:** Only like-minded persons can start a partnership. It is sarcastically said,' it is easy to find a life partner, but not a business partner'.
2. **Liability:** The partners have joint and several liabilities beside unlimited liability. Joint and several liability puts additional burden on the partners, which means that even the personal properties of the partner or partners can be attached. Even when all but one partner become insolvent, the solvent partner has to bear the entire burden of business loss.
3. **Lack of harmony or cohesiveness:** It is likely that partners may not, most often work as a group with cohesiveness. This result in mutual conflicts, an attitude of suspicion and crisis of confidence. Lack of harmony results in delay in decisions and paralyses the entire operations
4. **Limited growth:** The resources when compared to sole trader, a partnership may raise little more. But when compare to the other forms such as a company, resources raised in this form of organization are limited. Added to this, there is a restriction on the maximum number of partners.

5. **Instability:** The partnership form is known for its instability. The firm may be dissolved on death, insolvency or insanity of any of the partners.
6. **Lack of Public confidence:** Public and even the financial institutions look at the unregistered firm with a suspicious eye. Though registration of the firm under the Indian Partnership Act is a solution of such problem, this cannot revive public confidence into this form of organization overnight. The partnership can create confidence in other only with their performance.

**JOINT STOCK COMPANY:**

The joint stock company emerges from the limitations of partnership such as joint and several liability, unlimited liability, limited resources and uncertain duration and so on. Normally, to take part in a business, it may need large money and we cannot foretell the fate of business. It is not literally possible to get into business with little money. Against this background, it is interesting to study the functioning of a joint stock company.

The main principle of the joint stock company from is to provide opportunity to take part in business with a low investment as possible say Rs.1000. Joint Stock Company has been a boon for investors with moderate funds to invest.

The word ‘ company’ has a Latin origin, **com means ‘ come together’, pany means ‘ bread’**, joint stock company means, people come together to earn their livelihood by investing in the stock of company jointly.

**Company Defined**:

Lord Justice Lindley explained the concept of the joint stock company from of organization as ‘**an association of many persons who contribute money or money’s worth to a common stock and employ it for a common purpose.**

**Features of Joint Stock Company**

1. **Artificial person:** The Company has no form or shape. It is an artificial person created by law. It is intangible, invisible and existing only, in the eyes of law.
2. **Separate legal existence**: it has an independence existence, it separate from its members. It can acquire the assets. It can borrow for the company. It can sue other if they are in default in payment of dues, breach of contract with it, if any. Similarly, outsiders for any claim can sue it. A shareholder is not liable for the acts of the company. Similarly, the shareholders cannot bind the company by their acts.
3. **Voluntary association of persons**: The Company is an association of voluntary association of persons who want to carry on business for profit. To carry on business, they need capital. So they invest in the share capital of the company.
4. **Limited Liability**: The shareholders have limited liability i.e., liability limited 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.
5. **Capital is divided into shares**: The total capital is divided into a certain number of units. Each unit is called 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 promoters of good standing (i.e., known for their reputation in terms of reliability character and dynamism) are likely to attract huge resources.
6. **Transferability of shares**: In the company form of organization, the shares can be transferred from one person to the other. A shareholder of a public company can cell sell his holding of shares at his will. However, the shares of a private company cannot be transferred. A private company restricts the transferability of the shares.
7. **Common Seal**: As the company is an artificial person created by law has no physical form, it cannot sign its name on a paper; so, it has a common seal on which its name is engraved. The common seal should affix every document or contract; otherwise the company is not bound by such a document or contract.
8. **Perpetual succession**: ‘Members may comes and members may go, but the company continues for ever and ever’ A. company has uninterrupted existence because of the right given to the shareholders to transfer the shares.
9. **Ownership and Management separated**: The shareholders are 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 among 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 owners.

10. **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 creditors of financial institutions, or shareholders against the company that their interests are not safeguarded. The company is not affected by the death or insolvency of any of its members.
11. **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 with limited liability and they should be careful about the liability aspect of their transactions with the company.

**FORMATION OF JOINT STOCK COMPANY**

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

(a) To obtain Certificates of Incorporation
(b) To obtain certificate of commencement of Business

**Certificate of Incorporation**: 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**: A private company need not 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 a registrar of joint stock companies to obtain certificate of incorporation:

(a) **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. If furnishes all its details in six clause such as (ii) Name clause (II) situation clause (iii) objects clause (iv) Capital clause and (vi) subscription clause duly executed by its subscribers.
(b) **Articles of association**: Articles of Association furnishes the byelaws or internal rules government the internal conduct of the company.
(c) The list of names and address of the proposed directors and their willingness, in writing to act as such, in case of registration of a public company.

(d) 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 practice, the proposed director, legal solicitor, chartered accountant in whole time practice or advocate of High court.

The registrar of joint stock companies peruses 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 operation immediately after obtaining certificate of incorporation.

**Advantages of 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. The facilities 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 shareholder 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 saving among the common man and mobilizes the same towards investments in the company.
7. **Democracy in management**: the shareholders elect the directors in a democratic way in the general body meetings. The shareholders are free to make any proposals, question the practice of the management, suggest the possible remedial measures, as they perceive, the directors respond to the issue raised by the shareholders and have to justify their actions.
8. **Economics of large scale production**: Since the production is in the scale with large funds at
9. **Continued existence**: The Company has perpetual succession. It has no natural end. It continues forever and ever unless law put 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 larger funds at its disposal, the Board of Directors recruits competent and professional managers to handle the affairs of the company in a professional manner.
12. **Growth and Expansion**: With large resources and professional management, the company can earn good returns on its operations, build good amount of reserves and further consider the proposals for growth and expansion.

All that shines is not gold. The company from of organization is not without any disadvantages. The following are the disadvantages of joint stock companies.

**Disadvantages of Joint Stock Company**

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 interference**: 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 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’.
4. **Lack or 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 lose the revenue.
6. **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.

**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 of over Rs.10, 000 crore is in heavy and basic industry, and infrastructure like power, transport and communications. The concept of public enterprise in Indian dates back to the era of preindependence.

Genesis (aim) of Public Enterprises In consequence to declaration of its goal as socialistic pattern of society in 1954, the Government of India realized that it is through progressive extension of public enterprises only, the following aims of our five years plans can be fulfilled.

 Higher production

- Greater employment
- Economic equality, and

- Dispersal of economic power

The government found it necessary to revise its industrial policy in 1956 to give it a socialistic bent.

Need for Public Enterprises
The Industrial Policy Resolution 1956 states the need for promoting public enterprises as follows:

- To accelerate **the rate of economic growth** by planned development
- **To speed up industrialization, particularly development** of heavy industries and to expand public sector and to build up a large and growing cooperative sector.
- **To increase infrastructure facilities**
- To disperse the industries over different geographical areas for balanced regional development
- **To increase the opportunities** of gainful employment

- To help in **raising the standards of living**

**Achievements of public Enterprises**

The achievements of public enterprise are vast and varied. They are:

1. Setting up a number of **public enterprises in basic and key industries**
2. Generating considerably large **employment opportunities in skilled, unskilled, supervisory and managerial cadres.**
3. Creating internal resources and contributing towards national exchequer for funds for development and welfare.
4. Bringing about **development activities in backward regions, through locations** in different areas of the country.
5. Creating viable infrastructure and bringing about rapid industrialization (ancillary industries developed around the public sector as its nucleus).
6. **Restricting the growth of private** monopolies
7. **Taking over sick industrial units and putting them**, in most of the vases, in order,
8. **Creating financial systems, through a powerful networking** of financial institutions, development and promotional institutions, which has resulted in social control and social orientation of investment, credit and capital management systems.
9. Benefiting the rural areas, priority sectors, and small business in the fields of industry, finance, credit, services, trade, transport, and consultancy and so on.

**FORMS OF PUBLIC ENTERPRISES**

Public enterprises can be classified into three forms:

(a) Departmental undertaking
(b) Public corporation
(c) Government company

**(A)Departmental Undertaking**

This is the earliest from of public enterprise. Under this form, the affairs of the public enterprise are carried out under the **overall control of one of the departments** of the government. The government department appoints a managing director (normally a civil servant) 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.

Examples for departmental undertakings are Railways, Department of Posts, All India Radio, and Doordarshan, Defence undertakings like DRDL, DLRL, ordinance factories, and such.

**Features of Departmental Undertaking**

1. **Under the control of a government department**: The departmental undertaking is not an independent organization. It has no separate existence. It is designed to work under close control of a government department. It is subject to direct ministerial control.
2. **More financial freedom:** The departmental undertaking can draw funds from government account as per the needs and deposit back when convenient.
3. **Like any other government department**: The departmental undertaking is almost similar to any other government department
4. **Budget, accounting and audit controls**: The departmental undertaking has to follow guidelines (as applicable to the other government departments) underlying the budget preparation, maintenance of accounts, and getting the accounts audited internally and by external auditors.
5. **More a government organization, less a business organization.** The set up of a departmental undertaking is more rigid, less flexible, and slow in responding to market needs.

**Advantages of Departmental Undertaking :**

1. **Effective control**: Control is likely to be effective because it is directly under the Ministry.
2. **Responsible Executives**: Normally the administration is entrusted to a senior civil servant. The administration will be organized and effective.

3. **Less scope for mystification of funds**: Departmental undertaking does not draw any money more than is needed, that too subject to ministerial sanction and other controls. So chances for mis-utilisation are low.
4. **Adds to Government revenue**: The revenue of the government is on the rise when the revenue of the departmental undertaking is deposited in the government account.

**Disadvantages**

1. **Decisions delayed**: Control is centralized. This results in lower degree of flexibility. Officials in the lower levels cannot take initiative. Decisions cannot be fast and actions cannot be prompt.
2. **No incentive to maximize earnings**: The departmental undertaking does not retain any surplus with it. So there is no inventive for maximizing the efficiency or earnings.
3. **Slow response to market conditions**: Since there is no competition, there is no profit motive; there is no incentive to move swiftly to market needs.
4. **Redtapism and bureaucracy**: The departmental undertakings are in the control of a civil servant and under the immediate supervision of a government department. Administration gets delayed substantially.
5. **Incidence of more taxes**: At times, in case of losses, these are made up by the government funds only. To make up these, there may be a need for fresh taxes, which is undesirable.

**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 of over Rs.10, 000 crore is in heavy and basic industry, and infrastructure like power, transport and communications. The concept of public enterprise in Indian dates back to the era of pre-independence.

## Genesis (aim) of Public Enterprises:

In consequence to declaration of its goal as socialistic pattern of society in 1954, the Government of India realized that it is through progressive extension of public enterprises only, the following aims of our five years plans can be fulfilled.

- Higher production
- Greater employment
- Economic equality, and
- Dispersal of economic power

The government found it necessary to revise its industrial policy in 1956 to give it a socialistic bent.

**Need for Public Enterprises**

The Industrial Policy Resolution 1956 states the need for promoting public enterprises as follows:

- To accelerate **the rate of economic growth** by planned development
- **To speed up industrialization, particularly development** of heavy industries and to expand public sector and to build up a large and growing cooperative sector.
- **To increase infrastructure facilities**
- To disperse the industries over different geographical areas for balanced regional development
- **To increase the opportunities** of gainful employment
- To help in **raising the standards of living**

**Features :**

1. **A body corporate**: It has a separate legal existence. It is a separate company by itself. If can raise resources, buy and sell properties, by name sue and be sued.
2. **More freedom and day-to-day affairs**: It is relatively free from any type of political interference. It enjoys administrative autonomy.
3. **Freedom regarding personnel**: The employees of public corporation are not government civil servants. The corporation has absolute freedom to formulate its own personnel policies and procedures, and these are applicable to all the employees including directors.
4. **Perpetual succession**: A statute in parliament or state legislature creates it. It continues forever and till a statue is passed to wind it up.
5. **Financial autonomy**: Through the public corporation is fully owned government organization and the initial finance are provided by the Government, it enjoys total financial autonomy, its income and expenditure are not shown in the annual budget of the government, and it enjoys total financial autonomy. Its income and expenditure are not shown in the annual budget of the government. However, for its freedom it is restricted regarding capital expenditure beyond the laid down limits, and raising the capital through capital market.

6. **Commercial audit**: Except in the case of banks and other financial institutions where chartered accountants are auditors, in all corporations, the audit is entrusted to the comptroller and auditor general of India.
7. **Run on commercial principles**: As far as the discharge of functions, the corporation shall act as far as possible on sound business principles.

**Advantages:**

1. **Independence, initiative and flexibility**: The Corporation has an autonomous set up. So it is independent, take necessary initiative to realize its goals, and it can be flexible in its decisions as required.
2. **Scope for Redtapism and bureaucracy minimized**: The Corporation has its own policies and procedures. If necessary they can be simplified to eliminate redtapism and bureaucracy, if any.
3. **Public interest protected**: The Corporation can protect the public interest by making its policies more public friendly; Public interests are protected because every policy of the corporation is subject to ministerial directives and board parliamentary control.

4. **Employee friendly work environment**: Corporation can design its own work culture and train its employees accordingly. It can provide better amenities and better terms of service to the employees and thereby secure greater productivity.
5. **Competitive prices**: the corporation is a government organization and hence can afford with minimum margins of profit, it can offer its products and services at competitive prices.
6. **Economics of scale**: By increasing the size of its operations, it can achieve economics of large-scale production.
7. **Public accountability**: It is accountable to the Parliament or legislature; it has to submit its annual report on its working results.

**Disadvantages**

1. **Continued political interference**: the autonomy is on paper only and in reality, the continued.
2. **Misuse of Power**: In some cases, the greater autonomy leads to misuse of power. It takes time to unearth the impact of such misuse on the resources of the corporation. Cases of misuse of power defeat the very purpose of the public corporation.
3. **Burden for the government**: Where the public corporation ignores the commercial principles and suffers losses, it is burdensome for the government to provide subsidies to make up the losses

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**(c)GOVERNMENT COMPANY*:***

Section 617 of the Indian Companies Act defines a government company as "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 Governments or partly by Central Government and partly by one or more of the state Governments and includes and company which is subsidiary of government company as thus defined".

A government company is the right combination of operating flexibility of privately organized companies with the advantages of state regulation and control in public interest.

Government companies differ in the degree of control and their motive also.

Some government companies are promoted as

- A company to take over the existing sick companies under private management (E.g. Hindustan Shipyard)
- A company established as a totally state enterprise to safeguard national interests such as Hindustan Aeronautics Ltd. And so on.
- Mixed ownership company in collaboration with a private consult to obtain technical know how and guidance for the management of its enterprises, e.g. Hindustan Cables)

**Features:**

The following are the features of a government company:

1. **Like any other registered company**: It is incorporated as a registered company under the Indian companies Act. 1956. Like any other company, the government company has separate legal existence. Common seal, perpetual succession, limited liability, and so on...
2. **Shareholding**: The majority of the share are held by the Government, Central or State, partly by the Central and State Government(s), in the name of the President of India, It is also common that the collaborators and allotted some shares for providing the transfer of technology.
3. **Directors are nominated**: As the government is the owner of the entire or majority of the share capital of the company, it has freedom to nominate the directors to the Board. Government may consider the requirements of the company in terms of necessary specialization and appoints the directors accordingly.
4. **Administrative autonomy and financial freedom**: A government company functions independently with full discretion and in the normal administration of affairs of the undertaking.
5. **Subject to ministerial control**: Concerned minister may act as the immediate boss. It is because it is the government that nominates the directors, the minister issue directions for a company and he can call for information related to the progress and affairs of the company any time.

**Advantages**

1. **Formation is easy**: There is no need for an Act in legislature or parliament to promote a government company. A Government company can be promoted as per the provisions of the companies Act. Which is relatively easier?
2. **Separate legal entity**: It retains the advantages of public corporation such as autonomy, legal entity.
3. **Ability to compete:** It is free from the rigid rules and regulations. It can smoothly function with all the necessary initiative and drive necessary to complete with any other private organization. It retains its independence in respect of large financial resources, recruitment of personnel, management of its affairs, and so on.
4. **Flexibility**: A Government company is more flexible than a departmental undertaking or public corporation. Necessary changes can be initiated, which the framework of the company law. Government can, if necessary, change the provisions of the Companies Act. If found restricting the freedom of the government company. The form of Government Company is so flexible that it can be used for taking over sick units promoting strategic industries in the context of national security and interest.

5. **Quick decision and prompt actions**: In view of the autonomy, the government company take decision quickly and ensure that the actions and initiated promptly.
6. **Private participation facilitated**: Government company is the only from providing scope for private participation in the ownership. The facilities to take the best, necessary to conduct the affairs of business, from the private sector and also from the public sector.

**Disadvantages**

1. **Continued political and government interference**: Government seldom leaves the government company to function on its own. Government is the major shareholder and it dictates its decisions to the Board. The Board of Directors gets these approved in the general body. There were a number of cases where the operational polices were influenced by the whims and fancies of the civil servants and the ministers.
2. **Higher degree of government control**: The degree of government control is so high that the government company is reduced to mere adjuncts to the ministry and is, in majority of the cases, not treated better than the subordinate organization or offices of the government.
3. **Evades constitutional responsibility**: A government company is creating by executive action of the government without the specific approval of the parliament or Legislature.
4. **Poor sense of attachment or commitment**: The members of the Board of Management of government companies and from the ministerial departments in their ex-officio capacity. The lack the sense of attachment and do not reflect any degree of commitment to lead the company in a competitive environment.
5. **Divided loyalties**: The employees are mostly drawn from the regular government departments for a defined period. After this period, they go back to their government departments and hence their divided loyalty dilutes their interest towards their job in the government company.

**Comparison of Private and Public Sector**

| | **Private sector** | **Public sector** |
|---|---|---|
| 1. | Profit is the main motive. It benefits only owners. | Service to the country is the main motive. It benefits all. |
| 2. | It is owned and managed by an individual or a group of individuals. | It is owned and managed by the government |
| | | |

| | | |
|---|---|---|
| 3. | It has to face tough competition in the market. | Generally it is a monopoly concern hence less competition. |
| 4. | Large amount of capital may not be available. | Large amount of capital can be available |
| 5. | It leads to economic inequality and concentration of wealth in the hands of a few | It leads to economic equality. The profits earned are utilized for public welfare. |
| 6. | Large scale business is generally not possible because of limited resources. | Large scale is always possible as the government has huge resources. |
| 7. | Private sector dominates in the production of consumer goods. | The public sector dominates in the production of producer goods. |

**Comparison of Partnership Business and Joint Stock Company**

| | **Partnership Business** | **Joint Stock Company** |
|---|---|---|
| 1. | **Registration:** Not a matter of compulsion but a matter of voluntary decision. | Registration is a matter of compulsion for every company, as per the companies' Act, 1956, provisions. |
| 2. | **Basic document:** A partnership deed or agreement is the base which helps partners to conduct business. | Memorandum articles of association prospectus are the documents which create some base for working of a company. |
| 3. | **Continuous survival:** In case of firm with only two partners, natural death, retirement of any one partner may dissolve the business. | This being artificial personality liquidation or dissolution is not an easy process. They enjoy longer life than any other form of business. |

| | | |
|---|---|---|
| 4. | **Capital resources:**<br><br>Partnership forms are not allowed to issue shares or debentures to the public. They have to rely on the partner's ability to invest and borrow from banks. | Public as well as private companies are allowed to tackle many sources of finance i.e.<br><br>Shares, debentures, public deposits, etc so, they enjoy sound financial position. |
| 5. | **No. of presentation:**<br><br>Minimum 2 persons and maximum 20 persons can be admitted an s partners. | Minimum 2 and maximum 50 persons for private company, No limit of maximum members in public companies. |
| 6. | **Competition capacity:**<br><br>In case of partnership organization, capacity is more than sole trader but less than joint stock company. | More capital and use of expert persons increase the capacity to compete with any other forms of business organization. |
| 7. | **Legal restriction:**<br><br>These are very limited for partnership firms. No required to give any publicity to its accounts. | More legal and other restrictions. Publishing annual reports, according statements is a matter of compulsion. |
| **8.** | **Scope for expansion:**<br><br>In case of firms they have to rely on local markets. Scope of expansion is very limited. Cannot take expert's advice. | More capacity to face competition. Joint stock companies can easily. Undertake expansion activities. They can even export goods to other countries. |

**Comparison of Individual Proprietorship and Partnership**

| | Proprietorship | Partnership |
|---|---|---|
| 1. | Single owner of the firm. | Minimum two or maximum twenty partners. |
| 2. | Easy to form the organization. | Some legal documents are to be prepared. |
| 3. | Success depends on skills of single owner. | Success depends on co-operation, understanding and skills of different partners. |
| 4. | Proprietor enjoys more freedom and profit. | Partner has less freedom and share of profit. |

| | | |
|---|---|---|
| 5. | Single proprietor can raise limited capital. | Partners together can collect large capital as compared to proprietor. |
| 6. | Business risk is totally with single proprietor. | Risk of business is equally divided among partners. |
| 7. | Individual proprietor can take decisions fast. | Partnership decisions are critical and take time. |
| 8. | Individual proprietor business is less efficient with less expertise. | Partnership business is more efficient and more expertise can be available from partners. |
| 9. | After the death of proprietor the business may discontinue. | Partners may carry out the business. |
| 10. | The business secret can be maintained or kept confidential. | Business secrecy cannot be maintained. |

**Comparison of Joint Stock Company and Public Enterprises**

| | **Joint Stock Company** | **Public Enterprises** |
|---|---|---|
| 1. | Main motive is profit making. | Service to the country is main motive. |
| 2. | Management of company is looked after by the board of directions. | It is owned and managed the by government. |
| 3. | It has to face competition in market. | Generally it is a monopoly concern. |
| 4. | Easy to form a company | Legal formalities are to be completed. |

**Comparison of Co-operative and Joint Stock Company**

| | Co-operative Enterprise | Joint Stock Company |
|---|---|---|
| 1. | Minimum ten and maximum no limit for members. | There is no maximum limit on membership |
| 2. | Suitable for medium or small business. | Suitable for medium or large business. |

| | | |
|---|---|---|
| 3. | Liability of members is limited. | Liability is limited to the contribution made by the share holders. |
| 4. | Management by managing committee. | Management of the company is looked after by the board of directions. |

**Comparison of MOA and AOA**

| | **Memorandum of association (MOA)** | **Articles of Association (AOA)** |
|---|---|---|
| 1. | MOA defines the object and scope of the business. | AOA defines the rules, regulation and bye laws of the business. |
| 2. | MOA is a mandatory document. | AOA is an optional document. |
| 3. | Any modification in MOA requires consent of government or court. | Modification in AOA requires resolution of share holders. |
| 4. | MOA is regulated by companies act. | AOA is regulated by shareholders. |

**SOURCES OF FINANCE FOR A COMPANY:**

**METHODS AND SOURCES OF FINANCE:**

Method of Finance is the type of finance used-such as a loan or a mortgage. The source of finance would be where the money was obtained from-a loan may be obtained from a bank while the mortgage may be obtained from a credit society. From a financial statement, we can read in what form the capital is tied up (fixed assets or current assets) and how these are financed (from own capital or borrowed funds).

It is necessary to notice the difference between methods and sources of finance to identify which type of asset can be bought from what source of funds. For example, fixed asset can be bought only from long-term source of funds. If you buy a long-term asset utilizing funds from short-term sources, the asset has to be sold off to repay the short-term loan, in the event of pressure to repay the loan.

**METHODS OF FINANCE:**

The following are the common methods of finance:

- Long –term finance
- Medium-term fiancé

- Short-term fiancé

Now we will discuss each of these methods identifying the sources under each method:

**1. 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, plant and so on.

**Own Capital:**

Irrespective of the form of organization such as soletrader, partnership or a company, the owners of the business have to invest their own finances 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.

**Share Capital:**

Normally in the case of a company, the capital is raised by issue of shares. The capital so raised is called share capital. The liability of the shareholder is limited to the extent of his contribution to the share capital of the company. The shareholder is entitled to dividend in case the company makes profits and the directors announce dividend formally in the general body meetings. The share capital can be of two types: ***Preference share capital and equity share capita*l.** The salient features of preference share capital and ordinary share capital are discussed below:

**Preference Share Capital:** Capital raised through issue of preference shares is called preference share capital.

***Preference share:*** A preference shareholder enjoys two rights over equity shareholders: (a) right to receive fixed rate of dividend and (b) right to return of capital. After setting the claims of outsiders, preference shareholders are the first to get their dividend and then the balance will go to the equity shareholders. However, the preference shareholders do not have any voting rights in the annual general body meetings of the company. This deprives them of the right to participate in the management of the affairs of the company.

***Types of preference shares:*** Preference shares are of five types. They are:

***Cumulative preference share:***A cumulative preference share gets his right to the arrears of dividend cumulated over a period of time. If the company is not in a position to pay dividends during a particular year due to paucity of profits, it has to pay the same to the cumulative preference shareholders when it makes profits. In other words, the holders of cumulative preference shares enjoy the right to receive, when profits permit, the dividend missed in the years when the profits were nil or inadequate.

1. ***Non-cumulative preference shares:*** The holders of these shares do not enjoy any right over the arrears of dividend. Hence the unpaid dividend in arrears cannot be claimed in future.

2. ***Participating preference shares***: The holder of these shares enjoys the dividend two times. They get their normal fixed rate of dividend as per their entitlement. They participate again along with the equity shareholders in the distribution of profits.
3. ***Redeemable preference shares***: These shares are repaid at the end of a given period. The period of repayment is stipulated on each share.
4. *Non-redeemable preference shares* These shares continue as long as the company continues. They are repaid only at the end of the lifetime of the company.

**Equity Share Capital:** Capital raised through issue of equity share is called equity share capital. An equity share is also called ordinary share. An equity shareholder does not enjoy any priorities such as those enjoyed by a preference shareholder. But an equity shareholder is entitled to voting rights as many as the number of shares he holds. The profits after praying all the claims belong to the equity shareholders. In case of loss, they are the first to suffer the losses. Equity shareholders are the real risk bearers of the company. But at the same time, they are entitled for the whole surplus of the profits after payment of dividends to preference shareholders. Therefore, the rate of dividend on equity shares is not fixed.

**Retained Profits:**

The retained profits are the profits remaining after all the claims. They form a very significant source of finance. Retained profits form good source of working capital. Particularly in times of growth and expansion, retained profits can be advantageously utilized.

**Long-term Loans:**

There are specialized financial institutions offering long-term loans, provided the business proposal is feasible. The promoter should be offer asset of the business as security to avail of this source.

**Debentures:**

Debentures are the loans taken by the company. It is a certificate or letter issued by the company under its common seal acknowledging the receipt of loan. A debenture holder is the creditor of the company. A debenture holder is entitled to a fixed rate of interest on the debenture amount. Payment of interest on debenture is the first charge against profit.

1. **Convertible Debentures:** These debentures are converted into equity shares after the period mentioned in the terms and conditions of issue. In terms of cost, debentures are cheaper than the equity shares. Where the company is not sure of good profits to sustain the size of equity, it prefers to issue convertible debentures. These debentures continue as loan for the defined period. These are converted into equity shares on the specified date.

Then onwards, these shareholders will be entitled to dividend, which will be normally higher than the rate of interest on debentures.

2. **Partly Convertible Debentures:** A portion of debentures is to be converted into equity shares. They continue as loan till the date of payment.

3. **Non-convertible Debentures:** These debentures will not be converted into equity shares. They continue as loan till the date of payment.

4. **Secured Debentures**: These debentures are safe because the assets of the company are offered as security towards the payment of the debentures. Newly promoted companies issue secured debentures to create confidence among the investors.

5. **Partly Secured Debentures**: These debentures are partly covered by the security. In other words, the security value is lesser than the face value of the debentures issued.

6. **Unsecured Debentures**: There is no security for these debentures. Normally, the companies having a good financial records issue unsecured debentures.

7. **Redeemable Debentures**: These debentures are repaid on a specified date.

8. **Non-redeemable Debentures**: These are repaid only at the end of the lifetime of the company.

**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. This is normally utilized to buy or lease motorvehicles, computer equipment, or machinery whose life is less than three years. The sources of medium-term finance are as given below:

**Bank Loans:**

Bank loans are extended at a fixed rate interest. Repayment of the loan and interest are scheduled at the beginning and are usually directly debited to the current account of the borrower. These are secured loans.

**Leasing of Renting**:

Where there is a need for fixed assets, the asset need not be purchased. It can be taken on lease or rent for specified number of years. The company who owns the asset is called *lessor* and the company which takes the asset on lease is called *lessee*. The agreement between the lessor and lessee is called a lease agreement. On the expiry of the lease agreement, the owner takes the asset back into his custody. Under lease agreement, ownership to the asset never passes.

**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 offer such finance through their merchant banking divisions, of specialist banks which offers advice unfinancial assistance.

**iii) Short-term fiancé**:

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 finance.

**Commercial Paper (CP):**

CPs are issued usually in large denominations by the leading, nationally reputed, highly rated and credit worthy, large manufacturing and finance companies in the public and private sectors.

**Bank overdraft:**

This is a special arrangement with the banker where the customer can draw more than what he has any savings/current account subject to a maximum limit interest is charged on a day to day basis on the actual amount overdrawn. This source is utilized to meet the temporary shortage of funds.

This is a special arrangement with the banker where the customer can draw more than what he has any savings/current account subject to a maximum limit interest is charged on a day to day basis on the actual amount overdrawn. This source is utilized to meet the temporary shortage of funds.

**Trade Credit**:

This is a short term credit facility extended by the creditor to the debtor. Normally, it is common for the trader to by the material and other supplies from the suppliers on the credit basis. After selling the stocks the trader pays the cash and buys fresh stocks again on credit. Sometimes, the suppliers may insist on the buyer to sign on bill (bill of exchange). This bill is called bills payable.

**Debit factoring or Credit factoring:**

Debit factoring is an arrangement with factor where the trader agrees to sell its accounts receivable or debtor at discount to the specialized dealer called factors. In the case of Credit factoring the trader agrees to sell his accounts payables (at premium).

**ECONOMICS:**

Economics is a study of human activity both at individual and national level. The economists of early age treated economics merely as the science of wealth. The reason for this is clear.

Every one of us in 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".

It was only during the eighteenth century that Adam Smith, the Father of Economics, defined economics as the study of nature and uses of national wealth'.

Dr. Alfred Marshall, one of the greatest economists of the nineteenth century, 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". Thus, it is one side, a study of wealth; and on the other, and more important side; it is the study of man. As Marshall observed, the chief aim of economics is to promote 'human welfare', but not wealth

**IMPORTANCE:**

1. **Useful For The Producer:-**

   Economics is very useful for the producer. It guides him that how he should combine the four factors of production and minimize the cost of production.

2. **UsefulForTheConsumer: -**
   The consumer can adjust his expenditure of various goods in better way if he knows the principles of economics. He will spend his income according the law of EquiMarginal utility in order to get maximum satisfaction.
3. **Poverty and Development**: -
   It helps in removing the poverty from the country. Under developed countries are facing many problems like unemployment, over population low per capita income and low production. Economics is very useful in solving these problems.
4. **Useful for the Leader: -**
   Its study is helpful for the leader5s to understand the economic problems if they have a knowledge of Economics.
5. **Useful For The Finance Minister: -**

   Finance minister prepares the yearly budget of the country. Economics guides him that how he should frame the tax policy and monetary policy.

6. **Useful for The Distribution Of National Income: -**

   From the study of economics one can easily judge that how the income should be distributed among the four factors of production. For this purpose Marginal productivity theory is suggested by economics.
7. **Cultural Value: -**

A person's education cannot be considered complete unless he has some knowledge of economics. The things which happen daily around us have an important economic bearing. So there is also the cultural value of the study of economics.

8. **Importance for a Common Man: -**

The study of economics is very useful for every citizen. It enables him to understand and criticize the economic policies of the government. He can also guide the government.

9. **Economic Planning: -**

In the modern age the importance of economic planning can not be ignored. Through planning we can utilize our natural resources in better way and can improve our economic condition.

10. **Importance For Labour :-**

It guides the workers that how they can get maximum wages from the employer. It enables them to get the right of trade union , collective bargaining and fixation of working hours.

**CONCEPTS:**

1. Micro concept
2. Macro concept

**MICRO ECONOMICS:**

Study of small economic units such as individuals, firms, and industries (competitive markets, labor markets, personal decision making, etc.)

**MACRO ECONOMICS:**

Study of the large economy as a whole or in its basic subdivisions (National Economic Growth, Government Spending, Inflation, Unemployment, etc.)

Macroeconomics is a branch of economics that deals with the economy as a whole. It takes into consideration the performance, behavior and structure of the economy as a whole rather than the individual components or firms (Microeconomics). Thus, Macroeconomics contains the study of the aggregated concepts like National Income, GDP, Unemployment, Aggregate Demand, Aggregate Supply etc. Macroeconomics plays a major role in helping the government to formulate the economic policy for the nation.

