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:

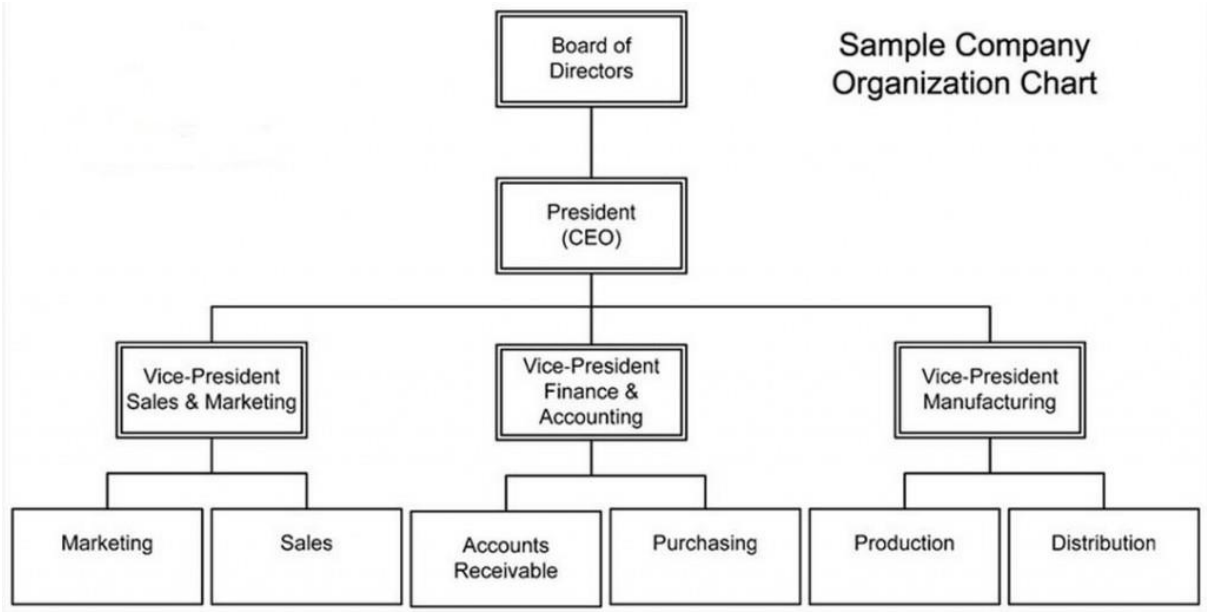
It provides employment opportunities to large number of people in society.

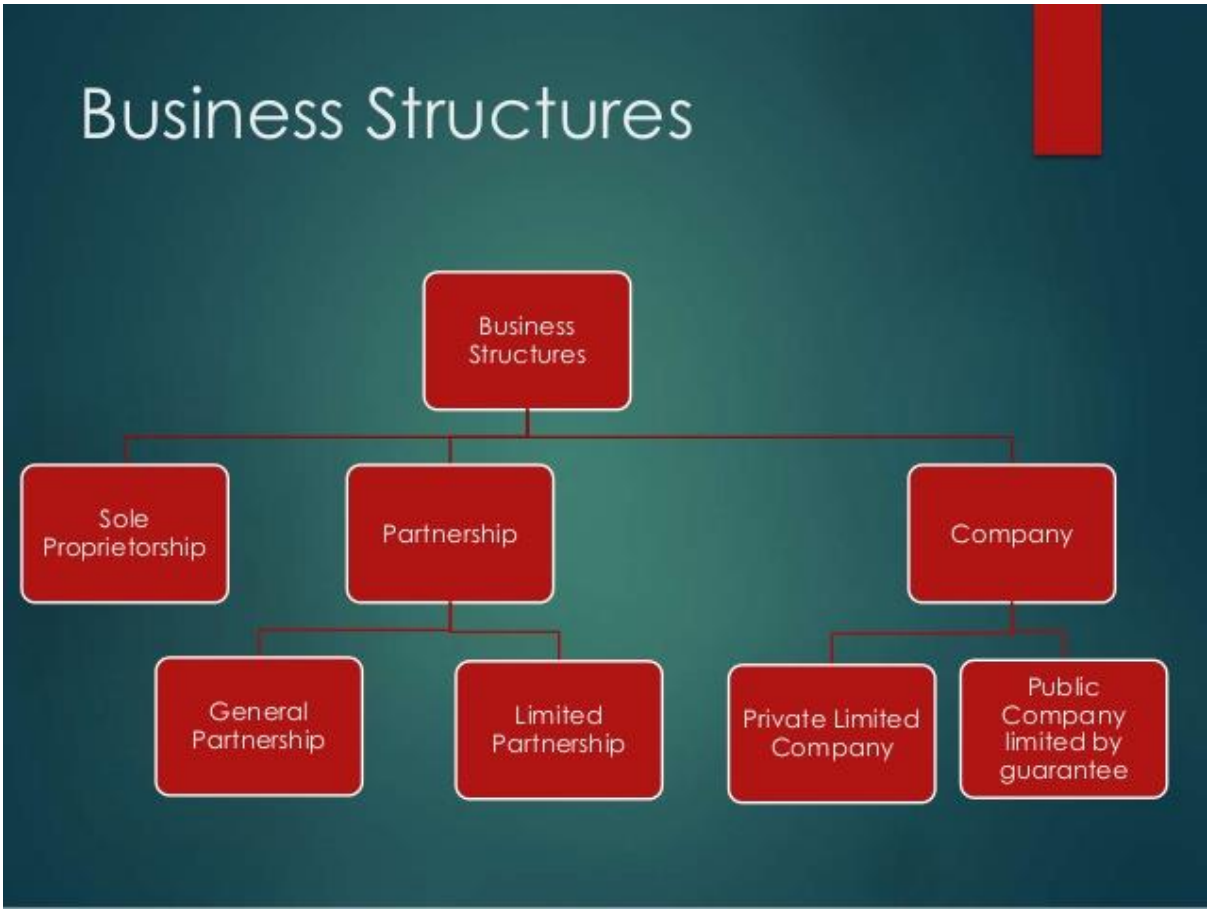
6. Workers' welfare

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.


Sample Company
Organization Chart
Board of Directors
President (CEO)
Vice-President Sales & Marketing
Vice-President Finance & Accounting
Vice-President Manufacturing
Marketing
Sales
Accounts Receivable
Purchasing
Production
Distribution


Business Structures
Business Structures
Sole Proprietorship
Partnership
Company
General Partnership
Limited Partnership
Private Limited Company
Public Company limited by guarantee

Organization structure:

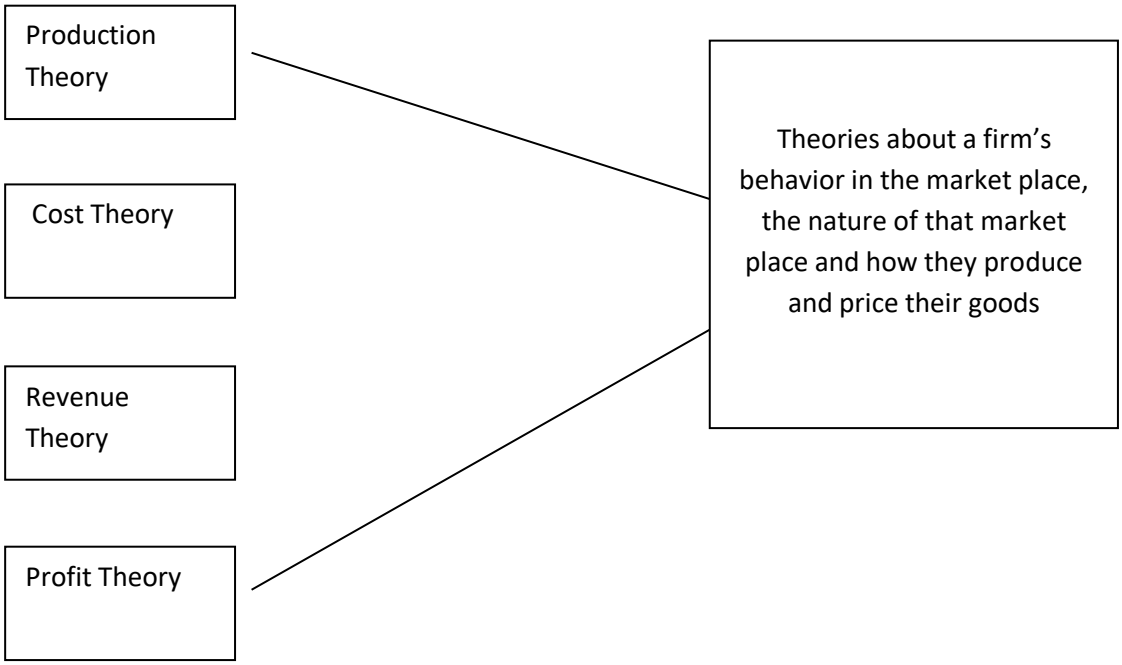
THEORY OF FIRM:

The of firm is the micro economic concept founded in neoclassical economics that state that firms (including business and corporations) exist and make decisions to maximize profits.

Theory of firm deals with optimum level of profit. It is used to identify level of output, prices to sell and prices to breakeven.

Purpose of the theories:

1. To provide models for the analysis of the decision making in the firm in various market structures.
2. The validity of the theories is judged on the basis of several criteria (like, ,production, cost, revenue, profit maximization)
3. To provide explanation on the entire range of price- output decision – how the firms set their price, decision their product line, advertisement expenses, sales promotion efforts, research and development expenses, etc.



Theory of Production:

In economics, production theory explains the principles in which the business has to take decisions on how much of each commodity it sells and how much it produces and also how much of raw material ie., fixed capital and labor it employs and how much it will use. It defines the relationships between the prices of the commodities and productive factors on one hand and the quantities of these commodities and productive factors that are produced on the other hand.

Concept:

Production is a process of combining various inputs to produce an output for consumption. It is the act of creating output in the form of a commodity or a service which contributes to the utility of individuals. In other words, it is a process in which the inputs are converted into outputs.

Production Definition:

The production function shows the relation between input changes and output changes. It also shows the maximum amount of output that can be obtained by the firm from a fixed quantity of resources. It is the process in which the inputs (The factors of production such as land, labour, capital, technology, etc) are converted into outputs (The goods and service).

Production Analysis:

Production analysis basically is concerned with the analysis in which the resources such as land, labor, and capital are employed to produce a firm's final product. To produce these goods the basic inputs are classified into two divisions

Variable input:

Variable inputs is one whose supply in the short run is elastic, example, labour, raw materials, and the like. Users of such inputs can employ a larger quantity in the short run. • Technically, a variable input is one that changes with changes in output. In the long run, all **inputs are variable.**

Fixed input: An input for which the level of usage cannot readily be changed

BASIC CONCEPTS OF PRODUCTION THEORY:

Production function –

Maximum amount of output that can be produced from any specified set of inputs, given existing technology

Technical efficiency –

Achieved when maximum amount of output is produced with a given combination of inputs

Economic efficiency –

Achieved when firm is producing a given output at the lowest possible total cost Basic Concepts of Production Theory Prof. Trupti Mish

Classification of inputs:

- Labour
- Land
- Capital
- Raw material
- Time

PRODUCTION FUCTION:

The production function shows the relation between input changes and output changes. It also shows the maximum amount of output that can be obtained by the firm from a fixed quantity of resources.

A tool of analysis used in explaining the input-output relationship. It describes the technical relationship between inputs and output in physical terms. In its general form, it holds that production of a given commodity depends on certain specific inputs.

In its specific form, it presents the quantitative relationships between inputs and outputs. A production function may take the form of a schedule, a graph line or a curve, an algebraic equation or a mathematical model. The production function represents the technology of a firm.

An empirical production function is generally so complex to include a wide range of inputs: land, labour, capital, raw materials, time, and technology. These variables form the

independent variables in a firm's actual production function. A firm's long-run production function is of the form:

Q=F (L, L, k, O, T)

Where q= Quantity of output

L= land

L= labour

K= capital

O= Oraganization

T= Technology

Total product:

Average product:

Marginal product:

No. of labours employed	TP	AP	MP
0	0	0	0
1	10	10	10
2	20	10	10
3	30	10	10

THEORY OF COST:

Maximization of profit is an important business objective for the firm

Profit = Revenue- Cost

Thus to know the profitability of any decision we need to understand the costs Cost of firm (TC) is classified into two broad categories – Fixed cost (TFC) and Variable cost (TVC).

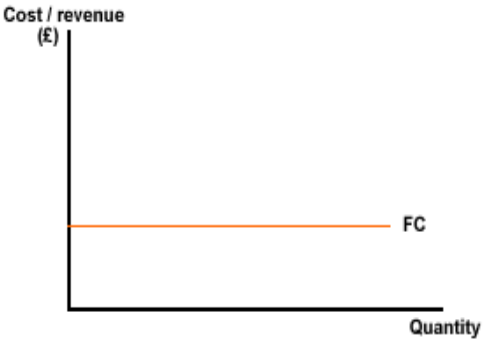
I.e TC= TFC+TVC

Fixed cost:

A **fixed cost** is a **cost** that does not change with an increase or decrease in the amount of goods or services produced or sold. **Fixed costs** are expenses that have to be paid by a company, independent of any business activity.

Ex: Factory rent and Electricity

No of units	Fixed cost(factory rent)
0	1000
10	1000
20	1000
30	1000
40	1000
50	1000

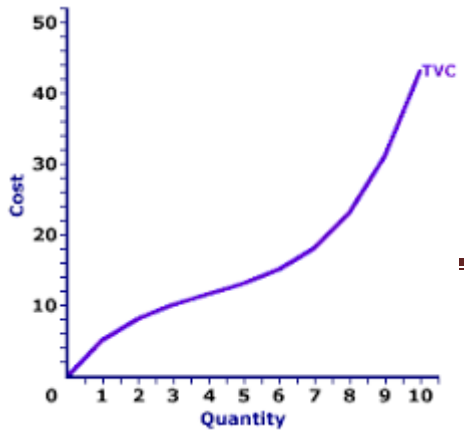


Variable cost:

Variable costs are **costs** that vary with output. Generally **variable costs** increase at a constant rate relative to labor and capital. **Variable costs** may include wages, utilities, materials used in production, etc.

Ex: wages, salaries, raw materials, and electricity, telephone charges etc.

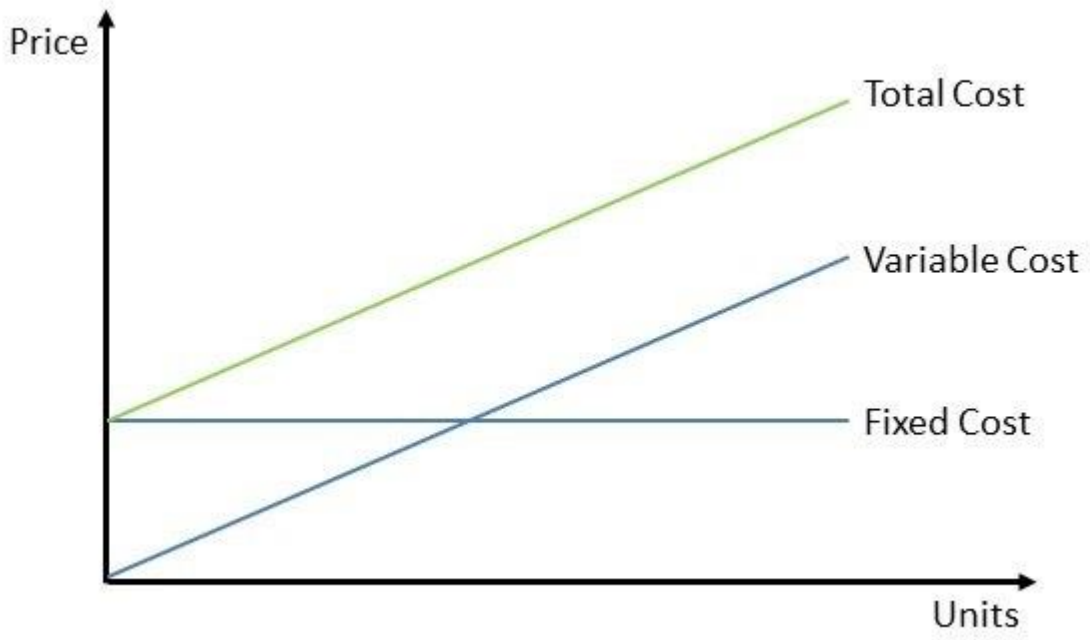
No of units	variable cost
0	0
1	10
2	20
3	30
4	40
5	50



Total cost:

In economics and **cost** accounting, **total cost** (TC) describes the **total** economic **cost** of production and is made up of variable **costs**, which vary according to the quantity of a good produced and include inputs such as labor and raw materials, plus fixed **costs**, which are independent of the quantity of a good produced and ...

I.e TC= TFC+TVC



THEORY OF REVENUE:

Revenue Theory explains the revenue is the amount of income a firm receives from selling its goods or services over a certain period of time.

Total revenue:

Total revenue in economics refers to the total receipts from sales of a given quantity of goods or services. It is the total income of a business and is calculated by multiplying the quantity of goods sold by the price of the goods.

Thus,

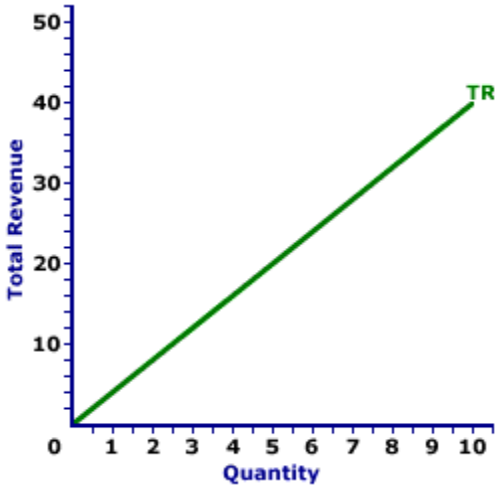
$$TR = AR \times Q$$

where
TR = Total Revenue
AR = Average Revenue or Price per Unit
Q = Output

For example if the price of a commodity is Rs. 100 and total units sold are 20 in that case total revenue will be

$$TR = 100 \times 20 = 200$$
$$TR = 2000$$

Quantity	Price	Total Revenue	Marginal Revenue
1	100	100	100
2	95	190	90
3	90	270	80
4	85	340	70
5	80	400	60
6	75	450	50
7	70	490	40
8	65	520	30
9	60	540	20
10	50	500	-40



Average revenue:

Average revenue is the revenue generated per unit of output sold. It plays a role in the determination of a firm's profit. Per unit profit is average revenue minus average (total) cost. A firm generally seeks toproduce the quantity of output that maximizes profit.