**What are the basic objectives of Macroeconomics?**

The basic objective of Macroeconomics is the Economic Growth of the nation, This Growth can be achieved by achieving the following goals: 1. Reduction in the Unemployment Rate

2. Stabilization of the prices in the economy

3. Maintaining the Balance of Payments

4. Stabilizing the Economic Growth Rate

**Components:**

1. Aggregate Demand

2. Aggregate Supply

**1. Aggregate Demand:**

Aggregate Demand refers to the total demand in the economy for the finalngoods and services at a given period of time at a particular price. This is also called DomesticnFinal Demand or Domestic GDP. The Aggregate Demand shows the different quantities that can be purchased at different possible prices. The main components that form Aggregate Demand are:

**Consumption**:

Consumption refers to the final goods and services consumed by the Households in the economy. This forms the largest proportion in the Aggregate Demand of the Economy.

**Investment**:

Investment is considered to be the most volatile component in the Aggregate Demand's composition. It is the spending by the firms in their capital.

**Government Spending:**

The government Spending involves the expenditure made by the Government. This includes Transfer Payments, Capital Spending etc.

**Net Exports (X-M):**

Net Exports refer to the excess of the exports over imports. The increase in the Exports will increase the consumption of the domestic product so as to be exported. "X" refers to Exports and "M" refers to Imports. Thus, we have, AD = C+I+G+(X-M) where,

AD- Aggregate Demand

C- Consumption

I- Investment

X- Exports

M- Imports

**2. Aggregate Supply:**

Aggregate Supply refers to the total supply of the final goods and services in the economy by the suppliers. It is the quantity that the suppliers or the firms are ready to supply in the economy at a given period of time at a particular price. The supply by all the firms in the economy is summed up while determining the aggregate supply. The main components that form Aggregate supply are:

**Consumption:**

Consumption refers to the goods and services that are consumed by the households. This is the basic part of Aggregate supply.

**Savings**:

Savings refer to the part of income that is saved by the households or the firms and which is not put into the investment sector.

Thus, we have, AS = C+S

Where,

AS- Aggregate Supply

C- Consumption

S- Savings

**Concepts of Macroeconomics:**

Macroeconomics is a wide subject and can be correlated to several ideologies and concepts. But usually it is linked up and studied with relation to the following three concepts:

1. Gross Domestic Product (GDP)

2. Unemployment Rate

3. Inflation Rate

4. International Trade.

**1. Output or Income:**

Both Output and income are interchangeably used in macroeconomics. Both correlated to each other, Income is generally directly proportional to the level of output an economy produces. The level of output determines the level of Gross Domestic Product. This GDP is used in the measurement of the efficiency of the economy's functions. Thus, it serves as one of the vital concepts of Macroeconomics.

**2. Unemployment:**

Unemployment is one of the major issues that macroeconomics deal with. Unemployment refers to the number of people who are willing to work but do not have any job.

Macroeconomics aims at full employment of the resources and the people present in the economy to achieve maximum production.

There are two approaches to the study of employment:

1. **Keynesian Approach:**
   According to the Keynesian approach; the resources are not fully employed in the economy and the supply can be fully elastic till the point the resources are completely employed. Once the resources are fully employed; the production can no more be increased.
2. **Classical Approach:**
   According to the Classical Approach, there is full employment in the economy at any point of time. Thus, there can be no increase in the supply or production in the economy, any increase in the aggregate demand will render a rise in the prices.

3. **Inflation or Deflation:**

Inflation refers to the rise in the prices of the goods and services in the economy and Deflation refers to the decline in the prices of the goods and services in the economy. Usually the rise in the prices i.e. inflation leads to the growth in the economy where as the deflation leads to a downfall in the growth of the economy. The economists generally try to maintain the level of prices in the economy so as to maintain a balance. This is being done by using various monetary and fiscal policies.

**BUSINESS CYCLE:**

The **business cycle**, also known as the **economic cycle** or **trade cycle**, is the downward and upward movement of gross domestic product (GDP) around its long-term growth trend.[1] The length of a business cycle is the period of time containing a single boom and contraction in sequence. These fluctuations typically involve shifts over time between periods of relatively rapid economic growth (expansions or booms), and periods of relative stagnation or decline (contractions or recessions).

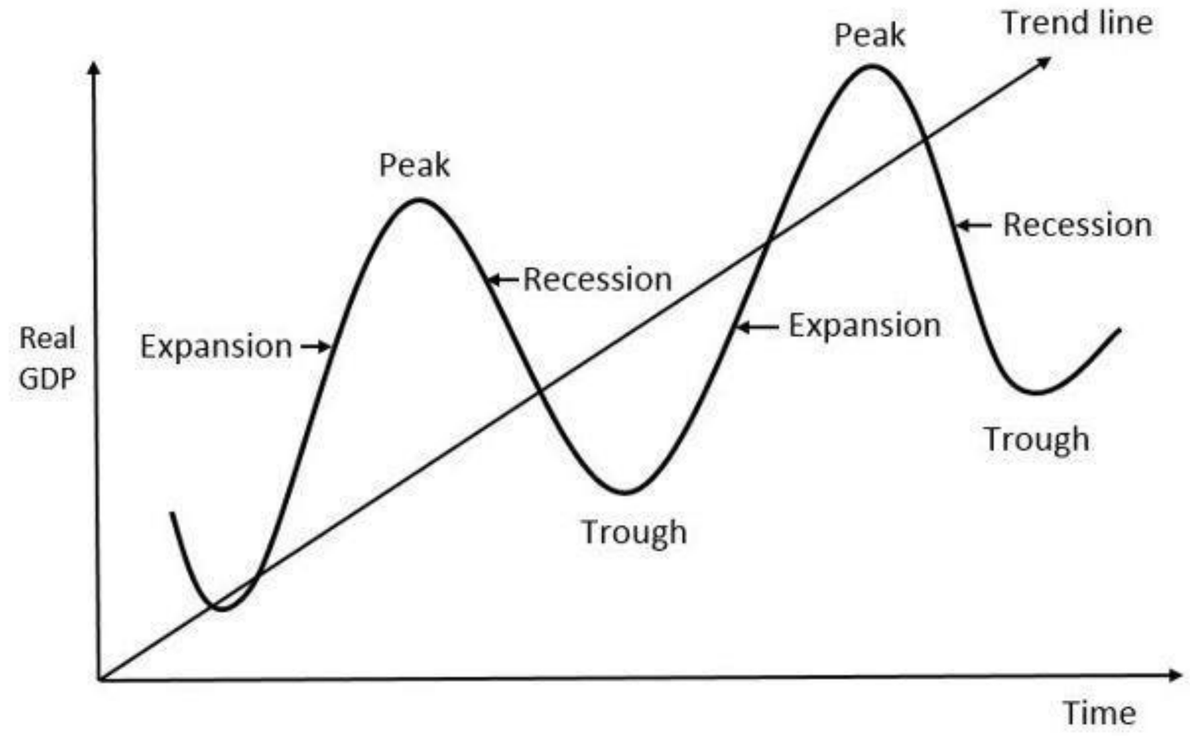
Business cycles are usually measured by considering the growth rate of real gross domestic product. Despite the often-applied term cycles, these fluctuations in economic activity do not exhibit uniform or predictable periodicity.

**Four Phases of Business Cycle:**

Business Cycle (or Trade Cycle) is divided into the following four phases :-

1. Prosperity Phase : Expansion or Boom or Upswing of economy.
2. Recession Phase : from prosperity to recession (upper turning point).
3. Depression Phase : Contraction or Downswing of economy.
4. Recovery Phase : from depression to prosperity (lower turning Point).

Graph 1




**1. Prosperity Phase:**

When there is an expansion of output, income, employment, prices and profits, there is also a rise in the standard of living. This period is termed as Prosperity phase.

**The features of prosperity are :-**

- High level of output and trade.
- High level of effective demand.
- High level of income and employment.
- Rising interest rates.
- Inflation.
- Large expansion of bank credit.
- Overall business optimism.
- A high level of MEC (Marginal efficiency of capital) and investment.

Due to full employment of resources, the level of production is Maximum and there is a rise in GNP (Gross National Product). Due to a high level of economic activity, it causes a rise in prices and profits. There is an upswing in the economic activity and economy reaches its Peak. This is also called as a Boom Period.

**2. Recession Phase**

The turning point from prosperity to depression is termed as Recession Phase. During a recession period, the economic activities slow down. When demand starts falling, the overproduction and future investment plans are also given up. There is a steady decline in the output, income, employment, prices and profits. The businessmen lose confidence and become pessimistic (Negative). It reduces investment. The banks and the people try to get greater liquidity, so credit also contracts. Expansion of business stops, stock market falls. Orders are cancelled and people start losing their jobs. The increase in unemployment causes a sharp decline in income and aggregate demand. Generally, recession lasts for a short period.

**3. Depression Phase**

When there is a continuous decrease of output, income, employment, prices and profits, there is a fall in the standard of living and depression sets in.

**The features of depression are:-**

- Fall in volume of output and trade.
- Fall in income and rise in unemployment.
- Decline in consumption and demand.
- Fall in interest rate.
- Deflation.
- Contraction of bank credit.
- Overall business pessimism.
- Fall in MEC (Marginal efficiency of capital) and investment.

In depression, there is under-utilization of resources and fall in GNP (Gross National Product). The aggregate economic activity is at the lowest, causing a decline in prices and profits until the economy reaches its Trough (low point).

**4. Recovery Phase:**

The turning point from depression to expansion is termed as Recovery or Revival Phase. During the period of revival or recovery, there are expansions and rise in economic activities. When demand starts rising, production increases and this causes an increase in investment. There is a steady rise in output, income, employment, prices and profits. The businessmen gain confidence and become optimistic (Positive). This increases investments. The stimulation of investment brings about the revival or recovery of the economy. The banks expand credit, business expansion takes place and stock markets are activated. There is an increase in employment, production, income and aggregate demand, prices and profits start rising, and business expands. Revival slowly emerges into prosperity, and the business cycle is repeated.

Thus we see that, during the expansionary or prosperity phase, there is inflation and during the contraction or depression phase, there is a deflation.

**NATIONAL INCOME:**

**INTRODUCTION**:

National income is an uncertain term which is used interchangeably with national dividend, national output and national expenditure. On this basis, national income has been defined in a number of ways. In common parlance, national income means the total value of goods and services produced annually in a country.

In other words, the total amount of income accruing to a country from economic activities in a year's time is known as national income. It includes payments made to all resources in the form of wages, interest, rent and profits.

National Income refers to the money value of all the goods and services produced in a country during a financial year. In other words, the final outcome of all the economic activities of the nation during a period of one year, valued in terms of money is called as a National income.

**Gross Domestic Product:**

The most important concept of national income is Gross Domestic Product. Gross domestic product is the money value of all final goods and services produced within the domestic territory of a country during a year.

Algebraic expression under product method is,

GDP= (P*Q)

Where,

GDP=Gross Domestic Product

P=Price of goods and service

Q=Quantity of goods and service

**Gross National Product (GNP)**

Gross National Product is the total market value of all final goods and services produced annually in a country plus net factor income from abroad. Thus, GNP is the total measure of the flow of goods and services at market value resulting from current production during a year in a country including net factor income from abroad. The GNP can be expressed as the following equation:

GNP=GDP+NFIA (Net Factor Income from Abroad)

Or, GNP=C+I+G+(X-M)+NFIA

Hence, GNP includes the following:

Consumer goods and services.

Gross private domestic investment in capital goods.

Government expenditure.

Net exports (exports-imports).

Net factor income from abroad.

**Net National Product (NNP)**

Net National Product is the market value of all final goods and services after allowing for depreciation. It is also called National Income at market price. When charges for depreciation are deducted from the gross national product, we get it. Thus,

NNP=GNP-Depreciation

Or, NNP=C+I+G+(X-M)+NFIA-Depreciation

**Personal Income (PI):**

Personal Income i s the total money income received by individuals and households of a country from all possible sources before direct taxes. Therefore, personal income can be expressed as follows:

PI=NI-Corporate Income Taxes-Undistributed Corporate Profits-Social Security Contribution+Transfer Payments

**Disposable Income (DI)**

The income left after the payment of direct taxes from personal income is called Disposable Income. Disposable income means actual income which can be spent on consumption by individuals and families. Thus, it can be expressed as:

DI=PI-Direct Taxes

From consumption approach,

DI=Consumption Expenditure+Savings

**Per Capita Income (PCI):**

Per Capita Income of a country is derived by dividing the national income of the country by the total population of a country. Thus,

PCI=Total National Income/Total National Population

**INFLATION:**

Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.

**Types of Inflation:**

1. Creeping Infltion

2. Walking Inflation
3. Running inflation
4. Hyper inflation

**Creeping Inflation:**

When prices are gently rising, it is referred as Creeping Inflation. It is the mildest form of inflation and also known as a Mild Inflation or Low Inflation. According to R.P. Kent, when prices rise by not more than (i.e. Up to) 3% per annum (year), it is called Creeping Inflation.

**Walking Inflation:**

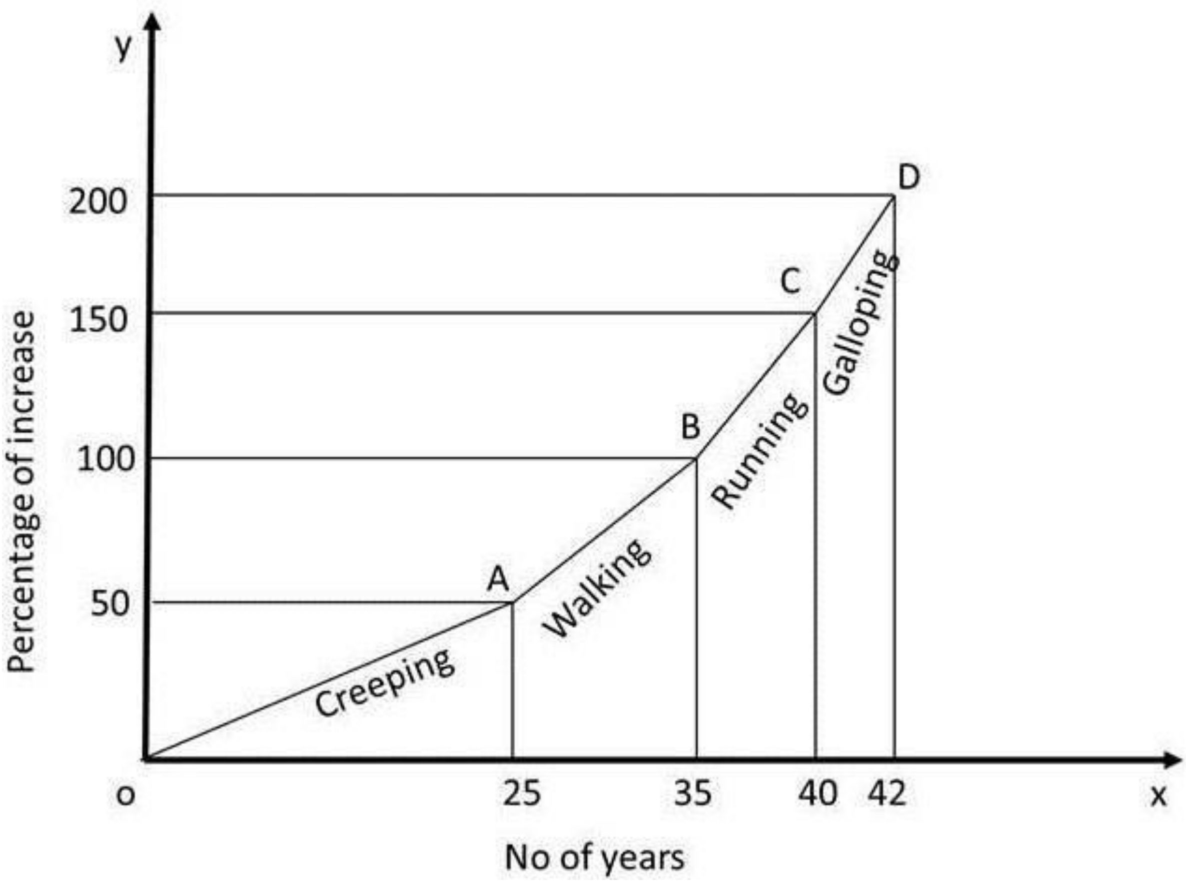
When the rate of rising prices is more than the Creeping Inflation, it is known as Walking Inflation. Trotting Inflation is its another name. When prices rise by more than 3%, but less than 10% per annum (i.e., between 3%, and 10% per annum), it is called as Walking Inflation. According to some economists, we must take Walking Inflation seriously as it gives a cautionary signal for the occurrence of Running inflation. Furthermore, if, not checked in due time, it can eventually result in Galloping Inflation.

**Running inflation**

A rapid acceleration in the rate of rising prices is called Running Inflation. It occurs when prices rise by more than 10% in a year. Though economists have not suggested a fixed range for measuring running inflation, we may consider a price increase between 10% to 20% per annum (double-digit inflation rate) as a Running Inflation.

**Hyper Inflation:**

Refers to a situation where the prices rise at an alarming high rate. The prices rise so fast that it becomes very difficult to measure its magnitude. However, in quantitative terms, when prices rise above 1000% per annum (quadruple or four-digit inflation rate), it is termed as Hyperinflation. During a worst-case scenario of hyperinflation, the value of the national currency (money) of an affected country reduces almost to zero. Paper money becomes worthless, and people start trading either in gold and silver or sometimes even use the old barter system of commerce. Two worst examples of hyperinflation recorded in the world history are of those experienced by Hungary in the year 1946 and Zimbabwe during 2004-2009 under Robert Mugabe's regime.




**BUSINESS ECONOMICS:**

**Meaning & Definition:**

Business Economics as a subject gained popularity in USA after the publication of the book "Managerial Economics" by Joel Dean in 1951.

Business Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management" or "Economics of Management". Business Economics is also called as "Industrial Economics" or "Managerial Economics".

"Business Economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".

----------M. H. Spencer and Louis Siegelman

Business economics shows how economic analysis can be used in formulating police.

------------- Joel Dean

Business economics is designed to provide a rigorous treatment of those aspects of economic theory and analysis that are most use for managerial decision analysis

------------ J. L. Pappas and E. F. Brigham.

**NATURE OF BUSINESS ECONOMICS**

Further, it is assumed that the firm or the buyer acts in a rational manner (which normally does not happen). The buyer is carried away by the advertisements, brand loyalties, incentives and so on, and, therefore, the natural behavior of the consumer will be rational is not a realistic assumption. Unfortunately, there are no other alternatives to understand the subject other than by making such assumptions. This is because the behavior of a firm or a consumer is a complex phenomenon.

The other features of Business economics are explained as below:

1. **Close to microeconomics:** Business economics is concerned with finding the solutions for different Business problems of a particular firm. Thus, it is more close to microeconomics. The study of an individual consumer or a firm is called microeconomics (also called the *Theory of Firm*). Microeconomics deals with behavior and problems of single individual and of micro organization. Managerial economics has its roots in microeconomics and it deals with the micro or individual enterprises.

2. **Macroeconomics:** The study of 'aggregate' or total level of economic activity in a country is called *macroeconomics*. It studies the flow of economics resources or factors of production (such as land, labour, capital, organization and technology) from the resource owner to the business firms and then from the business firms to the households. It deals with total aggregates, for instance, total national income total employment, output and total investment. It studies the interrelations among various aggregates and examines their nature and behaviour, their determination and causes of fluctuations in the.

3. **Normative statements:** A normative statement usually includes or implies the words 'ought' or 'should'. They reflect people's moral attitudes and are expressions of what a team of people ought to do. For instance, it deals with statements such as
'Government of India should open up the economy. Such statement are based on value judgments and express views of what is 'good' or 'bad', 'right' or ' wrong'. One problem with normative statements is that they cannot to verify by looking at the facts, because they mostly deal with the future. Disagreements about such statements are usually settled by voting on them.

4. **Prescriptive actions:** Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from the available alternatives for optimal solution. If does not merely mention the concept, it also explains whether the concept can be applied in a given context on not...

5. **Offers scope to evaluate each alternative:** Business economics provides an opportunity to evaluate each alternative in terms of its costs and revenue. The managerial economist can decide which is the better alternative to maximize the profits for the firm.

6. **Interdisciplinary:** The contents, tools and techniques of Business economics are drawn from different subjects such as economics, management, mathematics, finance, marketing statistics, accountancy, psychology, organizational behavior, sociology and etc.

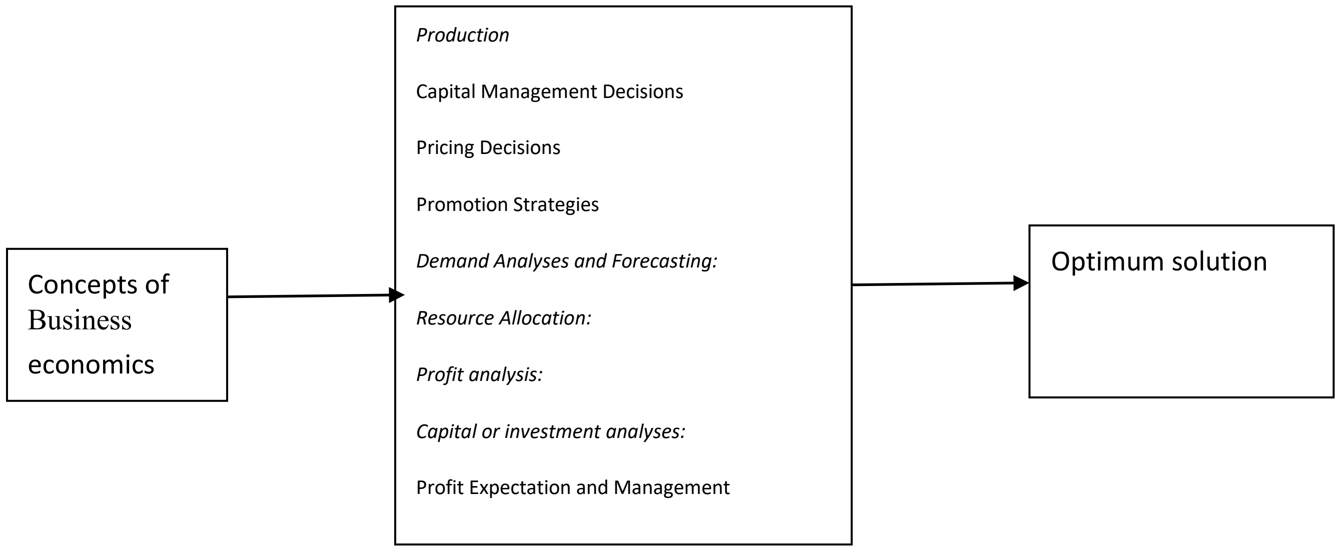
7. **Managerial economic is descriptive**: It is provides explanation description for the concepts of sales, profit ect… Business economic provides brief description for the questions like how will be our sales, when can we reach breakeven and from what time we can get profits ect...

8. **Managerial economic is application oriented**: It is helps the managers in solving problems of different application areas like production. Pricing, promotion demand analysis ect.

**SCOPE OF BUSINESS ECONOMICS:**

The scope of Business economics refers to its area of study. Business economics refers to its area of study. Business economics is help to find out the optimal solution for different Business problems such as *Production*, Capital Management Decisions, Pricing Decisions, Promotion Strategies, *Demand Analyses and Forecasting, Resource Allocation Profit analysis ,Capital or investment analyses,* Profit Expectation and Management

The production department, marketing and sales department and the finance department usually handle these five types of decisions.




**1. Production**

*It means inputs are transfer to output.* Production analysis is in physical terms. While the cost analysis is in monetary terms cost concepts and classifications, cost-out-put relationships, economies and diseconomies of scale and production functions are some of the points constituting cost and production analysis.

**2. Capital Management Decisions**

Capital management decision carries lot of weight age in the organization. It deals with various options of capital employment and respective returns with that investment. A manager has to select optimal investment decision among the available options with the use of managerial economics using discounted cash flow techniques and non discounted can flow techniques.

**3. Pricing Decisions**

Pricing plays a vital role in the success of product as well as the organization. Business Economics provides different types of prices for products. Managerial Economics has a close watch on the factors affecting the pricing. How the organization has to price the items, when to do changes in pricing like questions will be answered by Business Economics. Pricing decisions have been always within the preview of Business economics. Pricing policies are merely a subset of broader class of Business economic problems. Price theory helps to explain how prices are determined under different types of market conditions.

**4. Promotion Strategies**

Whatever many be the quality of product, if it was not reached to final customer, it cannot get success. So, proper promotion has to be done in all products and services. Business Economics guides managers how to promote and what is the sector they need to concentrate more and what should be the advertisement budget etc.

**5. Demand Analyses and Forecasting:**

A firm can survive only if it is able to the demand for its product at the right time, within the right quantity. Understanding the basic concepts of demand is essential for demand forecasting. Demand analysis should be a basic activity of the firm because many of the other activities of the firms depend upon the outcome of the demand forecast.

***4.* Resource Allocation:**

Business Economics is the traditional economic theory that is concerned with the problem of optimum allocation of scarce resources. Marginal analysis is applied to the problem of determining the level of output, which maximizes profit. In this respect linear programming techniques has been used to solve optimization problems. In fact lines programming is one of the most practical and powerful Business decision making tools currently available.

***5.* Profit analysis*:***

Profit making is the major goal of firms. There are several constraints here an account of competition from other products, changing input prices and changing business environment hence in spite of careful planning, there is always certain risk involved.

Business economics deals with techniques of averting of minimizing risks. Profit theory guides in the measurement and management of profit, in calculating the pure return on capital, besides future profit planning.

***6.* Capital or investment analyses:**

Capital is the foundation of business. Lack of capital may result in small size of operations. Availability of capital from various sources like equity capital, institutional finance etc. may help to undertake large-scale operations. Hence efficient allocation and management of capital is one of the most important tasks of the managers. The major issues related to capital analysis are:

The choice of investment project

Evaluation of the efficiency of capital

Most efficient allocation of capital

Knowledge of capital theory can help very much in taking investment decisions. This involves, capital budgeting, feasibility studies, analysis of cost of capital etc.

***7.* Profit Expectation and Management**

In addition to the all the above, sales of product takes place. Business economics tells us when can we reach the breakeven point and when can be we get profit. It also guides as in holders or reinvest in the same product.

These are the application areas where managerial economics can be used to take a decision.

**MANAGERIAL ECONOMICS RELATIONSHIP WITH OTHER DISCIPLINES:**

Many new subjects have evolved in recent years due to the interaction among basic disciplines. While there are many such new subjects in natural and social sciences, managerial economics can be taken as the best example of such a phenomenon among social sciences. Hence it is necessary to trace its roots and relationship with other disciplines.

*1.* **Relationship with economics:**

The relationship between managerial economics and economics theory may be viewed from the point of view of the two approaches to the subject Viz. Micro Economics and Marco Economics. Microeconomics is the study of the economic behavior of individuals, firms and other such micro organizations. Managerial economics is rooted in Micro Economic theory.

Managerial Economics makes use to several Micro Economic concepts such as marginal cost, marginal revenue, elasticity of demand as well as price theory and theories of market structure to name only a few. Macro theory on the other hand is the study of the economy as a whole. It deals with the analysis of national income, the level of employment, general price level, consumption and investment in the economy and even matters related to international trade, Money, public finance, etc.

*2.* **Management theory and accounting**:

Managerial economics has been influenced by the developments in management theory and accounting techniques. Accounting refers to the recording of pecuniary transactions of the firm in certain books. A proper knowledge of accounting techniques is very essential for the success of the firm because profit maximization is the major objective of the firm.

*3.* **Managerial Economics and mathematics:**

The use of mathematics is significant for managerial economics in view of its profit maximization goal long with optional use of resources. The major problem of the firm is how to minimize cost, hoe to maximize profit or how to optimize sales. Mathematical concepts and techniques are widely used in economic logic to solve these problems. Also mathematical methods help to estimate and predict the economic factors for decision making and forward planning.

*4.* **Managerial Economics and Statistics:**

Managerial Economics needs the tools of statistics in more than one way. A successful businessman must correctly estimate the demand for his product. He should be able to analyses the impact of variations in tastes. Fashion and changes in income on demand only then he can adjust his output. Statistical methods provide and sure base for decision-making. Thus statistical tools are used in collecting data and analyzing them to help in the decision making process.

*5.* **Managerial Economics and Operations Research:**

Taking effectives decisions is the major concern of both managerial economics and operations research. The development of techniques and concepts such as linear programming, inventory models and game theory is due to the development of this new subject of operations research in the postwar years. Operations research is concerned with the complex problems arising out of the management of men, machines, materials and money.

Operation research provides a scientific model of the system and it helps managerial economists in the field of product development, material management, and inventory control, quality control, marketing and demand analysis. The varied tools of operations Research are helpful to managerial economists in decision-making.

*6.* **Managerial Economics and the theory of Decision- making:**

The Theory of decision-making is a new field of knowledge grown in the second half of this century. Most of the economic theories explain a single goal for the consumer i.e., Profit maximization for the firm. But the theory of decision-making is developed to explain multiplicity of goals and lot of uncertainty.

As such this new branch of knowledge is useful to business firms, which have to take quick decision in the case of multiple goals. Viewed this way the theory of decision making is more practical and application oriented than the economic theories.

# UNIT -2

## DEMAND ANALYSIS

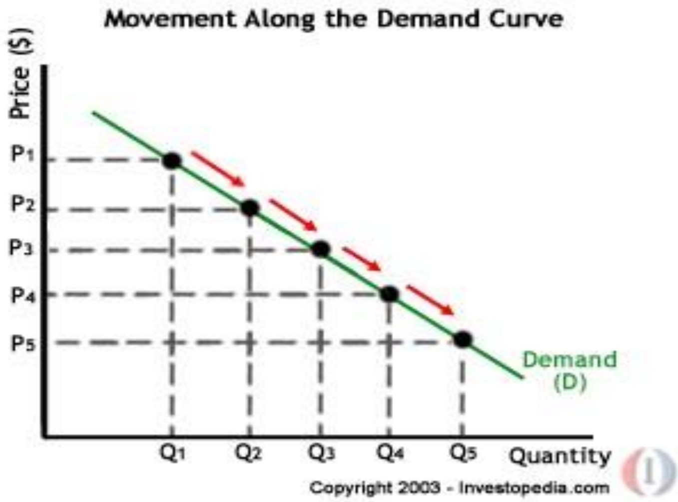
**INTRODUCTION & MEANING:**

Demand in common parlance means the desire for an object. But in economics demand is something more than this. According to Stonier and Hague, “Demand in economics means demand backed up by enough money to pay for the goods demanded”. This means that the demand becomes effective only it if is backed by the purchasing power in addition to this there must be willingness to buy a commodity.

Thus demand in economics means the desire backed by the willingness to buy a commodity and the purchasing power to pay. In the words of “Benham” “The demand for anything at a given price is the amount of it which will be bought per unit of time at that Price”. (Thus demand is always at a price for a definite quantity at a specified time.) Thus demand has three essentials – price, quantity demanded and time. Without these, demand has to significance in economics.

A product or services is said to have demand when tree conditions are satisfied:

| **Desire + Ability to pay + Willingness to pay for it** |
|---|




| Price of Apple (In. Rs.) | Quantity Demanded |
|---|---|
| 10 | 1 |
| 8 | 2 |
| 6 | 3 |
| 4 | 4 |
| 2 | 5 |

**FACTORS AFFECTING DEMAND:**

There are factors on which the demand for a commodity depends. These factors are economic, social as well as political factors. The effect of all the factors on the amount demanded for the commodity is called Demand Function.

These factors are as follows:

1. **Price of the Commodity:**

The most important factor-affecting amount demanded is the price of the commodity. The amount of a commodity demanded at a particular price is more properly called price demand. The relation between price and demand is called the Law of Demand. It is not only the existing price but also the expected changes in price, which affect demand

2. **Income of the Consumer:**

The second most important factor influencing demand is consumer income. In fact, we can establish a relation between the consumer income and the demand at different levels of income, price and other things remaining the same. The demand for a normal commodity goes up when income rises and falls down when income falls. But in case of Giffen goods the relationship is the opposite.

3. **Prices of related goods:**

The demand for a commodity is also affected by the changes in prices of the related goods also. Related goods can be of two types:

(I). Substitutes: which can replace each other in use; for example, tea and coffee are substitutes. The change in price of a substitute has effect on a commodity's demand in the same direction in which price changes. The rise in price of coffee shall raise the demand for tea;

(ii). Complementary: foods are those which are jointly demanded, such as pen and ink. In such cases complementary goods have opposite relationship between price of one commodity and the amount demanded for the other. If the price of pens goes up, their demand is less as a result of which the demand for ink is also less.

The price and demand go in opposite direction. The effect of changes in price of a commodity on amounts demanded of related commodities is called Cross Demand.

4. **Tastes of the Consumers:**

The amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc. A consumer's taste is also affected by advertisement. If the taste for a commodity goes up, its amount demanded is more even at the same price. This is called increase in demand.
The opposite is called decrease in demand.

5. **Population:**

Increase in population increases demand for necessaries of life. The composition of population also affects demand. Composition of population means the proportion of young and old and children as well as the ratio of men to women. A change in composition of population has an effect on the nature of demand for different commodities.

6. **Expectations regarding the future:**

If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same. Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now.

7. **Advertisement expenditure:**

Advertisement promotes sales. Other factors remaining same, with every increase in the advertisement expense there will be an increase in sales.

8. **Demonstration effect:**
   Demand for luxury item is always great among the rich. This naturally influences the less affluent or the lower income group in the neighborhood. They also begin to buy luxury item to imitate their rich neighbors even when they do not have any genuine need for them
9. ***Climate and weather:***

The climate of an area and the weather prevailing there has a decisive effect on consumer's demand. In cold areas woolen cloth is demanded. During hot summer days, ice is very much in demand. On a rainy day, ice cream is not so much demanded.

## LAW OF DEMAND

Law of demand shows the relation between price and quantity demanded of a commodity in the market. In the words of Marshall, "the amount demand increases with a fall in price and diminishes with a rise in price".

Generally, a person demands more at a lower price and less at a higher price. The relation of price to demand or sales is known in Economics as the Law of Demand.

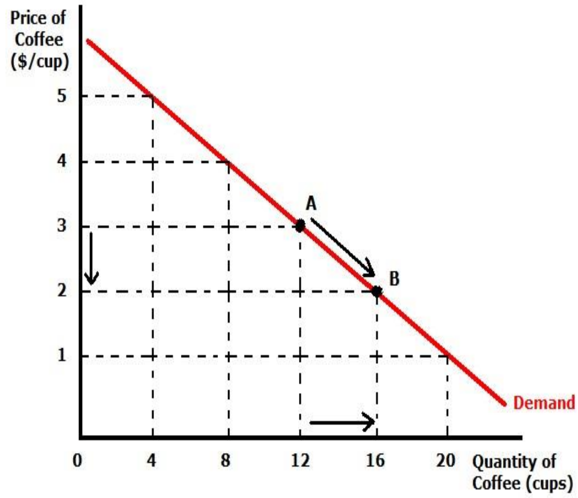
The Law of Demand states that "higher the price, lower the demand and vice versa, other things remaining the same".

The demand curve slopes downward from left to rights showing that more quantities are demanded at lower prices. That is, demand responds to price in the reverse direction. The reasons for the inverse relation between price and quantity demanded are the following:

*Demand Schedule* .

| Price of Apple (In. Rs.) | Quantity Demanded |
|---|---|
| 10 | 1 |
| 8 | 2 |
| 6 | 3 |

| | |
|---|---|
| 4 | 4 |
| 2 | 5 |



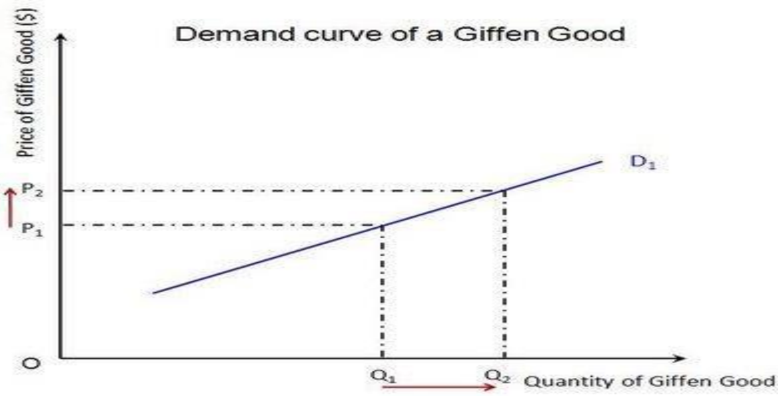

When the price falls from Rs. 10 to 8 quantity demand increases from 1 to 2. In the same way as price falls, quantity demand increases on the basis of the demand schedule we can draw the demand curve The demand curve DD shows the inverse relation between price and quantity demand of apple. It is downward sloping.

**Assumptions***:*

- Law is demand is based on certain assumptions:
- This is no change in consumers taste and preferences.
- Income should remain constant.
- Prices of other goods should not change.
- There should be no substitute for the commodity
- The commodity should not confer at any distinction
- The demand for the commodity should be continuous
- People should not expect any change in the price of the commodity

**EXCEPTIONAL DEMAND CURVE**

Sometimes the demand curve slopes upwards from left to right. In this case the demand curve has a positive slope.




When price increases from OP to Op1 quantity demanded also increases from to OQ1 and vice versa. The reasons for exceptional demand curve are as follows.

**1. Giffen paradox:**

Robert giffen has observed an effect of goods which has increase in demand even if price raised and goods demand decreases even if price decreased. He named above the goods as

**Superior goods**

**Inferior goods**

Ex: if a person buy bread and meat daily, If the price of bread is decreased, he will not purchases more breads, for the balance of money he will purchases meat . Decrease in the price of an inferior goods does not increases its demand, dut increase the demand for superior goods

The Giffen good or inferior good is an exception to the law of demand. When the price of an inferior good falls, the poor will buy less and vice versa. For example, when the price of maize falls, the poor are willing to spend more on superior goods than on maize if the price of maize increases, he has to increase the quantity of money spent on it. Otherwise he will have to face starvation. Thus a fall in price is followed by reduction in quantity demanded and vice versa. “Giffen” first explained this and therefore it is called as Giffen’s paradox.

**2. Demonstration effect:**

_‘Veblan’ has explained the exceptional demand curve through his doctrine of conspicuous consumption. Rich people buy certain good because it gives social distinction or prestige for example diamonds are bought by the richer class for the prestige it possess. It the price of diamonds falls poor also will buy is hence they will not give prestige. Therefore, rich people may stop buying this commodity.

**3. Ignorance:**

Sometimes, the quality of the commodity is Judge by its price. Consumers think that the product is superior if the price is high. As such they buy more at a higher price.

**4. Speculative effect:**

If the price of the commodity is increasing the consumers will buy more of it because of the fear that it increase still further, Thus, an increase in price may not be accomplished by a decrease in demand.

**5. Fear of shortage:**

During the times of emergency of war People may expect shortage of a commodity. At that time, they may buy more at a higher price to keep stocks for the future.

**6. Necessaries:**

In the case of necessaries like rice, vegetables etc. people buy more even at a higher price.

**7. Goods don't have substitutes:**

As a general tendency, demand has to be decrease with increase in price, but if any goods don't have substitutes, like salt and medicines, the demand will not get decreases. People will definitely buy as they don't have other alternative

**8. Insignificant income spent on goods:**

If consumers spend a small amount for any goods the price changes will not influence the demand for that sort of goods, as they spent insignificant income or match boxes they might not reduce buying even if price rises

**9. Conspicuous consumption:**

Goods like diamonds, pearls ect ,are purchased by rich and wealthy section of the society because the price of such goods are so high that they are beyond the reach of a common man .most of these goods are demand when their price go up very high

**ELASTICITY OF DEMAND**

Elasticity of demand explains the relationship between a change in price and consequent change in amount demanded. "Marshall" introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.

In the words of "Marshall", "The elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in the price and diminishes much or little for a given rise in Price"

**Elastic demand:** A small change in price may lead to a great change in quantity demanded. In this case, demand is elastic.

**In-elastic demand:** If a big change in price is followed by a small change in demanded then the demand in "inelastic".

Proportionate change in the quantity demand of commodity

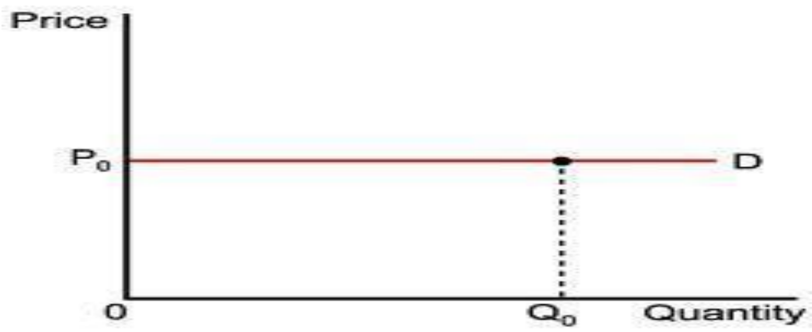
**Elasticity** = ----------------------------------------------------------------

Proportionate change in the factors of commodity

**MEASUREMENT OF ELASTICITY OF DEMAND**

- **Perfectly elastic demand**
- **Perfectly Inelastic Demand**
- **Relatively elastic demand**
- **Relatively in-elastic demand**
- **Unit elasticity of demand**

**A. PERFECTLY ELASTIC DEMAND:**

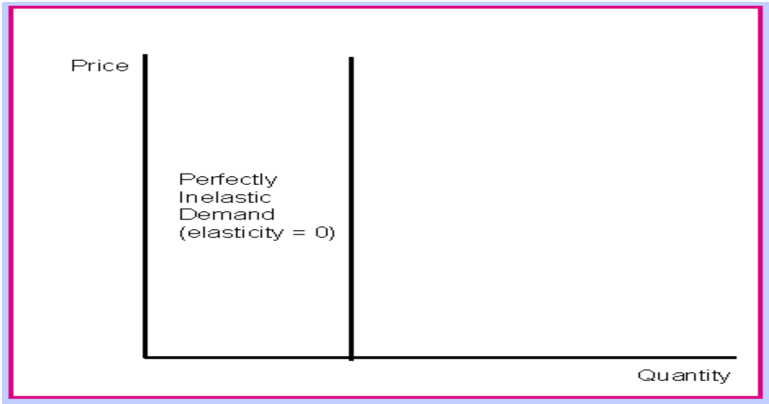



When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case E=∞

The demand curve DD1 is horizontal straight line. It shows the at "OP" price any amount is demand and if price increases, the consumer will not purchase the commodity.

**B. PERFECTLY INELASTIC DEMAND**

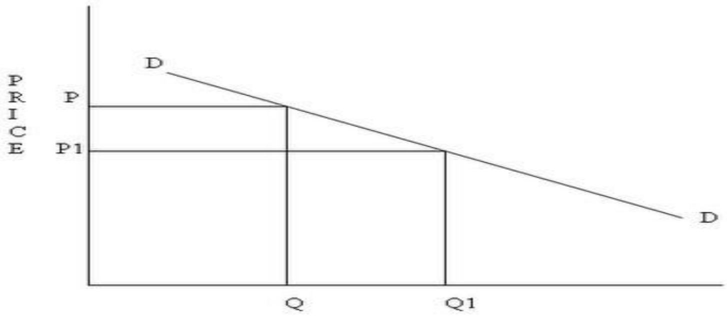
In this case, even a large change in price fails to bring about a change in quantity demanded.




When price increases from 'op' to 'op', the quantity demanded remains the same. In other words the response of demand to a change in price is nil. In this case 'e'=0.

**C. RELATIVELY ELASTIC DEMAND:**

Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this caseE > 1. This demand curve will be flatter.

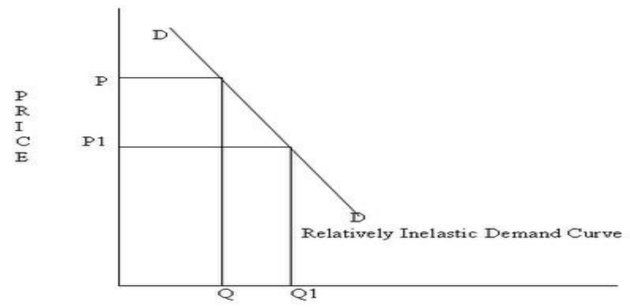



Relatively Elastic Curve

When price falls from 'OP' to 'OP1', amount demanded increase from "OQ' to "OQ1' which is larger than the change in price.

**D. RELATIVELY IN-ELASTIC DEMAND.**

Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.

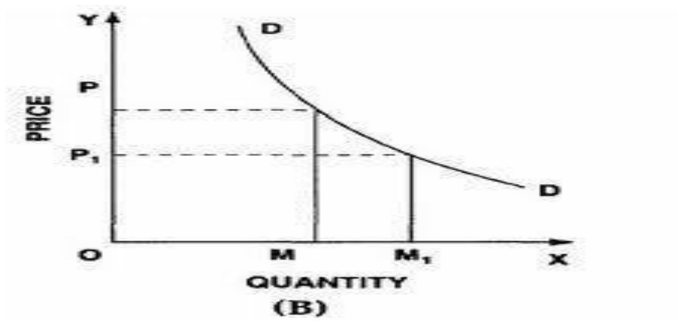



Relatively Inelastic Curve

When price falls from "OP' to 'OP1 amount demanded increases from OQ to OQ1, which is smaller than the change in price.

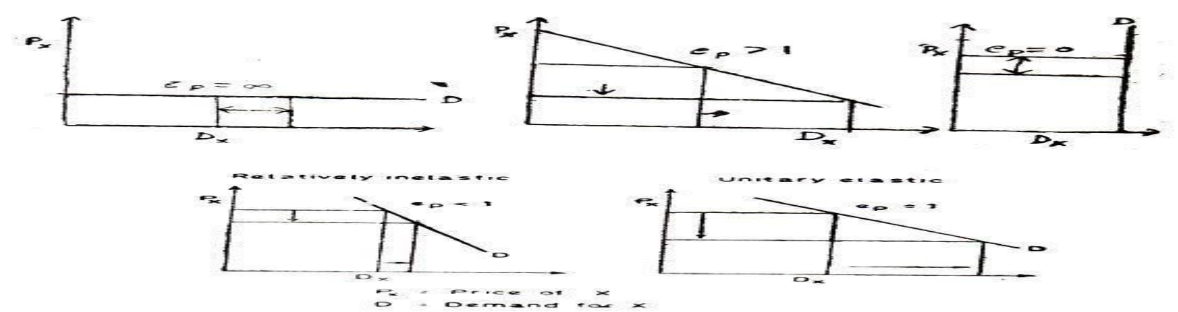
**E. UNIT ELASTICITY OF DEMAND:**

The change in demand is exactly equal to the change in price. When both are equal E=1 and elasticity if said to be unitary.




When price falls from 'OP' to 'OP1' quantity demanded increases from 'OP' to 'OP1', quantity demanded increases from 'OM' to 'OM1'. Thus a change in price has resulted in an equal change in quantity demanded so price elasticity of demand is equal to unity.

Fig. VI. 6 a



**TYPES OF ELASTICITY OF DEMAND:**

There are three 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:**

Marshall was the first economist to define price elasticity of demand. Price elasticity of demand measures changes in quantity demand to a change in Price. It is the ratio of percentage change in quantity demanded to a percentage change in price.

Proportionate change in the quantity demand of commodity

**Price elasticity** = ----------------------------------------------------------------

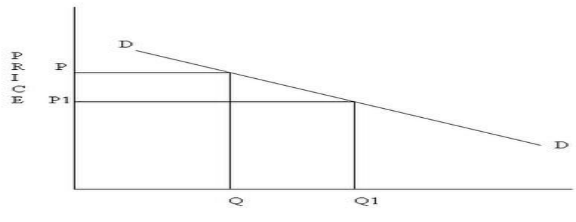
Proportionate change in the price of commodity

There are three cases of price elasticity of demand

- ✓ Price elasticity greater than unity
- ✓ Price elasticity leas than unity
- ✓ Unit price elasticity

**Price elasticity greater than unity:**

Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this caseE > 1. This demand curve will be flatter.

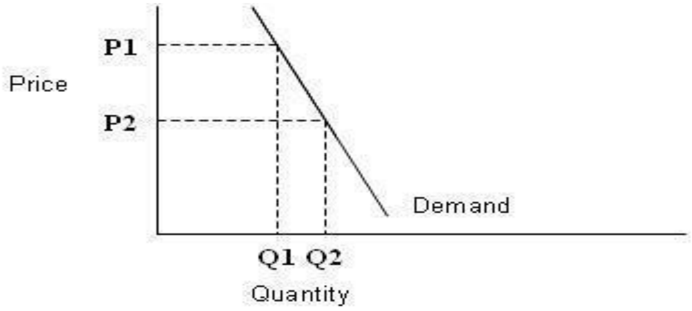



Relatively Elastic Curve

When price falls from 'OP' to 'OP1', amount demanded increase from "OQ' to "OQ1' which is larger than the change in price.

**Price elasticity leas than unity:**

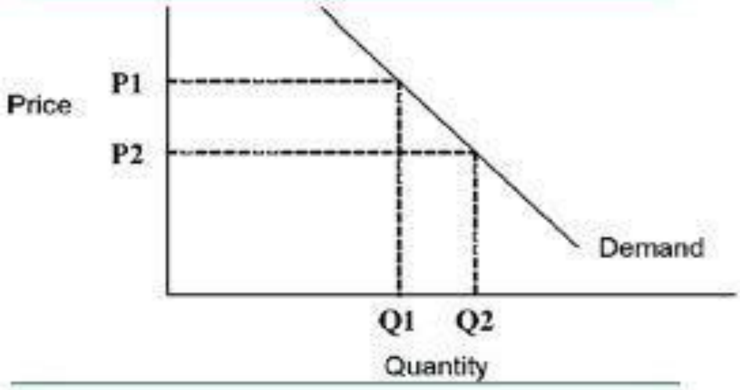
Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.




When price falls from "OP1' to 'OP2 amount demanded increases from OQ1 to OQ2, which is smaller than the change in price. **unit price elasticity:**

The change in demand is exactly equal to the change in price. When both are equal E=1 and elasticity if said to be unitary.

**Figure 3. Unitary elasticity**




**2. INCOME ELASTICITY OF DEMAND:**

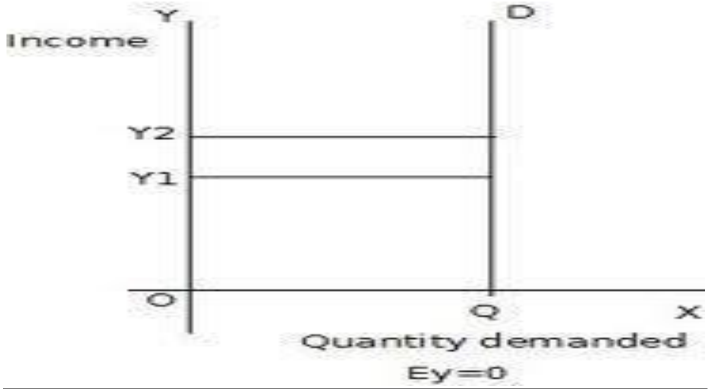
Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

$$\textbf{Income Elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the income of the people}}$$

Income elasticity of demand can be classified in to five types.

**A. Zero income elasticity:**

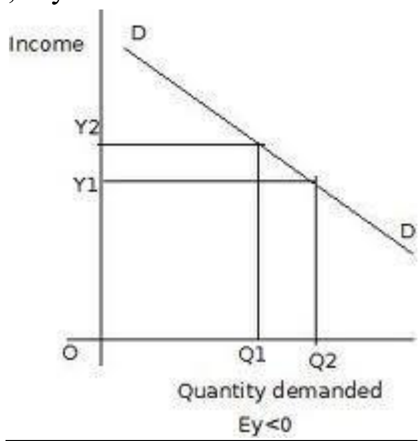
Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way:




As income increases from OY to OY1, quantity demanded never changes.

**B. Negative Income elasticity:**

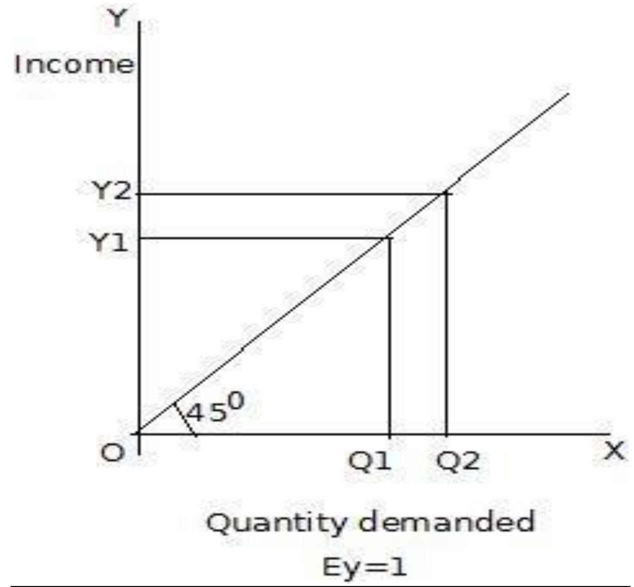
When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., Ey< 0




When income increases from OY1 to OY2, demand falls from OQ1 to OQ2.

**c. Unit income elasticity:**

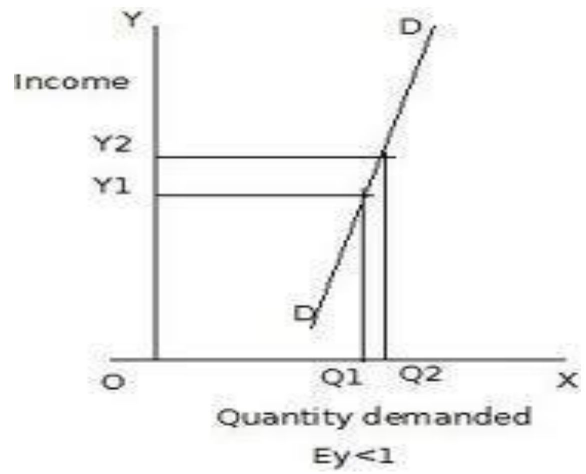
When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1




When income increases from OY1 to OY2, Quantity demanded also increases from OQ1 to OQ2.

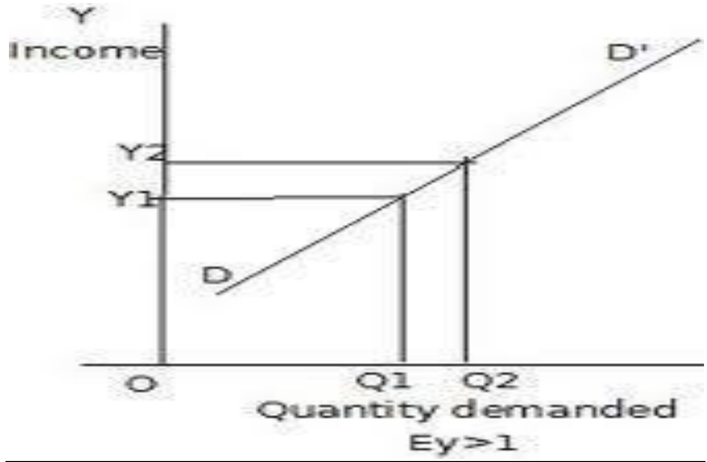
**d. Income elasticitylees than unity:**

In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey< 1.




It shows high-income elasticity of demand. When income increases from OY to OY1, Quantity demanded increases from OQ to OQ1. **E. Income elasticity greater than unity:**

When income increases quantity demanded also increases but less than proportionately. In this case E < 1.




An increase in income from OY1 to OY2, brings what an increase in quantity demanded from OQ1 to OQ2, But the increase in quantity demanded is smaller than the increase in income. Hence, income elasticity of demand is less than one.

**3. CROSS ELASTICITY OF DEMAND:**

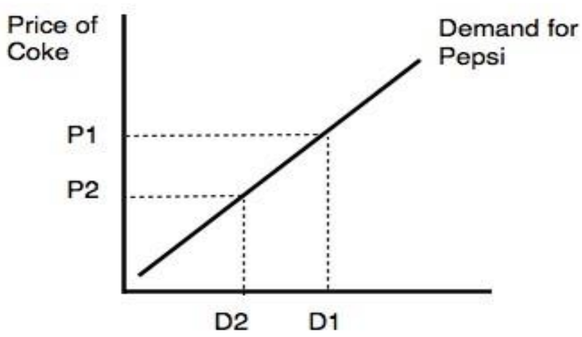
A change in the price of one commodity leads to a change in the quantity demanded of another commodity. This is called a cross elasticity of demand. The formula for cross elasticity of demand is:

Proportionate change in the quantity demand of commodity “**X**”

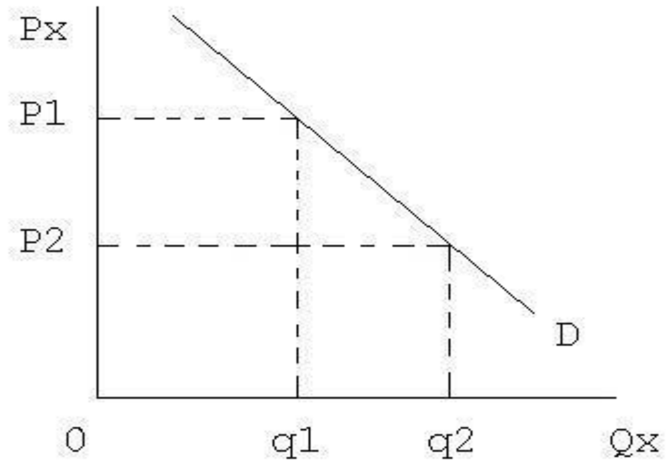
**Cross elasticity** = ------------------------------------------------------------------

Proportionate change in the price of commodity “**Y**”

**A.In case of substitutes**, cross elasticity of demand is positive. Eg: Coffee and Tea. When the price of coffee increases, Quantity demanded of tea increases. Both are substitutes.




**B.In case of compliments**, cross elasticity is negative. If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa.




When price of car goes up from OP to OP! the quantity demanded of petrol decreases from OQ1 to OQ2. The cross-demanded curve has negative slope.

**4 ADVERTISING ELASTICITY OF DEMAND**

It refers to increase in the sale revenue because of changes in the advertising expenditure. In other words there is a direct relationship between the amount of money spent on advertising and its impact on sales. It is always positive

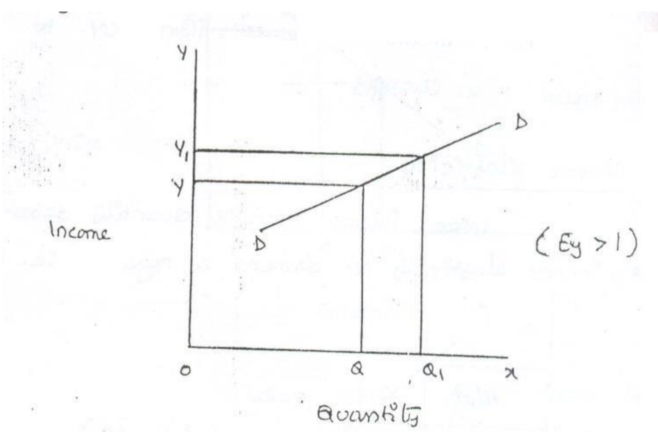
Proportionate change in the quantity demand of product "**X**"

**Advertising elasticity** = ---------------------------------------------------------------------

Proportionate change in the advertising cost

**Advertising elasticity greater than unity:**

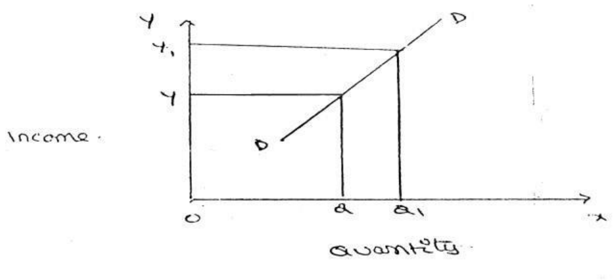
In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey> 1.



It shows high-income elasticity of demand. When income increases from OY to OY1, Quantity demanded increases from OQ to OQ1.

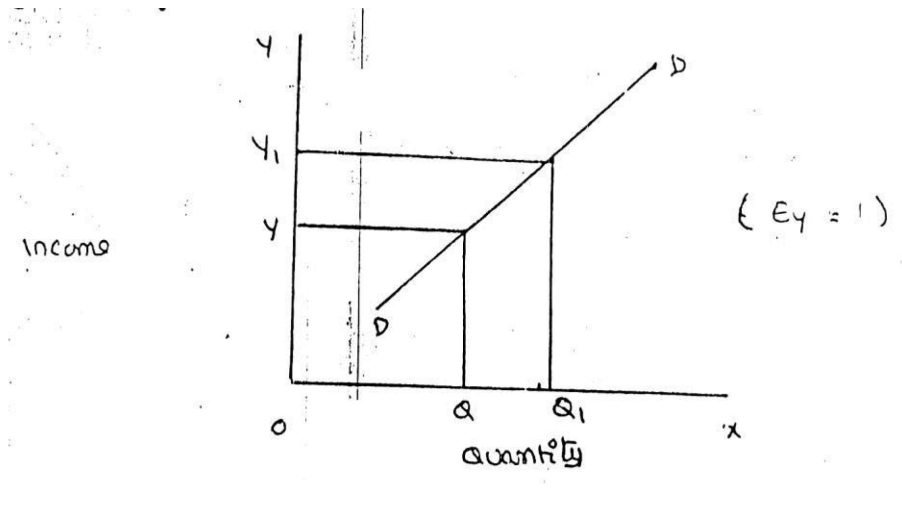
**Advertising elasticity leas than unity:**

When income increases quantity demanded also increases but less than proportionately. In this case E < 1.




**Unit advertising elasticity:**

When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Eye = 1




## <u>FACTORS INFLUENCING THE ELASTICITY OF DEMAND</u>

Elasticity of demand depends on many factors.

***1. Nature of commodity:***

Elasticity or in-elasticity of demand depends on the nature of the commodity i.e. whether a commodity is a necessity, comfort or luxury, normally; the demand for Necessaries like salt, rice etc is inelastic. On the other band, the demand for comforts and luxuries is elastic.

***2. Availability of substitutes:***

Elasticity of demand depends on availability or non-availability of substitutes. In case of commodities, which have substitutes, demand is elastic, but in case of commodities, which have no substitutes, demand is in elastic.

***3. Variety of uses:***

If a commodity can be used for several purposes, than it will have elastic demand. i.e. electricity. On the other hand, demanded is inelastic for commodities, which can be put to only one use.

***4. Postponement of demand:***

If the consumption of a commodity can be postponed, than it will have elastic demand. On the contrary, if the demand for a commodity cannot be postpones, than demand is in elastic. The demand for rice or medicine cannot be postponed, while the demand for Cycle or umbrella can be postponed.

***5. Amount of money spent:***

Elasticity of demand depends on the amount of money spent on the commodity. If the consumer spends a smaller for example a consumer spends a little amount on salt and matchboxes. Even when price of salt or matchbox goes up, demanded will not fall. Therefore, demand is in case of clothing a consumer spends a large proportion of his income and an increase in price will reduce his demand for clothing. So the demand is elastic.

***6. Time:***

Elasticity of demand varies with time. Generally, demand is inelastic during short period and elastic during the long period. Demand is inelastic during short period because the consumers do not have enough time to know about the change is price. Even if they are aware of the price change, they may not immediately switch over to a new commodity, as they are accustomed to the old commodity.

***7. Range of Prices:***

Range of prices exerts an important influence on elasticity of demand. At a very high price, demand is inelastic because a slight fall in price will not induce the people buy more. Similarly at a low price also demand is inelastic. This is because at a low price all those who want to buy the commodity would have bought it and a further fall in price will not increase the demand. Therefore, elasticity is low at very him and very low prices.

## IMPORTANCE OF ELASTICITY OF DEMAND:

The concept of elasticity of demand is of much practical importance.

***1. Price fixation:***

The manufacturer can decide the amount of price that can be fixed for his product based on the concept of elasticity. If there is no competition the manufacturer is free to fix his price. Where there is a competition it difficult to fix the price

***2. Production:***

Producers generally decide their production level on the basis of demand for the product. Hence elasticity of demand helps the producers to take correct decision regarding the level of cut put to be produced.

***3. Distribution:***

Elasticity of demand also helps in the determination of rewards for factors of production. For example, if the demand for labour is inelastic, trade unions will be successful in raising wages. It is applicable to other factors of production.

***4. International Trade:***

Elasticity of demand helps in finding out the terms of trade between two countries. Terms of trade refers to the rate at which domestic commodity is exchanged for foreign commodities. Terms of trade depends upon the elasticity of demand of the two countries for each other goods.

***5. Public Finance:***

Elasticity of demand helps the government in formulating tax policies. For example, for imposing tax on a commodity, the Finance Minister has to take into account the elasticity of demand.

***6. Nationalization:*** The concept of elasticity of demand enables the government to decide about nationalization of industries.