Thus :

$$AR = \frac{TR}{Q}$$

where AR = Average Revenue

TR = Total Revenue

Q = Output

According to **McDonnell**, "Average Revenue is the per unit revenue received from the sale of one unit of a commodity."

$$TR = Price \times Output$$

$$TR = Pq$$

$$AR = \frac{Pq}{q} = P$$

and $P = f(Q)$ is an average curve which shows that price is a function of quantity demanded. It is also a demand curve.

Marginal revenue:

In microeconomics, marginal revenue (R') is the additional revenue that will be generated by increasing product sales by one unit. It can also be described as the unit revenue the last item sold has generated for the firm. ... As a result, it will have to lower the price of all units sold to increase sales by 1 unit.

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

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

Whereas

TR_n = Total Revenue of 'n' units

TR_{n-1} = Total Revenue from $(n - 1)$ units

$MR_{(nth)}$ = Marginal revenue from nth unit

n = Any given number

The relationship between TR, AR and MR can be expressed with the help of a table 1.

Table 1

Unit (q)	TR/q AR or Price	(Pq) TR	($TR_n - TR_{n-1}$) MR
1	10	10	10
2	9	18	8
3	8	24	6
4	7	28	4
5	6	30	2
6	5	30	0
7	4	28	– 2
8	3	24	– 4
9	2	18	– 6
10	1	10	– 8

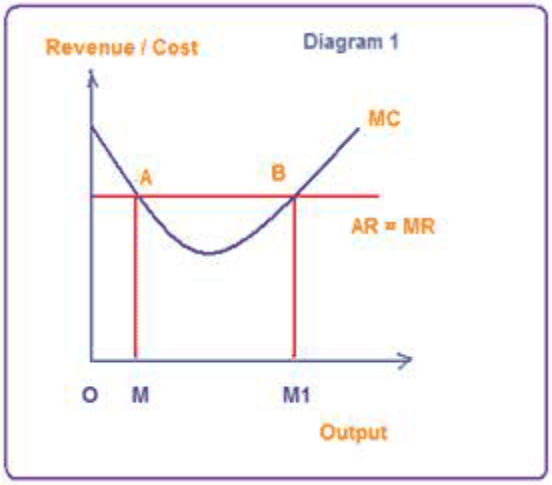
PROFIT MAXIMIZATION THEORY:

In the neoclassical theory of the firm, the main objective of a business firm is profit maximization. The firm maximizes its profits when it satisfies the two rules.

MC = MR and

MC curve cuts the MR curve from below.

Maximum profits refer to pure profits which are a surplus above the average cost of production. It is the amount left with the entrepreneur after he has made payments to all factors of production, including his wages of management. In other words, it is a residual income over and above his normal profits.



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

4. **High degree of flexibility:** Based on the profitability, the trader can decide to continue or change the business, if need be.
5. **Secrecy:** Business secrets can well be maintained because there is only one trader.
6. **Low rate of taxation:** The rate of income tax for sole traders is relatively very low.
7. **Direct motivation:** If there are profits, all the profits belong to the trader himself. In other words. If he works 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. **Total Control:** The ownership, management and control are in the hands of the sole trader and hence it is easy to maintain the hold on business.
9. **Minimum interference from government:** Except in matters relating to public interest, government does not interfere in the business matters of the sole trader. The sole trader is free to fix price for his products/services if he enjoys monopoly market.
10. **Transferability:** The legal heirs of the sole trader may take the possession of the business.

Disadvantages of sole trader:

The following are the disadvantages of sole trader form:

1. **Unlimited liability:** The liability of the sole trader is unlimited. It means that the sole trader has to bring his personal property to clear off the loans of his business. From the legal point of view, he is not different from his business.
2. **Limited amounts of capital:** The resources a sole trader can mobilize cannot be very large and hence this naturally sets a limit for the 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, one-man-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 like-minded 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 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**
-

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.

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- **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:** 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. Shares, debentures, public deposits, etc so, they enjoy sound financial position.
5.	**No. of presentation:** 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:** 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:** 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:** 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 by the 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 capital.*** 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 motor-vehicles, 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 un-financial 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.

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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 Equi-Marginal 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).

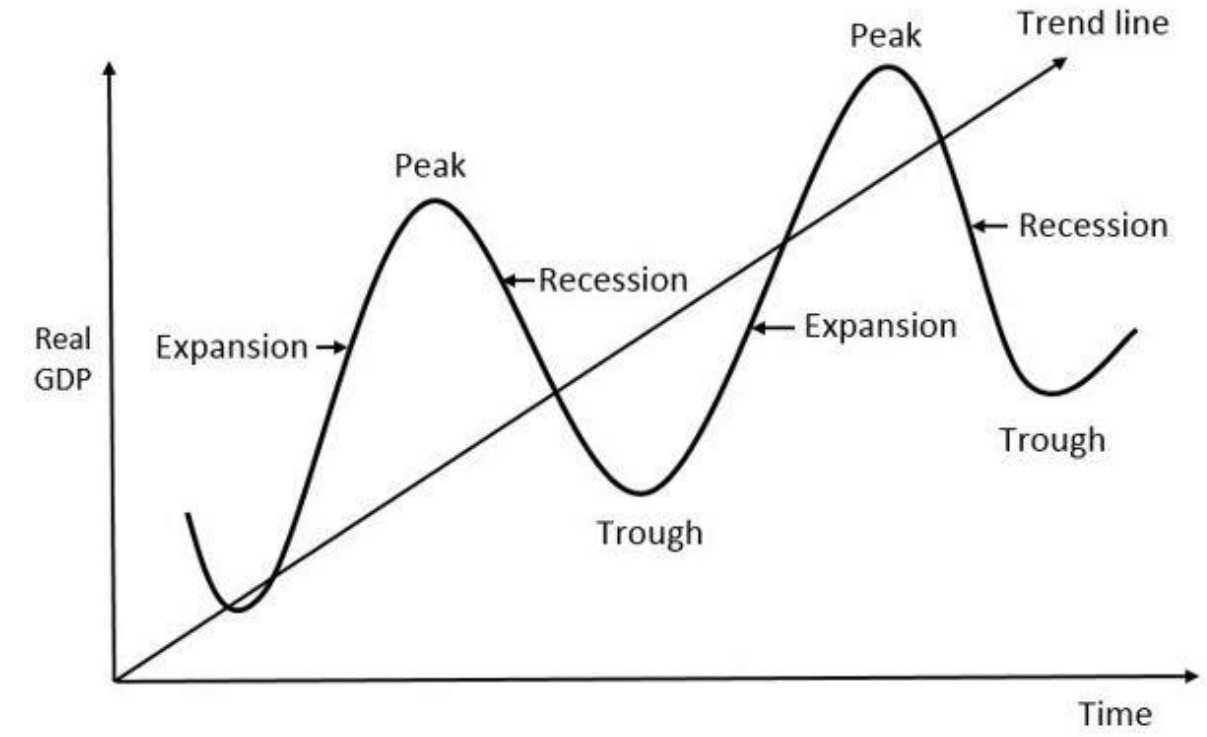
Business cycles are usually measured by considering the growth rate of real gross domestic product. Despite the often-applied term cycles, these fluctuations in economic activity do not exhibit uniform or predictable periodicity.

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:

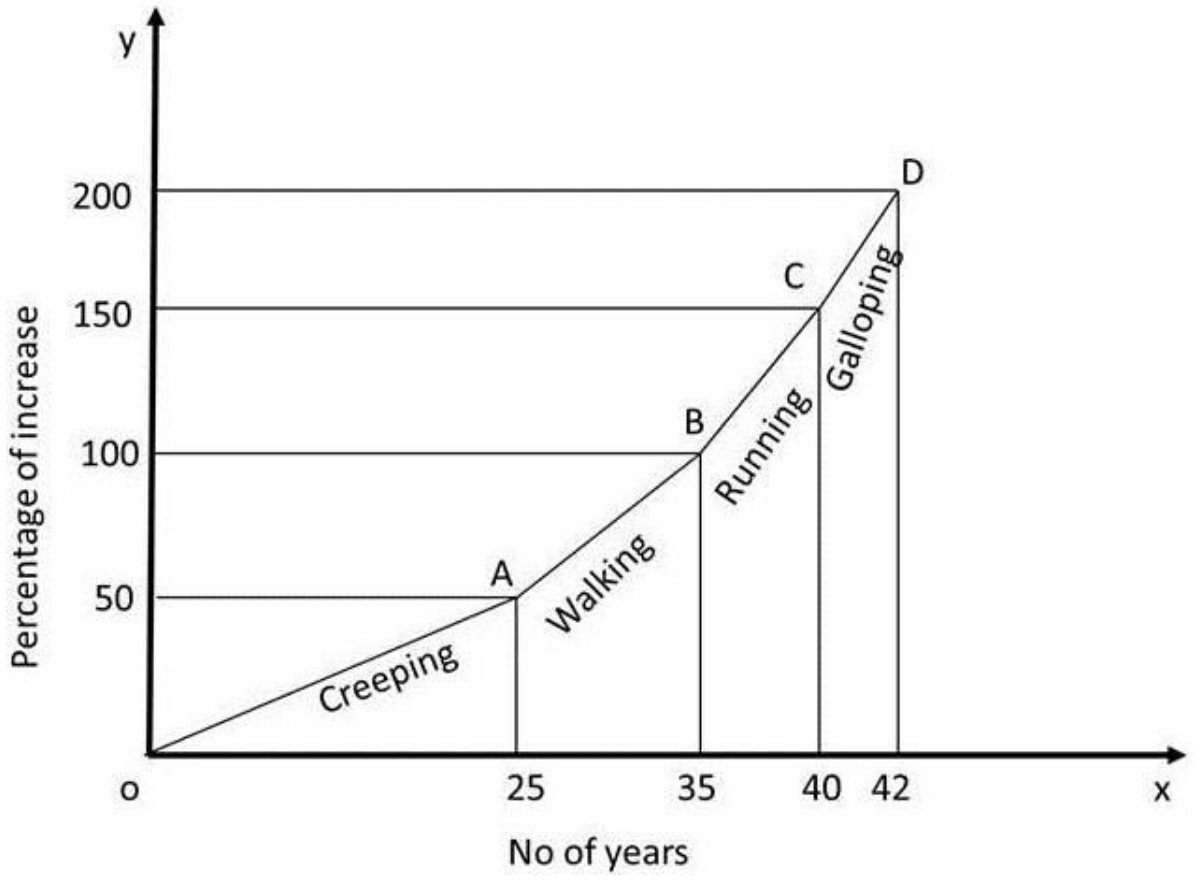
When the rate of rising prices is more than the Creeping Inflation, it is known as Walking Inflation. Trotting Inflation is its another name. When prices rise by more than 3%, but less than 10% per annum (i.e., between 3%, and 10% per annum), it is called as Walking Inflation. According to some economists, 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

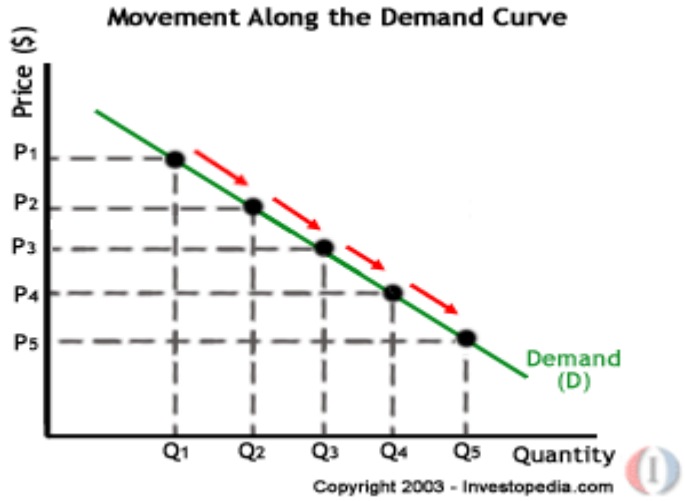
INTRODUCTION & MEANING:

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".

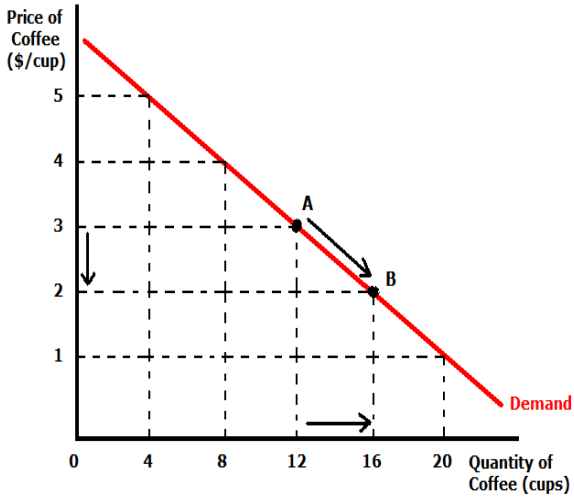
Generally, a person demands more at a lower price and less at a higher price. The relation of price to demand or sales is known in Economics as the Law of Demand.

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



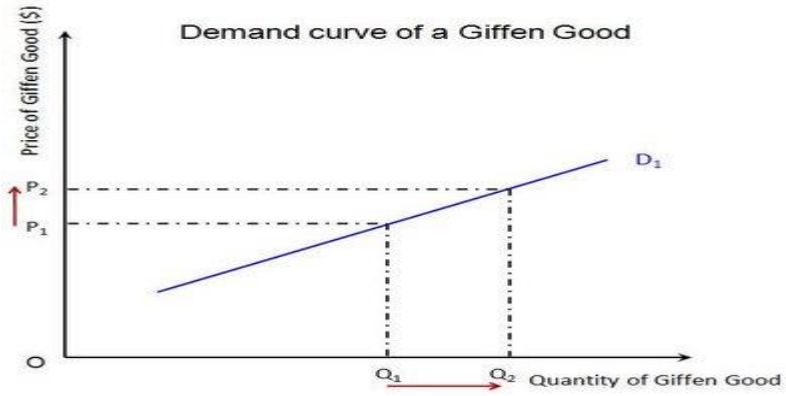
When the price falls from Rs. 10 to 8 quantity demand increases from 1 to 2. In the same way as price falls, quantity demand increases on the basis of the demand schedule we can draw the demand curve The demand curve DD shows the inverse relation between price and quantity demand of apple. It is downward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

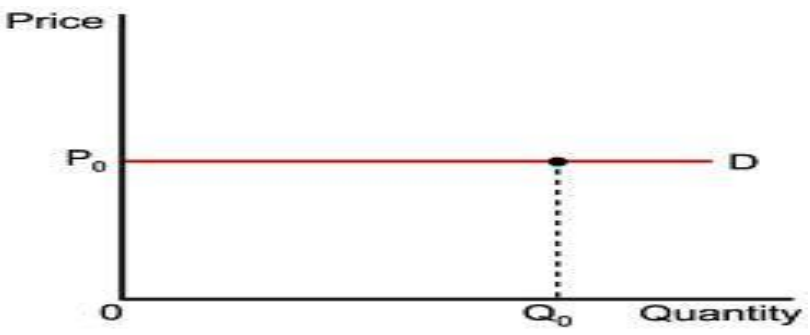
In-elastic demand: If a big change in price is followed by a small change in demanded then the demand in "inelastic".

$$\text{Elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the factors of commodity}}$$

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:

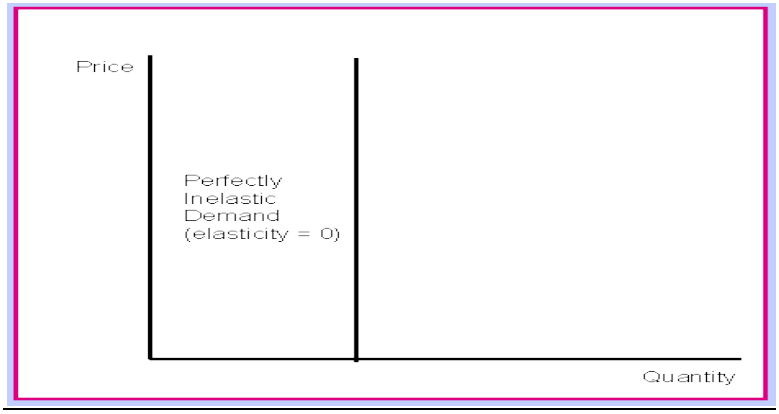


When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case E=∞

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

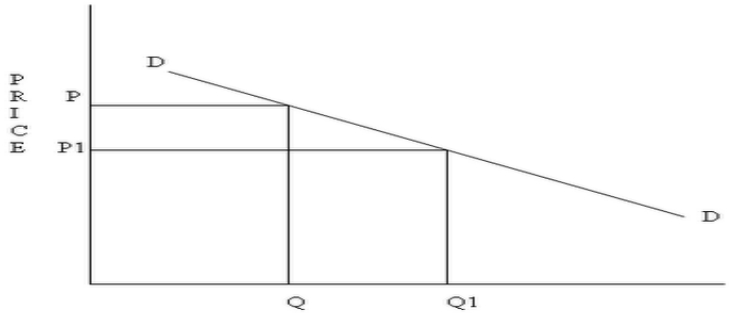
In this case, even a large change in price fails to bring about a change in quantity demanded.



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.

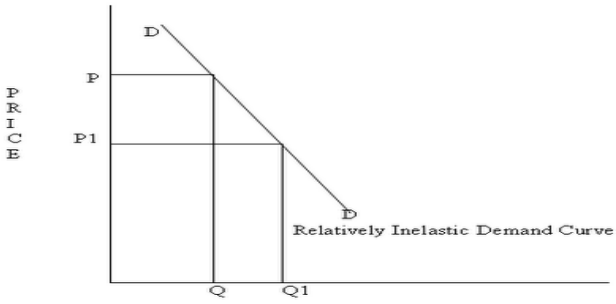


Relatively Elastic Curve

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.