*7.* **Forecasting demand:**

Income elasticity is used to forecasting demand for product. The demand for the product can be forecasting a given level. Other words, the impact of changing income level on the demand of the product can be assessed with the help of income elasticity

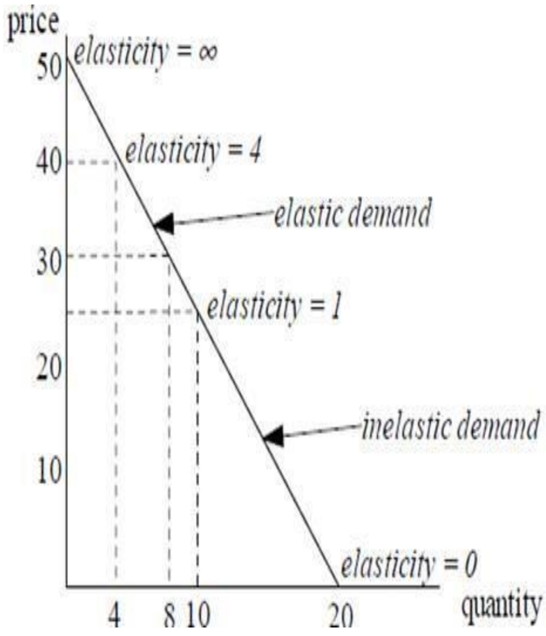
*8.* **Planning the level of output and price:**

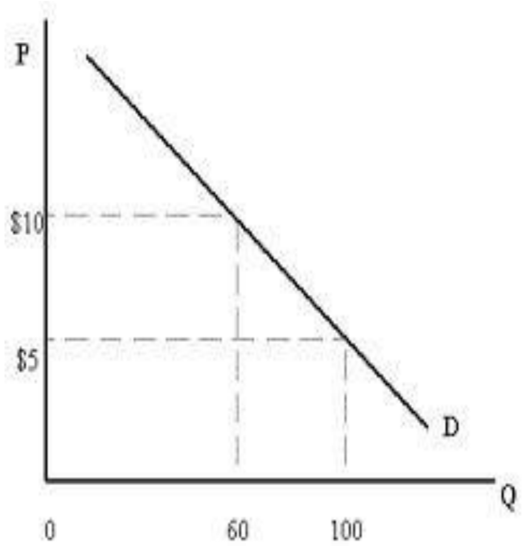
The knowing of price elasticity is very useful to producers. If the demand for the product is inelasticity, a little higher price may be to him to get huge profits

*9.* **Public utilities**:

The govt uses the concept of elasticity in fixing chargers for the public utility such as electricity, water ect

**Point elasticity and arc elasticity**




**DEMAND FORECASTING**

**INTRODUCTION:**

The information about the future is essential for both new firms and those planning to expand the scale of their production. Demand forecasting refers to an estimate of future demand for the product. Forecasting helps to assess the likely demand for products and services and to plan production accordingly

In recent times, forecasting plays an important role in business decision-making. Demand forecasting has an important influence on production planning. It is essential for a firm to produce the required quantities at the right time.

It is essential to distinguish between forecasts of demand and forecasts of sales. Sales forecast is important for estimating revenue cash requirements and expenses. Demand forecasts relate to production, inventory control, timing, reliability of forecast etc. However, there is not much difference between these two terms.

**THE NEED FOR DEMAND FORECASTING**

The importance of demand forecasting is paramount when either production or demand is uncertain. Where the supply is not in accordance with the demand, it results in the development of a black market or excessive prices.

Where there is a lot of competition, the entrepreneur has to estimate the demand for his production and services so that he can plan his material inputs, such as manpower, finances, advertising and other overheads.

**TYPES OF DEMAND FORECASTING:**

Based on the time span and planning requirements of business firms, demand forecasting can be classified in to

1. Short-term demand forecasting and

2. Long – term demand forecasting.

***1. Short-term demand forecasting:*** Short-term demand forecasting is limited to short periods, usually for one year. It relates to policies regarding sales, purchase, price and finances. It refers to existing production capacity of the firm. Short-term forecasting is essential for formulating is essential for formulating a suitable price policy. If the business people expect of rise in the prices of raw materials of shortages, they may buy early... Production may be undertaken based on expected sales and not on actual sales.

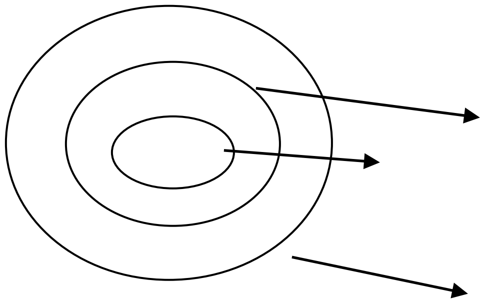
***2. Long – term forecasting:*** In long-term forecasting, the businessmen should now about the long-term demand for the product. Planning of a new plant or expansion of an existing unit depends on long-term demand. Similarly a multi product firm must take into account the demand for different items. When forecast are mode covering long periods, the probability of error is high. It is very difficult to forecast the production, the trend of prices and the nature of competition.

**<u>FORECASTING LEVELS</u>**

**INDUSTRY LEVEL**

**FIRM LEVEL**

**ECONOMIC LEVEL**



Economic forecasting is concerned with the economics, its covers whole economy. It based on levels of income saving of the customers.

Industrial level forecasting is used for inter-industry comparisons and is being supplied by trade association or chamber of commerce.

Firm level forecasting relates to individual firm. Estimate the demand for product and services offered by a single firm

**<u>Functional nature o demand</u>**

Higher volumes of sales can be realized with higher level of advertisements. However there could be some minimum value sales even when there are no advertisements on a large scale.

**<u>Degree of orientation</u>**

The fore casting is terms of total sales can be viewed as general forecasting where as product and service wise forecasting is a refers to specific forecasting.

**METHODS OF DEMANDFORECASTING**

1. SURVEY METHOD
   (a) Census methods
   (b) Sample method
2. STATISTICAL METHODS

   1. Trend Projection Methods

      A) Moving Average Method

B) Exponential Smoothing

2. Barometric Techniques

3. Correlation and Regression Methods

3.OTHERS METHODS

(a)Expert Opinion

(B)Test Marketing

(C)Controlled Experiments

(D)Judgmental Approach

**1. Survey method :**

It is the most useful source of information would be the buyers themselves. It is better to draw list of all potential buyers, approach each buyers to ask how much he plans to buy of the given product at a given point of time. The survey of buyers can be conducted either by covering the whole populations or by selecting a sample group of buyers. Suppose there are 10000 buyers for a particular product.

If the company wishes to elicit the opinion of all the buyers, this method is called census or total enumeration methods. This methods is not only time consuming but also costly. The firm can select a group of buyers who can represent the whole populations this methods is called the sample method.

The survey method is considered more advantages in the following situations.

(1) Where the product is new on the market for which no data previously exists

(2) When the buyers are few and they are accessible

(3) When the cost of reaching them is not significant (4) When the consumers stick to their intentions

(5) When they are willing to disclose what they intend to do.

This method has certain disadvantages also. They are:

(1) SURVEYS MAY BE EXPENSIVE**;-**Quite often the value of information supplied by the customer is not worth the cost of gathering it.

(2) SAMPLE SIZE AND TIMING OF SURVEY**;-**Sample size should be large enough to yield meaningful results on the desired aspects of study. Also the sample should be selected in such a way that it represents the whole population under the study. This increase the cost and also the time needed to undertake the analysis. The forecast results can deeply be influenced by the timing of the survey. For example, the number of residents preferring to stay in multi-stored apartments soon after the news about an earthquake may drastically come down when compared to the normal times.

Where the surveys are conducted by a group of firms, these costs can be shared.

(3) METHODS OF SAMPLING**;-**The survey should be based on appropriate method of sampling. The method so selected should be capable of providing result with no bays. For instance, the surveys conducted on the internet will have a built-in bias towards those in the higher socio-economic groups who have access to interment.

(4) INCONSISTENT BUYING BEHAVIOUR**;-**The buyers also may not express their intentions freely. Even the buyers do no act upon the way they express. Most of the buyers are susceptible to the advertisement strategies and are emotional when it really comes to the question of buying the product or services.

**STATISTICAL METHODS**

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

**1. 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)**MOVING AVERAGE METHOD;-**This method considers that the average of past events determine the future events. In other words, this method provides consistent results when the past events are consistent and unaffected by wide changes. As the name itself suggest, under this method, the average keeps on moving depending up on the number of years selected. Selection of the number of years is the decisive factor in this method. Moving averages get updated as new information flows in.

(c)**EXPONENTIAL SMOOTIHING;-**This is a more popular technique used for short forecasts. This method is an improvement over moving averages method. Unlike in moving averages method, all time periods (ranging from the immediate past) here are given varying weights, that is, the values of the given variable in the recent time are given higher weights and the values of the given variable in the distant past are given relatively lower weights for further processing.

**2. BAROMETRIC TECHNIQUES;-**In other words, to forecast demand for a particular product or service, use some other relevant indicator (Which is known as a barometer) of future demand. How the statistical data relating to the economy comes handy for this purpose is explained in the following examples.

**3. CORRELATION AND REGRESSION METHODS;-**Correlation and regression methods are statistical techniques. When the two variables tend to change together, then they are said to be correlated. The extent to which they are correlated is measured by correlation coefficient. Of these two variables, one is a dependent variable and the other is an independent. If the high values of one variable are associated with the high values of another, they are said to be positively correlated. For example, if the advertisement are positively correlated. Similarly, if the high values of one variable are associated with the low values of another, then they are said to be negatively correlated. For example, if the price of a product has come down; and as result, there is increase in its demand; the demand and the price are negatively correlated.

**OTHERS METHODS**

**(a)EXPERT OPINION**: Well informed person are called experts. Experts constitute another source of information. These people are generally the outside experts and they do not have any vested in the result of particular survey

An expert is good at forecasting and analyzing the future trends in a given product or service at a given level of technology. The service of an expert could be advantageously used when a firm uses general economic forecast or special industry forecast prepared outside the firm. It may be easy to administer this method where there are parameters clearly defined to make forecast. This act as guidelines

This method has certain advantages and disadvantages.

- Result of this method would be more reliable as the expert is unbiased, has no direct involvement in its primary activities
- Independent demand forecast can be made relatively quickly and cheaply
- Where there is different point of view among different experts, consensus can be arrived through an objective analysis. These experts can be asked to explain the reasons why the forecasts are out of line with consensus. These can be taken into account before taking the final decisions. Sorting out difference in estimates in this way is called DELPHI TECNIQUE

**(b)TEST MAREKETING**: It is likely that opinions given by buyers, sales man or other experts may be, at times, misleading. This is the reason why of the manufacturers favor to test their product or service in a limited market as test –run before they launch their product nationwide. Based on the result of test marketing, valuable lessons can be learnt in how customer 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.

Automobiles companies maintain a panel of consumers who give feedback on style and design and specification of the new models. Accordingly these companies make changes, if any, and launch the product in the wider markets

The advantages of test marketing are:

- The acceptability of the product can be judged in a limited market
- Before this is too late, the correction can be made to the product design, if necessary. Thus, major atrophy, in term of failure, can be avoided.
- The customer psychology is more focused in this method and the product and service are aligned or redesigned accordingly to gain more customer acceptance

The following are the disadvantages of this method:

- It reveals the quality of product to the competitors before it is launched in the wider markets. The competitors may bring about the similar product or often misuse the result of test marketing against the given company.
- It is not always easy to select a representative audience or market.

- It may also be difficult to extrapolate the feedback received from such a test market, particularly where the chosen market is not fully representative.

**(c)CONTROLLED EXPERIMENTS**: It refers to such exercises of the major determinants of demand are manipulated to suit to the customer with taste and preferences, income groups, and such other. It is further factors remain same in this method in this method the product is introduced in different packages, different prices in different markets or same markets.

This method is still in the infancy stage and not much tried because of the following reasons:

- It is costly and consuming
- It involves elaborate model of studying different markets and different permutations and combinations that can push the product aggressively
- It fails in one market, it may affect other market also

**(d)JUDGEMENTAL APPROACH**: When none of the above methods are directly related to the given product or service, the management has no alternative other than using its own judgment. Even when the above methods are used, the forecasting process is supplemented with the factor of judgment for the following reasons:

- Historical data for significantly long period is not available

| **Price of goods (Rs)** | **Quantity supplied** |
|---|---|
| **10** | 5 |
| **20** | 7 |
| **30** | 8 |
| **40** | 10 |
| **50** | 15 |

- Turning points in terms of polices or procedure

## UNIT -3:

# Unit 3

# PRODUCTION:

**Introduction:**

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 **Definition:**

Samuelson defines the production function as "the technical relationship which reveals the maximum amount of output capable of being produced by each set of inputs". It is defined for a given state of technical knowledge.

**Input-Output Relationship or Production Function**

The inputs for any product or service are land, labour, capital, organization and technology. In other words, the production here is the function here of these five variable inputs. Mathematically, this is expressed as

Q=F (L1, L2, C, O, T)

L1 =land

L2 =labour

C = capital

O = organization

T = technology

Where Q is the quantity of production, f explains the function, that is, the type of relation between inputs and outputs these inputs have been taken in conventional terms. In reality, materials also can be included in a set of inputs.

In a specific situation, some factors of production may be important and the relative importance of the factors depends upon the final product to be manufactured. For example, in the case of the software industry, land is not an input factor as significant as that in case of an agricultural product.

In the case of an agricultural product, increasing the other factors of production can increase the production; but beyond a point, increased output can be had only with increased use of agricultural land. Investment in land forms a significant portion of the total cost of production for output. With change in industry and the requirements, the production function also needs to be modified to suit to the situation.

**Assumptions:**

Production function has the following assumptions.

1. The production function is related to a particular period of time.
2. There is no change in technology.
3. The producer is using the best techniques available.
4. The factors of production are divisible.
5. Production function can be fitted to a short run or to long run.

**Production Function with One Variable Inputs and Laws Of Returns**

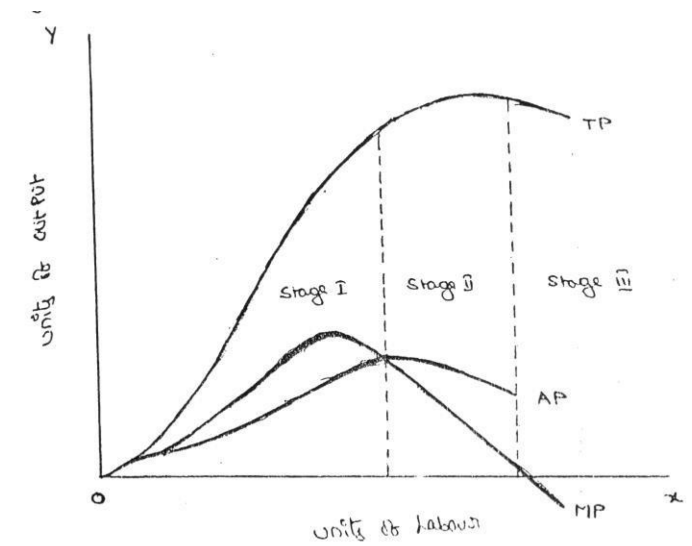
Assume that a firms production function consists of fixed quantities of all inputs (land, equipment, etc.) except labour which is a variable input when the firm expands output by employing more and more labour it alters the proportion between fixed and the variable inputs. The law can be stated as follows:

"When total output or production of a commodity is increased by adding units of a variable input while the quantities of other inputs are held constant, the increase in total production becomes after some point, smaller and smaller".

**Three stages of law:**

The behaviors of the Output when the varying quantity of one factor is combines with a fixed quantity of the other can be divided in to three district stages. The three stages can be better understood by following the table.

| Fixed factor | Variable factor (Labour) | Total product | Average Product | Marginal Product | |
|---|---|---|---|---|---|
| 1 | 1 | 100 | 100 | - | Stage I |



| | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 220 | 120 | 120 | |
| 1 | 3 | 270 | 90 | 50 | |
| 1 | 4 | 300 | 75 | 30 | Stage II |
| 1 | 5 | 320 | 64 | 20 | |
| 1 | 6 | 330 | 55 | 10 | |
| 1 | 7 | 330 | 47 | 0 | Stage III |
| 1 | 8 | 320 | 40 | -10 | |

Above table reveals that both average product and marginal product increase in the beginning and then decline of the two marginal products drops of faster than average product.

Total product is maximum when the farmer employs $6^{th}$ worker, nothing is produced by the $7^{th}$ worker and its marginal productivity is zero, whereas marginal product of $8^{th}$ worker is ‘10’, by just creating credits $8^{th}$ worker not only fails to make a positive contribution but leads to a fall in the total output.

Production function with one variable input and the remaining fixed inputs is illustrated as below

From the above graph the law of variable proportions operates in three stages. In the first stage, total product increases at an increasing rate. The marginal product in this stage increases at an increasing rate resulting in a greater increase in total product. The average product also increases. This stage continues up to the point where average product is equal to marginal product. The law of increasing returns is in operation at this stage.

The law of diminishing returns starts operating from the second stage awards. At the second stage total product increases only at a diminishing rate. The average product also declines. The second stage comes to an end where total product becomes maximum and marginal product becomes zero. The marginal product becomes negative in the third stage. So the total product also declines. The average product continues to decline

| STAGES | TP | MP | AP |
|---|---|---|---|
| 1 | Increase at an increasing rate | Increase reach the maximum | Increase and reach the maximum |
| 2 | Increase atDiminishing rate Till it reaches Maximum | Diminish equal to zero | Starts Diminish |
| 3 | Start declining | Because negative | Continues to decline |

**Production Function with Two Variable Inputs and Laws of Returns**

Let us consider a production process that requires two inputs, capital(c) and labour (L) to produce a given output (Q). There could be more than two inputs in a real life situation, but for a simple analysis, we restrict the number of inputs to two only. In other words, the production function based on two inputs can be expressed as:

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

Normally, both capital and labour are required to produce a product. To some extent, these two inputs can be substituted for each other. Hence the product may choose any combination of labour and capital that gives him the required number of units of output. For any given level of output, a producer may hire both capital and labour, but he is free to choose any one combination of labour and capital out of several such combinations. The alternative combinations of labour and capital yielding a given level of output are such that if the use of one factor input is increased, that of another will decrease and vice versa.

## ISOQUANTS:

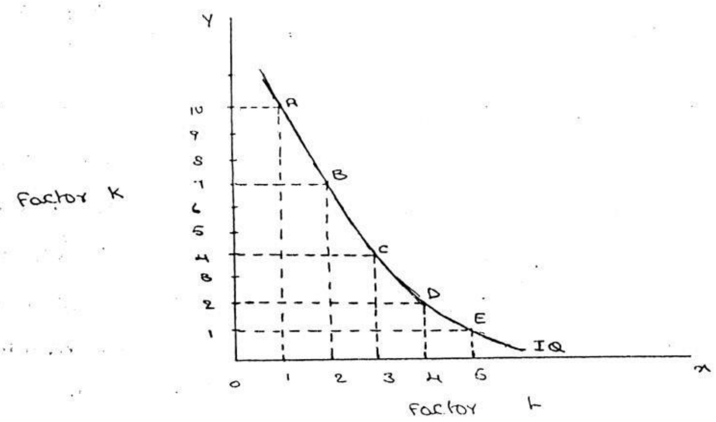
The term Isoquants is derived from the words ‘iso’ and ‘quant’ – ‘Iso’ means equal and ‘quent’ implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are 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 on the isoquant represents the some level of output.

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

Where ‘Q’, the units of output is a function of the quantity of two inputs ‘L’ and ‘K’.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 yields same output, the producer becomes indifferent towards these combinations.

| Combinations | Labour (units) | Capital (Units) | Output (quintals) |
|---|---|---|---|
| A | 1 | 10 | 50 |
| B | 2 | 7 | 50 |
| C | 3 | 4 | 50 |
| D | 4 | 4 | 50 |
| E | 5 | 1 | 50 |




**FEATURES OF AN ISOQUANT**

**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.

A degree of substitution is assumed between the factors of production. In other words, an isoquant cannot be increasing, as increase in both the inputs does not yield same level of output. If it is constant, it means that the output remains constant though the use of one of the factors is increasing, which is not true, isoquants slope from left to right.

**CONVEX TO ORIGIN:-**

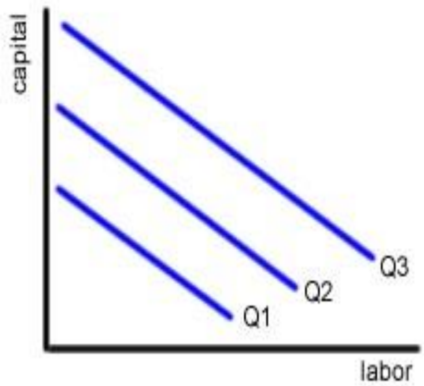
Isoquants are convex to the origin. It is because the input factors are not perfect substitutes. One input factors were perfect substituted by other input factor in a 'diminishing marginal rate'. If the input factors were perfect substitutes, the isoquant would be a falling straight line. When the inputs are used in fixed proportion, and substitution of one input for the other cannot take place, the isoquant will be L shaped.

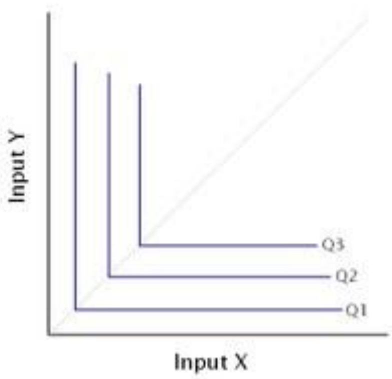
**DO NOT INTERSECT:-**

Two isoproducts do not intersect with each other. It is because, each of these denote a particular level of output. If the manufacturer wants to operate at a higher level of output, he has to switch over to another isoquant with a higher level of output and vice versa.

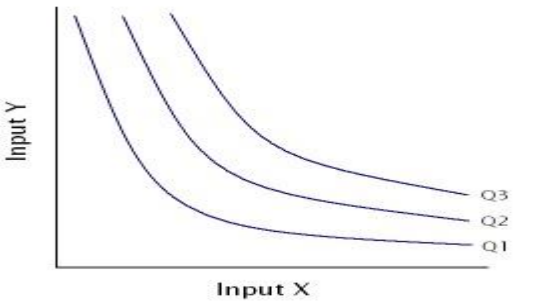
**DO NOT TOUCH AXES:-**

The isoquant touches neither x-axis nor y-axis, as both inputs are required to produce a given product.




isoquant perfect substitute isoquant not perfect substitute




It showing different volume of output

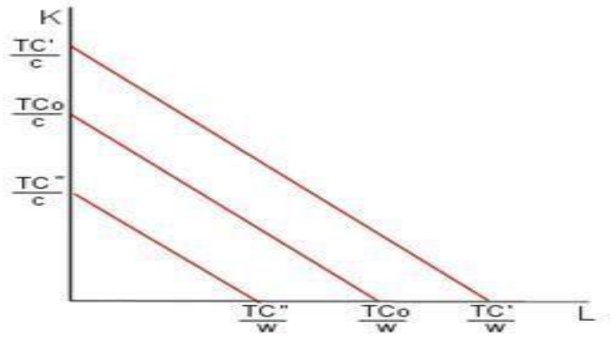
## ISO COST

**Definition**:

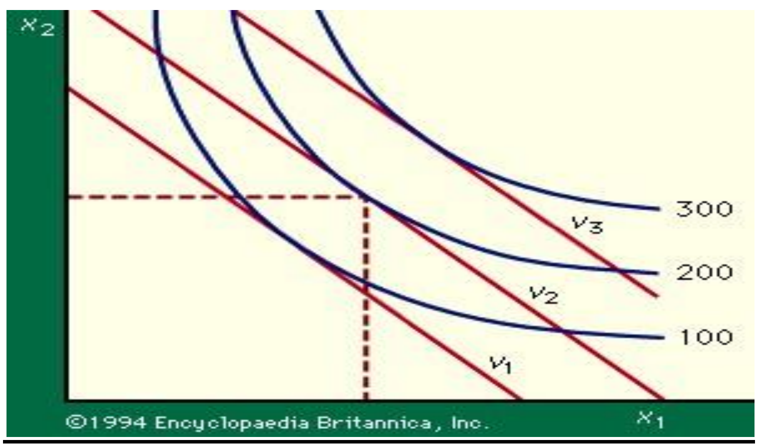
A firm can produce a given level of output using efficiently different combinations of two inputs. For choosing efficient combination of the inputs, the producer selects that combination of factors which has the lower cost of production. The information about the cost can be obtained from the ***isocost lines.***

**Explanation:**

An isocost line is also called ***outlay line or price line or factor cost line.*** An isocost line shows all the combinations of labor and capital that are available for a given total cost to-the producer.. In economics, the isocost is the set of combinations of goods that have the same total cost; this can be represented by a curve on a graph.
In economics an `isocost` line shows all combinations of inputs which cost the same total amount




Isoquant and Isocost



**Cobb-Douglas production function:**

Production function of the linear homogenous type is invested by and first tested by C. W. Cobb and P. H. Dougles in 1899 to1922. This famous statistical production function is known as Cobb-Douglas production function. Originally the function is applied on the empirical study of the American manufacturing industry. Cabb – Douglas production function takes the following mathematical form.

$$Y= (bK_{X}\,L_{1-x})$$

Where Y=output k=Capital L=Labour

The production function shows that one percent change in labour, capital reaming the same is associated with a 0.75 %change in output. One percent change in capital, labour reaming the same, is associated with a 0.25 %change in output.

**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(same)

## RETURNS TO SCALE

Another important attribute of production function is how output responds in the long run to changes in the scale of the firm i.e. when all inputs are increased in the same proportion (by say 10%), how does output change.

Clearly, there are 3 possibilities. If output increases by more than an increase in inputs (i.e.by more than 10%), then the situation is one of **increasing returns to scale (IRS).**

If output increases by less than the increase in inputs, then it is a case of **decreasing returns to scale (DRS).** Lastly, output may increase by exactly the same proportion as inputs. For example a doubling of inputs may lead to a doubling of output. This is a case of **constant returns to scale (CRS).**

| Capital (Units) | Labour (units) | % increase in both inputs | Output (quintals) | % increase in both output | Law applications |
|---|---|---|---|---|---|
| 1 | 3 | | 50 | | |
| 2 | 6 | 100 | 120 | 140 | increase |
| 4 | 12 | 100 | 240 | 100 | constant |
| 8 | 24 | 100 | 360 | 50 | decrease |

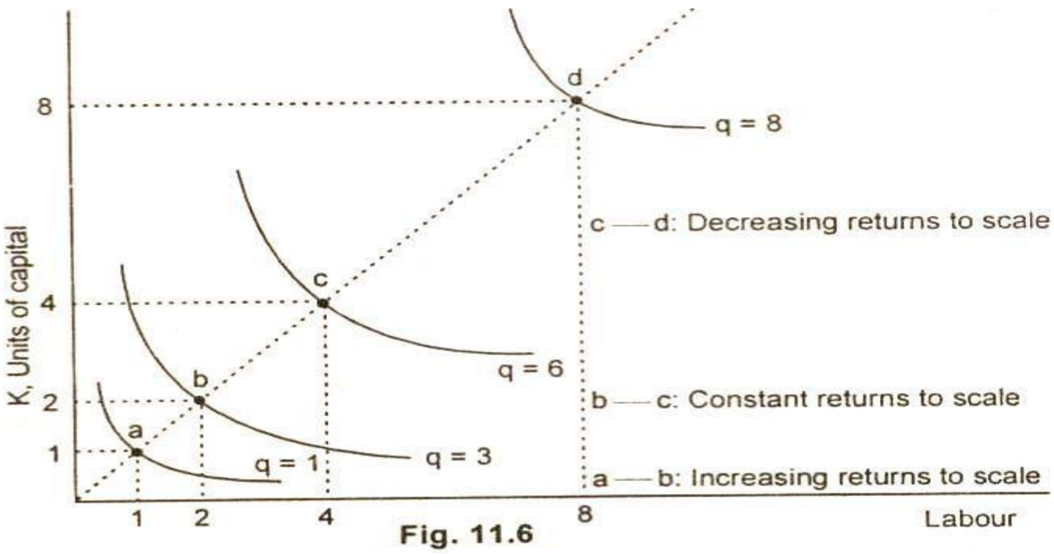


Fig. 11.6

## ECONOMIES OF SCALE

The economics of scale result because of increase in the scale of production. Marshal divides the economies of scale into two groups:

Internal economies External; economies

**Internal economies:**

It refers to the economies in production cost which accrue to the firm alone when it expands it output. the internal economies occur as results of increase in the scale of production.

The internal economies divide into following type:

1. **Managerial economies :**

As the firm expands the firm need qualified managerial personnel to handle each of its functions such as marketing, finance, ect functional specilizational ensure minimum wastage and lower the cost of productions in the long run.

2. **Commercial economies**

The transactions of buying and selling raw material and other operating supplies such as spares and so on. There could be cheaper saving in the procurement, transportation and storage costs. This will leads to lower cost and increase profits.

3. **Financial economies**

There could be cheaper credit facility from the financial institution to meet the capital expenditure or working capital requirement .a large firm to give security to financial institution

4. **Technical economies**

Increase in the scale of production follows when there is sophisticated technology available and the firm is in a position to hire qualified technology manpower to make use of it.

5. **Marketing economies**

As the firm grow lager and lager it can afford to maintain a full fledged marketing department independently to handle the issues related to design of customer ,promotion ,marketing staff.

6. **Risk bearing economies**

As there is growth in size of firm there is increase in the risk also. Sharing in the risk with the insurance companies is the first priority for any firm. The firm insure it machinery and other assets against the fire theft ect.the lager firm can spread their risk so that they do not keep all their eggs in one basket.

7. **Economies of research and development**

Large organizations such as dr.reddy labs,HCL, ect bring out several innovative products.

**External economies**

It refers to the entire firm in the industry, because of growth of the on industry as a whole or because of growth of industry.

1. **Economies concentration**

   Because all firm are located at one place ,it is likely that there is better infrastructure in term of approach roads, tans potation ect

2. **Economies of R&D**

   The entire firm can pool resource together to finance research and development activity and thus shares benefits of research.

3. **Economies of welfare**

There could be common facility such as canteen, industry housing, community halls,ect which can be used in common by the employee in the whole industry. 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 secures certain advantages known as economies of production. Marshall has classified these economies of large-scale production 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.

# 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. Since every business decision involves cost consideration, it is necessary to understand the meaning of various 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. Out-of pocket and books costs:***

Out-of pocket costs also known as explicit costs are those costs that involve current cash payment. Book costs also called implicit costs do not require current cash payments. Depreciation, unpaid interest, salary of the owner is examples of back costs.

But the book costs are taken into account in determining the level dividend payable during a period. Both book costs and out-of-pocket costs are considered for all decisions. Book cost is the cost of self-owned factors of production.

***6. 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.

***7. Post and Future costs:***

Post costs also called historical costs are the actual cost incurred and recorded in the book of account these costs are useful only for valuation and not for decision making.

Future costs are costs that are expected to be incurred in the futures. They are not actual costs. They are the costs forecasted or estimated with rational methods. Future cost estimate is useful for decision making because decision are meant for future.

***8. Traceable and common costs:***

Traceable costs otherwise called direct cost, is one, which can be identified with a products process or product. Raw material, labour involved in production is examples of traceable cost.

Common costs are the ones that common are attributed to a particular process or product. They are incurred collectively for different processes or different types of products. It cannot be directly identified with any particular process or type of product.

***9. 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.

***10. Controllable and uncontrollable costs:***

Controllable costs are ones, which can be regulated by the executive who is in change 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.

***11. 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.

***12. 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.

***13. Accounting and Economics costs:***

Accounting costs are the costs recorded for the purpose of preparing the balance sheet and profit and ton statements to meet the legal, financial and tax purpose of the company. The accounting concept is a historical concept and records what has happened in the post.

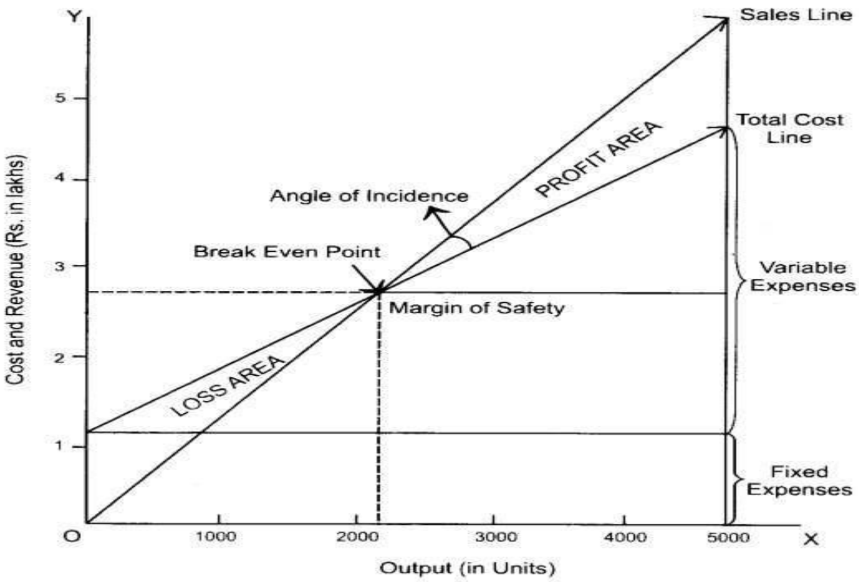
Economics concept considers future costs and future revenues, which help future planning, and choice, while the accountant describes what has happened, the economics aims at projecting what will happen.

# BREAKEVEN ANALYSIS

The study of cost-volume-profit relationship is often referred 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 determine the probable profit at any level of production.

**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 in spite of competition or change in the volume of production.
5. There will be no change in operating efficiency.
6. There will be no change in the general price level.
7. Volume of production is the only factor affecting the cost.
8. Volume of sales and volume of production are equal. Hence there is no unsold stock.
9. 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:**

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 draw back 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. Semi-variable costs are completely ignored.
9. It assumes production is equal to sale. It is not always true because generally there may be opening stock.
10. When production increases variable cost per unit may not remain constant but may reduce on account of bulk buying etc.
11. The assumption of static nature of business and economic activities is a well-known defect of BEC.

1. Fixed cost
2. Variable cost
3. Contribution
4. Margin of safety
5. Angle of incidence
6. Profit volume ratio
7. Break-Even-Point

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. ***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.

4. ***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
4. Substituting unprofitable product with profitable one.

5. ***Angle of incidence:*** This is the angle between sales line and total cost line at the Break-even point. It indicates the profit earning capacity of the concern. Large angle of incidence indicates a high rate of profit; a small angle indicates a low rate of earnings. To improve this angle, contribution should be increased either by raising the selling price and/or by reducing variable cost. It also indicates as to what extent the output and sales price can be changed to attain a desired amount of profit.

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

7. ***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.

Fixed Expenses Contributi on per unit Fixed expenses Contributi on

1. Break Even point (Units) = ____________________
2. Break Even point (In Rupees) = ______________ X sales

# Pricing Methods

## Introduction

Pricing is an important, if not the most important function of all enterprises. Since every enterprise is engaged in the production of some goods or/and service. Incurring some expenditure, it must set a price for the same to sell it in the market. It is only in extreme cases that the firm has no say in pricing its product; because there is severe or rather perfect competition in the market of the good happens to be of such public significance that its price is decided by the government. In an overwhelmingly large number of cases, the individual producer plays the role in pricing its product.

It is said that if a firm were good in setting its product price it would certainly flourish in the market. This is because the price is such a parameter that it exerts a direct influence on the products demand as well as on its supply, leading to firm's turnover (sales) and profit. Every manager endeavors to find the price, which would best meet with his firm's objective. If the price is set too high the seller may not find enough customers to buy his product. On the other hand, if the price is set too low the seller may not be able to recover his costs. There is a need for the right price further, since demand and supply conditions are variable over time what is a right price today may not be so tomorrow hence, pricing decision must be reviewed and reformulated from time to time.

**Price**

Price denotes the exchange value of a unit of good expressed in terms of money. Thus the current price of a maruti car around Rs. 2,00,000, the price of a hair cut is Rs. 25 the price of a economics book is Rs. 150 and so on. Nevertheless, if one gives a little, if one gives a little thought to this subject, one would realize that there is nothing like a unique price for any good. Instead, there are multiple prices.

### Price concepts

Price of a well-defined product varies over the types of the buyers, place it is received, credit sale or cash sale, time taken between final production and sale, etc.

It should be obvious to the readers, that the price difference on account of the above four factors are more significant. The multiple prices is more serious in the case of items like cars refrigerators, coal, furniture and bricks and is of little significance for items like shaving blade, soaps, tooth pastes, creams and stationeries. Differences in various prices of any good are due to differences in transport cost, storage cost accessories, interest cost, intermediaries' profits etc. Once can still conceive of a basic price, which would be exclusive of all these items of cost and then rationalize other prices by adding the cost of special items attached to the particular transaction, in what follows we shall explain the determination of this basis price alone and thus resolve the problem of multiple prices.

**Price determinants – Demand and supply**

The price of a product is determined by the demand for and supply of that product. According to Marshall the role of these two determinants is like that of a pair of scissors in cutting cloth. It is possible that at times, while one pair is held fixed, the other is moving to cut the cloth. Similarly, it is conceivable that there could be situations under which either demand or supply is playing a passive role, and the other, which is active, alone appear to be determining the price. However, just as one pair of scissors alone can never cut a cloth, demand or supply alone is insufficient to determine the price

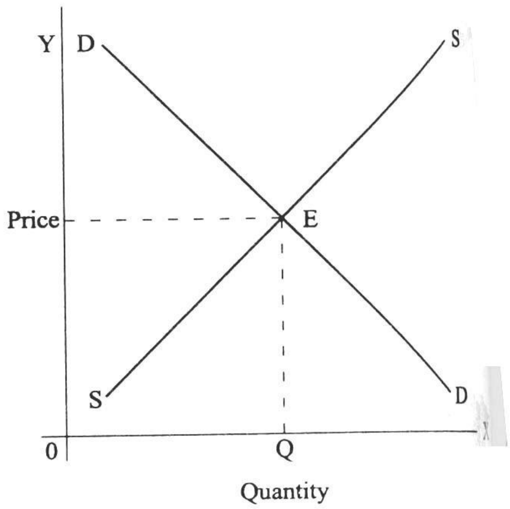
**Equilibrium Price**

The price at which demand and supply of a commodity is equal known as equilibrium price. The demand and supply schedules of a good are shown in the table below.

**Demand supply schedule**

| Price | Demand | Supply |
|---|---|---|
| 50 | 100 | 200 |
| 40 | 120 | 180 |
| 30 | 150 | 150 |
| 20 | 200 | 110 |
| 10 | 300 | 50 |

Of the five possible prices in the above example, price Rs.30 would be the market-clearing price. No other price could prevail in the market. If price is Rs. 50 supply would exceed demand and consequently the producers of this good would not find enough customers for their demand, thereby they would accumulate unwanted inventories of output, which, in turn, would lead to competition among the producers, forcing price to Rs.30. Similarly if price were Rs.10, there would be excess demand, which would give rise to competition among the buyers of good, forcing price to Rs.30. At price Rs.30, demand equals supply and thus both producers and consumers are satisfied. The economist calls such a price as equilibrium price.

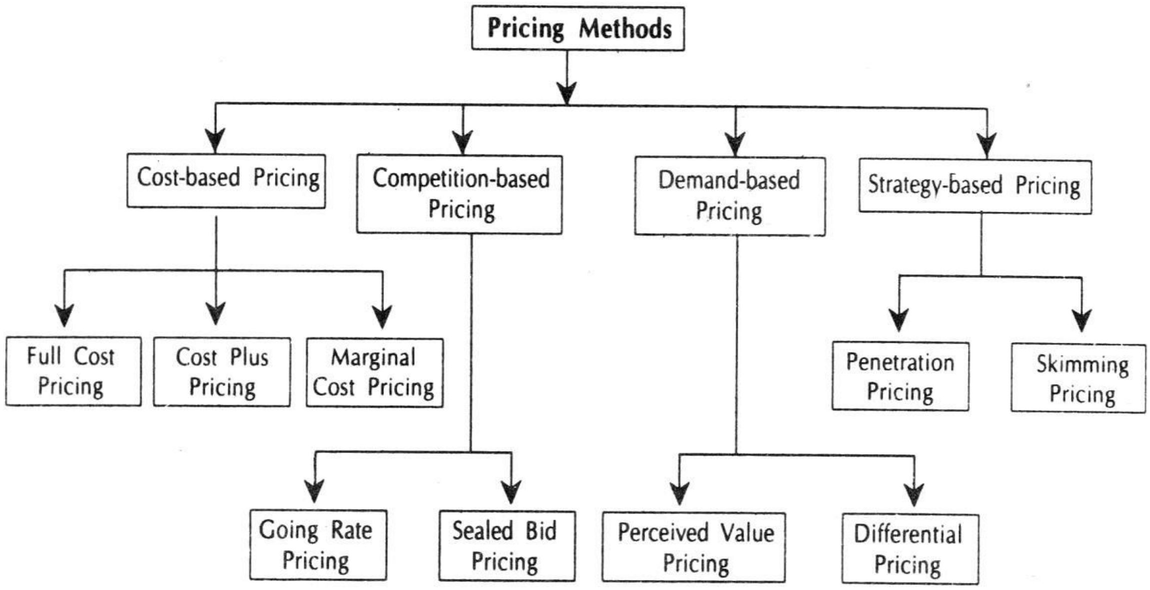



It was seen in unit 1 that the demand for a good depends on, a number of factors and thus, every factor, which influences either demand or supply is in fact a determinant of price. Accordingly, a change in demand or/and supply causes price change.

The micro – economic principle of profit maximization suggests pricing by the marginal analysis. That is by equating MR to MC. However the pricing methods followed by the firms in practice around the world rarely follow this procedure. This is for two reasons; uncertainty with regard to demand and cost function and the deviation from the objective of short run profit maximization.

It was seen that there is no unique theory of firm behavior. While profit certainly on important variable for which every firm cares. Maximization of short – run profit is not a popular objective of a firm today. At the most firms seek maximum profit in the long run. If so the problem is dynamic and its solution requires accurate knowledge of demand and cost conditions over time. Which is impossible to come by?

In view of these problems economic prices are a rare phenomenon. Instead, firms set prices for their products through several alternative means. The important pricing methods followed in practice are shown in the chart.




**Cost Based Pricing**

There are three versions of the cost – based pricing. Full – cost or break even pricing, cost plus pricing and the marginal cost pricing. Under the first version, price just equals the average (total) cost. In the second version, some mark-up is added to the average cost in arriving at the price. In the last version, price is set equal to the marginal cost. While all these methods appear to be easy and straight forward, they are in fact associated with a number of difficulties. Even through difficulties are there, the cost- oriented pricing is quite popular today.

The cost – based pricing has several strengths as well as limitations. The advantages are its simplicity, acceptability and consistency with the target rate of return on investment and the price stability in general. The limitations are difficulties in getting accurate estimates of cost (particularly of the future cost rather than the historic cost) Volatile nature of the variable cost and its ignoring of the demand side of the market etc.

**Competition based pricing**

Some commodities are priced according to the competition in their markets. Thus we have the going rate method of price and the sealed bid pricing technique. Under the former a firm prices its new product according to the prevailing prices of comparable products in the market. If the product is new in the country, then its import cost – inclusive of the costs of certificates, insurance, and freight and customs duty, is used as the basis for pricing, Incidentally, the price is not necessarily equal to the import cost, but to the firm is either new in the country, or is a close substitute or complimentary to some other products, the prices of hitherto existing bands or / and of the related goods are taken in to a account while deciding its price. Thus, when television was first manufactures in India, its import cost must have been a guiding force in its price determination. Similarly, when

maruti car was first manufactured in India, it must have taken into account the prices of existing cars, price of petrol, price of car accessories, etc. Needless to say, the going rate price could be below or above the average cost and it could even be an economic price.

The sealed bid pricing method is quite popular in the case of construction activities and in the disposition of used produces. In this method the prospective seller (buyers) are asked to quote their prices through a sealed cover, all the offers are opened at a preannounce time in the presence of all the competitors, and the one who quoted the least is awarded the contract (purchase / sale deed). As it sound, this method is totally competition based and if the competitors unit by any change, the buyers (seller) may have to pay (receive) an exorbitantly high (too low) price, thus there is a great degree of risk attached to this method of pricing

**Demand Based Pricing**

The demand – based pricing and strategy – based pricing are quite related. The seller knows rather well that the demand for its product is a decreasing function of the price its sets for product. Thus if seller wishes to sell more he must reduce the price of his product, and if he wants a good price for his product, he could sell only a limited quantity of his good. Demand oriented pricing rules imply establishment of prices in accordance with consumer preference and perceptions and the intensity of demand.

Two general types demand oriented pricing rules can be identified.

i. Perceived value pricing and
ii. Differential pricing

Perceived value pricing considers the buyer's perception of the value of the product ad the basis of pricing. Here the pricing rule is that the firm must develop procedures for measuring the relative value of the product as perceived by consumers. Differential pricing is nothing but price discrimination. In involves selling a product or service for different prices in different market segments. Price differentiation depends on geographical location of the consumers, type of consumer, purchasing quantity, season, time of the service etc. E.g. Telephone charges, APSRTC charges

**Strategy based pricing (new product pricing)**

A firm which products a new product, if it is also new to industry, can earn very good profits it if handles marketing carefully, because of the uniqueness of the product. The price fixed for the new product must keep the competitors away. Earn good profits for the firm over the life of the product and must help to get the product accepted. The company can select either skimming pricing or penetration pricing.

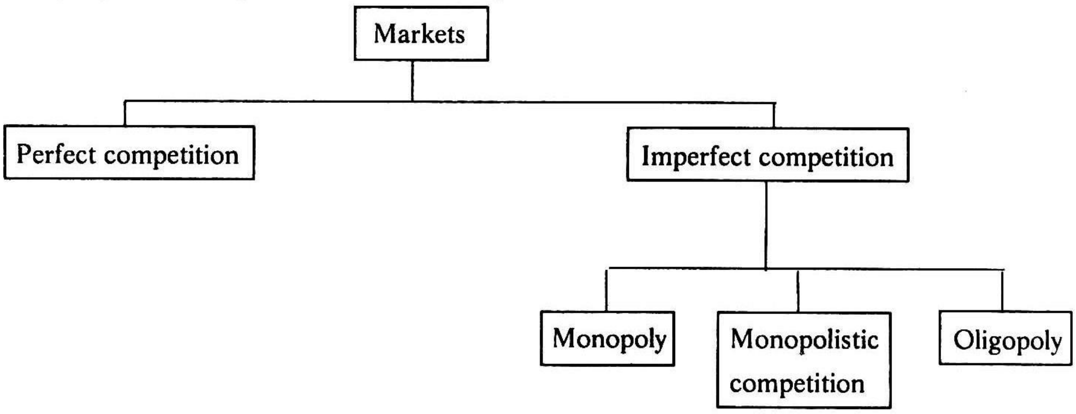
While there are some firms, which follow the strategy of price penetration, there are some others who opt for price – skimming. Under the former, firms sell their new product at a low price in the beginning in order to catch the attention of consumers, once the product image and credibility is established, the seller slowly starts jacking up the price to reap good profits in future. Under this strategy, a firm might well sell its product below the cost of production and thus runs into losses to start with but eventually it recovers all its losses and even makes good overall profits. The Rin washing soap perhaps falls into this category. This soap was sold at a rather low price in the beginning and the firm even distributed free samples. Today, it is quite an expensive brand and yet it is selling very well. Under the price – skimming strategy, the new product is priced high in the beginning, and its price is reduced gradually as it faces a dearth of buyers such a strategy may be beneficial for products, which are fancy, but of poor quality and / or of insignificant use over a period of time.

A prudent producer follows a good mix of the various pricing methods rather than adapting any once of them. This is because no method is perfect and every method has certain good features further a firm might adopt one method at one time and another method at some other accession.

# Different Market Structures

Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals who are willing and able to buy or sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants.

The determination of price is affected by the competitive structure of the market. This is because the firm operates in a market and not in isolation. In marking decisions concerning economic variables it is affected, as are all institutions in society by its environment.




# Perfect Competition

Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form. In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market.

Characteristics of Perfect Competition
The following features characterize a perfectly competitive market:

1. **A large number of buyers and sellers:** The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.
2. **Homogeneous product:** The product of each seller is totally undifferentiated from those of the others.

3. **Free entry and exit**: Any buyer and seller is free to enter or leave the market of the commodity.
4. **Perfect knowledge**: All buyers and sellers have perfect knowledge about the market for the commodity.
5. **Indifference:** No buyer has a preference to buy from a particular seller and no seller to sell to a particular buyer.
6. **Non-existence of transport costs**: Perfectly competitive market also assumes the nonexistence of transport costs.
7. **Perfect mobility of factors of production**: Factors of production must be in a position to move freely into or out of industry and from one firm to the other.

Under such a market no single buyer or seller plays a significant role in price determination. One the other hand all of them jointly determine the price. The price is determined in the industry, which is composed of all the buyers and seller for the commodity. The demand curve facing the industry is the sum of all consumers' demands at various prices. The industry supply curve is the sum of all sellers' supplies at various prices.

Pure competition and perfect competition

The term perfect competition is used in a wider sense. Pure competition has only limited assumptions. When the assumptions, that large number of buyers and sellers, homogeneous products, free entry and exit are satisfied, there exists pure competition. Competition becomes perfect only when all the assumptions (features) are satisfied. Generally pure competition can be seen in agricultural products.

## □ MONOPOLY

The word monopoly is made up of two syllables, Mono and poly. Mono means single while poly implies selling. Thus monopoly is a form of market organization in which there is only one seller of the commodity. There are no close substitutes for the commodity sold by the seller. Pure monopoly is a market situation in which a single firm sells a product for which there is no good substitute.

Features of monopoly

The following are the features of monopoly.

1. **Single person or a firm:** A single person or a firm controls the total supply of the commodity. There will be no competition for monopoly firm. The monopolist firm is the only firm in the whole industry.
2. **No close substitute:** The goods sold by the monopolist shall not have closely competition substitutes. Even if price of monopoly product increase people will not go in far substitute.

For example: If the price of electric bulb increase slightly, consumer will not go in for kerosene lamp.

3. **Large number of Buyers:** Under monopoly, there may be a large number of buyers in the market who compete among themselves.
4. **Price Maker:** Since the monopolist controls the whole supply of a commodity, he is a price-maker, and then he can alter the price.
5. **Supply and Price:** The monopolist can fix either the supply or the price. He cannot fix both. If he charges a very high price, he can sell a small amount. If he wants to sell more, he has to charge a low price. He cannot sell as much as he wishes for any price he pleases.
6. **Downward Sloping Demand Curve:** The demand curve (average revenue curve) of monopolist slopes downward from left to right. It means that he can sell more only by lowering price.

Types of Monopoly

Monopoly may be classified into various types. The different types of monopolies are explained below:

1. **Legal Monopoly:** If monopoly arises on account of legal support or as a matter of legal privilege, it is called Legal Monopoly. Ex. Patent rights, special brands, trade means, copyright etc.
2. **Voluntary Monopoly:** To get the advantages of monopoly some private firms come together voluntarily to control the supply of a commodity. These are called voluntary monopolies. Generally, these monopolies arise with industrial combinations. These voluntary monopolies are of three kinds (a) cartel (b) trust (c) holding company. It may be called artificial monopoly.
3. **Government Monopoly:** Sometimes the government will take the responsibility of supplying a commodity and avoid private interference. Ex. Water, electricity. These monopolies, created to satisfy social wants, are formed on social considerations. These are also called Social Monopolies.
4. **Private Monopoly:** If the total supply of a good is produced by a single private person or firm, it is called private monopoly. Hindustan Lever Ltd. Is having the monopoly power to produce Lux Soap.
5. **Limited Monopoly:** if the monopolist is having limited power in fixing the price of his product, it is called as 'Limited Monopoly'. It may be due to the fear of distant substitutes or government intervention or the entry of rivals firms.
6. **Unlimited Monopoly:** If the monopolist is having unlimited power in fixing the price of his good or service, it is called unlimited monopoly. Ex. A doctor in a village.
7. **Single Price Monopoly:** When the monopolist charges same price for all units of his product, it is called single price monopoly. Ex. Tata Company charges the same price to all the Tata Indiaca Cars of the same model.
8. **Discriminating Monopoly:** When a Monopolist charges different prices to different consumers for the same product, it is called discriminating monopoly. A doctor may take Rs.20 from a rich man and only Rs.2 from a poor man for the same treatment.

9. **Natural Monopoly:** Sometimes monopoly may arise due to scarcity of natural resources. Nature provides raw materials only in some places. The owner of the place will become monopolist. For Ex. Diamond mine in South Africa.

# Oligopoly

The term oligopoly is derived from two Greek words, oligos meaning a few, and pollen meaning to sell. Oligopoly is the form of imperfect competition where there are a few firms in the market, producing either a homogeneous product or producing products, which are close but not perfect substitute of each other.

Characteristics of Oligopoly
The main features of oligopoly are:

1. **Few Firms:** There are only a few firms in the industry. Each firm contributes a sizeable share of the total market. Any decision taken by one firm influence the actions of other firms in the industry. The various firms in the industry compete with each other.
2. **Interdependence:** As there are only very few firms, any steps taken by one firm to increase sales, by reducing price or by changing product design or by increasing advertisement expenditure will naturally affect the sales of other firms in the industry. An immediate retaliatory action can be anticipated from the other firms in the industry every time when one firm takes such a decision. He has to take this into account when he takes decisions. So the decisions of all the firms in the industry are interdependent.
3. **Indeterminate Demand Curve:** The interdependence of the firms makes their demand curve indeterminate. When one firm reduces price other firms also will make a cut in their prices. So he firm cannot be certain about the demand for its product. Thus the demand curve facing an oligopolistic firm loses its definiteness and thus is indeterminate as it constantly changes due to the reactions of the rival firms.
4. **Advertising and selling costs:** Advertising plays a greater role in the oligopoly market when compared to other market systems. According to Prof. William J. Banumol “it is only oligopoly that advertising comes fully into its own”. A huge expenditure on advertising and sales promotion techniques is needed both to retain the present market share and to increase it. So Banumol concludes “under oligopoly, advertising can become a life-and-death matter where a firm which fails to keep up with the advertising budget of its competitors may find its customers drifting off to rival products.”
5. **Price Rigidity:** In the oligopoly market price remain rigid. If one firm reduced price it is with the intention of attracting the customers of other firms in the industry. In order to retain their consumers they will also reduce price. Thus the pricing decision of one firm results in a loss to all the firms in the industry. If one firm increases price. Other firms will remain silent there by allowing that firm to lost its customers. Hence, no firm will be ready to change the prevailing price. It causes price rigidity in the oligopoly market.

 Other Market Structures

## Duopoly

Duopoly refers to a market situation in which there are only two sellers. As there are only two sellers any decision taken by one seller will have reaction from the other Eg. Coca-Cola and Pepsi. Usually these two sellers may agree to co-operate each other and share the market equally between them, So that they can avoid harmful competition.

The duopoly price, in the long run, may be a monopoly price or competitive price, or it may settle at any level between the monopoly price and competitive price. In the short period, duopoly price may even fall below the level competitive price with the both the firms earning less than even the normal price.

## Monopsony

Mrs. Joan Robinson was the first writer to use the term monopsony to refer to market, which there is a single buyer. Monoposony is a single buyer or a purchasing agency, which buys the show, or nearly whole of a commodity or service produced. It may be created when all consumers of a commodity are organized together and/or when only one consumer requires that commodity which no one else requires.

## Bilateral Monopoly

A bilateral monopoly is a market situation in which a single seller (Monopoly) faces a single buyer (Monoposony). It is a market of monopoly-monoposy.

## Oligopsony

Oligopsony is a market situation in which there will be a few buyers and many sellers. As the sellers are more and buyers are few, the price of product will be comparatively low but not as low as under monopoly.

# UNIT – 4:

# HISTORY OF ACCOUNTING:

Accounting based on the principles of Double Entry System came into existence in 17th Century. Fra Luka Paciolo, a Fransiscan monk and mathematician published a book *De computicetscripturies*in 1494 at Venice in Italyl. This book was translated into English in 1543. In this book he covered a brief section on ‘book-keeping’.

## ORIGIN OF ACCOUNTING IN INDIA:

Accounting was practiced in India thousand years ago and there is a clear evidence for this. In his famous book *Arthashastra*Kautilya dealt with not only politics and economics but also the art of proper keeping of accounts. However, the accounting on modern lines was introduced in India after 1850 with the formation joint stock companies in India.

Accounting in India is now a fast developing discipline. The two premier Accounting Institutes in India viz., chartered Accountants of India and the Institute of Cost and Works Accountants of India

## BOOK-KEEPING AND ACCOUNTING

First stage is called Book-Keeping and the second one is accounting.

**Book – Keeping:** Book – Keeping involves the chronological recording of financial transactions in a set of books in a systematic manner.

**Accounting:** Accounting is concerned with the maintenance of accounts giving stress to the design of the system of records, the preparation of reports based on the recorded date and the interpretation of the reports.

## MEANING OF ACCOUNTING

Thus, book-keeping is an art of recording the business transactions in the books of original entry and the ledges. Accountancy begins where Book-keeping ends. Accountancy means the compilations of accounts in such a way that one is in a position to know the state of affairs of the business.

## Definition of Accounting:

**Smith and Ashburne:** “Accounting is a means of measuring and reporting the results of economic activities.”

**American Institute of Certified Public Accountants (AICPA):**

"The art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events, which are in part at least, of a financial character and interpreting the results thereof."

Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the *Language of Business.*

## BRANCHES OF ACCOUNTING:

The important branches of accounting are:

1. **Financial Accounting:** The purpose of Accounting is to ascertain the financial results i.e. profit or loss in the operations during a specific period. It is also aimed at knowing the financial position, i.e. assets, liabilities and equity position at the end of the period. It also provides other relevant information to the management as a basic for decisionmaking for planning and controlling the operations of the business.
2. **Cost Accounting:** The purpose of this branch of accounting is to ascertain the cost of a product / operation / project and the costs incurred for carrying out various activities. It also assists the management in controlling the costs. The necessary data and information are gatherr4ed form financial and other sources.
3. **Management Accounting:** Its aim to assist the management in taking correct policy decision and to evaluate the impact of its decisions and actions. The data required for this purpose are drawn accounting and cost-accounting.

## FUNCTIONS OF AN ACCOUNTANT

The job of an accountant involves the following types of accounting works

1. **Designing Work:** It includes the designing of the accounting system, basis for identification and classification of financial transactions and events, forms, methods, procedures, etc.
2. **Recording Work:** The financial transactions are identified, classified and recorded in appropriate books of accounts according to principles. This is "Book Keeping". The recording of transactions tends to be mechanical and repetitive.
3. **Summarizing Work:** The recorded transactions are summarized into significant form according to generally accepted accounting principles. The work includes the preparation of profit and loss account, balance sheet. This phase is called 'preparation of final accounts'
4. **Analysis and Interpretation Work:** The financial statements are analysed by using ratio analysis, break-even analysis, funds flow and cash flow analysis.
5. **Reporting Work:** The summarized statements along with analysis and interpretation are communicated to the interested parties or whoever has the right to receive them. For Ex. Share holders. In addition, the accou8nting departments have to prepare and send regular reports so as to assist the management in decision making. This is 'Reporting'.

6. **Preparation of Budget:** The management must be able to reasonably estimate the future requirements and opportunities. As an aid to this process, the accountant has to prepare budgets, like cash budget, capital budget, purchase budget, sales budget etc. this is 'Budgeting'.
7. **Taxation Work:** The accountant has to prepare various statements and returns pertaining to income-tax, sales-tax, excise or customs duties etc., and file the returns with the authorities concerned.
8. **Auditing:** It involves a critical review and verification of the books of accounts statements and reports with a view to verifying their accuracy. This is 'Auditing'

## USERS OF ACCOUNTING INFORMATION

Different categories of users need different kinds of information for making decisions. The users of accounting can be divided in two board groups

(1). Internal users and

(2). External users.

1. **Internal Users:**

**Managers:** These are the persons who manage the business, i.e. management at him top, middle and lower levels. Their requirements of information are different because they make different types of decisions.

Accounting reports are important to managers for evaluating the results of their decisions. In additions to external financial statements, managers need detailed internal reports either branch division or department or product-wise. Accounting reports for managers are prepared much more frequently than external reports.

Accounting information also helps the managers in appraising the performance of subordinates. As such Accounting is termed as "the eyes and ears of management."

2. **External Users:**

1. **Investors:** Those who are interested in buying the shares of company are naturally interested in the financial statements to know how safe the investment already made is and how safe the proposed investments will be.

2. **Creditors:** Lenders are interested to know whether their load, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.

3. **Workers:** In our country, workers are entitled to payment of bonus which depends on the size of profit earned. Hence, they would like to be satisfied that he bonus being paid to them is correct. This knowledge also helps them in conducting negotiations for wages.

4. **Customers:** They are also concerned with the stability and profitability of the enterprise. They may be interested in knowing the financial strength of the company to rent it for further decisions relating to purchase of goods.

**5. Government:** Governments all over the world are using financial statements for compiling statistics concerning business which, in turn, helps in compiling national accounts. The financial statements are useful for tax authorities for calculating taxes.

**6. Public :**The public at large interested in the functioning of the enterprises because it may make a substantial contribution to the local economy in many ways including the number of people employed and their patronage to local suppliers.

**7. Researchers:**The financial statements', being a mirror of business conditions, is of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

## ADVANTAGES FROM ACCOUNTING

The role of accounting has changed from that of a mere record keeping during the 1st decade of 20th century of the present stage, which it is accepted as information system and decision making activity. The following are the advantages of accounting.

1. **Provides for systematic records:** Since all the financial transactions are recorded in the books, one need not rely on memory. Any information required is readily available from these records.
2. **Facilitates the preparation of financial statements:** Profit and loss accountant and balance sheet can be easily prepared with the help of the information in the records. This enables the trader to know the net result of business operations (i.e. profit / loss) during the accounting period and the financial position of the business at the end of the accounting period.
3. **Provides control over assets:**Book-keeping provides information regarding cash in had, cash at bank, stock of goods, accounts receivables from various parties and the amounts invested in various other assets. As the trader knows the values of the assets he will have control over them.
4. **Provides the required information:** Interested parties such as owners, lenders, creditors etc., get necessary information at frequent intervals.
5. **Comparative study:** One can compare the present performance of the organization with that of its past. This enables the managers to draw useful conclusion and make proper decisions.
6. **Less Scope for fraud or theft:** It is difficult to conceal fraud or theft etc., because of the balancing of the books of accounts periodically. As the work is divided among many persons, there will be check and counter check.
7. **Tax matters:** Properly maintained book-keeping records will help in the settlement of all tax matters with the tax authorities.
8. **Ascertaining Value of Business:** The accounting records will help in ascertaining the correct value of the business. This helps in the event of sale or purchase of a business.
9. **Documentary evidence:** Accounting records can also be used as evidence in the court to substantiate the claim of the business. These records are based on documentary proof. Every entry is supported by authentic vouchers. As such, Courts accept these records as evidence.

10. **Helpful to management:** Accounting is useful to the management in various ways. It enables the management to asses the achievement of its performance. The weakness of the business can be identified and corrective measures can be applied to remove them with the helps accounting.

**LIMITATIONS OF ACCOUNTING .**

1. **Does not record all events:** Only the transactions of a financial character will be recorded under book-keeping. So it does not reveal a complete picture about the quality of human resources, locational advantage, business contacts etc.
2. **Does not reflect current values:** The data available under book-keeping is historical in nature. So they do not reflect current values. For instance, we record the value of stock at cost price or market price, which ever is less. In case of, building, machinery etc., we adopt historical cost as the basis. Infact, the current values of buildings, plant and machinery may be much more than what is recorded in the balance sheet.
3. **Estimates based on Personal Judgment:** The estimate used for determining the values of various items may not be correct. For example, debtors are estimated in terms of collectibility, inventories are based on marketability, and fixed assets are based on useful working life. These estimates are based on personal judgment and hence sometimes may not be correct.
4. **Inadequate information on costs and Profits:** Book-keeping only provides information about the overall profitability of the business. No information is given about the cost and profitability of different activities of products or divisions.

**BASIC ACCOUNTING CONCEPTS**

Accounting has been evolved over a period of several centuries. During this period, certain rules and conventions have been adopted. These rules and conventions are termed as **Generally Accepted Accounting Principles.** These principles are also referred as standards, assumptions, concepts, conventions doctrines, etc. Thus, the accounting concepts are the fundamental ideas or basic assumptions underlying the theory and practice of financial accounting. They are the broad working rules for all accounting activities developed and accepted by the accounting profession.

**BASIC ACCOUNTING CONCEPTS**

Accounting is a system evolved to achieve a set of objectives. In order to achieve the goals, we need a set of rules or guidelines. These guidelines are termed here as "BASIC ACCOUNTING CONCEPTS". The term concept means an idea or thought. Basic accounting concepts are the fundamental ideas or basic assumptions underlying the theory and profit of FINANCIAL ACCOUNTING. These concepts help in bringing about uniformity in the practice of accounting. In accountancy following concepts are quite popular.

1. **BUSINESS ENTITY CONEPT:** In this concept "Business is treated as separate from the proprietor". All the Transactions recorded in the book of Business and not in the books of proprietor. The proprietor is also treated as a creditor for the Business.

2. ***GOING CONCERN CONCEPT*:** This concept relates with the long life of Business. The assumption is that business will continue to exist for unlimited period unless it is dissolved due to some reasons or the other.

3. **MONEY MEASUREMENT CONCEPT:** In this concept "Only those transactions are recorded in accounting which can be expressed in terms of money, those transactions which can not be expressed in terms of money are not recorded in the books of accounting".

4. **COST CONCEPT:** Accounting to this concept, can asset is recorded at its cost in the books of account. i.e., the price, which is paid at the time of acquiring it. In balance sheet, these assets appear not at cost price every year, but depreciation is deducted and they appear at the amount, which is cost, less classification.

5. **ACCOUNTING PERIOD CONCEPT:** every Businessman wants to know the result of his investment and efforts after a certain period. Usually one-year period is regarded as an ideal for this purpose. This period is called Accounting Period. It depends on the nature of the business and object of the proprietor of business.

6. **DUAL ASCEPT CONCEPT:** According to this concept "Every business transactions has two aspects", one is the receiving benefit aspect another one is giving benefit aspect. The receiving benefit aspect is termed as

"DEBIT", where as the giving benefit aspect is termed as "CREDIT". Therefore, for every debit, there will be corresponding credit.

7. **MATCHING COST CONCEPT:** According to this concept "The expenses incurred during an accounting period, e.g., if revenue is recognized on all goods sold during a period, cost of those good sole should alsoBe charged to that period.

8. **REALISATION CONCEPT:** According to this concept revenue is recognized when a sale is made. Sale is Considered to be made at the point when the property in goods posses to the buyer and he becomes legally liable to pay.

## ACCOUNTING CONVENTIONS

Accounting is based on some customs or usages. Naturally accountants here to adopt that usage or custom.They are termed as convert conventions in accounting. The following are some of the important accounting conventions.

1. **FULL DISCLOSURE:** According to this convention accounting reports should disclose fully and fairly the information. They purport to represent. They should be prepared honestly and sufficiently disclose information which is if material interest to proprietors, present and potential creditors and investors. The companies ACT, 1956 makes it compulsory to provide all the information in the prescribed form.