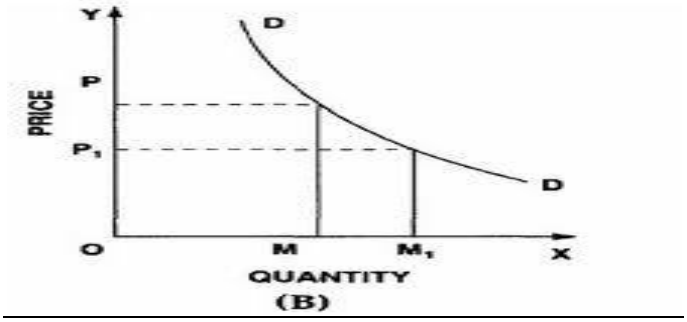


→ Relatively Inelastic Curve

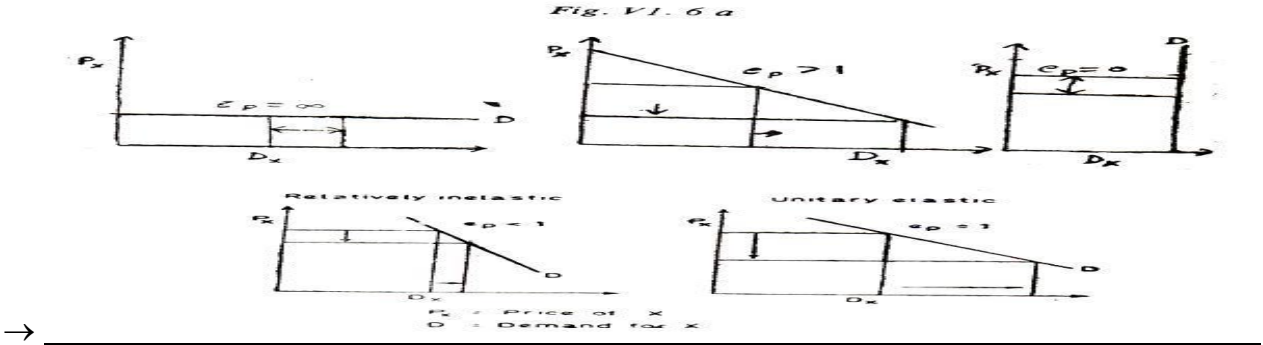
When price falls from "OP' to 'OP1 amount demanded increases from OQ to OQ1, which is smaller than the change in price.

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.



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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.

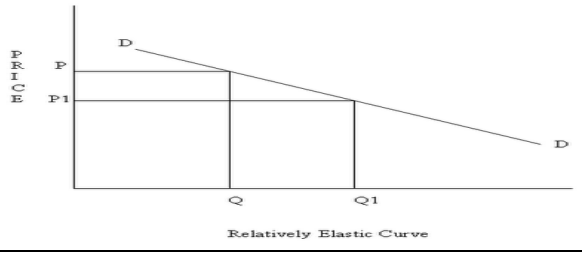
Price elasticity = Proportionate change in the quantity demand of commodity / Proportionate change in the price of commodity

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:

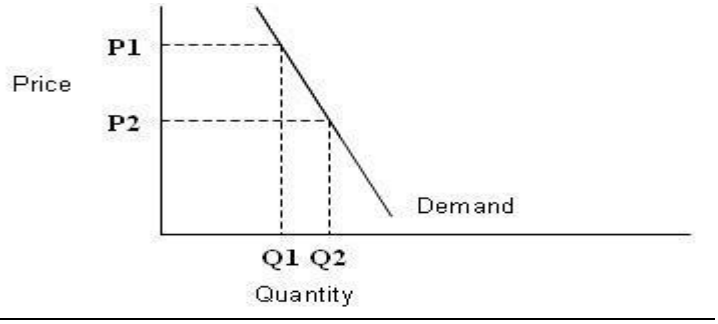
Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this caseE > 1. This demand curve will be flatter.



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:

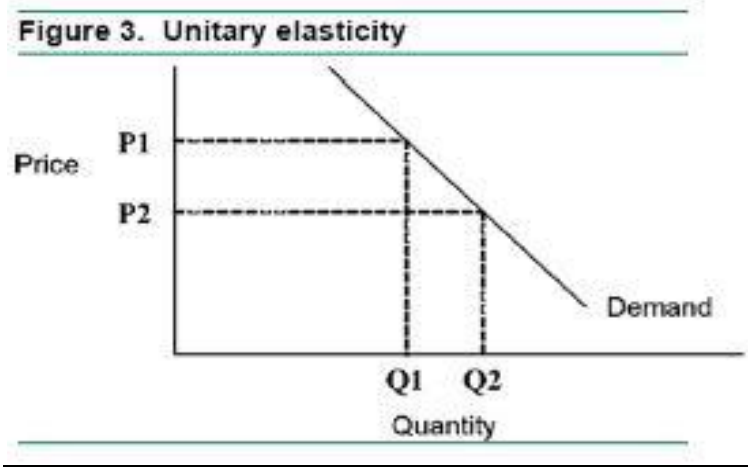
Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.



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.



2. INCOME ELASTICITY OF DEMAND:

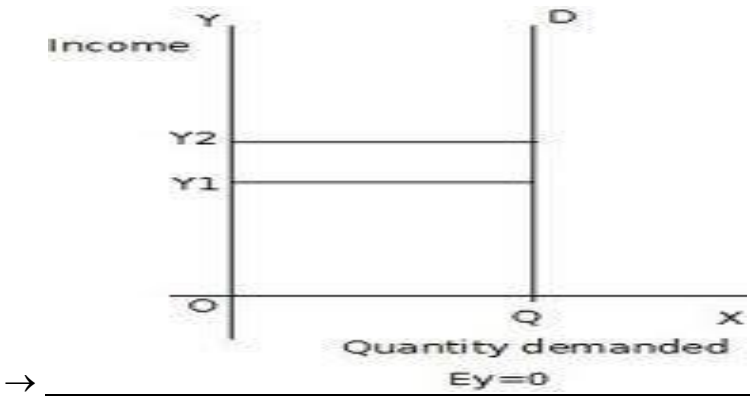
Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

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

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

A. Zero income elasticity:

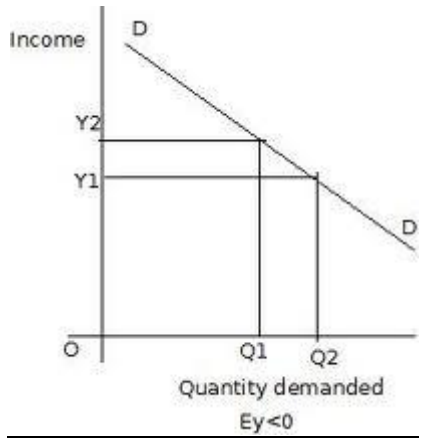
Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way:



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

B. Negative Income elasticity:

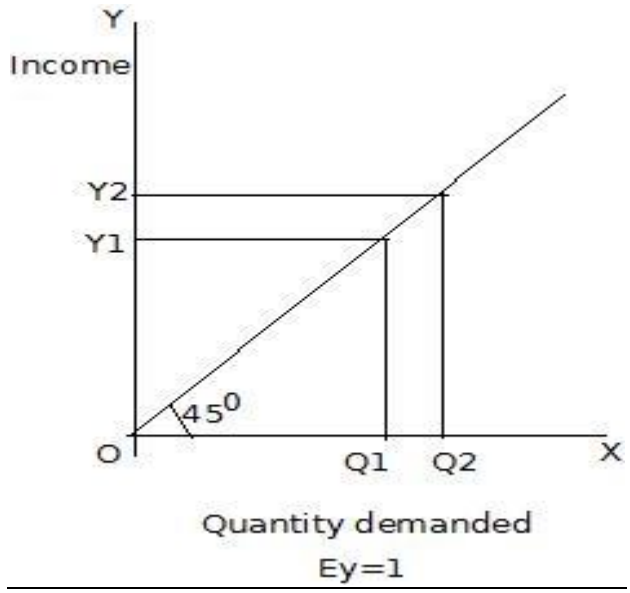
When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., Ey< 0



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

c. Unit income elasticity:

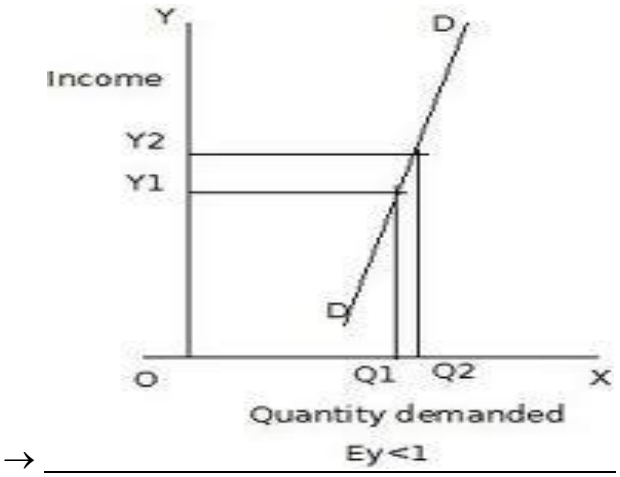
When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1



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

d. Income elasticitylees than unity:

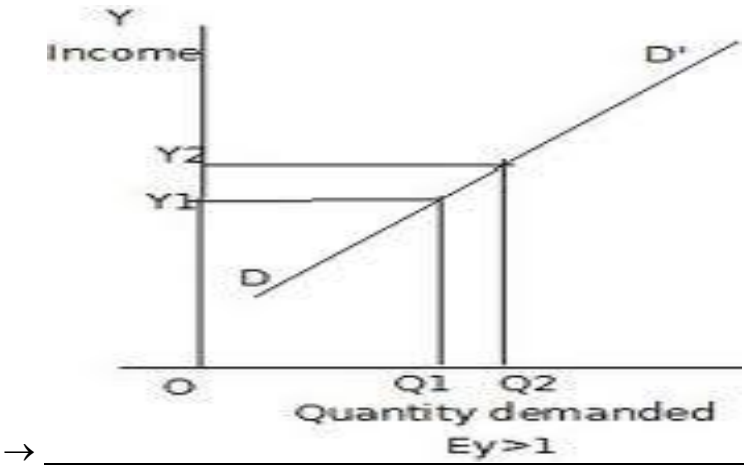
In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey< 1.



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:

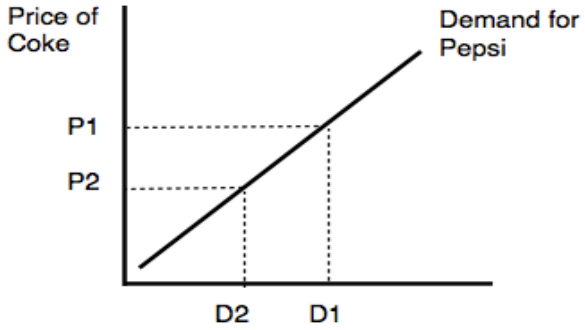
A change in the price of one commodity leads to a change in the quantity demanded of another commodity. This is called a cross elasticity of demand. The formula for cross elasticity of demand is:

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.



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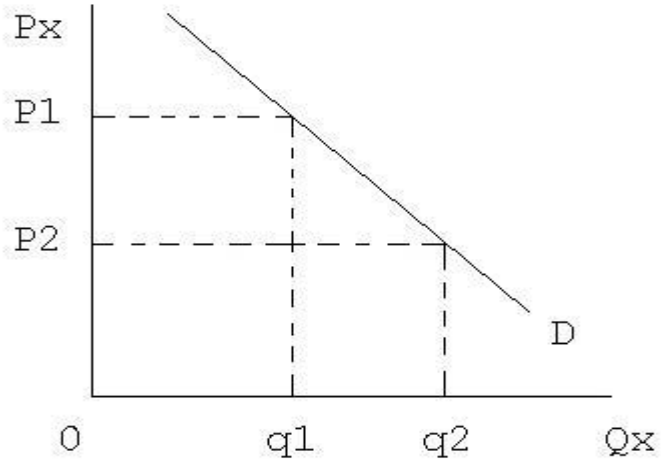
B.In case of compliments, cross elasticity is negative. If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa.



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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

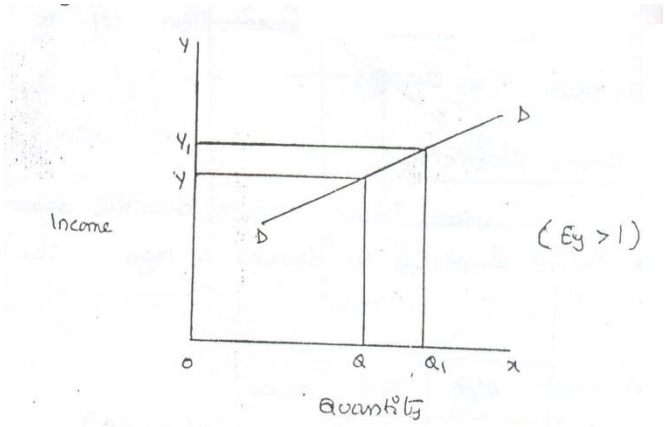
Proportionate change in the quantity demand of product "**X**"

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

Proportionate change in the advertising cost

Advertising elasticity greater than unity:

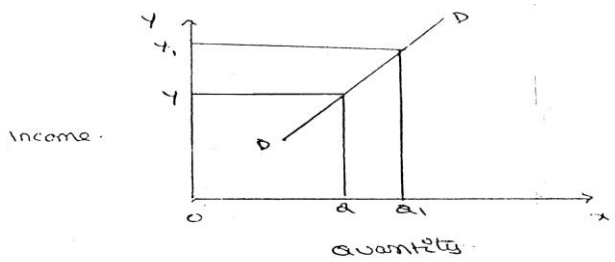
In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey> 1.



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

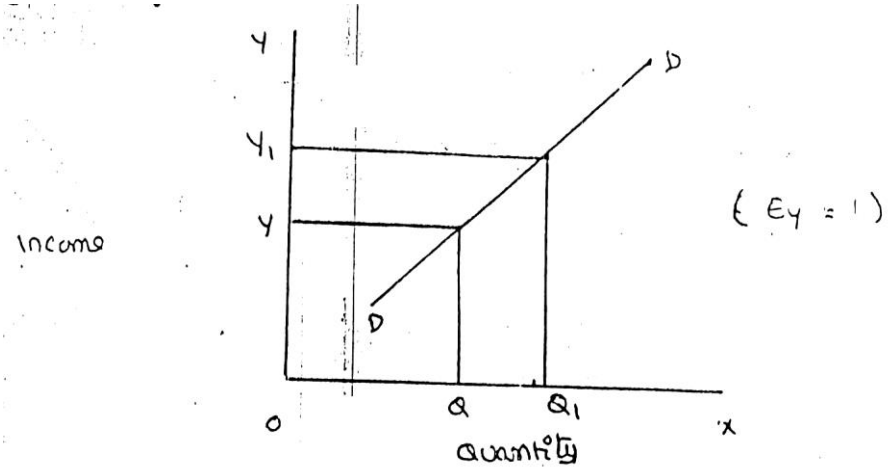
Advertising elasticity leas than unity:

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



FACTORS INFLUENCING THE ELASTICITY OF DEMAND

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

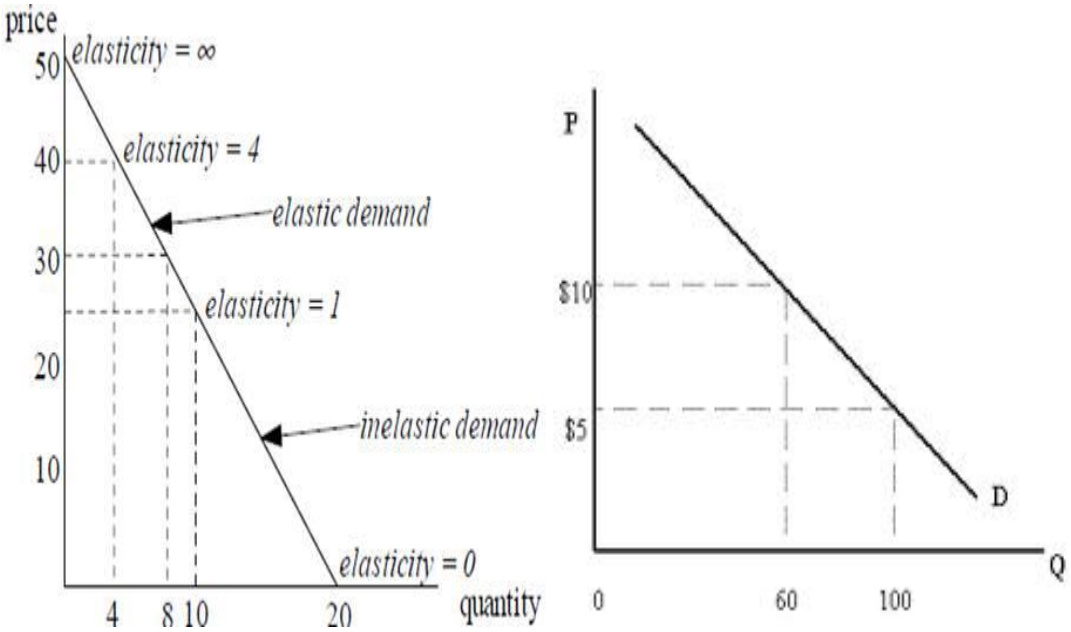
8. Planning the level of output and price:

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:

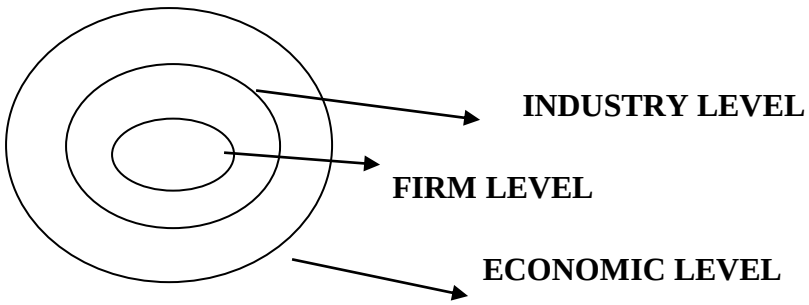
Based on the time span and planning requirements of business firms, demand forecasting can be classified in to

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.

FORECASTING LEVELS



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

Functional nature o demand

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.