2. **MATERIALITY:** Under this convention the trader records important factor about the commercial activities. In the form of financial statements if any unimportant information is to be given for the sake of clarity it will be given as footnotes.

3. **CONSISTENCY :**It means that accounting method adopted should not be changed from year to year. It means that there should be consistent in the methods or principles followed. Or else the results of a year cannot be conveniently compared with that of another.

4. **CONSERVATISM:** This convention warns the trader not to take unrealized income in to account. That is why the practice of valuing stock at cost or market price, which ever is lower is in vague. This is the policy of "playing safe"; it takes in to consideration all prospective losses but leaves all prospective profits.

**CLASSIFICATION OF BUSINESS TRANSACTIONS**

All business transactions are classified into three categories:

1. Those relating to persons

2. Those relating to property (Assets)

3. Those relating to income & expenses

Thus, three classes of accounts are maintained for recording all business transactions. They are:

1. Personal accounts

2. Real accounts

3. Nominal accounts

1. **Personal Accounts:**

Accounts which are transactions with persons are called "Personal Accounts". A separate account is kept on the name of each person for recording the benefits received from, or given to the person in the course of dealings with him.

E.g.: Krishna's A/C, Gopal's A/C, SBI A/C, NagarjunaFinanaceLtd.A/C, ObulReddy& Sons A/C , HMT Ltd. A/C, Capital A/C, Drawings A/C etc.

**2. *Real Accounts*:**

The accounts relating to properties or assets are known as "Real Accounts" .Every business needs assets such as machinery, furniture etc, for running its activities .A separate account is maintained for each asset owned by the business.

E.g.: cash A/C, furniture A/C, building A/C, machinery A/C etc.

**3. *NominalAccounts:***

Accounts relating to expenses, losses, incomes and gains are known as "Nominal Accounts". A separate account is maintained for each item of expenses, losses, income or gain.

E.g.: Salaries A/C, stationery A/C, wages A/C, postage A/C, commission A/C, interest A/C, purchases A/C, rent A/C, discount A/C, commission received A/C, interest received A/C, rent received A/C, discount received A/C.

Before recording a transaction, it is necessary to find out which of the accounts is to be debited and which is to be credited. The following three different rules have been laid down for the three classes of accounts….

1. *Personal Accounts*: The account of the person receiving benefit (receiver) is to be debited and the account of the person giving the benefit (given) is to be credited.

***Rule***: "Debit----The Receiver

Credit---The Giver"

2. *Real Accounts*: When an asset is coming into the business, account of that asset is to be debited .When an asset is going out of the business; the account of that asset is to be credited.

***Rule***: "Debit----What comes in

Credit---What goes out"

2. *Nominal Accounts*: When an expense is incurred or loss encountered, the account representing the expense or loss is to be debited. When any income is earned or gain made, the account representing the income of gain is to be credited.

***Rule***: "Debit----All expenses and losses

Credit---All incomes and gains"

**JOURNAL**

The first step in accounting therefore is the record of all the transactions in the books of original entry viz., Journal and then posting into ledges.

**JOURNAL**:

The word Journal is derived from the Latin word 'journ' which means a day. Therefore, journal means a 'day Book' in day-to-day business transactions are recorded in chronological order.

Journal is treated as the book of original entry or first entry or prime entry. All the business transactions are recorded in this book before they are posted in the ledges. The journal is a complete and chronological (in order of dates) record of business transactions. It is recorded in a systematic manner. The process of recording a transaction in the journal is called "JOURNALISING". The entries made in the book are called "Journal Entries".

The Performa of Journal is given below.

| Date | Particulars | L.F. no | Debit RS. | Credit RS. |
|---|---|---|---|---|
| 1998 Jan 1 | Purchases account to cash account(being goods purchased for cash) | | 10,000/- | 10,000/- |

***Note: Problems to be solved on journal***

***Problems :-***

***1Q.***

| | |
|---|---|
| ***1-1-2016*** | Mr. John Invested 200000 as capital |
| ***2-1-2016*** | Purchased land for 105000.00 |
| ***3-1-2016*** | Purchased Goods from S.K creation on credit 200000.00 |
| ***4-1-2016*** | Stationery purchased for 1000.00 |
| ***5-1-2016*** | Goods sold to Indian cotton for Credit 45000.00 |
| ***8-1-2016*** | Rent paid to building owner 1500.00 |
| ***9-1-2016*** | Cash withdrawn for personal use 5000.00 |
| ***10-1-2016*** | Paid commission 500.00 |
| ***11-1-2016*** | Deposit cash in to SBI 15000.00 |
| ***12-1-2016*** | cash sales 25000.00 |

***Ans)***

| ***Date*** | ***Particulars*** | ***Dr. Amount*** | ***Cr .Amount*** |
|---|---|---|---|
| *1-1-2016* | Cash .....Dr<br>To capital A/c<br>(Bring business started with 2,00,000) | 2,00,000 | 2,00,000 |
| *2-1-2016* | Land a/c .....Dr<br>To Cash<br>(being land purchased for cash) | 1,05,000 | 1,05,000 |
| *3-1-2016* | Purchase a/c .....Dr<br>To S.K Creation<br>(being land purchased forcash) | 2,00,000 | 2,00,000 |
| *4-1-2016* | stationery a/c .....Dr<br>To Cash<br>*(Being* Stationery purchased for cash ) | *1,000* | *1,000* |
| *5-1-2016* | Indian Cotton a/c.....Dr<br>To Sales a/c<br>(being Credit sales to Indian cottons ) | *45,000* | *45,000* |
| *8-1-2016* | Rent a/c .....Dr | *1,500* | *1,500* |
| | To cash a/c<br>(being rent paid ) | | |
| *9-1-2016* | Drawings a/c .....Dr<br>To cash a/c<br>(being cash withdrawn for personal use ) | *5,000* | *5,000* |
| *10-1-2016* | Commision a/c .....Dr<br>To cash a/c<br>(being commission paid ) | *500* | *500* |
| *11-1-2016* | *Bank a/c .... Dr*<br>*To cash a/c*<br>(cash deposited in to bank ) | *15,000* | *15,000 q* |
| *12-1-2016* | Cash a/c .....Dr<br>To Sales a/c<br>(being sold for cash | *25,000* | *25,000* |

**LEDGER**

All the transactions in a journal are recorded in a chronological order. After a certain period, if we want to know whether a particular account is showing a debit or credit balance it becomes very difficult. So, the ledger is designed to accommodate the various accounts maintained the trader. It contains the final or permanent record of all the transactions in duly classified form. "A ledger is a book which contains various accounts." The process of transferring entries from journal to ledger is called "POSTING".

Posting is the process of entering in the ledger the entries given in the journal. Posting into ledger is done periodically, may be weekly or fortnightly as per the convenience of the business. The following are the guidelines for posting transactions in the ledger.

1. After the completion of Journal entries only posting is to be made in the ledger.
2. For each item in the Journal a separate account is to be opened. Further, for each new item a new account is to be opened.
3. Depending upon the number of transactions space for each account is to be determined in the ledger.
4. For each account there must be a name. This should be written in the top of the table. At the end of the name, the word "Account" is to be added.
5. The debit side of the Journal entry is to be posted on the debit side of the account, by starting with "TO".
6. The credit side of the Journal entry is to be posted on the debit side of the account, by starting with "BY".

**Proforma for ledger:**

***<u>LEDGER BOOK</u>*** Particulars account

| Date | Particulars | Lfno | Amount | Date | Particulars | Lfno | amount |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Sales account

| Date | Particulars | Lfno | Amount | Date | Particulars | Lfno | amount |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Cash account

| Date | Particulars | Lfno | Amount | Date | Particulars | Lfno | amount |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Mr. Ramu has the following transactions in the month of July.

Record them into the journal and show postings in the ledger and balance the accounts.

July 1st : Ramu started business with a capital of 75,000
1st : Purchased goods from Manu on credit 25,000
2nd : Sold goods to Sonu 20,000
3rd : Purchased goods from Meenu 15,000
4th : Sold goods to Tanu for cash 16,000
5th : Goods retuned to Manu 2,000
6th : Bought furniture for 15,000
7th : Bought goods from Zenu 12,000
8th : Cash paid to Manu 10,000
9th : Sold goods to Jane 13,500
10th : Goods returned from Sonu 3,000
11th : Cash received from Jane 5,500
12th : Goods taken by Ramu for domestic use 3,000
13th : Returned Goods to Zenu 1,000
14th : Cash received from Sonu 12,000
15th : Bought machinery for 18,000
16th : Sold part of the furniture for 1,000
17th : Cash paid for the purchase of bicycle for Ramu's son 1,500
19th : Cash sales 15,000
20th : Cash purchases 13,500

| Date | V/R No. | Particulars | | L/F | Amount (Dr) | Amount (Cr) |
|---|---|---|---|---|---|---|
| July 1st | – | Cash a/c | Dr | – | 75,000 | |
| | | To Capital a/c | | – | | 75,000 |
| | | [Being the amount received from Mr. Ramu, the proprietor as his capital contribution vide receipt no:___ dated:__] | | | | |
| July 1st | – | Goods/stock a/c | Dr | – | 25,000 | |
| | | To Manu a/c | | – | | 25,000 |
| | | [Being the value of stock purchased from Mr. Manu vide bill no:___ dated:__] | | | | |
| July 2nd | – | Sonu a/c | Dr | – | 20,000 | |
| | | To Goods/stock a/c | | – | | 20,000 |
| | | [Being the value of stock sold to Mr.Sonu vide bill no:___ dated:__] | | | | |
| July 3rd | – | Goods/stock a/c | Dr | – | 15,000 | |
| | | To Meenu a/c | | – | | 15,000 |
| | | [Being the value of stock purchased from Mr.Meenu on credit vide bill no:___ dated:__] | | | | |
| July 4th | – | Cash a/c | Dr | – | 16,000 | |
| | | To Goods/stock a/c | | – | | 16,000 |
| | | [Being the value of stock sold to Mr. Tanu for cash | | | | |

| | | | | | |
|---|---|---|---|---|---|
| July 5th | – | Manu a/c Dr<br>To Goods/stock a/c<br>[Being the value of stock returned to Mr. Manu vide bill no:___ dated:__] | –<br>– | 2,000 | <br>2,000 |
| July 6th | – | Furniture a/c Dr<br>To Cash a/c<br>[Being the value of furniture purchased from M/s ___vide bill no:___ dated:__] | –<br>– | 15,000 | <br>15,000 |
| July 7th | – | Goods/stock a/c Dr<br>To Zenu a/c<br>[Being the value of stock Purchased from Mr. Zenu vide bill no:___ dated:__] | –<br>– | 12,000 | <br>12,000 |
| July 8th | – | Manu a/c Dr<br>To Cash a/c<br>[Being the amount paid to Mr. Manu vide voucher no:___ dated:__] | –<br>– | 10,000 | <br>10,000 |
| July 9th | – | Jane a/c Dr<br>To Goods/stock a/c<br>[Being the value of stock Sold to Ms.Zane vide bill no:___ dated:__] | –<br>– | 13,500 | <br>13,500 |

| | | | | | |
|---|---|---|---|---|---|
| July $10^{th}$ | – | Goods/stock a/c Dr<br>To Sonu a/c<br>[Being the value of stock returned from Mr. Sonu vide bill no:___ dated:__] | –<br>– | 3,000 | <br>3,000 |
| July $11^{th}$ | – | Cash a/c Dr<br>To Jane a/c<br>[Being the amount of cash received from Ms. Jane vide cash receipt no:___ dated:__] | –<br>– | 5,500 | <br>5,500 |
| July $12^{th}$ | – | Drawings a/c Dr<br>To Goods/stock a/c<br>[Being the amount of stock taken by Ramu for domestic use vide bill no:___ dated:__] | –<br>– | 3,000 | <br>3,000 |
| July $13^{th}$ | – | Zenu a/c Dr<br>To Goods/stock a/c<br>[Being the amount of stock returned to Mr. Zenu vide bill no:___ dated:__] | –<br>– | 1,000 | <br>1,000 |
| July $14^{th}$ | – | Cash a/c Dr<br>To Sonu a/c<br>[Being the amount of cash received from Mr. Sonu vide cash receipt no:___ dated:_] | –<br>– | 12,000 | <br>12,000 |

| | | | | | |
|---|---|---|---|---|---|
| July 15th | – | Machinery a/c Dr<br>To Cash a/c<br>[Being the amount paid for machinery purchased to M/s ____vide voucher no:___ dated:__] | –<br>– | 18,000 | <br>18,000 |
| July 16th | – | Cash a/c Dr<br>To Furniture a/c<br>[Being the amount received on sale of furniture vide cash receipt no:___ dated:__] | –<br>– | 1,000 | <br>1,000 |
| July 17th | – | Drawings a/c Dr<br>To Cash a/c<br>[Being the amount of cash paid for bicycle purchases for proprietor's son vide voucher no:___ dated:__] | –<br>– | 15,000 | <br>15,000 |
| July 19th | – | Cash a/c Dr<br>To Goods/stock a/c<br>[Being the value of stock sold for cash vide receipt no:___ dated:__] | –<br>– | 15,000 | <br>15,000 |
| July 20th | – | Goods/stock a/c Dr<br>To Cash a/c<br>[Being the value of stock Purchased for vide voucher no:___ dated:__] | –<br>– | 13,500 | <br>13,500 |

Dr **Cash a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 01/10/_5 | To Capital a/c | – | 75,000 | 06/10/_5 | By Furniture a/c | – | 15,000 |
| 04/10/_5 | To Goods/stock a/c | – | 16,000 | 08/10/_5 | By Manu a/c | – | 10,000 |
| 11/10/_5 | To Jane a/c | – | 5,500 | 15/10/_5 | By Machinery a/c | – | 18,000 |
| 14/10/_5 | To Sonu a/c | – | 12,000 | 17/10/_5 | By Drawings a/c | – | 15,000 |
| 16/10/_5 | To Furniture a/c | – | 1,000 | 20/10/_5 | By Goods/stock a/c | – | 13,500 |
| 19/10/_5 | To Goods/stock a/c | – | 15,000 | 30/07/_5 | By Balance c/d | – | 53,000 |
| | tl | | 1,24,500 | | tl | | 1,24,500 |
| 31/07/_5 | To Balance b/d | – | 53,000 | | | | |

Dr **Capital a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 30/07/_5 | To Balance c/d | – | 75,000 | 01/10/_5 | By Cash a/c | – | 75,000 |
| | tl | | 75,000 | | tl | | 75,000 |
| | | | | 31/07/_5 | By Balance b/d | – | 75,000 |

Dr **Goods/stock a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 01/10/_5 | To Manu a/c | – | 25,000 | 02/10/_5 | By Sonu a/c | – | 20,000 |
| 03/10/_5 | To Meenu a/c | – | 15,000 | 04/10/_5 | By Cash a/c | – | 16,000 |
| 07/10/_5 | To Zenu a/c | – | 12,000 | 05/10/_5 | By Manu a/c | – | 2,000 |
| 10/10/_5 | To Sonu a/c | – | 3,000 | 09/10/_5 | By Jane a/c | – | 13,500 |
| 20/10/_5 | To Cash a/c | – | 13,500 | 12/10/_5 | By Drawings a/c | – | 3,000 |
| 30/07/_5 | To Balance c/d | – | 2,000 | 13/10/_5 | By Zenu a/c | – | 1,000 |
| | | | | 19/10/_5 | By Cash a/c | – | 15,000 |
| | tl | | 70,500 | | tl | | 70,500 |
| | | | | 31/07/_5 | By Balance b/d | – | 2,000 |

Dr **Manu a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 05/10/_5 | To Goods/stock a/c | – | 2,000 | 01/10/_5 | By Goods/stock a/c | – | 25,000 |
| 08/10/_5 | To Cash a/c | – | 10,000 | | | | |
| 30/07/_5 | To Balance c/d | – | 13,000 | | | | |
| | tl | | 25,000 | | tl | | 25,000 |
| | | | | 31/07/_5 | By Balance b/d | – | 13,000 |

Dr **Sonu a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 02/10/_5 | To Goods/stock a/c | – | 20,000 | 10/10/_5 | By Goods/stock a/c | – | 3,000 |
| | | | | 14/10/_5 | By Cash a/c | – | 12,000 |
| | | | | 30/07/_5 | By Balance c/d | – | 5,000 |
| | tl | | 20,000 | | tl | | 20,000 |
| 31/07/_5 | To Balance b/d | – | 5,000 | | | | |

Dr **Meenu a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 30/07/_5 | To Balance c/d | – | 15,000 | 03/10/_5 | By Goods/stock a/c | – | 15,000 |
| | tl | | 15,000 | | tl | | 15,000 |
| | | | | 31/07/_5 | By Balance b/d | – | 15,000 |

Dr **Furniture a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 06/10/_5 | To Cash a/c | – | 15,000 | 16/10/_5 | By Cash a/c | – | 1,000 |
| | | | | 30/07/_5 | By Balance c/d | – | 14,000 |
| | tl | | 15,000 | | tl | | 15,000 |
| 31/07/_5 | To Balance b/d | – | 14,000 | | | | |

Dr **Zenu a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 13/10/_5 | To Goods/stock a/c | – | 1,000 | 07/10/_5 | By Goods/stock a/c | – | 12,000 |
| 30/07/_5 | To Balance c/d | – | 11,000 | | | | |
| | tl | | 12,000 | | tl | | 12,000 |
| | | | | 31/07/_5 | By Balance b/d | – | 11,000 |

Dr **Jane a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 09/10/_5 | To Goods/stock a/c | – | 13,500 | 11/10/_5 | By Cash a/c | – | 5,500 |
| | | | | 30/07/_5 | By Balance c/d | – | 8,000 |
| | tl | | 13,500 | | tl | | 13,500 |
| 31/07/_5 | To Balance b/d | – | 8,000 | | | | |

Drawings a/c

Dr **Drawings a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 12/10/_5 | To Goods/stock a/c | – | 3,000 | 30/07/_5 | By Balance c/d | – | 18,000 |
| 17/10/_5 | To Cash a/c | – | 15,000 | | | | |
| | tl | | 18,000 | | tl | | 18,000 |
| 31/07/_5 | To Balance b/d | – | 18,000 | | | | |

Dr **Machinery a/c** Cr

| Date | Particulars | J/F | Amount | Date | Particulars | J/F | Amount |
|---|---|---|---|---|---|---|---|
| 15/10/_5 | To Cash a/c | – | 18,000 | 30/07/_5 | By Balance c/d | – | 18,000 |
| | tl | | 18,000 | | tl | | 18,000 |
| 31/07/_5 | To Balance b/d | – | 18,000 | | | | |

## TRAIL BALANCE

The first step in the preparation of final accounts is the preparation of trail balance. In the double entry system of book keeping, there will be credit for every debit and there will not be any debit without credit. When this principle is followed in writing journal entries, the total amount of all debits is equal to the total amount all credits.

A trail balance is a statement of debit and credit balances. It is prepared on a particular date with the object of checking the accuracy of the books of accounts. It indicates that all the transactions for a particular period have been duly entered in the book, properly posted and balanced. The trail balance doesn't include stock in hand at the end of the period. All adjustments required to be done at the end of the period including closing stock are generally given under the trail balance.

*DEFINITIONS*:*SPICER AND POGLAR :*A trail balance is a list of all the balances standing on the ledger accounts and cash book of a concern at any given date. *J.R.BATLIBOI:*

A trail balance is a statement of debit and credit balances extracted from the ledger with a view to test the arithmetical accuracy of the books.

Thus a trail balance is a list of balances of the ledger accounts' and cash book of a business concern at any given date.

*PROFORMA FOR TRAIL BALANCE*:

Trail balance for MR…………………………………… as on …………

| NO | NAME OF ACCOUNT (PARTICULARS) | DEBIT AMOUNT (RS.) | CREDIT AMOUNT (RS.) |
|---|---|---|---|
| | | | |

**Note: Problems to be solved on trail balance**

**Illustration 4**

From the following balances extracted from the books of a trader, prepare Trial Balance as on 31st March, 2006.

| | Rs |
|---|---|
| Cash in hand | 4200 |
| Cash at Bank | 16800 |
| Bills Receivable | 18000 |
| Bills payable | 16000 |
| Sundry debtors | 24600 |
| Sundry creditors | 32400 |
| Capital | 50000 |
| Drawings | 18000 |
| Sales | 105000 |
| Purchases | 75000 |
| Carriage Inward | 2700 |
| Salaries | 12000 |
| Advertisement | 2400 |
| Insurance | 1600 |
| Furniture | 7500 |
| Stock | 18600 |
| Office Rent | 2000 |

**Solution :**

**Trial Balance**

| Name of the Account | Dr Balances (Rs) | Cr Balances (Rs) |
|---|---|---|
| Cash | 4200 | |
| Bank | 16800 | |
| Bills Receivable | 18000 | |
| Bills payable | | 16000 |
| Sundry Debtors | 24600 | |
| Sundry creditors | | 32400 |
| Capital | | 50000 |
| Drawings | 18000 | |
| Sales | | 105000 |
| Purchases | 75000 | |
| Carriage Inward | 2700 | |
| Salaries | 12000 | |
| Advertisement | 2400 | |
| Insurance | 1600 | |
| Furniture | 7500 | |
| Rent | 2000 | |
| Stock | 18600 | |
| Total | 203400 | 203400 |

## FINAL ACCOUNTS

In every business, the business man is interested in knowing whether the business has resulted in profit or loss and what the financial position of the business is at a given time. In brief, he wants to know

(I)The profitability of the business and

(ii) The soundness of the business.

The trader can ascertain this by preparing the final accounts. The final accounts are prepared from the trial balance. Hence the trial balance is said to be the link between the ledger accounts and the final accounts. The final accounts of a firm can be divided into two stages. The first stage is preparing the trading and profit and loss account and the second stage is preparing the balance sheet.

## TRADING ACCOUNT

The first step in the preparation of final account is the preparation of trading account. The main purpose of preparing the trading account is to ascertain gross profit or gross loss as a result of buying and selling the goods.

*Trading account of MR…………………….. for the year ended ……………………*

| Particulars | Amount | Particulars | Amount |
|---|---|---|---|
| To opening stock | Xxxx | By sales xxxx | |
| To purchases xxxx | | Less: returns xxx | Xxxx |
| Less: returns xx | Xxxx | By closing stock | Xxxx |
| To carriage inwards | Xxxx | | |
| To wages | Xxxx | | |
| To freight | Xxxx | | |
| To customs duty, octroi | Xxxx | | |
| To gas, fuel, coal,Water | Xxxx | | |
| To factory expenses | Xxxx | | |
| To other man. Expenses | Xxxx | | |
| To productive expenses | Xxxx | | Xxxx |
| To gross profit c/d | Xxxx | | |

Finally, a ledger may be defined as a summary statement of all the transactions relating to a person, asset, expense or income which have taken place during a given period of time. The up-to-date state of any account can be easily known by referring to the ledger.

**PROFIT AND LOSS ACCOUNT**

The business man is always interested in knowing his net income or net profit.Net profit represents the excess of gross profit plus the other revenue incomes over administrative, sales, Financial and other expenses. The debit side of profit and loss account shows the expenses and the credit side the incomes. If the total of the credit side is more, it will be the net profit. And if the debit side is more, it will be net loss.

PROFIT AND LOSS A/C OF MR…………………….FOR THE YEAR ENDED…………

| PARTICULARS | AMOUNT | PARTICULARS | AMOUNT |
|---|---|---|---|

| | | | |
|---|---|---|---|
| TO office salaries | Xxxxxx | By gross profit b/d | Xxxxx |
| TO rent,rates,taxes | Xxxxx | By Interest received | Xxxxx |
| TO Printing and stationery | Xxxxx | By Discount received | Xxxx |
| TO Legal charges,Audit fee | Xxxx | By Commission received | Xxxxx |
| TO Insurance | Xxxx | | Xxxx |
| TO General expenses | Xxxx | ByIncomefrom investments | Xxxx |
| TO Advertisements | Xxxxx | By Dividend on shares | Xxxx |
| TO Bad debts | Xxxx | ByMiscellaneous investments | Xxxx<br>Xxxx |
| TO Carriage outwards | Xxxx | | |
| TO Repairs | Xxxx | By Rent received | |
| TO Depreciation | Xxxxx | | |
| TO interest paid | Xxxxx | | |
| TO Interest on capital | Xxxxx | | |
| TO Interest on loans | Xxxx | | |
| TO Discount allowed | Xxxxx | | |
| TO Commission | Xxxxx | | |
| TO Net profit-------→ | Xxxxx | | |
| (transferred to capital a/c) | | | |
| | Xxxxxx | | |

**BALANCE SHEET**

The second point of final accounts is the preparation of balance sheet. It is prepared often in the trading and profit; loss accounts have been compiled and closed. A balance sheet may be considered as a statement of the financial position of the concern at a given date.

*DEFINITION:* A balance sheet is an item wise list of assets, liabilities and proprietorship of a business at a certain state.

*J.R.botliboi:* A balance sheet is a statement with a view to measure exact financial position of a business at a particular date.

Thus, Balance sheet is defined as a statement which sets out the assets and liabilities of a business firm and which serves to as certain the financial position of the same on any particular date. On the left-hand side of this statement, the liabilities and the capital are shown. On the right-hand side all the assets are shown. Therefore, the two sides of the balance sheet should be equal. Otherwise, there is an error somewhere.

BALANCE SHEET OF ………………………… AS ON ……………………………………

| Liabilities and capital | Amount | Assets | Amount |
|---|---|---|---|
| Creditors | Xxxx | Cash in hand cash at bank | Xxxx |
| Bills payable | Xxxx | Bills receivable | Xxxx |
| Bank overdraft | Xxxx | Debtors | Xxxx |
| Loans | Xxxx | Closing stock | Xxxx |
| Mortgage | Xxxx | Investments | Xxxx |
| Reserve fund | Xxxx | Furniture and fittings | Xxxx |
| Capital xxxxxx | | Plats&machinery | Xxxx |
| <u>Add</u>: Net Profit xxxx | | Land & buildings | Xxxx |
| xxxxxxx | | Patents, tm ,copyrights | Xxxx |
| <u>Less</u>: Drawings xxxx | Xxxx | Goodwill | Xxxx |
| | | Prepaid expenses | Xxxx |
| | | Outstanding incomes | Xxxx |
| | XXXX | | XXXX |

*<u>Advantages</u>:* The following are the advantages of final balance.

1. It helps in checking the arithmetical accuracy of books of accounts.
2. It helps in the preparation of financial statements.
3. It helps in detecting errors.
4. It serves as an instrument for carrying out the job of rectification of entries.
5. It is possible to find out the balances of various accounts at one place.

**FINAL ACCOUNTS -- ADJUSTMENTS**

We know that business is a going concern. It has to be carried on indefinitely. At the end of every accounting year. The trader prepares the trading and profit and loss account and balance sheet. While preparing these financial statements, sometimes the trader may come across certain problems .The expenses of the current year may be still payable or the expenses of the next year have been prepaid during the current year. In the same way, the income of the current year still receivable and the income of the next year have been received during the current year. Without these adjustments, the profit figures arrived at or the financial position of the concern may not be correct. As such these adjustments are to be made while preparing the final accounts.

The adjustments to be made to final accounts will be given under the Trial Balance. While making the adjustment in the final accounts, the student should remember that "every adjustment is to be made in the final accounts twice i.e. once in trading, profit and loss account and later in balance sheet generally". The following are some of the important adjustments to be made at the time of preparing of final accounts:-

**Illustration:**

Prepare a Trading Account for the year ended 31st December 2010 from the following balances:

| | Rs. | | Rs. |
|---|---|---|---|
| Opening Stock | 4,00,000 | Purchases Return | 1,20,000 |
| Purchases | 20,00,000 | Sales Return | 2,00,000 |
| Sales | 50,00,000 | Carriage on Purchase | 80,000 |
| Freight and Octroi | 65,000 | Carriage on sales | 1,00,000 |
| Wages | 3,00,000 | Factory Rent | 1,20,000 |
| Factory Lighting | 1,08,000 | Office Rent | 75,000 |
| Coal, Gas and Water | 22,000 | Import Duty | 3,20,000 |

Closing Stock is valued at Rs. 6,00,000.

**TRADING A/C**

*(for the year ended................)*

Dr. Cr.

| Particular | | Amount | Particulars | | Amount |
|---|---|---|---|---|---|
| | | Rs. | | | Rs. |
| To Opening Stock | | 4,00,000 | By Sales | 50,00,000 | |
| To Purchases | 20,00,000 | | *Less:* Sales Returns | 2,00,000 | 48,00,000 |
| *Less:* Purchases Return | 1,20,000 | 18,80,000 | By Closing Stock | | 6,00,000 |
| To Freight and Octroi | | 65,000 | | | |
| To Wages | | 3,00,000 | | | |
| To Factory Lighting | | 1,08,000 | | | |
| To Coal, Gas and Water | | 22,000 | | | |
| To Carriage on Purchase | | 80,000 | | | |
| To Factory Rent | | 1,20,000 | | | |
| To Import Duty | | 3,20,000 | | | |
| To Gross Profit transferred to Profit & Loss A/c | | 21,05,000 | | | |
| | | 54,00,000 | | | 54,00,000 |

**Illustration:**

From the following particulars, prepare a Profit & Loss Account for the year ending 31st December, 2010.

| | Rs. | | Rs. |
|---|---|---|---|
| Gross Profit | 21,05,000 | Discount allowed | 30,000 |
| Trade Expenses | 20,000 | Lighting | 7,800 |
| Carriage on Sales | 1,00,000 | Commission Received | 8,400 |
| Office Salaries | 1,58,000 | Bad-debts | 12,000 |
| Postage and Telegram | 7,200 | Discount (Cr.) | 6,000 |
| Office Rent | 75,00 | Interest on Loan | 22,000 |
| Legal Charges | 4,000 | Stable Expenses | 14,000 |
| Audit Fee | 16,000 | Export Duty | 23,000 |
| Donation | 11,000 | Miscellaneous Receipts | 5,000 |
| Sundry Expenses | 3,600 | Unproductive Expenses | 41,000 |
| Selling Expenses | 53,200 | Travelling Expenses | 25,000 |

**PROFIT AND LOSS ACCOUNT**

***for the year ending on 31st December, 2010***

Dr. Cr.

| Particulars | Amount | Particulars | Amount |
|---|---|---|---|
| | Rs. | | Rs. |
| To Trade Expenses | 20,000 | By Gross Profit | 21,05,000 |
| To Carriage on Sales | 1,00,000 | By Commission Received | 8,400 |
| To Office Salaries | 1,58,000 | By Discount | 6,000 |
| To Postage & Telegram | 7,200 | By Miscellaneous Receipts | 5,000 |
| To Office Rent | 75,000 | | |
| To Legal Charges | 4,000 | | |
| To Audit Fee | 16,000 | | |
| To Donation | 11,000 | | |
| To Sundry Expenses | 3,600 | | |
| To Selling Expenses | 53,200 | | |
| To Discount Allowed | 30,000 | | |
| To Lighting | 7,800 | | |
| To Bad-Debts | 12,000 | | |
| To Interest on Loan | 22,000 | | |
| To Stable Expenses | 14,000 | | |
| To Export Duty | 23,000 | | |
| To Unproductive Expenses | 41,000 | | |
| To Travelling Expenses | 25,000 | | |
| To Net Profit transferred to Capital Account | 15,01,600 | | |
| | **21,24,400** | | **21,24,400** |

**Illustration:**

From the following Trial Balance of Radhe Shyam Trading and Profit and Loss A/c for the year ending 31st December, 2010 and Balance Sheet as on that date. The Closing Stock on 31st December, 2010 was valued at Rs. 2,50,000.

| Debit Balances | Amount (Rs.) | Credit Balance | Amount (Rs.) |
|---|---|---|---|
| Stock (1-1-2010) | 2,00,000 | Sundry Creditors | 1,50,000 |
| Purchases | 7,50,000 | Purchases Return | 30,000 |
| Sales Return | 80,000 | Sales | 25,00,000 |
| Freight and Carriage | 75,000 | Commission | 33,000 |
| Wages | 3,65,000 | Capital | 17,00,000 |
| Salaries | 1,20,000 | Interest on Bank Deposit | 20,000 |
| Repairs | 12,000 | B/P | 62,000 |
| Trade Expenses | 40,000 | | |
| Rent and Taxes | 2,40,000 | | |
| Cash in Hand | 57,000 | | |
| B/R | 40,000 | | |
| | 5,50,000 | | |
| Plant and Machinery | 16,00,000 | | |
| Withdrawals (Drawings) | 1,66,000 | | |
| Bank Deposit | 2,00,000 | | |
| | **44,95,000** | | **44,95,000** |
| | | | |

**TRADING AND PROFIT & LOSS ACCOUNT**

***for the year ending 31st December, 2010***

| Liabilities | | Amount | Assets | | Amount |
|---|---|---|---|---|---|
| | | Rs. | | | Rs. |
| To Opening Stock | | 2,00,000 | By Sales | 25,00,000 | |
| To Purchases | 7,50,000 | | *Less:* Sales Return | 80,000 | 24,20,000 |
| *Less:* Purchases Return | 30,000 | 7,20,000 | By Closing Stock | | 2,50,000 |
| To Freight & Carriage | | 75,000 | | | |
| To Wages | | 3,65,000 | | | |
| To Gross Profit c/d | | 13,10,000 | | | |
| | | 26,70,000 | | | 26,70,000 |
| To Salaries | | 1,20,000 | By Gross Profit b/d | | 13,10,000 |
| To Repairs | | 12,000 | By Commission | | 33,000 |
| To Trade Expenses | | 40,000 | By Interest on Bank Deposit | | 20,000 |
| To Rent & Taxes | | 2,40,000 | | | |
| To Net profit transferred to Capital A/c | | 9,51,000 | | | |
| | | **13,63,000** | | | **13,63,000** |

**BALANCE SHEET**

*as on 31st December, 2010*

| Liabilities | | Amount | Assets | Amount |
|---|---|---|---|---|
| | | Rs. | | Rs. |
| B/P | | 62,000 | Cash in Hand | 57,000 |
| Sundry Creditors | | 1,50,000 | B/R | 40,000 |
| Capital | 17,00,000 | | Sundry Debtors | 5,50,000 |
| *Add:* Net Profit | 9,50,000 | | Closing Stock | 2,50,000 |
| | 26,51,000 | | Bank Deposit | 2,00,000 |
| *Less:* Drawings | 1,66,000 | 24,85,000 | Plant & Machinery | 16,00,000 |
| | | **26,97,000** | | **26,97,000** |

**Illustration:**

From the following balances prepare Final Accounts as on 31st December, 2010.

| | Rs. | | Rs. |
|---|---|---|---|
| Opening Stock | 1,53,100 | Capital | 25,00,000 |
| Purchase | 8,24,000 | Drawings | 4,80,000 |
| Sales | 25,60,000 | Sundry Debtors | 5,70,000 |
| Returns (Dr.) | 40,000 | Sundry Creditors | 1,40,000 |
| Returns (Cr.) | 24,000 | Depreciation | 42,000 |
| Factory Rent | 1,80,000 | Charity | 5,000 |
| Custom Duty | 1,15,000 | Cash Balance | 44,600 |
| Coal, Gas and Power | 60,000 | Bank Balance | 40,000 |
| Wages & Salary | 3,66,000 | Bank Charges | 1,800 |
| Discount (Dr.) | 75,000 | Establishment Expenses | 36,000 |
| Commission (Cr.) | 12,000 | Plant | 4,20,000 |
| Bad-Debts | 58,500 | Leasehold Building | 15,00,000 |
| Bad-Debts Recovered | 20,000 | Goodwill | 2,00,000 |
| Apprentice Premium | 48,000 | Patents | 1,00,000 |
| Productive Expenses | 26,000 | Trade Marks | 50,000 |
| Unproductive Expenses | 50,000 | Loan Cr. | 2,50,000 |
| Carriage | 87,000 | Interest on Loan | 30,000 |

The value of Closing Stock on 31st December, 2010 was Rs. 2,54,000.