Degree of orientation

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

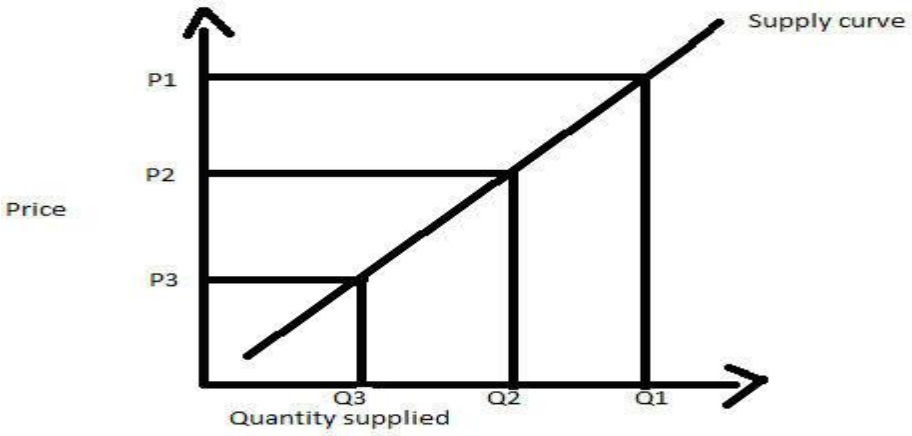
Definition of 'Law of Supply'

Definition:

Law of supply states that other factors remaining constant, price and quantity supplied of a good are directly related to each other. In other words, when the price paid by buyers for a good rises, then suppliers increase the supply of that good in the market.

Description:

Law of supply depicts the producer behavior at the time of changes in the prices of goods and services. When the price of a good rises, the supplier increases the supply in order to earn a profit because of higher prices.



The above diagram shows the supply curve that is upward sloping (positive relation between the price and the quantity supplied). When the price of the good was at P3, suppliers were supplying Q3 quantity. As the price starts rising, the quantity supplied also starts rising.

Determinants of the Quantity Supplied of a Commodity the Supply Function:

There are five major determinants of the quantity supplied of a commodity in a particular market:

1. The price of the commodity

2. The prices of other commodities

3. The prices of factors of production

4. The objectives of producers, and

5. The state of technology (or the art of production).

This list of factors can be summarized in a supply function:

$q_x = S (P_x, P_y, P_z, f_1, f_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots f_n, O, T, \text{etc.})$

where q_x is the quantity supplied of commodity x, p_x is its own price, p_y *and* p_z are the prices of other commodities, $f_1, f_2 \ldots\ldots f_m$ are the prices of the factors of production, O is the objective of the firm and T is the state of technology. In fact, the goals of producers and the state of technology determine the form of the function S. Here q_x is the dependent variable and all other variables on the right-hand side are independent variables. Thus q_x is the function of all the variables shown on the right hand side. It means that q_x depends on all the factors listed on the right side of the above equation.

Thus the quantity supplied of a commodity depends on a number of factors. The following factors bear relevance in this context.

Nature of Supply:

Our object is to find out and study the factors which influence the quantities of a good that suppliers wish to produce and offer for sale. However, a study of the theory of supply requires background knowledge of certain pertinent facts. For example, we must know at the outset who the suppliers are, what are their objectives, what do they sell, and so o

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:

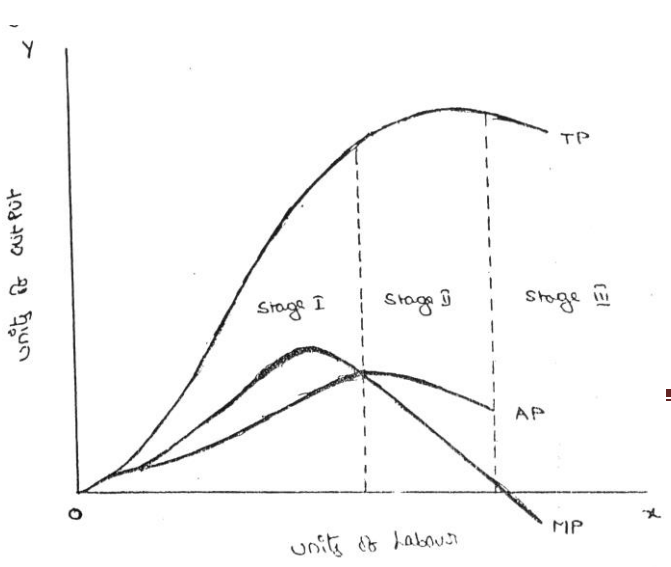
The behaviors of the Output when the varying quantity of one factor is combines with a fixed quantity of the other can be divided in to three district stages. The three stages can be better understood by following the table.

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 6th worker, nothing is produced by the 7th worker and its marginal productivity is zero, whereas marginal product of 8th worker is '-10', by just creating credits 8th 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:

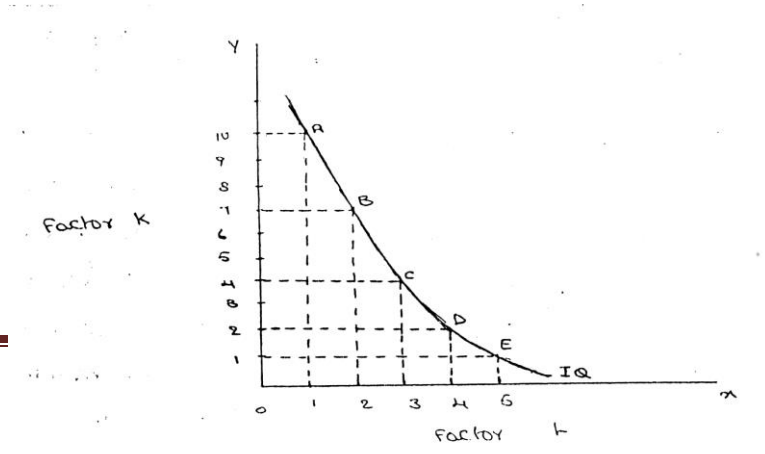
The term Isoquants is derived from the words 'iso' and 'quant' – 'Iso' means equal and 'quent' implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are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

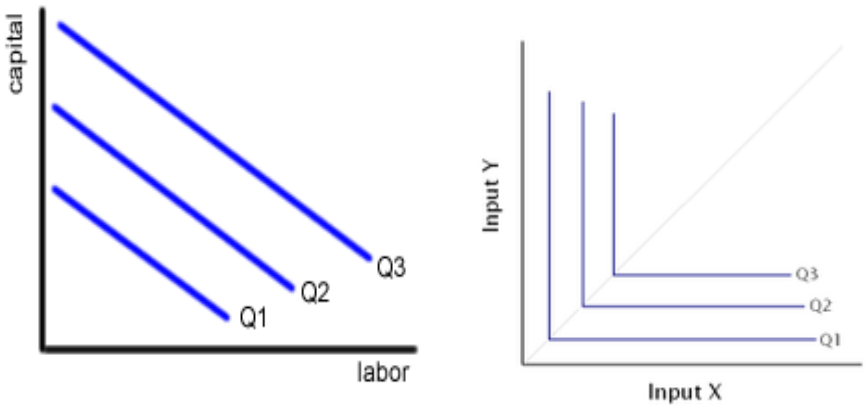
Isoquants are convex to the origin. It is because the input factors are not perfect substitutes. One input factors were perfect substituted by other input factor in a 'diminishing marginal rate'. If the input factors were perfect substitutes, the isoquant would be a falling straight line. When the inputs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

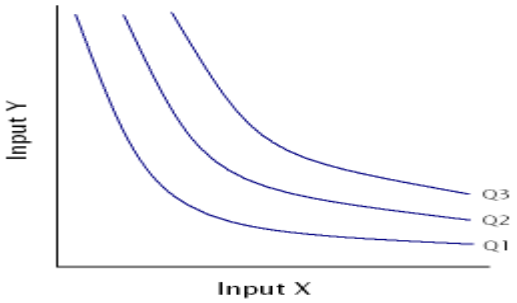
Two isoproducts do not intersect with each other. It is because, each of these denote a particular level of output. If the manufacturer wants to operate at a higher level of output, he has to switch over to another isoquant with a higher level of output and vice versa.

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

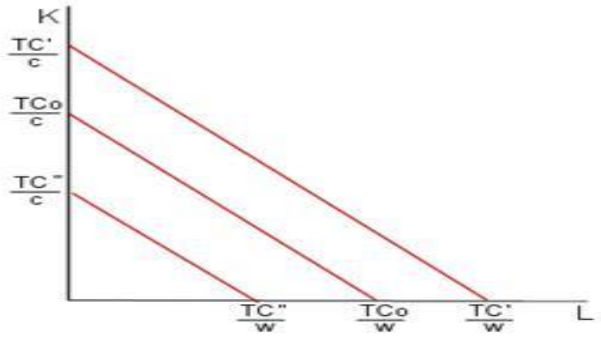
ISO COST

Definition:

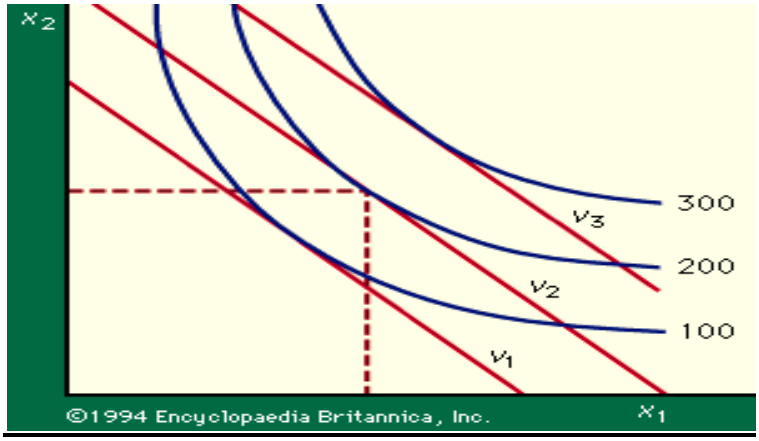
A firm can produce a given level of output using efficiently different combinations of two inputs. For choosing efficient combination of the inputs, the producer selects that combination of factors which has the lower cost of production. The information about the cost can be obtained from the ***isocost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

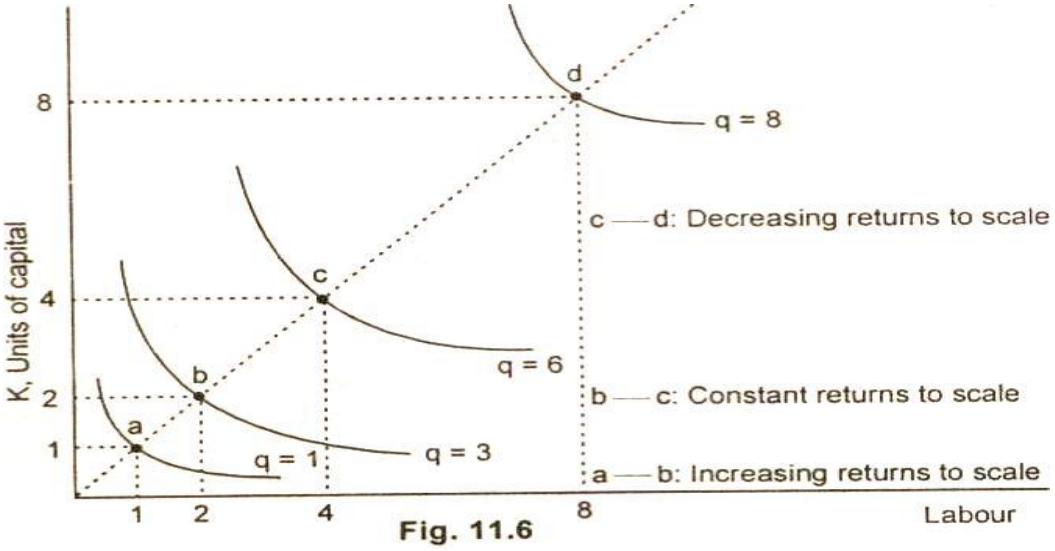


Fig. 11.6

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.

COST-OUTPUT RELATIONSHIP

A proper understanding of the nature and behavior of costs is a must for regulation and control of cost of production. The cost of production depends on money forces and an understanding of the functional relationship of cost to various forces will help us to take various decisions. Output is an important factor, which influences the cost.

The cost-output relationship plays an important role in determining the optimum level of production. Knowledge of the cost-output relation helps the manager in cost control, profit prediction, pricing, promotion etc. The relation between cost and its determinants is technically described as the cost function.

$$C = f(S, O, P, T \ldots.)$$

Where;

C= Cost (Unit or total cost)

S= Size of plant/scale of production

O= Output level

P= Prices of inputs

T= Technology

Considering the period the cost function can be classified as (a) short-run cost function and (b) long-run cost function. In economics theory, the short-run is defined as that period during which the physical capacity of the firm is fixed and the output can be increased only by using the existing capacity allows to bring changes in output by physical capacity of the firm.

(a) Cost-Output Relation in the short-run:

The cost concepts made use of in the cost behavior are total cost, Average cost, and marginal cost.

Total cost is the actual money spent to produce a particular quantity of output. Total cost is the summation of fixed and variable costs.

$$TC=TFC+TVC$$

Up to a certain level of production total fixed cost i.e., the cost of plant, building, equipment etc, remains fixed. But the total variable cost i.e., the cost of labour, raw materials etc., Vary with the variation in output. Average cost is the total cost per unit. It can be found out as follows.

$$AC= \frac{TC}{Q}$$

Q

The total of average fixed cost (TFC/Q) keep coming down as the production is increased and average variable cost (TVC/Q) will remain constant at any level of output.

Marginal cost is the addition to the total cost due to the production of an additional unit of product. It can be arrived at by dividing the change in total cost by the change in total output.

In the short-run there will not be any change in total fixed cost. Hence change in total cost implies change in total variable cost only.

Cost – output relations

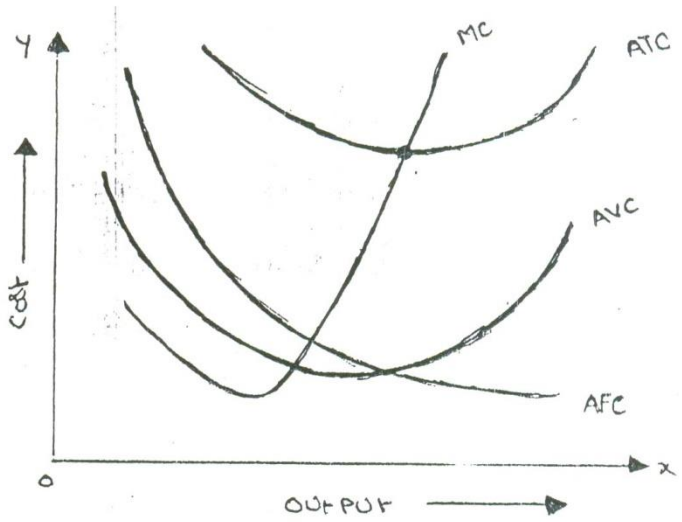
Units of Output Q	Total fixed cost TFC	Total variable cost TVC	Total cost (TFC + TVC) TC	Average variable cost (TVC / Q) AVC	Average fixed cost (TFC / Q) AFC	Average cost (TC/Q) AC	Marginal cost MC
0	-	-	60	-	-	-	-
1	60	20	80	20	60	80	20
2	60	36	96	18	30	48	16
3	60	48	108	16	20	36	12
4	60	64	124	16	15	31	16
5	60	90	150	18	12	30	26
6	60	132	192	22	10	32	42

The above table represents the cost-output relation. The table is prepared on the basis of the law of diminishing marginal returns. The fixed cost Rs. 60 May include rent of factory building, interest on capital, salaries of permanently employed staff, insurance etc. The table shows that fixed cost is same at all levels of output but the average fixed cost, i.e., the fixed cost per unit, falls continuously as the output increases. The expenditure on the variable factors (TVC) is at different rate. If more and more units are produced with a given physical capacity the AVC will fall initially, as per the table declining up to 3rd unit, and being constant up to 4th unit and then rising. It implies that variable factors produce more efficiently near a firm's optimum capacity than at any other levels of output.

And later rises. But the rise in AC is felt only after the start rising. In the table 'AVC' starts rising from the 5th unit onwards whereas the 'AC' starts rising from the 6th unit only so long as 'AVC' declines 'AC' also will decline. 'AFC' continues to fall with an increase in Output. When the rise in 'AVC' is more than the decline in 'AFC', the total cost again begin to rise. Thus there will be a stage where the 'AVC', the total cost again begin to rise thus there will be a stage where the 'AVC' may have started rising, yet the 'AC' is still declining because the rise in 'AVC' is less than the droop in 'AFC'.

Thus the table shows an increasing returns or diminishing cost in the first stage and diminishing returns or diminishing cost in the second stage and followed by diminishing returns or increasing cost in the third stage.

The short-run cost-output relationship can be shown graphically as follows.



In the above graph the "AFC' curve continues to fall as output rises an account of its spread over more and more units Output. But AVC curve (i.e. variable cost per unit) first falls and than rises due to the operation of the law of variable proportions. The behavior of "ATC' curve depends upon the behavior of 'AVC' curve and 'AFC' curve. In the initial stage of production both 'AVC' and 'AFC' decline and hence 'ATC' also decline. But after a certain point 'AVC' starts rising. If the rise in variable cost is less than the decline in fixed cost, ATC will still continue to decline otherwise AC begins to rise. Thus the lower end of 'ATC' curve thus turns up and gives it a U-shape. That is why 'ATC' curve are U-shaped. The lowest point in 'ATC' curve indicates the least-cost combination of inputs. Where the total average cost is the minimum and where the "MC' curve intersects 'AC' curve, It is not be the maximum output level rather it is the point where per unit cost of production will be at its lowest.

The relationship between 'AVC', 'AFC' and 'ATC' can be summarized up as follows:

1. If both AFC and 'AVC' fall, 'ATC' will also fall.
2. When 'AFC' falls and 'AVC' rises
    a. 'ATC' will fall where the drop in 'AFC' is more than the raise in 'AVC'.
    b. 'ATC' remains constant is the drop in 'AFC' = rise in 'AVC'
    c. 'ATC' will rise where the drop in 'AFC' is less than the rise in 'AVC'

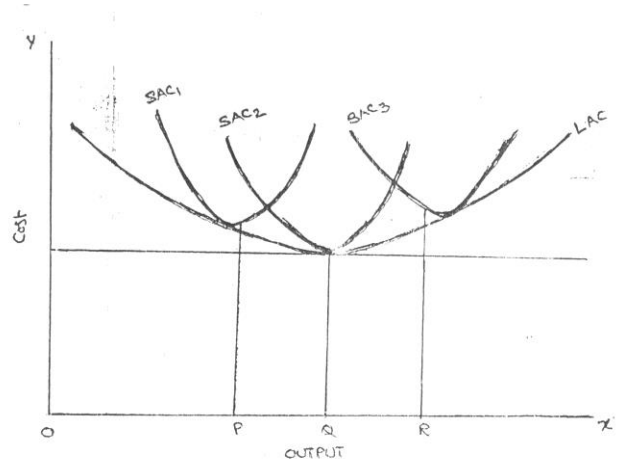
b. Cost-output Relationship in the long-run:

Long run is a period, during which all inputs are variable including the one, which are fixes in the short-run. In the long run a firm can change its output according to its demand. Over a long period, the size of the plant can be changed, unwanted buildings can be sold staff can be increased or reduced. The long run enables the firms to expand and scale of their operation by bringing or purchasing larger quantities of all the inputs. Thus in the long run all factors become variable.

The long-run cost-output relations therefore imply the relationship between the total cost and the total output. In the long-run cost-output relationship is influenced by the law of returns to scale.

In the long run a firm has a number of alternatives in regards to the scale of operations. For each scale of production or plant size, the firm has an appropriate short-run average cost curves. The short-run average cost (SAC) curve applies to only one plant whereas the long-run average cost (LAC) curve takes in to consideration many plants.

The long-run cost-output relationship is shown graphically with the help of "LCA' curve.



To draw on 'LAC' curve we have to start with a number of 'SAC' curves. In the above figure it is assumed that technologically there are only three sizes of plants – small, medium and large,

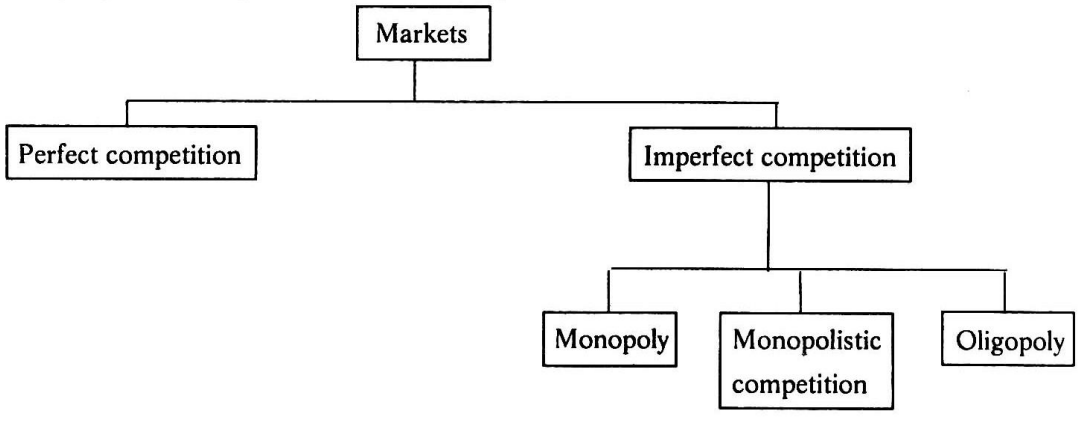
'SAC', for the small size, 'SAC2' for the medium size plant and 'SAC3' for the large size plant. If the firm wants to produce 'OP' units of output, it will choose the smallest plant. For an output beyond 'OQ' the firm wills optimum for medium size plant. It does not mean that the OQ production is not possible with small plant. Rather it implies that cost of production will be more with small plant compared to the medium plant.

For an output 'OR' the firm will choose the largest plant as the cost of production will be more with medium plant. Thus the firm has a series of 'SAC' curves. The 'LCA' curve drawn will be tangential to the entire family of 'SAC' curves i.e. the 'LAC' curve touches each 'SAC' curve at one point, and thus it is known as envelope curve. It is also known as planning curve as it serves as guide to the entrepreneur in his planning to expand the production in future. With the help of 'LAC' the firm determines the size of plant which yields the lowest average cost of producing a given volume of output it anticipates.

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 non-existence 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.

Equilibrium of a firm and industry under perfect competition

Equilibrium is a position where the firm has no incentive either to expand or contrast its output. The firm is said to be in equilibrium when it earn maximum profit. There are two conditions for attaining equilibrium by a firm. They are:

Marginal cost is an additional cost incurred by a firm for producing and additional unit of output. Marginal revenue is the additional revenue accrued to a firm when it sells one additional unit of output. A firm increases its output so long as its marginal cost becomes equal to marginal revenue. When marginal cost is more than marginal revenue, the firm reduces output as its costs exceed the revenue. It is only at the point where marginal cost is equal to marginal

revenue, and then the firm attains equilibrium. Secondly, the marginal cost curve must cut the marginal revenue curve from below. If marginal cost curve cuts the marginal revenue curve from above, the firm is having the scope to increase its output as the marginal cost curve slopes downwards. It is only with the upward sloping marginal cost curve, there the firm attains equilibrium. The reason is that the marginal cost curve when rising cuts the marginal revenue curve from below.

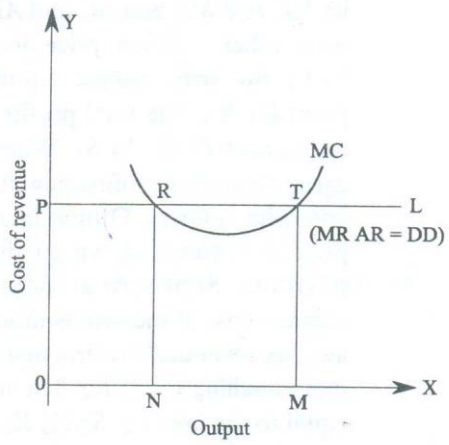


Fig. 6.2

The equilibrium of a perfectly competitive firm may be explained with the help of the fig. 6.2.

In the given fig. PL and MC represent the Price line and Marginal cost curve. PL also represents Marginal revenue, Average revenue and demand. As Marginal revenue, Average revenue and demand are the same in perfect competition, all are equal to the price line. Marginal cost curve is U- shaped curve cutting MR curve at R and T. At point R marginal cost becomes equal to marginal revenue. But MC curve cuts the MR curve fro above. So this is not the equilibrium position. The downward sloping marginal cost curve indicates that the firm can reduce its cost of production by increasing output. As the firm expands its output, it will reach equilibrium at point T. At this point, on price line PL; the two conditions of equilibrium are satisfied. Here the marginal cost and marginal revenue of the firm remain equal. The firm is producing maximum output and is in equilibrium at this stage. If the firm continues its output beyond this stage, its marginal cost exceeds marginal revenue resulting in losses. As the firm has no idea of expanding or contracting its size of out, the firm is said to be in equilibrium at point T.

Pricing under perfect competition

The price or value of a commodity under perfect competition is determined by the demand for and the supply of that commodity.

Under perfect competition there is large number of sellers trading in a homogeneous product. Each firm supplies only very small portion of the market demand. No single buyer or seller is powerful enough to influence the price. The demand of all consumers and the supply of all firms together determine the price. The individual seller is only a price taker and not a price maker. An individual firm has no price policy of it's own. Thus, the main problem of a firm in a perfectly competitive market is not to determine the price of its product but to adjust its output to the given price, So that the profit is maximum. Marshall however gives great importance to the time element for the determination of price. He divided the time periods on the basis of supply and ignored the forces of demand. He classified the time into four periods to determine the price as follows.

1. Very short period or Market period
2. Short period
3. Long period
4. Very long period or secular period

Very short period: It is the period in which the supply is more or less fixed because the time available to the firm to adjust the supply of the commodity to its changed demand is extremely short; say a single day or a few days. The price determined in this period is known as Market Price.

Short Period: In this period, the time available to firms to adjust the supply of the commodity to its changed demand is, of course, greater than that in the market period. In this period altering the variable factors like raw materials, labour, etc can change supply. During this period new firms cannot enter into the industry.

Long period: In this period, a sufficiently long time is available to the firms to adjust the supply of the commodity fully to the changed demand. In this period not only variable factors of production but also fixed factors of production can be changed. In this period new firms can also enter the industry. The price determined in this period is known as long run normal price.

Secular Period: In this period, a very long time is available to adjust the supply fully to change in demand. This is very long period consisting of a number of decades. As the period is very long it is difficult to lay down principles determining the price.

Price Determination in the market period

The price determined in very short period is known as Market price. Market price is determined by the equilibrium between demand and supply in a market period. The nature of the commodity determines the nature of supply curve in a market period. Under this period goods are classified in to (a) Perishable goods and (b) Non-perishable goods.

Perishable Goods: In the very short period, the supply of perishable goods like fish, milk vegetables etc. cannot be increased. And it cannot be decreased also. As a result the supply curve under very short period will be parallel to the Y-axis or Vertical to X-axis. Supply is perfectly inelastic. The price determination of perishable goods in very short period may be shown with the help of the following fig. 6.5

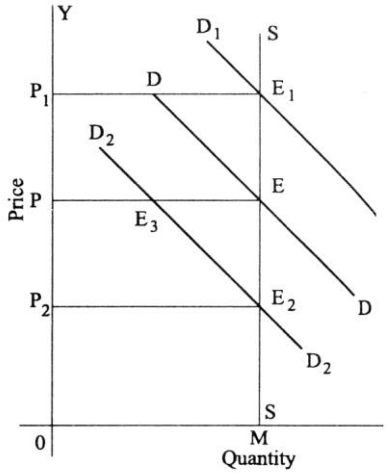


Fig. 6.5

In this figure quantity is represented along X-axis and price is represented along Y-axis. MS is the very short period supply curve of perishable goods. DD is demand curve. It intersects supply curve at E. The price is OP. The quantity exchanged is OM. D1 D1 represents increased demand. This curve cuts the supply curve at E1. Even at the new equilibrium, supply is OM only. But price increases to OP1. So, when demand increases, the price will increase but not the supply. If demand decreases new demand curve will be D2 D2. This curve cuts the supply curve at E2. Even at this new equilibrium, the supply is OM only. But price falls to OP2. Hence in very short period, given the supply, it is the change in demand that influences price. The price determined in a very short period is called Market Price.

Non-perishable goods: In the very short period, the supply of non-perishable goods like cloth, pen, watches etc. cannot be increased. But if price falls, preserving some stock can decrease their supply. If price falls too much, the whole stock will be held back from the market and carried over to the next market period. The price below, which the seller will refuse to sell, is called Reserve Price.

The Price determination of non-perishable goods in very short period may be shown with the help of the following fig 6.6.

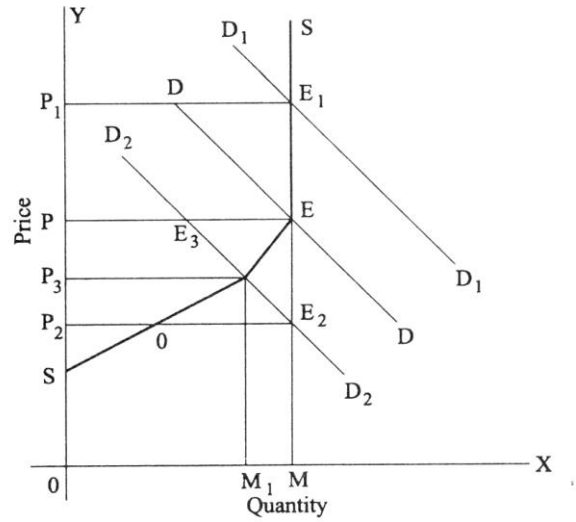


Fig. 6.6

In the given figure quantity is shown on X-axis and the price on Y-axis. SES is the supply curve. It slopes upward up to the point E. From E it becomes a vertical straight line. This is because the quantity existing with sellers is OM, the maximum amount they have is thus OM. Till OM quantity (i.e., point E) the supply curve sloped upward. At the point S, nothing is offered for sale.

It means that the seller with hold the entire stock if the price is OS. OS is thus the reserve price. As the price rises, supply increases up to point E. At OP price (Point E), the entire stock is offered for sale.

Suppose demand increases, the DD curve shift upward. It becomes D1D1 price raises to OP1. If demand decreases, the demand curve becomes D2D2. It intersects the supply curve at E3. The price will fall to OP3. We find that at OS price, supply is zero. It is the reserve price.

Price Determination in the short period

Short period is a period in which supply can be increased by altering the variable factors. In this period fixed costs will remain constant. The supply is increased when price rises and vice versa. So the supply curve slopes upwards from left to right

The price in short period may be explained with the help of a diagram.

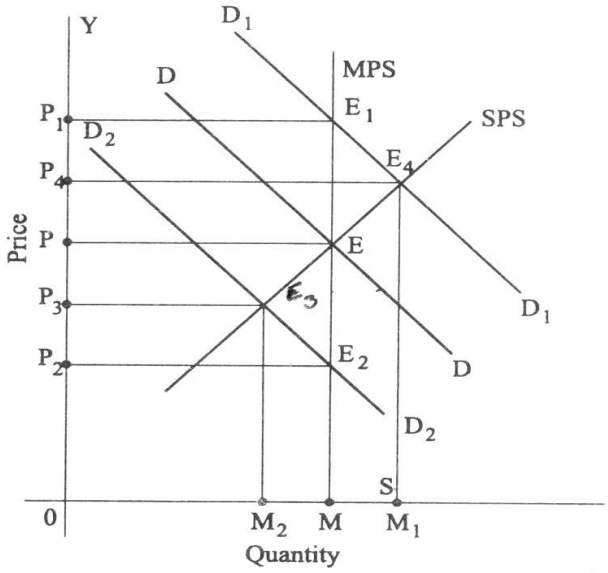


Fig. 6.7

In the given diagram MPS is the market period supply curve. DD is the initial demand curve. It intersects MPS curve at E. The price is OP and out put OM. Suppose demand increases, the demand curve shifts upwards and becomes D1D1. In the very short period, supply remains fixed on OM. The new demand curve D1D1 intersects MPS at E1. The price will rise to OP1. This is what happen in the very short-period.

As the price rises from OP to OP1, firms expand output. As firms can vary some factors but not all, the law of variable proportions operates. This results in new short-run supply curve SPS. It interests D1 D1 curve at E4. The price will fall from OP1 to OP4.

It the demand decreases, DD curve shifts downward and becomes D2D2. It interests MPS curve at E2. The price will fall to OP2. This is what happens in market period. In the short period, the supply curve is SPS. D2D2 curve interests SPS curve at E3. The short period price is higher than the market period price.

Price determination in the long period (Normal Price)

Market price may fluctuate due to a sudden change either on the supply side or on the demand side. A big arrival of milk may decrease the price of that production in the market period. Similarly, a sudden cold wave may raise the price of woolen garments. This type of temporary change in supply and demand may cause changes in market price. In the absence of such disturbing causes, the price tends to come back to a certain level. Marshall called this level is normal price level. In the words of Marshall Normal value (Price) of a commodity is that which economics force would tend to bring about in the long period.

In order to describe how long run normal price is determined, it is useful to refer to the market period as short period also. The market period is so short that no adjustment in the output can be

made. Here cost of production has no influence on price. A short period is sufficient only to allow the firms to make only limited output adjustment. In the long period, supply conditions are fully sufficient to meet the changes in demand. In the long period, all factors are alterable and the new firms may enter into or old firms leave the; industry.

In the long period all costs are variable costs. So supply will be increased only when price is equal to average cost.

Hence, in long period normal price will be equal to minimum average cost of the industry. Will this price be more or less than the short period normal price? The answer depends on the stage of returns to which the industry is subject. There are three stages of return on the stage of returns to which the industry is subject. There are three stages of returns.

1. Increasing returns or decreasing costs.
2. Constant Returns or Constant costs.
3. Diminishing returns or increasing costs.

1. <u>Determination of long period normal price in decreasing cost industry:</u>

At this stage, average cost falls due to an increase in the output. So, the supply curve at this stage will slope downwards from left to right. The long period Normal price determination at this stage can be explained with the help of a diagram.

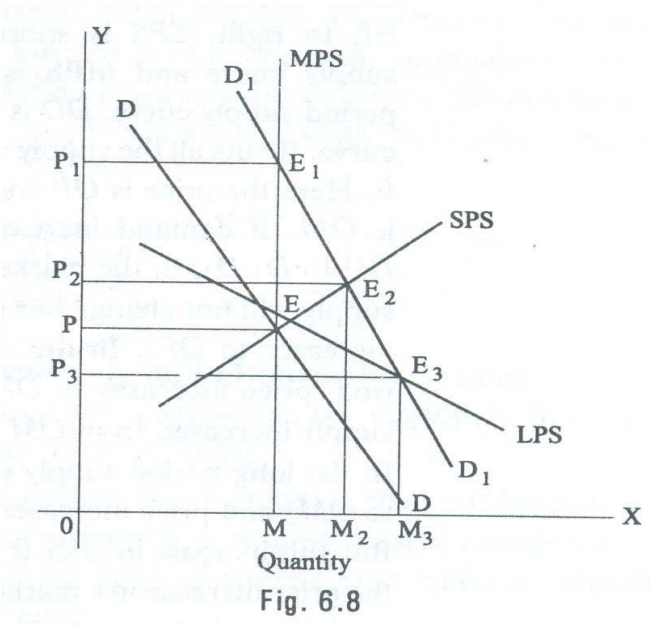


Fig. 6.8

In the diagram, MPS represents market period supply curve. DD is demand curve. DD cuts LPS, SPS and MPS at point E. At point E the supply is OM and the price is OP. If demand increases from DD to D1D1 market price increases to OP1. In the short period it is OP2. In the long period supply increases considerably to OM3. So price has fallen to OP3, which is less than the price of market period.

2. Determination of Long Period Normal Price in Constant Cost Industry:

In this case average cost does not change even though the output increases. Hence long period supply curve is horizontal to X-axis. The determination of long period normal price can be explained with the help of the diagram. In the fig. 6.9, LPS is horizontal to X-axis. MPS represents market period supply curve, and SPS represents short period supply curve. At point 'E' the output is OM and price is OP. If demand increases from DD to D1D1 market price increases to OP1. In the short period, supply increases and hence the price will be OP2. In the long run supply is adjusted fully to meet increased demand. The price remains constant at OP because costs are constant at OP and market is perfect market.