1

**Solution:**

**TRADING AND PROFIT & LOSS ACCOUNT**

***for the year ending 31st December, 2010***

| | | Rs. | | | Rs. |
|---|---|---|---|---|---|
| To Opening Stock | | 1,53,100 | By Sales | 25,60,000 | |
| To Purchases | 8,24,000 | | *Less:* Returns (Dr.) | 40,000 | 25,20,000 |
| *Less:* Returns (Cr.) | 24,000 | 8,00,00 | By Closing Stock | | 2,54,000 |
| To Factory Rent | | 1,80,000 | | | |
| To Custom Duty | | 1,15,000(1) | | | |
| To Coal, Gas and Power | | 60,000 | | | |
| To Wages & Salary | | 3,66,000 | | | |
| To Productive Expenses | | 26,000 | | | |
| To Carriage | | 87,000 | | | |
| To Gross Profit c/d | | 9,86,900 | | | |
| | | **27,74,000** | | | **27,74,000** |

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<u>*STOCK*</u>:-

| | | | |
|---|---|---|---|
| To Discount | 75,000 | By Gross Profit b/d | 9,86,900 |
| To Bad-Debts | 58,500 | By Commission | 12,000 |
| To Unproductive Expenses | 50,000 | By Bad Debts Recovered | 20,000 |
| To Depreciation | 42,000 | By Apprentice Premium | 48,000(2) |
| To Charity | 5,000 | | |
| To Bank Charges | 1,800 | | |
| To Establishment Expenses | 36,000 | | |
| To Interest on Loan | 30,000 | | |
| To Net Profit transferred to Capital A/c | 7,68,600 | | |
| | **10,66,900** | | **10,66,900** |

**BALANCE SHEET**

***as on 31st December, 2010***

| Liabilities | | Amount | Assets | Amount |
|---|---|---|---|---|
| | | Rs. | | Rs. |
| Sundry Creditors | | 1,40,000 | Cash Balance | 44,600 |
| Loan | | 2,50,000 | Bank Balance | 40,000 |
| Capital | 25,00,000 | | Sundry Debtors | 5,70,000 |
| *Add:* Net Profit | 7,68,600 | | Closing Stock | 2,54,000 |
| | 32,68,600 | | Plant | 4,20,000 |
| *Less:* Drawings | 4,80,000 | 27,88,600 | LeaseholdBuilding | 15,00,000 |
| | | | Patents | 1,00,000 |
| | | | Trade Marks | 50,000 |
| | | | Goodwill | 2,00,000 |
| | | **31,78,600** | | **31,78,600** |

Closing stock

(i)*<u>If closing stock is given in Trail Balance</u>*: It should be shown only in the balance sheet "Assets Side".

(ii)*<u>If closing stock is given as adjustment</u>:*

1. First, it should be posted at the credit side of "Trading Account".
2. Next, shown at the asset side of the "Balance Sheet".

2. *<u>OUTSTANDING EXPENSES</u>*:-

(i)*<u>If outstanding expenses given in Trail Balance</u>*: It should be only on the liability side of Balance Sheet.

(ii)*<u>If outstanding expenses given as adjustment</u>*:

1. First, it should be added to the concerned expense at the debit side of profit and loss account or Trading Account.
2. Next, it should be added at the liabilities side of the Balance Sheet.

3. *<u>PREAPID EXPENSES</u>*:-

(i)*<u>If prepaid expenses given in Trial Balance</u>*: It should be shown only in assets side of the Balance Sheet.

(ii)*<u>If prepaid expense given as adjustment</u>* :

1. First, it should be deducted from the concerned expenses at the debit side of profit and loss account or Trading Account.
2. Next, it should be shown at the assets side of the Balance Sheet.

4. *<u>INCOME EARNED BUT NOT RECEIVED [OR] OUTSTANDING INCOME [OR] ACCURED INCOME</u>*:-

(i)*<u>If incomes given in Trial Balance</u>*: It should be shown only on the assets side of the Balance Sheet.

(ii)*<u>If incomes outstanding given as adjustment</u>*:

1. First, it should be added to the concerned income at the credit side of profit and loss account.
2. Next, it should be shown at the assets side of the Balance sheet.

5. *<u>INCOME RECEIVED IN ADVANCE: UNEARNED INCOME</u>*:-

(i)*<u>If unearned incomes given in Trail Balance</u>*: It should be shown only on the liabilities side of the Balance Sheet.

(ii)*<u>If unearned income given as adjustment</u>* :

1. First, it should be deducted from the concerned income in the credit side of the profit and loss account.
2. Secondly, it should be shown in the liabilities side of the Balance Sheet.

6. *DEPRECIATION*:-

(i)*If Depreciation given in Trail Balance*: It should be shown only on the debit side of the profit and loss account.

(ii)*If Depreciation given as adjustment*

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deduced from the concerned asset in the Balance sheet assets side.

7. *INTEREST ON LOAN [OR] CAPITAL*:-

(i)*If interest on loan (or) capital given in Trail balance*:It should be shown only on debit side of the profit and loss account.

(ii)*If interest on loan (or)capital given as adjustment*:

1. First, it should be shown on debit side of the profit and loss account.
2. Secondly, it should added to the loan or capital in The liabilities side of the Balance Sheet.

8. *BAD DEBTS*:-

(i)*If bad debts given in Trail balance*: It should be shown on the debit side of the profit and loss account.

(ii)*If bad debts given as adjustment*:

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deducted from debtors in the assets side of the Balance Sheet.

9. *INTEREST ON DRAWINGS*:-

(i)*If interest on drawings given in Trail balance*: It should be shown on the credit side of the profit and loss account.

(ii)*If interest on drawings given as adjustments*:

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be deducted from capital on liabilities Side of the Balance Sheet.

10. *INTEREST ON INVESTMENTS*:-

(I)*If interest on the investments given in Trail balance: It* should be shown on the credit side of the profit and loss account.

(ii)*If interest on investments given as adjustments* :

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be added to the investments on assets side of the Balance Sheet.

***Note: Problems to be solved on final accounts***

**KEY WORDS IN BOOK-KEEPING**

**1.** *TRANSACTIONS*: Any sale or purchase of goods of services is called the transaction.

Transactions are two types.

[A]. cash transaction: cash transaction is one where cash receipt or payment is involved in the exchange.

[b]. Credit transaction: Credit transaction will not have cash, either received or paid, for something given or received respectively.

**2.** *GOODS*: Fill those things which a firm purchases for resale are called goods.

**3.** *PURCHASES*: Purchases means purchase of goods, unless it is stated otherwise it also represents the Goods purchased.

**4.** *SALES*: Sales means sale of goods, unless it is stated otherwise it also represents these goods sold.

**5.** *EXPENSES*: Payments for the purchase of goods as services are known as expenses.

**6.** *REVENUE*: Revenue is the amount realized or receivable from the sale of goods or services.

**7.** *ASSETS*: The valuable things owned by the business are known as assets. These are the properties Owned by the business.

**8.** *LIABILITIES*: Liabilities are the obligations or debts payable by the enterprise in future in the term of money or goods.

**9.** *DEBTORS*: Debtors means a person who owes money to the trader.

**10.** *CREDITORS*: A creditor is a person to whom something is owned by the business.

**11.** *DRAWINGS*: cash or goods withdrawn by the proprietor from the Business for his personal or Household is termed to as “drawing”.

**12.** *RESERVE*: An amount set aside out of profits or other surplus and designed to meet contingencies.

**13.** *ACCOUNT*: A summarized statements of transactions relating to a particular person, thing, Expense or income.

**14.** *DISCOUNT*: There are two types of discounts...

a. Cash discount: An allowable made to encourage frame payment or before the expiration of the period allowed for credit.
b. Trade discount: A deduction from the gross or catalogue price allowed to traders who buys them for resale.

# UNIT – 5:

# RATIO ANALYSIS

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. By computing ratios, it is easy to understand the financial position of the firm. Ratio analysis is used to focus on financial issues such as liquidity, profitability and solvency of a given firm.

**WHAT IS A RATIO?**

Ratio is simply a number expressed in terms of another. It refers to the numerical or quantitative relationship between two variables which are comparable. It is an expression derived by dividing one variable by the other. It is a statistical measure that provides an insight into the relationships between two variables. Ratios used rightly may even develop understanding and stimulate thinking. Ratios can be expressed in terms of percentages, proportions, and quotients also.

**INTERPERTATION:**

Interpretation refers to evaluating the ratio in terms of the laid out standards or norms; nature of the industry/sector; and identifying the possible cause for improvement or decline in the performance of the company. An insight into the logical functioning of business and the knowledge of cause and effect relationship among the given variables in the micro- and macrobusiness environment will enhance the quality of interpretation. Interpretation is to be made with meticulous care because future decisions are based on the results of interpretation.

**USES OR ADVANTAGES OR IMPORTANCE OF RATIO ANALYSIS**

**Useful in financial position analysis:** Accounting reveals the financial position of the concern. This helps banks, insurance companies and other financial institution in lending and making investment decisions.

**Useful in simplifying accounting figures**: Accounting ratios simplify, summaries and systematic the accounting figures in order to make them more understandable and in lucid form.

**Useful in assessing the operational efficiency:** Accounting ratios helps to have an idea of the working of a concern. The efficiency of the firm becomes evident when analysis is based on accounting ratio. This helps the management to assess financial requirements and the capabilities of various business units.

**Useful in forecasting purposes**: If accounting ratios are calculated for number of years, then a trend is established. This trend helps in setting up future plans and forecasting.

**Useful in locating the weak spots of the business**: Accounting ratios are of great assistance in locating the weak spots in the business even through the overall performance may be efficient.

**Useful in comparison of performance**: Managers are usually interested to know which department performance is good and for that he compare one department with the another department of the same firm. Ratios also help him to make any change in the organisation structure.

LIMITATIONS OF RATIO ANALYSIS:

These limitations should be kept in mind while making use of ratio analyses for interpreting the financial statements. The following are the main limitations of ratio analysis.

**False results if based on incorrect accounting data**: Accounting ratios can be correct only if the data (on which they are based) is correct. Sometimes, the information given in the financial statements is affected by window dressing, i. e. showing position better than what actually is.

**No idea of probable happenings in future:** Ratios are an attempt to make an analysis of the past financial statements; so they are historical documents. Now-a-days keeping in view the complexities of the business, it is important to have an idea of the probable happenings in future.

**Variation in accounting methods:** The two firms' results are comparable with the help of accounting ratios only if they follow the some accounting methods or bases. Comparison will become difficult if the two concerns follow the different methods of providing depreciation or valuing stock.

**Price level change**: Change in price levels make comparison for various years difficult.

**Only one method of analysis:** Ratio analysis is only a beginning and gives just a fraction of information needed for decision-making so, to have a comprehensive analysis of financial statements, ratios should be used along with other methods of analysis.

**No common standards:** It is very difficult to by down a common standard for comparison because circumstances differ from concern to concern and the nature of each industry is different.

**Different meanings assigned to the some term:** Different firms, in order to calculate ratio may assign different meanings. This may affect the calculation of ratio in different firms and such ratio when used for comparison may lead to wrong conclusions.

**TYPES OF RATIO:**

Based on their nature, the ratios can broadly be classified into four categories:

Liquidity ratios

Activity ratios

Capital structure ratios

Profitability ratios

LIQUIDITY RATIOS:

Liquidity ratios express the ability of the firm to meet its short-term commitments as and when they become due. Creditors are 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 payment of taxes, wages and salaries, and so on, then it cannot continue in business for long despite its strong capital base. Liquidity ratios help in identifying the danger signals for the firm in advance.

Apart from the firm itself, all the financing companies offering short-term finances are interested in there ratios.

Liquidity ratios can be classified into two types:

1. CURRENT RATIO:

2. QUICK RATIO

**1. CURRENT RATIO:**

Current ratio is the ratio between current assets 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 assess short-term liquidity. However, it may vary from one industry sector to the other. In other words, for every rupee of current liability, there should be two rupees worth current assets. The interests of the creditors are safeguarded if the current ratio is at least 2:1.

**CURRENT RATIO= CURRENT ASSETS/ CURRENT LIABILITES**

**2. QUICK RATIO:**

Quick ratio is also called acid test ratio. It measures the firm's ability to convert its current assets quickly into cash in order to meet its current liabilities. It is the ratio between liquid assets and liquid liabilities. It supplements the information given by current ratio.

**QUICK RATIO = QUICK ASSETS/ CURRENT LIABILITIES**

Where Quick assets = Current assets – (Stock + Prepaid expenses)

Quick assets are those assets that can be converted into cash quickly. These are also called liquid assets. Since stock can be sold quickly, it is not included in the list of quick assets. All current assets except stock and prepaid expenses, if any, are called quick or liquid assets.

**ACTIVITY RATIOS**:

Activity ratios express how active the firm is in terms of selling its stocks, collecting its receivables and paying its creditors. These are three types:

Inventory Turnover Ratio

Debtors Turnover Ratio

**INVENTORY TURNOVER RATIO:**

It is also called stock turnover ratio. It indicates the number of times the average stock is being sold during a given accounting period. It establishes the relation between 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 inventories are converted into sales and then to cash. It also helps the financial manager to design an appropriate inventory policy so as to avoid piling of inventories. It is calculated as given below:

**INVENTORY TURNOVER RATIO = COST OF GOODS SOLD/ AVERAGE INVETORY**

Where cost of goods sold = Sales – Gross profit;

Average inventory is the average of opening stock at the beginning of the year and the closing stock at the end of the year, that is,

**AVERAGE STOCK = OPENING STOCK + CLOSING STOCK / 2**

A high inventory turnover ratio implies the efficiency of the firm whereas a low inventory turnover ratio indicates that the firm is not in a position a clear its stocks. From inventory turnover ratio, we can also determine the inventory holding period. It is determined as given below:

**INVENTORY HOLDING PERIOD = 364 DAYS/ INVENTORY TURNOVER RATIO**

**DEBTORS TURNOVER RATIO:**

Debtor’s turnover ratio reveals the number of times the average debtors are collected during a given accounting period. In other words, It shows how quickly the firm is in a position to collect its debts. It is necessary to keep close monitoring of realization of debts because it directly affect the working capital position. In case, the firm is not in a position to collect its debts, to meet the working capital requirements, it has to borrow paying interest. This further erodes the profitability. The successful companies maintain the aged list of the debtors showing the details of when to collect, how much to collect and from which debtor.

Debtor’s turnover ratio is calculated as given below:

**DEBTORS TURNOVER RATIO = CREDIT SALES/ AVEREGE DEBTORS**

Where credit sales refer to goods sold on credit. Average debtors are the average of opening and closing balances of debtors for the given accounting period.

A higher debtor’s turnover ratio explains that the firm is efficient in collecting its debts whereas lower ratio signifies its inefficiency.

**DEBT COLLECTION PERIOD:**

Debt collection period refers to the time taken to collect the debts. From debtors turnover ratio, we can find out the debt collection period as follows.

**DEBT COLLECTION PERIOD = 365 DAYS/ DEBTORS TURNOVER RATIO**

The lesser the time, more is the efficiency of the firm and vice versa.

**CAPITAL STRUCTURE RATIOS (LEVERAGE RATIOS):**

Capital structure or leverage ratio is defined as 'the financial ratio, which focuses on the long-term solvency of the firm. The long-term solvency of the firm is always reflected in its ability to meet its long-term commitments such as payment of interest periodically without fail, repayment of principal as and when due.

DEBT-EQUITY (D/E) RATIO

INTEREST COVERAGE RATIO

**DEBT-EQUITY (D/E) RATIO:**

Debt-equity ratio is the ratio between outsider's funds (debt) and insiders fund (equity). This is used to measure the firm's obligations to creditors in relation to the owner's 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 funds.

This is also industry/sector specific ratio. Depending upon the industry, the standard for the debt-equity ratio differs. For instance, in case of capital intensive industries such as shipping companies or steel manufacturing companies, the D/E ratio can be as high as 20:1. So this ratio has to be interpreted considering the nature of industry and competitors D/E ratios.

Debt-equity ratio is calculated as follows:

**DEBT-EQUITY RATIO = (DEBT/EQUITY) OR (OUTSIDERS FUNDS/INSIDERS OR SHAREHOLDERS FUNDS)**

**INTEREST COVERAGE RATIO:**

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

Interest coverage ratio is calculated as follows:

**INTEREST COVERAGE RATIO = (NTE PROFIT BEFORE INTEREST AND TAXES/ FIXED INTEREST CHARGES)**

The more the number of times of coverage, the better is the solvency position of the borrower.

## PROFITABILITY RAITOS:

Profitability ratios throw light on how well the firm is organizing its activities in profitable manner. The owners expect reasonable rate of return on their investment. The firm should generate enough profits not only to meet the expectations of the owners, but also to finance the expansion activities.

### 1. GROSS PROFIT RATIO:

Gross profit ratio is the ratio between gross profits 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 investments, gain on sale of fixed assets and so on are added to the operating profit and non-operation expenses such as loss 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-operation expenses;

NET PROFIT RATIO = (NET PROFIT AFTER TAXES/NET SALES) * 100

### 3. OPERATING RATIO:

Operation 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

Where Operating expenses = (Cost of goods sold + Administrative expenses + Selling and distribution expenses)

### 4. EARNINGS PER SHARE (EPS):

EPS is the relationship between net profits 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.

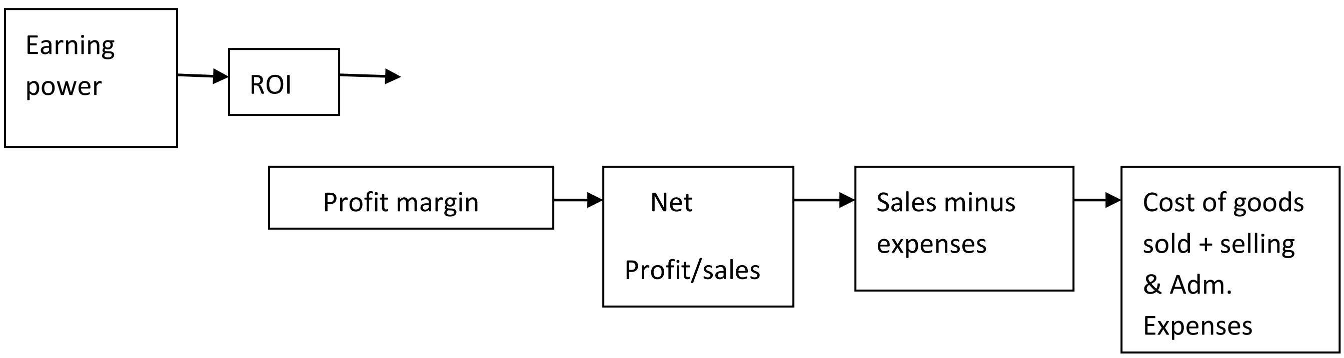
EPS = (NET PROFIT AFTER TEXES/NUMBER OF SHARES OUTSTANDING)

DUPONT CHART:

The elements that go into computation of earning power have been built into the following chart by Du Pont Company for the first time and hence it is called Du Pont Chart.

It can be seen that the earning power is dependent on many variables. Any change in these factors will affect the earning power. If the selling price increases, it will increase the profits and vice versa. If the cost of goods sold increases, the profit margin declines. The earnings power will improve only if turnover or net profit or both increases.

Earning power is an important ratio that can be used to evaluate and compare the performances of departments as well as the firm as a whole. It is a valuable tool for inter-firm comparison also.



# RATIO ANALYSIS PROBLEMS

## Problem - 1

The following Trading and Profit and Loss Account of Fantasy Ltd. for the year 31-3-2000 is given below:

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| To Opening Stock | 76,250 | By Sales | 5,00,000 |
| “ Purchases | 3,15,250 | “ Closing stock | 98,500 |
| “ Carriage and Freight | 2,000 | | |
| “ Wages | 5,000 | | |
| “ Gross Profit b/d | 2,00,000 | | |
| | 5,98,500 | | |
| To Administration expenses | 1,01,000 | By Gross Profit b/d | 5,98,50 |
| “ Selling and Dist. expenses | 12,000 | “ Non-operating incomes: | |
| “ Non-operating expenses | 2,000 | “ Interest on Securities | 2,00,000 |
| “ Financial Expenses Net | 7,000 | “ Dividend on shares | |
| Profit c/d | 84,000 | “ Profit on sale of shares | 1,500 |
| | 2,06,000 | | 3,750 |
| | | | 75 |
| | | | 2,06,000 |

Calculate:

**1.** Gross Profit Ratio **2.** Expenses Ratio **3.** Operating Ratio

**1.** Net Profit Ratio **5.** Operating (Net) Profit Ratio **6.** Stock Turnover Ratio.

## Solution – 1 (Problem related to Revenue Ratio)

**1.** Gross Profit Margin = $\frac{\text{Gross profit}}{\text{Sales}} \times 100$

$\frac{2,00,000}{5,00,000} \times 100$

= 40%

**2.** Expenses Ratio = $\frac{\text{Op. Expenses}}{\text{Net Sales}} \times 100$

$$\frac{1,13,000}{5,00,000} \times 100$$

= 22.60%

**3.** Operating Ratio = $\frac{\text{Cost of goods sold + Op. Expenses}}{\text{Net Sales}} \times 100$

$$\frac{3,00,000 + 1,13,000}{5,00,000} \times 100$$

= 82.60%

Cost of Goods sold = Op. stock + purchases + carriage and Freight + wages – Closing Stock

= 76250 + 315250 + 2000 + 5000 - 98500

= Rs.3,00,000

**4.** Net Profit Ratio = $\frac{\text{Net Profit}}{\text{Net Sales}} \times 100$

$$\frac{84,000}{5,00,000} \times 100$$

= 16.8%

Op. Profit

5. Operating Profit Ratio = **X** 100

Net Sales

Operating Profit = Sales – (Op. Exp. + Admin Exp.)

$$\frac{87,000}{5,00,000} \times 100$$

= 17.40%

6. Stock Turnover Ratio = $\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$

$$\frac{3,00,000}{87,375}$$

= 3.43 times

## Problem - 2

The Balance Sheet of Punjab Auto Limited as on 31-12-2002 was as follows:

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| Equity Share Capital | 40,000 | Plant and Machinery | 24,000 |
| Capital Reserve | 8,000 | Land and Buildings | 40,000 |
| 8% Loan on Mortgage | 32,000 | Furniture & Fixtures | 16,000 |
| Creditors | 16,000 | Stock | 12,000 |
| Bank overdraft | 4,000 | Debtors | 12,000 |
| Taxation: Current | | Investments (Short-term) | 4,000 |
| Future | 4,000 | Cash in hand | 12,000 |
| Profit and Loss A/c | 4,000 | | |
| | 12,000 | | |
| | 1,20,000 | | 1,20,000 |

From the above, compute (a) the Current Ratio, (b) Quick Ratio, (c) Debt-Equity Ratio, and (d) Proprietary Ratio.

### Solution – 2 (Problem related to Balance Sheet Ratio)

| | | |
|---|---|---|
| **1.** Current Ratio = | Current Assets Current liabilities | |
| | Current Assets = Stock + debtors + Investments (short term) + Cash In hand | |
| | Current Liabilities = Creditors + bank overdraft + Provision for Taxation (current & Future) | |
| | CA = 12000 + 12000 + 4000 + 12000<br>= 40,000 | |
| | **CL =** 16000 + 4000 + 4000 + 4000 | |
| | = 28,000 | |
| | = 40,000<br>28,000 | |
| | **= 1.43 : 1** | |

| | | |
|---|---|---|
| **2.** Quick Ratio = | Quick Assets Quick Liabilities | |
| | Quick Assets = Current Assets - Stock | |
| | Quick Liabilities = Current Liabilities – (BOD + PFT future) | |
| | QA = 40,000 – 12,000<br>= 28,000 | |
| | QL = 28,000 – (4,000 + 4,000)<br>= 20,000 | |
| | = 28,000<br>20,000 | |
| | **= 1.40 : 1** | |

| | | |
|---|---|---|
| **3.** Debt – Equity Ratio = | Long Term Debt (Liabilities) / Shareholders Fund | |
| | LTL = Debentures + long term loans | |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets | |
| | LTL = 32,000 | |
| | SHF = 40,000 + 8,000 + 12,000 <br> = 60,000 | |
| | = 32,000 / 60,000 | |
| | **= 0.53 : 1** | |

| | | |
|---|---|---|
| **4.** Proprietary Ratio = | Shareholders' Funds / Total Assets | |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets | |
| | Total Assets = Total Assets – Fictitious Assets | |
| | SHF = 40,000 + 8,000 + 12,000 <br> = 60,000 | |
| | TA = 1,20,000 | |
| | = 60,000 / 1,20,000 | |
| | **= 0.5 : 1** | |

**Problem - 3 [Sau. Uni. T. Y., April, 2000]**

The details of Shreenath Company are as under:

| | | |
|---|---|---|
| Sales (40% cash sales) | | 15,00,000 |
| Less: Cost of sales | | 7,50,000 |
| **Gross Profit**: | | 7,50,000 |
| Less: Office Exp. (including int. on debentures) | 1,25,000 | |
| Selling Exp. | 1,25,000 | 2,50,000 |
| **Profit before Taxes:** | | 5,00,000 |
| Less: Taxes | | 2,50,000 |
| **Net Profit:** | | 2,50,000 |

**Balance Sheet**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| Equity share capital | 20,00,000 | Fixed Assets | 55,00,000 |
| 10% Preference share capital | 20,00,000 | Stock | 1,75,000 |
| Reserves | 11,00,000 | Debtors | 3,50,000 |
| 10% Debentures | 10,00,000 | Bills receivable | 50,000 |
| Creditors | 1,00,000 | Cash | 2,25,000 |
| Bank-overdraft | 1,50,000 | Fictitious Assets | 1,00,000 |
| Bills payable | 45,000 | | |
| Outstanding expenses | 5,000 | | |
| | 64,00,000 | | 64,00,000 |

Beside the details mentioned above, the opening stock was of Rs. 3,25,000. Taking 360 days of the year, calculate the following ratios; also discuss the position of the company: (1) Gross profit ratio. (2) Stock turnover ratio. (3) Operating ratio. (4) Current ratio. (5) Liquid ratio. (6) Debtors ratio. (7) Creditors ratio. (8) Proprietary ratio. (9) Rate of return on net capital employed. (10) Rate of return on equity shares.

## Solution – 3 (Problem related to Composite Ratio)

| | | |
|---|---|---|
| **1.** Gross Profit Margin = | $\frac{\text{Gross profit}}{\text{Sales}}$ | **X** 100 |
| | $\frac{7,50,000}{15,00,000}$ | **X** 100 |
| | = 50% | |

| | | |
|---|---|---|
| **2.** Stock Turnover Ratio = | Cost of goods sold / Avg. Stock | |
| | Avg. stock = Opening Stock + Closing Stock / 2 | |
| | COGS = Sales – GP | |
| | 3,25,000 + 1,75,000 / 2 | |
| | AS = 2,50,000 | |
| | COGS = 15,00,000 – 7,50,000<br>7,50,000 | |
| | = 7,50,000 / 2,50,000 | |
| | = 3 times | |

| | | |
|---|---|---|
| **3.** Operating Profit Ratio = | Op. Profit / Net Sales | **X** 100 |
| | Operating Profit = Sales – (Op. Exp. + COGS.) | |
| | OP = 15,00,000 – (7,50,000 + 1,25,000 + 25,000)<br>= 6,00,000<br>**(excluding Interest on Debentures)** | |
| | = 6,00,000 / 15,00,000 | **X** 100 |
| | = 40% | |

| | | |
|---|---|---|
| **4.** Current Ratio = | Current Assets Current liabilities | |
| | Current Assets = Stock + debtors + Bills receivable + Cash | |
| | Current Liabilities = Creditors + bank overdraft + Bills payable + Outstanding expenses | |
| | CA = 1,75,000 + 3,50,000 + 50,000 + 2,25,000<br>= 8,00,000 | |
| | **CL =** 1,00,000 + 1,50,000 + 45,000 + 5,000<br>= 3,00,000 | |
| | = $\frac{8,00,000}{3,00,000}$ | |
| | **= 2.67 : 1** | |

| | | |
|---|---|---|
| **5.** Quick Ratio / Liquid Ratio = | Liquid Assets Liquid Liabilities | |
| | (Liquid) Quick Assets = Current Assets - Stock | |
| | (Liquid) Quick Liabilities = Current Liabilities – BOD | |
| | QA = 8,00,000 – 1,75,000<br>= 6,25,000 | |
| | QL = 3,00,000 – 1,50,000<br>= 1,50,000 | |
| | = $\frac{6,25,000}{1,50,000}$ | |
| | **= 4.17 : 1** | |

| | | |
|---|---|---|
| **6. Debtors Ratio =** | Debtors + Bills receivable / Credit sales | **X** 365 / 360 days |
| | = 3,50,000 + 50,000 / 9,00,000 (60% of 15,00,000) | **X** 360 days |
| | = 0.444 | **X** 360 days |
| | **= 160 days** | |
| **7. Creditors Ratio =** | Creditors + Bills payable / Credit Purchase | **X** 365 / 360 days |
| | = 1,00,000 + 45,000 / 7,50,000 **Notes: If credit purchase could not find out at that point Cost of Goods sold consider Credit purchase** | **X** 360 days |
| | = 0.193 | **X** 360 days |
| | **= 69 days** | |

| | | |
|---|---|---|
| **8.** Proprietary Ratio = | Shareholders' Funds / Total Assets | |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets | |
| | Total Assets = Total Assets – Fictitious Assets | |
| | SHF = 20,00,000 + 20,00,000 + 11,00,000 – 1,00,000 = 50,00,000 | |
| | TA = 64,00,000 – 1,00,000 = 63,00,000 | |
| | = 50,00,000 / 63,00,000 | |

| | |
|---|---|
| = 0.79 : 1 | |

Notes:

| Rate of Return on Capital Employed | | Rate of Return on Share holders Fund | | Rate of return on Equity Shareholders Fund | |
|---|---|---|---|---|---|
| = EBIT / Capital employed | X 100 | = PAT / SHF | X 100 | = PAT – Pref. Div. / ESHF | X 100 |
| **CE =** Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets | | **SHF =** Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets | | **ESHF =** Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets | |

| | |
|---|---|
| Sales | 15,00,000 |
| Less: Cost of goods sold | 7,50,000 |
| **Gross profit** | **7,50,000** |
| Less: Operating expenses (including Depreciation) | 1,50,000 |
| Earnings before Interest & Tax (EBIT) | **6,00,000** |
| Less: Interest Cost | 1,00,000 |
| Earnings before Tax (EBT) | **5,00,000** |
| Less: Tax liability | 2,50,000 |
| Earnings after Tax (EAT/ PAT) | **2,50,000** |
| Less: Preference share dividend | 2,00,000 |
| Distributional Profit | **50,000** |

| 9. | | 10. | | 11. | |
|---|---|---|---|---|---|
| **Rate of Return on Capital Employed** | | **Rate of Return on Share holders Fund** | | **Rate of return on Equity Shareholders Fund** | |
| = EBIT / Capital employed | X 100 | = PAT / SHF | X 100 | = PAT – Pref. Div. / ESHF | X 100 |
| **CE =** Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets | | **SHF =** Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets | | **ESHF =** Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets | |
| **CE** = 20,00,000 + 20,00,000 11,00,000 +10,00,000 – 1,00,000 | | **SHF** = 20,00,000 + 20,00,000 11,00,000 – 1,00,000 | | ESHF = 20,00,000 + 11,00,000 – 1,00,000 | |
| **= 60,00,000** | | **= 50,00,000** | | **= 30,00,000** | |
| = 6,00,000 X 100 / 60,00,000 | | = 2,50,000 X 100 / 50,00,000 | | = 50,000 X / 30,00,000 | 100 |
| **= 10%** | | **= 5%** | | **= 1.67 %** | |

## Problem = 4

From the following particulars extracted from the books of Ashok & Co. Ltd., compute the following ratios and comment:
(a) Current ratio, (b) Acid Test Ratio, (c) Stock-Turnover Ratio, (d) Debtors Turnover Ratio, (e) Creditors' Turnover Ratio, and Average Debt Collection period.

| | 1-1-2002 | 31-12-2002 |
|---|---|---|
| | Rs. | Rs. |
| Bills Receivable | 30,000 | 60,000 |
| Bills Payable | 60,000 | 30,000 |
| Sundry Debtors | 1,20,000 | 1,50,000 |
| Sundry Creditors | 75,000 | 1,05,000 |
| Stock-in-trade | 96,000 | 1,44,000 |

**Additional information:**

(a) On 31-12-2002, there were assets: Building Rs. 2,00,000, Cash Rs. 1,20,000 and Cash at Bank Rs. 96,000.
(b) Cash purchases Rs. 1,38,000 and Purchases Returns were Rs. 18,000.
(c) Cash sales Rs. 1,50,000 and Sales returns were Rs. 6,000.
Rate of gross profit 25% on sales and actual gross profit was Rs. 1,50,000.