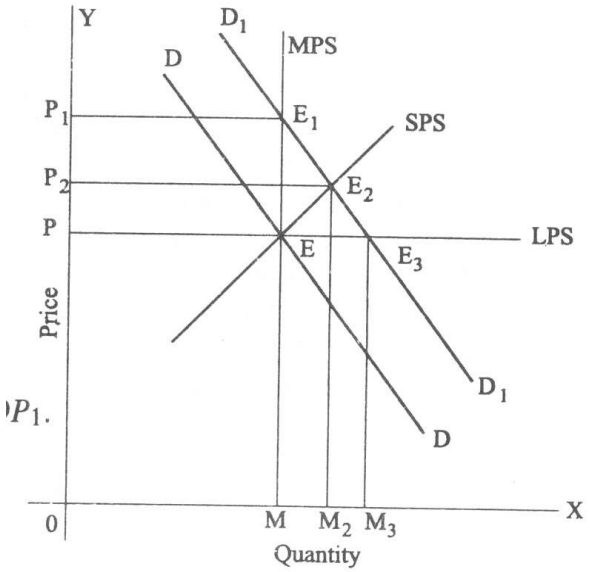


Fig. 6.9

3. Determination of long period normal price in increase cost industry:

If the industry is subject to increasing costs (diminishing returns) the supply curve slopes upwards from left to right like an ordinary supply curve. The determination of long period normal price in increasing cost industry can be explained with the help of the following diagram. In the diagram LPS represents long period supply curve. The industry is subject to diminishing return or increasing costs. So, LPS slopes upwards from left to right. SPS is short period supply curve and MPS is market period supply curve. DD is demand curve. It cuts all the supply curves at E. Here the price is OP and output is OM. If demand increases from DD to D1D1 in the market period, supply will not change but the price increases to OP1. In the short period, price increase but the price increases to OP1. In the short period, price increases to OP2 as the supply increased from OM to OM2. In the long period supply increases to OM3 and price increases to OP3. But this increase in price is less than the price increase in a market period or short period.

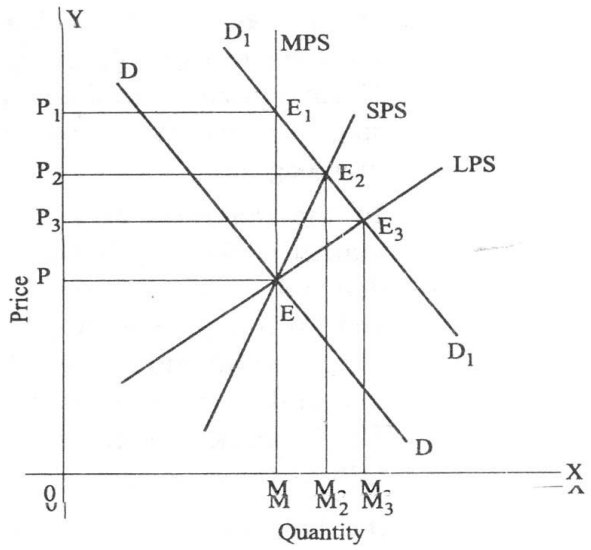


Fig. 6.10

→ 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.

Pricing under Monopoly

Monopoly refers to a market situation where there is only one seller. He has complete control over the supply of a commodity. He is therefore in a position to fix any price. Under monopoly there is no distinction between a firm and an industry. This is because the entire industry consists of a single firm.

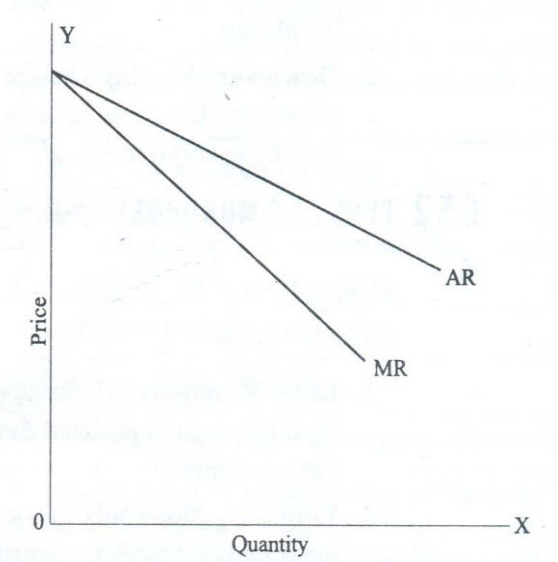


Fig. 6.11

Being the sole producer, the monopolist has complete control over the supply of the commodity. He has also the power to influence the market price. He can raise the price by reducing his output and lower the price by increasing his output. Thus he is a price-maker. He can fix the price to his maximum advantages. But he cannot fix both the supply and the price, simultaneously. He can do one thing at a time. If the fixes the price, his output will be determined by the market demand for his commodity. On the other hand, if he fixes the output

to be sold, its market will determine the price for the commodity. Thus his decision to fix either the price or the output is determined by the market demand.

The market demand curve of the monopolist (the average revenue curve) is downward sloping. Its corresponding marginal revenue curve is also downward sloping. But the marginal revenue curve lies below the average revenue curve as shown in the figure. The monopolist faces the down-sloping demand curve because to sell more output, he must reduce the price of his product. The firm's demand curve and industry's demand curve are one and the same. The average cost and marginal cost curve are U shaped curve. Marginal cost falls and rises steeply when compared to average cost.

Price output determination (Equilibrium Point)

The monopolistic firm attains equilibrium when its marginal cost becomes equal to the marginal revenue. The monopolist always desires to make maximum profits. He makes maximum profits when MC=MR. He does not increasing his output if his revenue exceeds his costs. But when the costs exceed the revenue, the monopolist firm incur loses. Hence the monopolist curtails his production. He produces up to that point where additional cost is equal to the additional revenue (MR=MC). Thus point is called equilibrium point. The price output determination under monopoly may be explained with the help of a diagram.

In the diagram 6.12 the quantity supplied or demanded is shown along X-axis. The cost or revenue is shown along Y-axis. AC and MC are the average cost and marginal cost curves respectively. AR and MR curves slope downwards from left to right. AC and MC and U shaped curves. The monopolistic firm attains equilibrium when its marginal cost is equal to marginal revenue (MC=MR). Under monopoly, the MC curve may cut the MR curve from below or from a side. In the diagram, the above condition is satisfied at point E. At point E, MC=MR. The firm is in equilibrium. The equilibrium output is OM.

The above diagram (Average revenue) = MQ or OP

Average cost = MR

Profit per unit = Average Revenue-Average cost=MQ-MR=QR

Total Profit = QRXSR=PQRS

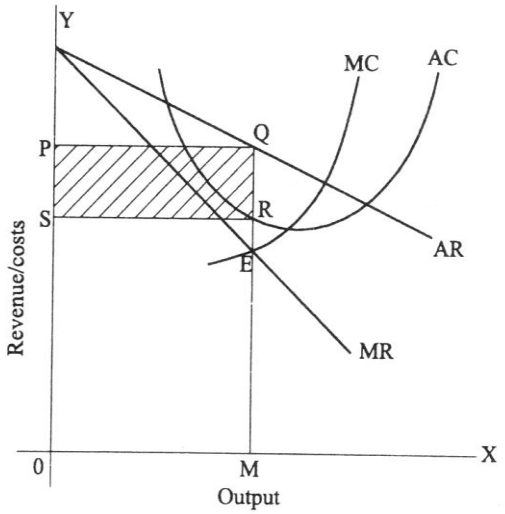


Fig. 6.12

The area PQRS resents the maximum profit earned by the monopoly firm.

But it is not always possible for a monopolist to earn super-normal profits. If the demand and cost situations are not favorable, the monopolist may realize short run losses.

Through the monopolist is a price marker, due to weak demand and high costs; he suffers a loss equal to PABC.

If AR > AC -> Abnormal or super normal profits.

If AR = AC -> Normal Profit

If AR < AC -> Loss

In the long run the firm has time to adjust his plant size or to use existing plant so as to maximize profits.

Monopolistic competition

Perfect competition and pure monopoly are rate phenomena in the real world. Instead, almost every market seems to exhibit characteristics of both perfect competition and monopoly. Hence in the real world it is the state of imperfect competition lying between these two extreme limits that work. Edward. H. Chamberlain developed the theory of monopolistic competition, which presents a more realistic picture of the actual market structure and the nature of competition.

Characteristics of Monopolistic Competition

The important characteristics of monopolistic competition are:

1. **Existence of Many firms:** Industry consists of a large number of sellers, each one of whom does not feel dependent upon others. Every firm acts independently without bothering about the reactions of its rivals. The size is so large that an individual firm has

only a relatively small part in the total market, so that each firm has very limited control over the price of the product. As the number is relatively large it is difficult for these firms to determine its price- output policies without considering the possible reactions of the rival forms. A monopolistically competitive firm follows an independent price policy.

2. **Product Differentiation:** Product differentiation means that products are different in some ways, but not altogether so. The products are not identical but the same time they will not be entirely different from each other. IT really means that there are various monopolist firms competing with each other. An example of monopolistic competition and product differentiation is the toothpaste produced by various firms. The product of each firm is different from that of its rivals in one or more respects. Different toothpastes like Colgate, Close-up, Forehans, Cibaca, etc., provide an example of monopolistic competition. These products are relatively close substitute for each other but not perfect substitutes. Consumers have definite preferences for the particular verities or brands of products offered for sale by various sellers. Advertisement, packing, trademarks, brand names etc. help differentiation of products even if they are physically identical.
3. **Large Number of Buyers:** There are large number buyers in the market. But the buyers have their own brand preferences. So the sellers are able to exercise a certain degree of monopoly over them. Each seller has to plan various incentive schemes to retain the customers who patronize his products.
4. **Free Entry and Exist of Firms:** As in the perfect competition, in the monopolistic competition too, there is freedom of entry and exit. That is, there is no barrier as found under monopoly.
5. **Selling costs:** Since the products are close substitute much effort is needed to retain the existing consumers and to create new demand. So each firm has to spend a lot on selling cost, which includes cost on advertising and other sale promotion activities.
6. **Imperfect Knowledge:** Imperfect knowledge about the product leads to monopolistic competition. If the buyers are fully aware of the quality of the product they cannot be influenced much by advertisement or other sales promotion techniques. But in the business world we can see that thought the quality of certain products is the same, effective advertisement and sales promotion techniques make certain brands monopolistic. For examples, effective dealer service backed by advertisement-helped popularization of some brands through the quality of almost all the cement available in the market remains the same.
7. **The Group:** Under perfect competition the term industry refers to all collection of firms producing a homogenous product. But under monopolistic competition the products of various firms are not identical through they are close substitutes. Prof. Chamberlin called the collection of firms producing close substitute products as a group.

Price – Output Determination under Monopolistic Competition

Since under monopolistic competition different firms produce different varieties of products, different prices for them will be determined in the market depending upon the demand and cost

conditions. Each firm will set the price and output of its own product. Here also the profit will be maximized when marginal revenue is equal to marginal cost.

Short-run equilibrium of the firm:

In the short-run the firm is in equilibrium when marginal Revenue = Marginal Cost. In Fig 6.15 AR is the average revenue curve. NMR marginal revenue curve, SMC short-run marginal cost curve, SAC short-run average cost curve, MR and SMC interest at point E where output in OM and price MQ (i.e. OP). Thus the equilibrium output or the maximum profit output is OM and the price MQ or OP. When the price (average revenue) is above average cost a firm will be making supernormal profit. From the figure it can be seen that AR is above AC in the equilibrium point. As AR is above AC, this firm is making abnormal profits in the short-run. The abnormal profit per unit is QR, i.e., the difference between AR and AC at equilibrium point and the total supernormal profit is OR X OM. This total abnormal profits is represented by the rectangle PQRS. As the demand curve here is highly elastic, the excess price over marginal cost is rather low. But in monopoly the demand curve is inelastic. So the gap between price and marginal cost will be rather large.

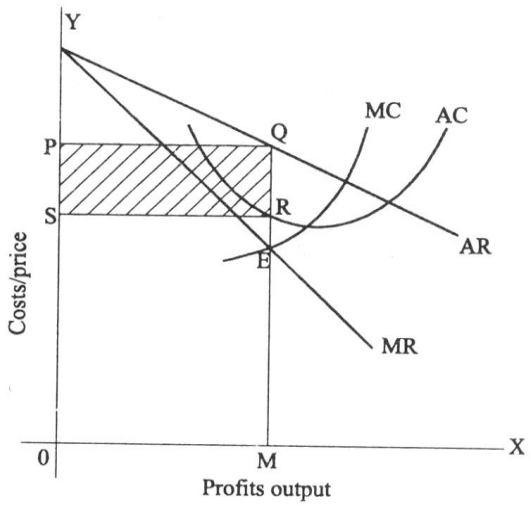


Fig. 6.15

If the demand and cost conditions are less favorable the monopolistically competitive firm may incur loss in the short-run fig 6.16 Illustrates this. A firm incurs loss when the price is less than the average cost of production. MQ is the average cost and OS (i.e. MR) is the price per unit at equilibrium output OM. QR is the loss per unit. The total loss at an output OM is OR X OM. The rectangle PQRS represents the total loses in the short run.

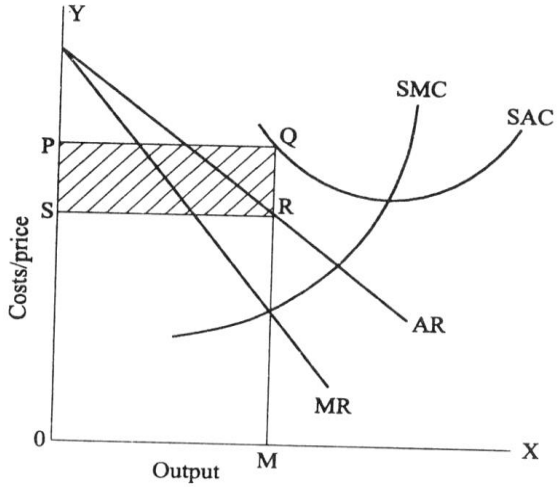


Fig. 6.16

Long – Run Equilibrium of the Firm:

A monopolistically competitive firm will be long – run equilibrium at the output level where marginal cost equal to marginal revenue. Monopolistically competitive firm in the long run attains equilibrium where MC=MR and AC=AR Fig 6.17 shows this trend.

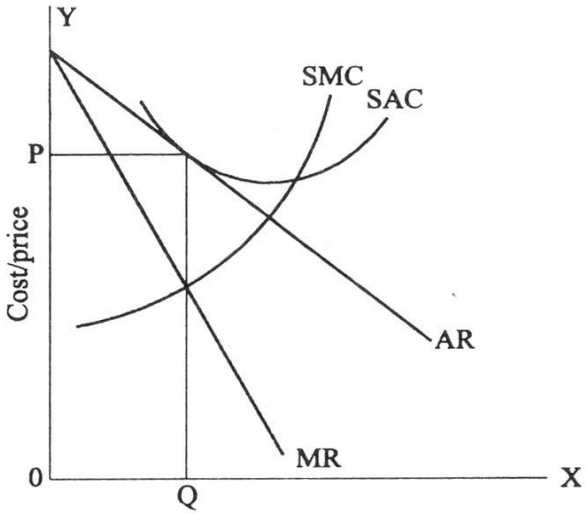


Fig. 6.17

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.

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

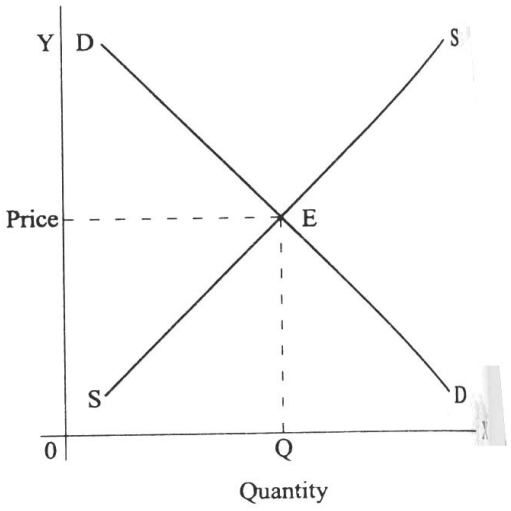
The price at which demand and supply of a commodity is equal known as equilibrium price. The demand and supply schedules of a good are shown in the table below.

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.

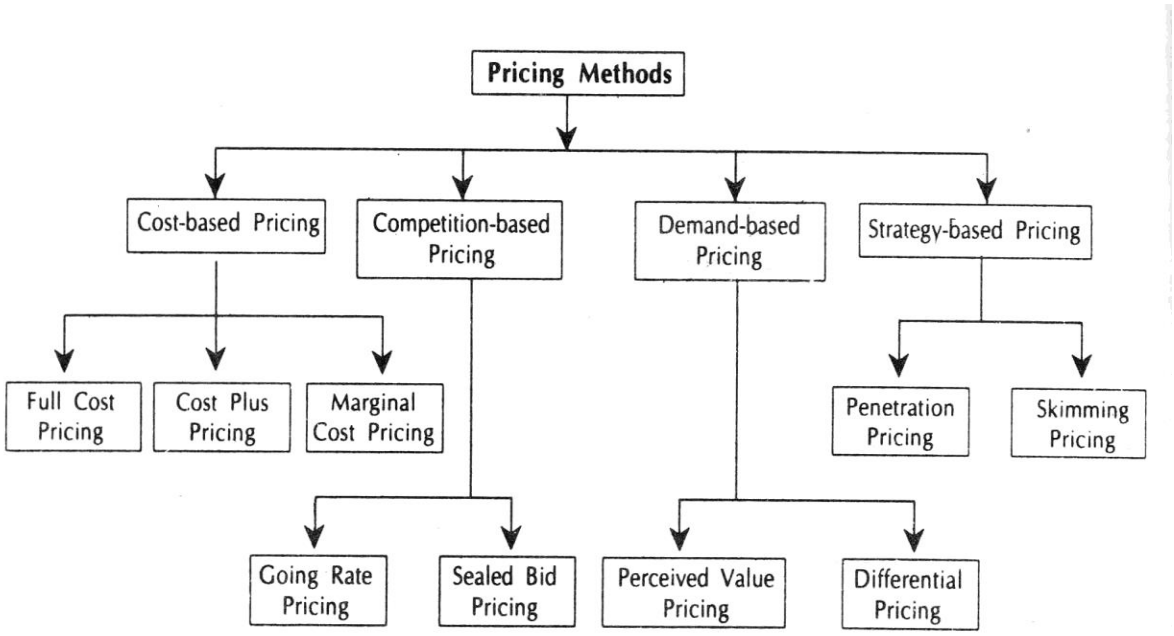


It was seen in unit 1 that the demand for a good depends on, a number of factors and thus, every factor, which influences either demand or supply is in fact a determinant of price. Accordingly, a change in demand or/and supply causes price change.