**Solution – 4 (Problem related to find out missing item)**

**Notes: In this problem available information is not enough to solve ratios asked so that need to prepare Trading Account to identify values which are not given in the question.**

**Trading Account**

| **Particular** | | **Amount Rs.** | **Particular** | | **Amount Rs.** |
|---|---|---|---|---|---|
| To Opening Stock | | 96,000 | By Sales: Cash: | 1,50,000 | |
| To Purchase: Cash: | 1,38,000 | | Credit : | 4,56,000 | |
| Credit: | 3,78,000 | | | 6,06,000 | |
| | 5,16,000 | | Less: S/R | 6,000 | **6,00,000** |
| Less: P/R | 18,000 | 4,98,000 | By Closing Stock | | 1,44,000 |
| To Gross Profit | | 1,50,000 | | | |
| | | 7,44,000 | | | 7,44,000 |

| | | |
|---|---|---|
| **1.** Gross Profit Margin = | Gross profit / Sales | **X** 100 |
| | 25% = 1,50,000 / Sales | **X** 100 |
| | Sales = 1,50,000 / 25 | **X** 100 |
| | **Sales = 6,00,000** | |

| | | |
|---|---|---|
| **2.** Current Ratio = | Current Assets / Current liabilities | |

| | | |
|---|---|---|
| | Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance | |
| | Current Liabilities = Creditors + Bills payable | |
| | CA = 1,44,000 + 1,50,000 + 60,000 + 1,20,000 + 96,000<br>= 5,70,000 | |
| | **CL =** 1,05,000 + 30,000<br>= 1,35,000 | |
| | = $\frac{5,70,000}{1,35,000}$ | |
| | **= 4.22 : 1** | |

| | | |
|---|---|---|
| **3.** Acid Test Ratio = | $\frac{\text{Cash \& Cash Equivalent Assets}}{\text{Liquid Liabilities}}$ | |
| | Cash & Cash equivalent Assets = Cash + Bank + Short term Investments | |
| | (Liquid) Quick Liabilities = Current Liabilities – BOD | |
| | = 1,20,000 + 96,000<br>= 2,16,000 | |
| | QL = 1,05,000 + 30,000<br>= 1,35,000 | |
| | = $\frac{2,16,000}{1,35,000}$ | |
| | **= 1.6 : 1** | |

| | |
|---|---|
| **4.** Stock Turnover Ratio = | $\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$ |
| | Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$ |
| | COGS = Sales – GP |

| |
|---|
| $\frac{96,000 + 1,44,000}{2}$ |
| AS = 1,20,000 |
| COGS = 6,00,000 – 1,50,000<br>4,50,000 |
| = $\frac{4,50,000}{1,20,000}$ |
| = 3.75 times |

| | | |
|---|---|---|
| **5. Debtors Ratio =**<br>**(Avg. debt collection period)** | $\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$ | **X** 365 / 360 days |
| | = $\frac{1,50,000 + 60,000}{4,56,000}$ | **X** 365 days |
| | = 0.461 | **X** 365 days |
| | **= 168 days** | |

| | | |
|---|---|---|
| **6. Creditors Ratio =** | $\frac{\text{Creditors + Bills payable}}{\text{Credit Purchase}}$ | **X** 365 / 360 days |
| | = $\frac{1,05,000 + 30,000}{3,78,000}$ | **X** 365 days |
| | = 0.357 | **X** 365 days |
| | **= 130 days** | |

## Problem - 5

Following is the summarised Balance Sheet of Mona Ltd. as on 31-3-04.

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Equity Shares of Rs. 10 each 10% Pref. Sh. of Rs.100 each Reserves and Surplus<br>15% Debentures<br>Sundry Creditors<br>Bank Overdraft | 10,00,000<br>4,00,000<br>7,00,000<br>5,00,000<br>2,40,000<br>1,60,000 | Fixed Assets<br>Investments<br>Closing Stock<br>Sundry Debtors<br>Bills Receivable<br>Cash at Bank<br>Preliminary Expenses | 20,00,000<br>2,00,000<br>2,00,000<br>4,60,000<br>60,000<br>60,000<br>20,000 |
| | 30,00,000 | | 30,00,000 |

Summarised Profit and Loss Account is as under for the year ending on 31-3-'04:

| | Rs. |
|---|---|
| Sales (25% Cash sales) | 80,00,000 |
| Less: Cost of goods sold | 56,00,000 |
| **Gross Profit** | 24,00,000 |
| Net profit (Before interest and tax 50%) | 9,00,000 |

Calculate the following ratios:

(1) Rate on Return on Capital Employed (2) Proprietary Ratio (3) Debt-Equity (4) Capital gearing Ratio (5) Debtors Ratio (365 days of the year.) (6) Rate of Return on Shareholders' Funds (7) Rate of Return on Equity shareholders fund

## Solution - 5

**Statement of Profitability**

| | |
|---|---|
| Sales | 80,00,000 |
| Less: Cost of goods sold | 56,00,000 |
| **Gross profit** | **24,00,000** |
| Less: Operating expenses (including Depreciation) | 15,00,000 |
| Earnings before Interest & Tax (EBIT) | **9,00,000** |
| Less: Interest Cost | 75,000 |
| Earnings before Tax (EBT) | **8,25,000** |
| Less: Tax liability (50%) | 4,12,500 |
| Earnings after Tax (EAT/ PAT) | 4,12,500 |
| Less: Preference share dividend | 40,000 |
| Distributional Profit | **3,72,500** |

| 1. | | 6. | | 7. | |
|---|---|---|---|---|---|
| **Rate of Return on Capital Employed** | | **Rate of Return on Share holders Fund** | | **Rate of return on Equity Shareholders Fund** | |
| = EBIT / Capital employed | X 100 | = PAT SHF | X 100 | = PAT – Pref. Div. / ESHF | X 100 |
| **CE =** Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets | | **SHF =** Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets | | **ESHF =** Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets | |
| **CE =** 10,00,000 + 4,00,000 7,00,000 + 5,00,000 – 20,000 = **25,80,000** | | **SHF =** 10,00,000 + 4,00,000 + 7,00,000 - 20,000 **= 20,80,000** | | ESHF = 10,00,000 + 7,00,000 – 20,000 **= 16,80,000** | |
| = 9,00,000 / 25,80,000 | X 100 | = 4,12,500 / 20,80,000 | X 100 | = 3,72,500 / 16,80,000 | X 100 |
| **= 34.88%** | | **= 19.83%** | | **= 22.17 %** | |

| | |
|---|---|
| **2.** Proprietary Ratio = | Shareholders' Funds / Total Assets |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets |
| | Total Assets = Total Assets – Fictitious Assets |
| | SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000 |
| | TA = 30,00,000 – 20,000 = 29,80,000 |
| | = 20,80,000 / 29,80,000 |
| | **= 0.70 : 1** |

| | |
|---|---|
| **3.** Debt – Equity Ratio = | Long Term Debt (Liabilities) / Shareholders Fund |

| | | |
|---|---|---|
| | LTL = Debentures + long term loans | |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets | |
| | LTL = 5,00,000 | |
| | SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000<br>= 20,80,000 | |
| | = <u>5,00,000</u><br>20,80,000 | |
| | **= 0.24 : 1** | |

| | | |
|---|---|---|
| **4.** Capital Gearing Ratio = | <u>Fixed Interest or Dividend Securities</u><br>Equity Shareholders Fund | |
| | FIS = Debentures + Preference share capital | |
| | ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets | |
| | LTL = 9,00,000 | |
| | ESHF = 10,00,000 + 7,00,000 - 20,000<br>= 16,80,000 | |
| | = <u>9,00,000</u><br>16,80,000 | |
| | **= 0.54 : 1** | |

| | | |
|---|---|---|
| **5. Debtors Ratio =**<br><br>**(Avg. debt collection period)** | <u>Debtors + Bills receivable</u><br>Credit sales | **X** 365 / 360 days |
| | = <u>4,60,000 + 60,000</u><br>60,00,000 | **X** 365 days |

| | |
|---|---|
| = 0.461 | **X** 365 days |
| **= 31.63 days**<br><br>**= 32 days (Aprox.)** | |

## Problem - 6

Two years' Balance sheets of Jamuna Company Ltd. are as follows:**[S. U. T.Y.-April, 1999]**

| Liabilities | 31-3-03 | 31-3-04 | Assets | 31-3-03 | 31-3-0 |
|---|---|---|---|---|---|
| Equity share capital | 1,00,000 | 1,50,000 | Land and Buildings | 1,00,000 | 90 |
| 10%Pref. Sh. capital | 50,000 | 50,000 | Machinery | 90,000 | 90 |
| General Reserve Profit & | 30,000 | 30,000 | Debtors | 53,000 | 30 |
| Loss A/c 12% | 20,000 | ----- | Bills Receivable | 20,000 | 12 |
| Debentures Creditors | 1,00,000 | 50,000 | Stock | 75,000 | 90 |
| Bills payable | 30,000 | 35,000 | Bank Balance | 15,000 | 35 |
| Bank Overdraft | 10,000 | 25,000 | Cash Balance | 2,000 | 13 |
| O/s. Expenses | 10,000 | 20,000 | Profit & Loss A/c | ---- | 10 |
| | 5,000 | 10,000 | | | |
| | 3,55,000 | 3,70,000 | | 3,55,000 | 3,70 |

**Additional Information:**

| | 2002-'03<br>Rs. | 2003-04<br>Rs. |
|---|---|---|
| (1) Sales | 3,65,000 | 2,19,000 |
| (2) Cost of Goods sold | 2,19,000 | 1,46,000 |
| (3) Net profit (Before Pref. Dividend) | 35,000 | 47,500 |
| (4) Stock on 1-4-'02 | 71,000 | --- |

Calculate following ratios and give your opinion about company position in 2003-'04 in comparison with 2002-'03. Whether it is positive or negative?

(1) Current ratio (2) Liquid ratio (3) Debtors ratio (Take 365 days for calculations) (4) Gross profit ratio (5) Stock Turnover ratio (6) Rate of return on equity share-holders' funds.

## Solution - 6 **(problem related to comparative analysis between two years)**

| | | |
|---|---|---|
| **1.** Current Ratio = | <u>Current Assets</u> Current liabilities | |
| | Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance | |
| | Current Liabilities = Creditors + Bills payable | |

| | |
|---|---|
| **2002-03:** | |
| $= \frac{53,000 + 20,000 + 75,000 + 15,000 + 2,000}{30,000 + 10,000 + 10,000 + 5,000}$ | |
| $= \frac{1,65,000}{55,000}$ | |
| **= 3 :1** | |
| **2003-04:** | |
| $= \frac{30,000 + 12,000 + 90,000 + 35,000 + 13,000}{35,000 + 25,000 + 20,000 + 10,000}$ | |
| $= \frac{1,80,000}{90,000}$ | |
| = **2 : 1** | |

| | | |
|---|---|---|
| **2.** Liquid Ratio = | $\frac{\text{Liquid Assets}}{\text{Liquid liabilities}}$ | |
| | (Liquid) Quick Assets = Current Assets - Stock | |
| | (Liquid) Quick Liabilities = Current Liabilities – BOD | |
| | **2002-03:** $= \frac{1,65,000 - 75,000}{55,000 - 10,000}$ | |
| | $= \frac{90,000}{45,000}$ | |
| | **= 2 :1** | |
| | **2003-04:** $= \frac{1,80,000 - 90,000}{90,000 - 20,000}$ | |
| | $= \frac{90,000}{70,000}$ | |
| | = **1.29 : 1** | |

| | | |
|---|---|---|
| **3. Debtors Ratio =** <br><br> **(Avg. debt collection period)** | Debtors + Bills receivable / Credit sales | **X** 365 / 360 days |
| | **2002-03:** <br> = 53,000 + 20,000 / 3,65,000 | **X** 365 days |
| | = 73,000 / 3,65,000 | **X** 365 days |
| | **= 73 days** | |
| | **2003-04:** <br> = 30,000 + 12,000 / 2,19,000 | **X** 365 days |
| | = 42,000 / 2,19,000 | **X** 365 days |
| | **= 70 days** | |

| | | |
|---|---|---|
| **4.** Gross Profit Margin = | Gross profit / Sales | **X** 100 |
| | **GP = Sales - COGS 2002-03:** <br> 365000 - 219000 <br> = 1,46,000 **2003-04:** <br> 219000 - 146000 <br> = 73,000 | |
| | **2002-03:** <br> 1,46,000 / 3,65,000 <br> = | **X** 100 |
| | **= 40%** | |
| | **2003-04:** <br> = 73,000 / 2,19,000 | **X** 100 |
| | **= 33.33%** | |

| | |
|---|---|
| **2.** Stock Turnover Ratio = | $\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$ |
| | Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$ |
| | **2002-03:** $\frac{71000 + 75000}{2}$ = 73,000 **2003-04:** $\frac{75000 + 90000}{2}$ = 82,500 |
| | **2002-03:** **=** $\frac{2,19,000}{73,000}$ |
| | = **3 times** |
| | **2003-04:** |
| | = $\frac{1,46,000}{82,500}$ |
| | **= 1.77 times** |

| | | |
|---|---|---|
| **7. Rate of return on Equity Shareholders Fund:** | | |
| | **2002-03** = $\frac{\text{PAT – Pref. Div.}}{\text{ESHF}}$ | **X** 100 |
| | **ESHF =** Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets | |
| | ESHF = 1,00,000 + 30,000 - 20,000 **= 1,50,000** | |
| | = $\frac{35,000 - 5,000}{1,50,000}$ | **X** 100 |
| | **= 20 %** | |

| | |
|---|---|
| **2003-04:**<br>**ESHF:** 1,50,000 + 30,000 - 10,000<br>= 1,70,000 | |
| = $\frac{47,500 - 5,000}{1,70,000}$ | **X** 100 |
| = **25%** | |

## Problem - 7

The Balance Sheet as on 2002 and 2003 are as under:

| Liabilities | 2002 | 2003 | Assets | 2002 | 2003 |
|---|---|---|---|---|---|
| Equity share capital | 1,00,000 | 1,25,000 | Land and Buildings | 50,000 | 75,00 |
| General Reserve Profit & | 12,500 | 15,000 | Plant Machinery | 57,500 | 55,00 |
| Loss A/c Creditors | 10,000 | 7,500 | Stock | 10,000 | 12,50 |
| Bills payable | 5,000 | 6,250 | Debtors | 7,500 | 10,00 |
| O/s. Expenses | 3,750 | 7,500 | Cash & Bank Bills | 5,000 | 7,50 |
| Provident Fund | 1,250 | 3,750 | Receivable | 2,500 | 5,00 |
| | 7,500 | 5,000 | Preliminary Exp. | 7,500 | 5,00 |
| | 1,40,000 | 1,70,000 | | 1,40,000 | 1,70,00 |

**Profit & Loss A/c.**

| Particulars | 2002 | 2003 | Particulars | 2002 | 2003 |
|---|---|---|---|---|---|
| To Op. Stock | 5,000 | 10,000 | By Sales | 62,500 | 1,12,50 |
| To Purchase | 37,500 | 47,500 | By Closing Stock | 10,000 | 12,50 |
| To Office Exp. | 7,500 | 10,000 | By Profit on Sale of | | |
| To Selling exp. To | 5,000 | 12,500 | Furniture | 2,500 | --- |
| Fin. Exp. | 2,500 | 15,000 | | | |
| To Net Profit | 17,500 | 30,000 | | | |
| | 75,000 | 1,25,000 | | 75,000 | 1,25,00 |

Find out (1) Current Ratio (2) Stock Turnover Ratio (3) Gross Profit Ratio (4) Liquid Ratio (5) Debtor Ratio (working days 300) (6) Return on Equity Capital employed (7) Ownership Ratio.

## Solution - 7

| | | |
|---|---|---|
| **1.** Current Ratio = | $\frac{\text{Current Assets}}{\text{Current liabilities}}$ | |
| | Current Assets = Stock + debtors + Bills receivable + Cash & Bank Balance | |

| | |
|---|---|
| Current Liabilities = Creditors + Bills payable + O/s Exp. + PF | |
| **2002:**<br>= $\frac{10,000 + 7,500 + 5,000 + 2,500}{5,000 + 3,750 + 1,250 + 7,500}$ | |
| = 25,000 17,500 | |
| **= 1.43 :1** | |
| **2003-04:**<br>= $\frac{12,500 + 10,000 + 7,500 + 5,000}{6,250 + 7,500 + 3,750 + 5,000}$ | |
| = $\frac{35,000}{22,500}$ | |
| = **1.56 : 1** | |

| | |
|---|---|
| **2.** Stock Turnover Ratio = | $\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$ |
| | Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$ |
| | **2002-03:**<br>$\frac{5000 + 10000}{2}$ =<br>7,500 **2003-04:**<br>$\frac{10000 + 12500}{2}$<br>= 11,250 |
| | **Gross Profit =** Sales + Closing Stock - (Opening Stock + Purchase)<br>**COGS =** Sales - GP |
| | **2002: =** 62,500 + 10,000 - (5,000 + 37,500)<br>= 30,000<br>**COGS =** 62,500 - 30,000<br>= 32,500 |

| | | |
|---|---|---|
| | **2003: =** 1,12,500 + 12,500 - (10,000 + 47,500) = 67,500<br>**COGS =** 1,12,500 - 67,500<br>= 45,000 | |
| | **2002-03:**<br>**=** $\frac{32,500}{7,500}$ | |
| | = **4.33 times** | |
| | **2003-04:**<br>= $\frac{45,000}{11,250}$ | |
| | **= 4 times** | |
| **3.** Gross Profit Margin = | $\frac{\text{Gross profit}}{\text{Sales}}$ | **X** 100 |
| | **GP = Sales - COGS 2002-03:**<br>**2002: =** 62,500 + 10,000 - (5,000 + 37,500)<br>= 30,000<br>**2003-04: =** 1,12,500 + 12,500 - (10,000 + 47,500)<br>= 67,500 | |
| | **2002-03:**<br>= $\frac{30,000}{62,500}$ | **X** 100 |
| | **= 48%** | |
| | **2003-04:**<br>= $\frac{67,500}{1,12,500}$ | **X** 100 |
| | **= 60%** | |

| | | |
|---|---|---|
| **4.** Liquid Ratio = | $\frac{\text{Liquid Assets}}{\text{Liquid liabilities}}$ | |

| | |
|---|---|
| (Liquid) Quick Assets = Current Assets - Stock | |
| (Liquid) Quick Liabilities = Current Liabilities – BOD | |
| **2002-03:** <br> = $\frac{25,000 - 10,000}{17,500}$ | |
| = $\frac{15,000}{17,500}$ | |
| **= 0.86 :1** | |
| **2003-04:** <br> = $\frac{35,000 - 12,500}{22,500}$ | |
| = $\frac{22,500}{22,500}$ | |
| = **1 : 1** | |

| | | |
|---|---|---|
| **5. Debtors Ratio =** <br> **(Avg. debt collection period)** | $\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$ | **X** 300 days |
| | **2002-03:** <br> = $\frac{7,500 + 2,500}{62,500}$ | **X** 300 days |
| | = $\frac{10,000}{62,500}$ | **X** 300 days |
| | **= 48 days** | |
| | **2003-04:** <br> = $\frac{10,000 + 5,000}{1,12,500}$ | **X** 300 days |
| | **=** $\frac{15,000}{1,12,500}$ | **X** 300 days |
| | **= 40 days** | |

| |
|---|
| **6. Rate of return on Equity Shareholders Fund:** |

| | |
|---|---|
| **2002**<br>= PAT – Pref. Div. / ESHF | **X** 100 |
| **ESHF =** Eq. Sh. Cap. + Reserves & Sur plus – Fictitious Assets | |
| ESHF = 1,00,000 + 12,500 + 10,000 - 7,500<br>**= 1,15,000** | |
| = 17,500 / 1,15,000 | **X** 100 |
| **= 15.22 %** | |
| **2003:** | |
| **ESHF:** 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500 | |
| = 30,000 / 1,42,500 | **X** 100 |
| = **21.05%** | |

| | |
|---|---|
| **7.** Ownership Ratio = | Shareholders' Funds / Total Assets |
| | SHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets |
| | Total Assets = Total Assets – Fictitious Assets |
| | **2002 =** SHF = 1,00,000 + 12,500 + 10,000 - 7,500<br>= 1,15,000 |
| | TA = 1,40,000 - 7,500<br>= 1,32,500 |
| | = 1,15,000 / 1,32,500 |
| | **= 0.87 : 1**<br>**OR**<br>**= 87%** |

| | |
|---|---|
| **2003 =** SHF = 1,25,000 + 15,000 + 7,500 - 5,000<br>= 1,42,500 | |
| **TA =** 1,70,000 - 5,000<br>1,65,000 | |
| = 1,42,500 / 1,65,000 | |
| **= 0.86 : 1**<br>**OR**<br>**= 86%** | |

## Problem - 8

Following are incomplete Trading & Profit and Loss A/c. and Balance Sheet. **Trading A/c.**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| To Op. stock | 3,50,000 | By Sales | (?) |
| To Purchase | (?) | By Closing Stock | (?) |
| To Purchase Return | 87,000 | | |
| To Gross Profit | 7,18,421 | | |
| | 14,96,710 | | 14,96,710 |

**Profit & Loss A/c.**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| To Office Exp. | 3,70,000 | By Gross Profit By | 7,18,421 |
| To Int. on Deb. | 30,000 | Commission | (?) |
| To Tax. Provision | 18,421 | | |
| To Net Profit | 3,50,000 | | |
| | (?) | | (?) |

**Balance Sheet**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| Paid Up Capital | 5,00,000 | Plant & machinery | 7,00,000 |
| General Reserve | (?) | Stock | (?) |
| P & L a/c. | (?) | Debtors | (?) |
| 10% Debenture | (?) | Bank | 62,500 |
| Current Liabilities | 6,00,000 | Other Fixed Assets | (?) |
| | (?) | | (?) |

Find out missing items with the help of other details are as under:

1. Current Ratio was 2:1.
2. Closing Stock is 25% of Sales.
3. Proposed Dividend was 40% of paid up capital.

4. Gross profit Ratio was 60%.
5. Amount transfer to General Reserve is same as proposed Dividend.
6. Balance of P & L Account is calculated 10% of proposed dividend.
7. Commission income is 1/7 of Net profit.
8. Balance of General reserve is twice the current year transfer amount.

## Solution - 8

**Trading A/c.**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| To Op. stock | 3,50,000 | By Sales (?) | **11,97,368** |
| To Purchase (?) | **3,41,289** | By Closing Stock (?) | **2,99,342** |
| To Purchase Return | 87,000 | | |
| To Gross Profit | 7,18,421 | | |
| | **14,96,710** | | **14,96,710** |

**Profit & Loss A/c.**

| Particular | Rs. | Particular | Rs. |
|---|---|---|---|
| To Office Exp. | 3,70,000 | By Gross Profit | 7,18,421 |
| To Int. on Deb. | 30,000 | By Commission (?) | **50,000** |
| To Tax. Provision | 18,421 | | |
| To Net Profit | 3,50,000 | | |
| | **7,68,421** | | **7,68,421** |

**Balance Sheet**

| LIABILITIES | AMOUNT | ASSETS | AMOUNT |
|---|---|---|---|
| Paid Up Capital | 5,00,000 | Plant & machinery | 7,00,000 |
| General Reserve (?) | **6,00,000** | Stock (?) | **2,99,342** |
| P & L a/c. (?) | **20,000** | Debtors (?) | **8,38,158** |
| 10% Debenture (?) | **3,00,000** | Bank (?) | 62,500 |
| Current Liabilities | 6,00,000 | Other Fixed Assets | **1,20,000** |
| | **20,20,000** | | **20,20,000** |

| | | |
|---|---|---|
| **1.** Gross Profit Margin = | $\frac{\text{Gross profit}}{\text{Sales}}$ | **X** 100 |
| | 60 = $\frac{7,18,421}{\text{Sales}}$ | **X** 100 |
| | Sales **=** $\frac{7,18,421}{60}$ | **X** 100 |
| | **Sales = 11,97,368** | |

| | |
|---|---|
| **2.** Closing Stock = | **Sales x 25%** |
| | 11,97,368 x 25% |
| | **CS = 2,99,342** |

| | |
|---|---|
| **3.** **Proposed Dividend** = | Paid up Capital x 40% |
| | = 5,00,000 x 40% |
| | PD = 2,00,000 |
| **4.** General Reserve = | GR find out as per Proposed Dividend |
| | Proposed Dividend is 2,00,000 |
| | **So that**<br>**Proposed Dividend = General Reserve** |
| | **GR = 2,00,000** |

| | |
|---|---|
| **5.** Commission = | It is 1/7 part of Net Profit |
| | Commission = 3,50,000 x 1/7 |
| | **Commission = 50,000** |

| | |
|---|---|
| **6.** Profit & Loss Account = | It is 10% of Proposed Dividend |
| | P & L A/c. = 2,00,000 x 10% |
| | **P & L A/c. = 20,000** |

| | |
|---|---|
| **7.** Debenture = | Rate of Interest is 10% |
| | Interest amount is Rs. 30,000 |

| |
|---|
| So that, Debenture value is<br>= 30,000 x 10/100 |
| **= 3,00,000** |

| | |
|---|---|
| **8.** Current Ratio = | Current Assets Current liabilities |
| | 2 = Stock + debtors + Bank Balance<br>Current Liability |
| | 2 = 2,99,342 + debtors + 62,500 |
| | 6,00,000 |
| | 12,00,000 = Debtors + 3,61,842 |
| | Debtors = 12,00,000 - 3,61,842 |
| | **Debtors = 8,38,158** |


| | |
|---|---|
| **8.** Current Ratio = | Current Assets Current liabilities |
| | 2 = Stock + debtors + Bank Balance<br>Current Liability |
| | 2 = 2,99,342 + debtors + 62,500<br>6,00,000 |
| | 12,00,000 = Debtors + 3,61,842 |
| | Debtors = 12,00,000 - 3,61,842 |
| | **Debtors = 8,38,158** |


| | |
|---|---|
| **8.** Balance of General Reserve = | It is twice of current year provision for General Reserve |
| | Current year provision is Rs. 2,00,000 |
| | So that, Balance of G. R. = 2,00,000 x 2 |
| | Balance of GR = 4,00,000 |
| | Now, General Reserve = 4,00,000 + 2,00,000 |

| GR = 6,00,000 |
|---|

## Problem -9

From the following information, prepare the Balance Sheet of ABB Ltd. Showing the details of working:

| | |
|---|---|
| Paid up capital | Rs. 50,000 |
| Plant and Machinery | Rs. 1,25,000 |
| Total Sales (p.a.) | Rs. 5,00,000 |
| Gross Profit | 25% |
| Annual Credit Sales | 80% of net sales |
| Current Ratio | 2 |
| Inventory Turnover | 4 |
| Fixed Assets Turnover | 2 |
| Sales Returns | 20% of sales |
| Average collection period | 73 days |
| Bank Credit to trade credit | 2 |
| Cash to Inventory | 1 : 15 |
| Total debt to current Liabilities | 3 |

## Solution - 9

| | |
|---|---|
| **1.** Net Sales = | Total Sales - Sales Return |
| | = 5,00,000 - 1,00,000 |
| | **= Rs. 4,00,000** |
| **2.** Credit Sales = | 80% of Net Sales |
| | = 4,00,000 x 80% |
| | **= Rs. 3,20,000** |
| **3.** Gross Profit = | 25% of Net sales |
| | = 4,00,000 x 25% |
| | **= Rs. 1,00,000** |
| **4.** Cost of Goods Sold = | Net Sales - Gross Profit |
| | = 4,00,000 - 1,00,000 |
| | **= Rs. 3,00,000** |
| **5.** Inventory = | $\frac{\text{Cost of Goods Sold}}{\text{Inventory Turnover}}$ |
| | $= \frac{3,00,000}{4}$ |
| | **= Rs. 75,000** |

| | |
|---|---|
| **6.** Receivable Turnover = | $\frac{365}{73}$ = 5 |

| | |
|---|---|
| Receivables **=** | Credit Sales / Receivables Turnover |
| | = $\frac{3,20,000}{5}$ |
| | **= Rs. 64,000** |
| **7.** Cash = | 1/5 of Inventory |
| | = 1/5 x 75,000 |
| | **= Rs. 5,000** |
| **8.** Total Current Assets = | Inventory + Receivables + Cash |
| | = 75,000 + 64,000 + 5,000 |
| | **= Rs. 1,44,000** |
| **9.** Total Current Liabilities = | $\frac{\text{Current Assets}}{2}$ |
| | = $\frac{1,44,000}{2}$ |
| | **= Rs. 72,000** |
| **10.** Bank Credit = | 2/3 **x** Current Liabilities |
| | = 2/3 x 72,000 |
| | **= Rs. 48,000** |
| **11.** Trade Credit = | 1/2 of Bank Credit OR 1/3 of Current Liabilities |
| | **Rs. 24,000** |
| **12.** Total Debt = | Current Liabilities x 3 |
| | 72,000 x 3 |
| | **= Rs. 2,16,000** |
| **13.** Long term debt = | Total Debt - Current Liabilities |
| | = 2,16,000 - 72,000 |
| | **= Rs. 1,44,000** |
| **14.** Fixed Assets = | 1/2 of Net Sales = |
| | 1/2 x 4,00,000 |
| | **= Rs. 2,00,000** |
| **15.** Other fixed Assets = | Fixed Assets - Plant & Machinery |

| | |
|---|---|
| | = 2,00,000 - 1,25,000 |
| | **= Rs. 75,000** |
| **16.** Total Assets = | Fixed Assets + Current Assets |
| | = 2,00,000 + 1,44,000 |
| | **= 3,44,000** |
| **17.** Net worth = | Total Assets - Total Debt |
| | 3,44,000 - 2,16,000 |
| | **= Rs. 1,28,000** |
| **18.** Reserves & Surplus = | Net worth - Paid Up capital |
| | = 1,28,000 - 50,000 |
| | **= Rs. 78,000** |

**Balance Sheet**

| LIABILITIES | AMOUNT | ASSETS | AMOUNT |
|---|---|---|---|
| Paid Up Capital | 50,000 | Plant & machinery | 1,25,000 |
| Reserves & Surplus | 78,000 | Other Fixed Assets | 75,000 |
| Long term Debt | 1,44,000 | Inventory | 75,000 |
| Bank credit | 48,000 | Receivables | 64,000 |
| Trade credit | 24,000 | Cash | 5,000 |
| | **3,44,000** | | **3,44,000** |