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.

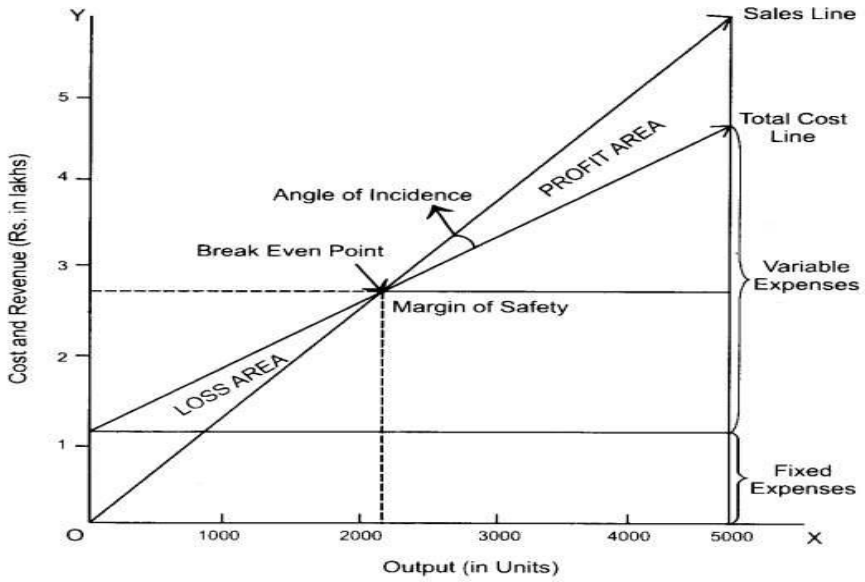
BREAKEVEN ANALYSIS

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, $\frac{\text{Contributi on}}{Sales}$ X 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.

1. Break Even point (Units) = $\frac{\text{Fixed Expenses}}{\text{Contributi on per unit}}$
2. Break Even point (In Rupees) = $\frac{\text{Fixed expenses}}{\text{Contributi on}}$ X sales

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 decision-making 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 To capital A/c (Bring business started with 2,00,000)	2,00,000	2,00,000
2-1-2016	Land a/c .....Dr To Cash (being land purchased for cash)	1,05,000	1,05,000
3-1-2016	Purchase a/c .....Dr To S.K Creation (being land purchased forcash)	2,00,000	2,00,000
4-1-2016	stationery a/c .....Dr To Cash *(Being* Stationery purchased for cash)	*1,000*	*1,000*
5-1-2016	Indian Cotton a/c.....Dr To Sales a/c (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 (being rent paid)		
9-1-2016	Drawings a/c .....Dr To cash a/c (being cash withdrawn for personal use)	*5,000*	*5,000*
10-1-2016	Commision a/c .....Dr To cash a/c (being commission paid)	*500*	*500*
11-1-2016	*Bank a/c …. Dr* *To cash a/c* (cash deposited in to bank)	*15,000*	*15,000 q*
12-1-2016	Cash a/c .....Dr To Sales a/c (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:

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

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

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

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

Manu a/c

Dr Date	Particulars	J/F	Amount	Cr 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

Sonu a/c

Dr Date	Particulars	J/F	Amount	Cr 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				

Meenu a/c

Dr Date	Particulars	J/F	Amount	Cr 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

Furniture a/c

Dr Date	Particulars	J/F	Amount	Cr 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				

Zenu a/c

Dr Date	Particulars	J/F	Amount	Cr 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

Jane a/c

Dr Date	Particulars	J/F	Amount	Cr 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

	Dr	Cr
Name of the Account	Balances (Rs)	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
TO Carriage outwards	Xxxx		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	Xxxx
Bills payable	Xxxx	cash at bank	Xxxx
Bank overdraft	Xxxx	Bills receivable	Xxxx
Loans	Xxxx	Debtors	Xxxx
Mortgage	Xxxx	Closing stock	Xxxx
Reserve fund	Xxxx	Investments	Xxxx
Capital xxxxxx		Furniture and fittings	Xxxx
Add: Net Profit xxxx		Plats&machinery	Xxxx
xxxxxxx		Land & buildings	Xxxx
Less: Drawings xxxx	Xxxx	Patents, tm ,copyrights	Xxxx
		Goodwill	Xxxx
		Prepaid expenses	Xxxx
		Outstanding incomes	
	XXXX		XXXX

Advantages: 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**

. *STOCK*:-

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)*If closing stock is given in Trail Balance*: It should be shown only in the balance sheet "Assets Side".

(ii)*If closing stock is given as adjustment:*

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. *OUTSTANDING EXPENSES*:-

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

(ii)*If outstanding expenses given as adjustment*:

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. *PREAPID EXPENSES*:-

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

(ii)*If prepaid expense given as adjustment* :

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. *INCOME EARNED BUT NOT RECEIVED [OR] OUTSTANDING INCOME [OR] ACCURED INCOME*:-

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

(ii)*If incomes outstanding given as adjustment*:

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. *INCOME RECEIVED IN ADVANCE: UNEARNED INCOME*:-

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

(ii)*If unearned income given as adjustment* :

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 macro-business 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.

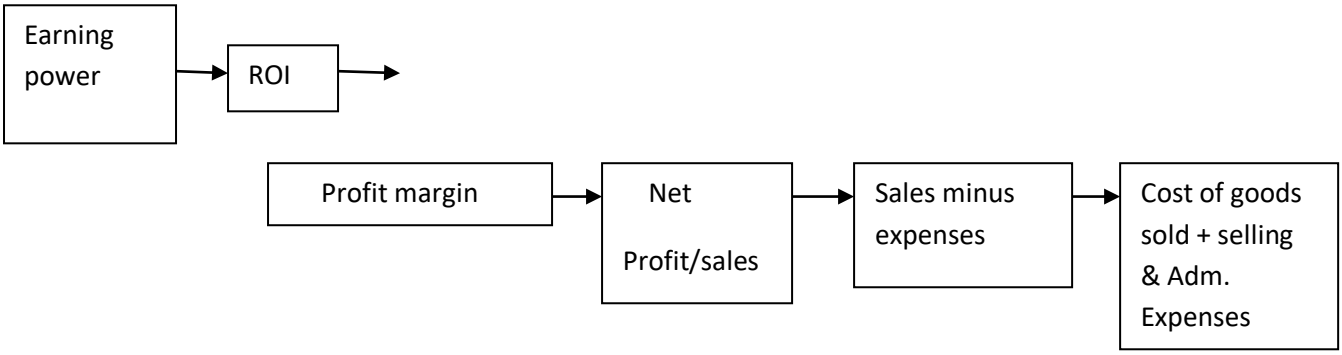
EPS = (NET PROFIT AFTER TEXES/NUMBER OF SHARES OUTSTANDING)

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.


Earning power
ROI
Profit margin
Net Profit/sales
Sales minus expenses
Cost of goods sold + selling & Adm. Expenses

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		5,98,500
To Administration expenses	1,01,000	By Gross Profit b/d	2,00,000
" Selling and Dist. expenses	12,000	" Non-operating incomes:	
" Non-operating expenses	2,000	" Interest on Securities	1,500
" Financial Expenses	7,000	" Dividend on shares	3,750
Net Profit c/d	84,000	" Profit on sale of shares	750
	2,06,000		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 = $\frac{\text{Gross profit}}{\text{Sales}}$ **X** 100

$\frac{2,00,000}{5,00,000}$ **X** 100

= 40%

2. Expenses Ratio = $\frac{\text{Op. Expenses}}{\text{Net Sales}}$ **X** 100

$\frac{1,13,000}{5,00,000}$ **X** 100

= 22.60%

3. Operating Ratio = $\frac{\text{Cost of goods sold + Op. Expenses}}{\text{Net Sales}}$ **X** 100

$\frac{3,00,000 + 1,13,000}{5,00,000}$ **X** 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 = $\frac{\text{Net Profit}}{\text{Net Sales}}$ **X** 100

$\frac{84,000}{5,00,000}$ **X** 100

= 16.8%

5. Operating Profit Ratio = $\frac{\text{Op. Profit}}{\text{Net Sales}}$ **X** 100

Operating Profit = Sales – (Op. Exp. + Admin Exp.)

$\frac{87,000}{5,00,000}$ **X** 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:		Investments (Short-term)	4,000
Current	4,000	Cash in hand	12,000
Future	4,000		
Profit and Loss A/c	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 =	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
	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 = 40,000	
	CL = 16000 + 4000 + 4000 + 4000	

= 28,000	
= 40,000 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 = 28,000	
	QL = 28,000 – (4,000 + 4,000) = 20,000	
	= 28,000 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 = 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 = 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 =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$
	COGS = Sales – GP
	$\frac{3,25,000 + 1,75,000}{2}$

AS = 2,50,000
COGS = 15,00,000 – 7,50,000 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) = 6,00,000 **(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 = 8,00,000	

CL = 1,00,000 + 1,50,000 + 45,000 + 5,000 = 3,00,000	
= 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 = 6,25,000	
	QL = 3,00,000 – 1,50,000 = 1,50,000	
	= 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.		**SHF =** Eq. Sh. Cap. + Pref. Sh.		**ESHF =** Eq. Sh. Cap. +	

Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets	Cap. + Reserves & Surplus – Fictitious Assets	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 / 60,00,000	X 100	= 2,50,000 / 50,00,000	X 100	= 50,000 / 30,00,000	X 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 Rs.	31-12-2002 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 = 5,70,000	
	CL = 1,05,000 + 30,000 = 1,35,000	
	= 5,70,000 / 1,35,000	
	= 4.22 : 1	

3. Acid Test Ratio =	Cash & Cash Equivalent Assets / Liquid Liabilities	

Cash & Cash equivalent Assets = Cash + Bank + Short term Investments	
(Liquid) Quick Liabilities = Current Liabilities – BOD	
= 1,20,000 + 96,000 = 2,16,000	
QL = 1,05,000 + 30,000 = 1,35,000	
= 2,16,000 1,35,000	
= 1.6 : 1	

4. Stock Turnover Ratio =	Cost of goods sold Avg. Stock
	Avg. stock = Opening Stock + Closing Stock 2
	COGS = Sales – GP
	96,000 + 1,44,000 2
	AS = 1,20,000
	COGS = 6,00,000 – 1,50,000 4,50,000
	= 4,50,000 1,20,000
	= 3.75 times

5. Debtors Ratio = **(Avg. debt collection period)**	Debtors + Bills receivable Credit sales	**X** 365 / 360 days
	= 1,50,000 + 60,000 4,56,000	**X** 365 days

= 0.461	**X** 365 days
= 168 days	

6. Creditors Ratio	**=**	Creditors + Bills payable / Credit Purchase	**X** 365 / 360 days
		= 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%	10,00,000	Fixed Assets	20,00,000
Pref. Sh. of Rs.100 each Reserves	4,00,000	Investments	2,00,000
and Surplus	7,00,000	Closing Stock	2,00,000
15% Debentures	5,00,000	Sundry Debtors	4,60,000
Sundry Creditors	2,40,000	Bills Receivable	60,000
Bank Overdraft	1,60,000	Cash at Bank	60,000
		Preliminary Expenses	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 = 20,80,000	
	= 5,00,000 20,80,000	
	= 0.24 : 1	

4. Capital Gearing Ratio =	Fixed Interest or Dividend Securities 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 = 16,80,000	
= 9,00,000 16,80,000	
= 0.54 : 1	

5. Debtors Ratio = **(Avg. debt collection period)**	Debtors + Bills receivable Credit sales	**X** 365 / 360 days
	= 4,60,000 + 60,000 60,00,000	**X** 365 days
	= 0.461	**X** 365 days
	= 31.63 days **= 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	31-3-04
Equity share capital	1,00,000	1,50,000	Land and Buildings	1,00,000	90,000
10%Pref. Sh. capital	50,000	50,000	Machinery	90,000	90,000
General Reserve Profit &	30,000	30,000	Debtors	53,000	30,000
Loss A/c 12%	20,000	-----	Bills Receivable	20,000	12,000
Debentures Creditors	1,00,000	50,000	Stock	75,000	90,000
Bills payable	30,000	35,000	Bank Balance	15,000	35,000
Bank Overdraft	10,000	25,000	Cash Balance	2,000	13,000
O/s. Expenses	10,000 5,000	20,000 10,000	Profit & Loss A/c	----	10,000
	3,55,000	3,70,000		3,55,000	3,70,000

Additional Information:

	2002-'03 Rs.	2003-04 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 =	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
	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: = 1,65,000 - 75,000 55,000 - 10,000	
= 90,000 45,000	
= 2 :1	
2003-04: = 1,80,000 - 90,000 90,000 - 20,000	
= 90,000 70,000	
= **1.29 : 1**	

3. Debtors Ratio = **(Avg. debt collection period)**	Debtors + Bills receivable Credit sales	**X** 365 / 360 days
	2002-03: = 53,000 + 20,000 3,65,000	**X** 365 days
	= 73,000 3,65,000	**X** 365 days
	= 73 days	
	2003-04: = 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:** 365000 - 219000 = 1,46,000 **2003-04:** 219000 - 146000 = 73,000	
	2002-03: = 1,46,000 / 3,65,000	**X** 100
	= 40%	
	2003-04: = 73,000 / 2,19,000	**X** 100
	= 33.33%	

2. Stock Turnover Ratio =	Cost of goods sold / Avg. Stock
	Avg. stock = Opening Stock + Closing Stock / 2
	2002-03: 71000 + 75000 / 2 = 73,000 **2003-04:** 75000 + 90000 / 2 = 82,500
	2002-03: **=** 2,19,000 / 73,000
	= **3 times**
	2003-04:

= 1,46,000 82,500
= 1.77 times

7. Rate of return on Equity Shareholders Fund:	
2002-03 = PAT – Pref. Div. ESHF	**X** 100
ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
ESHF = 1,00,000 + 30,000 + 20,000 **= 1,50,000**	
= 35,000 - 5,000 1,50,000	**X** 100
= 20 %	
2003-04: **ESHF:** 1,50,000 + 30,000 - 10,000 = 1,70,000	
= 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	75,000
General Reserve Profit &	12,500	15,000	Plant Machinery	57,500	55,000
Loss A/c Creditors	10,000	7,500	Stock	10,000	12,500
Bills payable	5,000	6,250	Debtors	7,500	10,000
O/s. Expenses	3,750	7,500	Cash & Bank	5,000	7,500
Provident Fund	1,250	3,750	Bills Receivable	2,500	5,000
	7,500	5,000	Preliminary Exp.	7,500	5,000
	1,40,000	1,70,000		1,40,000	1,70,000

Profit & Loss A/c.

Particulars	2002	2003	Particulars	2002	2003
To Op. Stock	5,000	10,000	By Sales	62,500	1,12,500
To Purchase	37,500	47,500	By Closing Stock	10,000	12,500
To Office Exp.	7,500	10,000	By Profit on Sale of		
To Selling exp.	5,000	12,500	Furniture	2,500	----
To Fin. Exp.	2,500	15,000			
To Net Profit	17,500	30,000			
	75,000	1,25,000		75,000	1,25,000

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: $= \frac{10,000 + 7,500 + 5,000 + 2,500}{5,000 + 3,750 + 1,250 + 7,500}$	
	$= \frac{25,000}{17,500}$	
	= 1.43 :1	
	2003-04: $= \frac{12,500 + 10,000 + 7,500 + 5,000}{6,250 + 7,500 + 3,750 + 5,000}$	
	$= \frac{35,000}{22,500}$	
	= **1.56 : 1**	

2. Stock Turnover Ratio =	Cost of goods sold Avg. Stock
	Avg. stock = Opening Stock + Closing Stock 2
	2002-03: 5000 + 10000 2 = 7,500 **2003-04:** 10000 + 12500 2 = 11,250
	Gross Profit = Sales + Closing Stock - (Opening Stock + Purchase) **COGS =** Sales - GP
	2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 **COGS =** 62,500 - 30,000 **=** 32,500
	2003: = 1,12,500 + 12,500 - (10,000 + 47,500) = 67,500 **COGS =** 1,12,500 - 67,500 = 45,000
	2002-03: **=** 32,500 7,500
	= **4.33 times**
	2003-04: = 45,000 11,250
	= 4 times

3. Gross Profit Margin =	Gross profit Sales	**X** 100
	GP = Sales - COGS **2002-03:** **2002:** **=** 62,500 + 10,000 - (5,000 + 37,500) = 30,000 **2003-04: =** 1,12,500 + 12,500 - (10,000 + 47,500) = 67,500	
	2002-03: = 30,000 62,500	**X** 100
	= 48%	
	2003-04: = 67,500 1,12,500	**X** 100
	= 60%	

4. Liquid Ratio =	Liquid Assets Liquid liabilities	
	(Liquid) Quick Assets = Current Assets - Stock	
	(Liquid) Quick Liabilities = Current Liabilities – BOD	
	2002-03: = 25,000 - 10,000 17,500	
	= 15,000 17,500	
	= 0.86 :1	
	2003-04: = 35,000 - 12,500 22,500	

= 22,500 22,500	
= **1 : 1**	

5. Debtors Ratio = **(Avg. debt collection period)**	Debtors + Bills receivable Credit sales	**X** 300 days
	2002-03: = 7,500 + 2,500 62,500	**X** 300 days
	= 10,000 62,500	**X** 300 days
	= 48 days	
	2003-04: = 10,000 + 5,000 1,12,500	**X** 300 days
	= 15,000 1,12,500	**X** 300 days
	= 40 days	

6. Rate of return on Equity Shareholders Fund:		
	2002 = PAT – Pref. Div. ESHF	**X** 100
	ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
	ESHF = 1,00,000 + 12,500 + 10,000 - 7,500 **= 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 = 1,15,000	
	TA = 1,40,000 - 7,500 = 1,32,500	
	= 1,15,000 / 1,32,500	
	= 0.87 : 1 **OR** **= 87%**	
	2003 = SHF = 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500	
	TA = 1,70,000 - 5,000 1,65,000	
	= 1,42,500 / 1,65,000	
	= 0.86 : 1 **OR** **= 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	7,18,421
To Int. on Deb.	30,000	By 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 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 = 30,000 x 10/100
	= 3,00,000

8. Current Ratio =	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
	$2 = \frac{\text{Stock + debtors + Bank Balance}}{\text{Current Liability}}$	
	$2 = \frac{2,99,342 + \text{debtors} + 62,500}{}$	

	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 / 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. 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
	= 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 =	Current Assets / 2
	= 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**

CHAPTER 7

Fund Flow Statement

Changes in Financial Position :

(a) Fund Flow Statement

(b) Cash Flow Statement

FUND FLOW STATEMENT

Introduction

The purpose of measuring trading performance, operational efficiency, profitability and financial position of a concern revealed by Trading, Profit and Loss Account and Balance Sheet. These financial statements are prepared to find out the Gross Profit or Gross Loss, Net Profit or Net Loss and financial soundness of a firm as a whole for a particular period of time. From the management point of view, the usefulness of information provided by these income statements functions effectively and efficiently. In the true sense they do not disclose the nature of all transactions. Management, Creditors and Investors etc. want to determine or evaluate the sources and application of funds employed by the firm for the future course of action. Based on these backgrounds, it is essential to analyse the movement of assets, liabilities, funds from operations and capital between the components of two year financial statements. The analysis of financial statements helps to the management by providing additional information in a meaningful manner.

Meaning of Fund

The term "Fund" refers to Cash, to Cash Equivalents or to Working Capital and all financial resources which are used in business. These total resources of a concern are in the form of men, materials, money, plant and equipments and others.

In a broader meaning the word "Fund" refers to Working Capital. The Working Capital indicates the difference between current assets and current liabilities. The term working capital may be :

(a) Gross Working Capital and

(b) Net Working Capital.

"Gross Working Capital" represents total of all Current Assets.

"Net Working Capital" refers to excess of Current Assets over Current Liabilities.

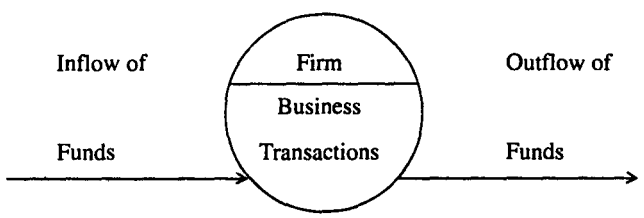
In a narrow sense the word "Fund" denotes cash or cash equivalents.

Meaning of Flow of Funds

The term "Flow of Funds" refers to changes or movement of funds or changes in working capital in the normal course of business transactions. The changes in working capital may be in the form of inflow of working capital or outflow of working capital. In other words, any increase or decrease in working capital when the transactions takes place is called as "Flow of Funds." If the components of working capital results in increase of the fund, it is known as Inflow of Fund or Sources of Fund. Similarly, if the components of working capital effects in decreasing the financial position it is treated as Outflow of Fund. For example, if the fund raised by way of issue of shares will be taken as a source of fund or inflow of fund. This transaction results in increase of the financial position. Like this, the fund used for the purchase of machinery will be taken as application or use of fund or outflow of fund. Because it stands to reduce the fund position.

The following chart shows the movement of funds :

Movement of Funds



No Flow of Funds

Some transactions may not make any movement or changes in the fund position. Such transactions are involved within the business concern. Like the transaction which involves both between current assets and current liabilities or between non-current assets and non-current liabilities and hence do not result in the flow of funds. For example, conversion of shares in to debenture. Such transaction involves between non-current account only and this activity does not effect in increase or decrease of the working capital position.

Statement of Changes in Financial Position

It is a statement prepared on the basis of all financial resources, i.e., assets, liabilities and capital. This statement is attempt to measure changes in both current and non-current accounts. The changes in financial position may occur in deal with following transactions:

(a) Involves between current assets and non-current assets (fixed assets or permanent assets).

(b) Involves between current liabilities and non-current assets.

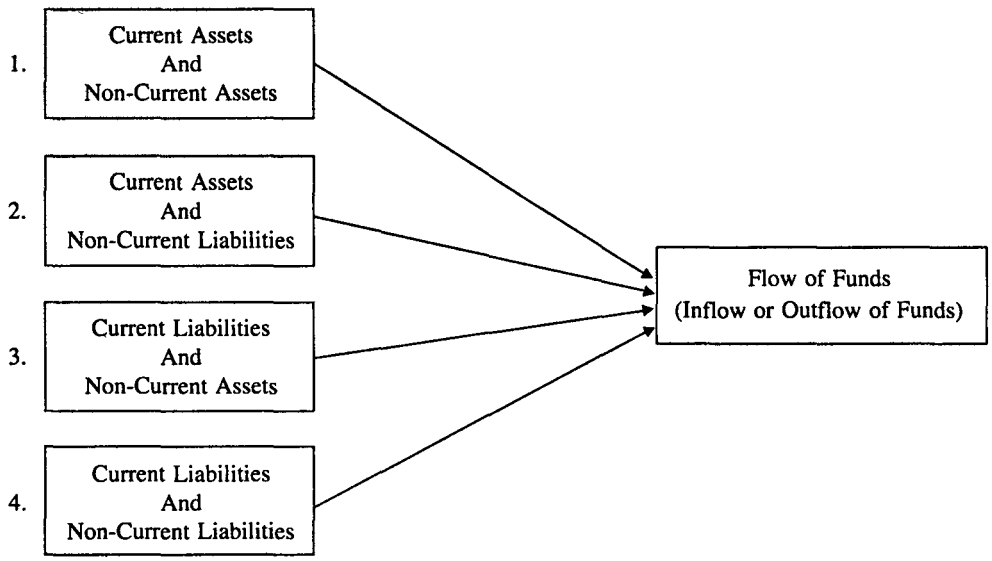
(c) Involves between current assets and non-current liabilities (long-term liabilities and capital).

(d) Involves between current liabilities and non-current liabilities.

The following chart explains the flow of funds when transaction involves between current and non-current accounts:

Flow of Funds Chart

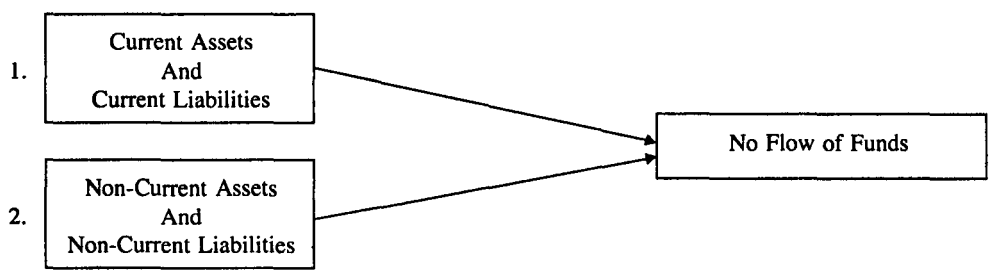
Transaction Involves between



When the transaction involves between non-current account and between current account it is not movement of funds. The following chart shows the no flow of funds :

No Flow of Funds Chart

Transaction Involves between



Examples of Flow of Funds and No Flow of Funds

The following are the few examples of flow of funds and no flow of funds:

Examples of "Flow of Funds"

Examples	*Transactions Involve Between*	*Flow of Funds From*
(1) Purchase of Machinery for Cash	Current Asset and Non-Current Asset	Current to Non-Current Account
(2) Issue of Share for Cash	Current Asset and Capital	Current to Capital Account
(3) Redemption of Debenture in Cash	Current Asset and Non-Current Liabilities	Current to Long-Term Liabilities Account
(4) Creditors Paid off in Debenture	Current Liabilities and Non-Current Liabilities	Non-Current Liabilities to Current Liabilities
(5) Land Transferred to Creditors for their Statement	Current Liability and Non-Current Assets	Non-Current Assets to Current Liability

Examples of "No Flow of Funds"

Examples	*Transactions Involve Between*	*Flow of Funds From*
(1) Payment made to Creditors	Current Asset and Current Liabilities	No Flow of Funds
(2) Machinery Purchased and Payment made in Debenture	Non-Current Assets and No-Current Liabilities	No Flow of Funds
(3) Machinery Purchased and Payment made in Shares	Non-Current Asset and Capital	No Flow of Funds

Components of Flow of Funds

In order to analyse the sources and application of funds, it is essential to know the meaning and components of flow of funds given below :

(1) Current Assets

(2) Non-Current Assets (Fixed or Permanent Assets)

(3) Current Liabilities

(4) Non-Current Liabilities (Capital & Long-Term Liabilities)

(5) Provision for Tax

(6) Proposed Dividend

(1) Current Assets: The term "Current Assets" refer to the assets of a business of a transitory nature which are intended for resale or conversion into different form during the course of business operations. For example, raw materials are purchased and the amount unused at the end of the trading period forms part of the current as stock on hand. Materials in process at the end of the trading period and the labour incurred in processing them also form part of current assets.

(2) Non-Current Assets (Permanent Assets): Non-Current Assets also refer to as Permanent Assets or Fixed Assets. This class of asset include those of tangible and intangiable nature having a specific value and which are not consumed during the course of business and trade but provide the means for producing saleable goods or providing services. Land and Building, Plant and Machinery, Goodwill and Patents etc. are the few examples of Non-Current Assets.

(3) Current Liabilities: The term Current Liabilities refer to amount owing by the business which are currently due for payment. They consist of amount owing to creditors, bank loans due for repayment, proposed dividend and proposed tax for payment and expenses accrued due.

(4) Non-Current Liabilities: The term Non-Current Liabilities refer to Capital and Long-Term Debts. It is also called as Permanent Liabilities. Any amount owing by the business which are payable over a longer period time, i.e., after a year are referred as Non-Current Liabilities. Debenture, long-term loans and loans on mortgage etc., are the few examples of non-current liabilities.

(5) Provision for Taxation: Provision for taxation may be treated as a current liability or an appropriation of profit. When it is made during the year it is not used for adjusting the net profit, it is advisable to treat the same as current liability. Any amount of tax paid during the year is to be treated as application of funds or non-current liability. Because it is used for adjusting the net profit made during the year.

(6) Proposed Dividend: Like provision for taxation, it is also treated as a current liability and non-current liability, when dividend may be considered as being declared. And thus, it will not be used for adjusting the net profit made during the year. If it is treated as an appropriation, i.e., an non-current liability when the dividend paid during the year.

(7) Provisions Against Current Assets and Current Liabilities: Provision for bad and doubtful debts, provision for loss on inventories, provision for discount on creditors and provision made against investment etc. are made during the year, they may be treated separately as current assets or current liabilities or reduce the same from the respective gross value of the assets or liabilities.

The list of Current Accounts and Non-Current Accounts are given below :

Current Accounts

Current Liabilities	*Current Assets*
(1) Bills Payable	(1) Cash in Hand
(2) Sundry Creditors	(2) Cash at Bank
(3) Outstanding Expenses	(3) Bills Receivable
(4) Dividends Payable	(4) Sundry Debtors
(5) Bank Overdraft	(5) Short-Term Investments
(6) Short-Term Loans	(6) Marketable Securities
(7) Provisions against Current Assets	(7) Stock of Raw Materials, Work in Progress & Finished Goods
(8) Provision for Taxation	(8) Prepaid Expenses
(9) Proposed Dividend (May be Current or Non-Current Liabilities)	(9) Accrued Incomes

Non-Current Accounts

Non-Current or Permanent Liabilities	*Non-Current or Permanent Assets*
(1) Equity Share Capital	(1) Good will
(2) Preference Share Capital	(2) Land
(3) Debentures	(3) Building
(4) Long-Term Loans	(4) Plant and Machinery
(5) Share Premium	(5) Furniture and Fittings
(6) Share forfeited	(6) Trade Marks
(7) Profit and Loss Account	(7) Patent Rights
(8) Capital Reserve	(8) Long-Term Investments
(9) Capital Redemption Reserve	(9) Discount on Issue of Shares and Debentures
	(10) Preliminary Expenses
	(11) Other Deferred Expenses

Fund Flow Statement

It is a statement summarizing the significant financial changes in items of financial position which have occurred between the two different balance sheet dates. This statement is prepared on the basis of "Working Capital" concept of funds. Fund flow Statement helps to measure the different sources of funds and application of funds from transactions involved during the course of business.

The fund flow statement also termed as Statement of Sources and Application of Fund, Where Got and Where Gone Out Statement, Inflow of Fund or Outflow of Fund Statement.

Importance or Uses of Fund Flow Statement

Fund Flow Statements are prepared for financial analysis in order to meet the needs of people serving the following purposes:

(1) It highlights the different sources and applications or uses of funds between the two accounting period.

(2) It brings into light about financial strength and weakness of a concern.

(3) It acts as a effective tool to measure the causes of changes in working capital.

(4) It helps the management to take corrective actions while deviations between two balance sheet figure.

(5) It is an instrument used by the investors for effective decisions at the time of their investment proposals.

(6) It also presents detailed information about profitability, operational efficiency and financial affairs of a concern.

(7) It serves as a guide to the management to formulate its dividend policy, retention policy and investment policy etc.

(8) It helps to evaluate the financial consequences of business transactions involved in operational finance and investment.

(9) It gives the detailed explanation about movement of funds from different sources or uses of funds during a particular accounting period.

Difference between Fund Flow Statement and Income Statement

Fund Flow Statement	*Income Statement*
(1) It explains the different sources and uses of funds during the particular period.	(1) It reveals the net profit or net loss in a particular period of time.
(2) No standard format is required for preparation of fund flow statement.	(2) As per the double entry book keeping, prescribed format is used for preparation of income statement.
(3) Fund Flow Statement considers both capital and revenue nature of income and expenditure.	(3) It considers only revenue nature of income and expenditure.
(4) It disclosed the exact flow of funds from operations. Thus, it is complementary to income statement.	(4) It is prepared not for fund flow statement.

Difference between Fund Flow Statement and Balance Sheet

Fund Flow Statement	*Balance Sheet*
(1) It presents significant financial Changes between two balance sheets.	(1) It is a statement that incorporates assets and liabilities prepared at the end of accounting period.
(2) It is prepared on the basis of Trading, Profit & Loss account and Balance sheet.	(2) It is prepared on the basis of Trial Balance.

Fund Flow Statement	*Balance Sheet*
(3) It provides additional information to the management to discharge its functions effectively.	(3) It explains the financial position of a concern as a whole in a particular period.
(4) Fund from operation, schedule of changes in working capital has to be required for preparation of fund flow statement.	(4) It is prepared after the Trading, Profit and Loss Account is completed.

Limitations of Fund Flow Statement

Fund Flow Statement has suffered with the following limitations :

(1) It is prepared on the basis of information related to historical in nature. It ignores to project future operations.

(2) This statement does not focus on transactions involved in non-fund items.

(3) It also ignores when transactions involved between current accounts or non-current accounts.

(4) It does not provide any additional information to the management because financial statements are simply rearranged and presented.

Preparation of Fund Flow Statement

Fund flow analysis involves the following important three statements such as :

I. Fund From Operations

II. Statement of Changes in Working Capital

III. Fund Flow Statement.

I. FUND FROM OPERATIONS

Fund From Operation is to be determined on the basis of Profit and Loss Account. The operating profit revealed by Profit and Loss Account represents the excess of sales revenue over cost of goods sold. In the true sense, it does not reflect the exact flow of funds caused by business operations. Because the revenue earned and expenses incurred are not in conformity with the flow of funds. For example, depreciation charges on fixed assets, write up of fixed assets or fictious assets, any appropriations etc. do not cause actual flow of funds. Because they have already been charged to such profits. Hence, fund from operation is prepared to find out exact inflow or outflow of funds from the regular operations on the basis of items which have readjusted to the current profit or loss. The balancing amount of adjusted profit and loss account is described as fund from operations.

Calculation of Fund From Operations

Fund from operations is calculated with the help of following adjustments. The adjustments may be shown in the specimen proforma of profit and loss account as given below :

Particulars	*Amount Rs.*	*Amount Rs.*
Net Profit or Retained Earnings		* * *
(Closing balance of P & L A/c as given in the Balance Sheet)		
Add : Non-Fund and Non-Operating items which have already been debited to P & L A/c :		
(1) Depreciation and Depletion	* * *	
(2) Amortization of Fictious and Intangible Assets etc.		
(a) Good will, Patents written off		
(b) Discount on Issue of shares written off		
(c) Preliminary Expenses written off		
(d) Premium on redemption of debenture		
(3) Appropriation of Retained Earnings :		
Profit transfer to General Reserve	* * *	
Profit transfer to Sinking Fund		
Profit transfer to Contingency		
Provision for Taxation (not taken as current liability)		
Provision for Proposed Dividend (not taken as current liability)		
Loss on Sale of Fixed Assets		
Loss on Sale of Plant and Machinery		
Loss on Sales of Land and Building		
Loss on Sale of Furniture and Fixtures	* * *	* * *
Total (A)	* * *	* * *
Less : Non-Fund and Non-Operating items which have already been credited to P & L A/c :		
(1) Profit on sale of Fixed Assets	* * *	
Profit on sale of Land & Building		
Profit on sale of Plant & Machinery		
Profit on sale of Furniture & Fixtures		
(2) Appreciation or Revaluation of fixed assets	* * *	
(3) Dividend received on investment	* * *	
(4) Profit on redemption of Shares and Debentures	* * *	
(5) Excess provisions written back	* * *	
(6) Any other non-trading items already credited to P & L A/c	* * *	
(7) Net Profit or Retained Earnings (Opening balance of P & L A/c)	* * *	
Total (B)	* * *	* * *
Fund From Operations (Total A – B)		* * *

Alternative Specimen Format

The following is the specimen of adjusted profit and loss account to calculate fund from operations :

Adjusted Profit and Loss Account

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Depreciation on Fixed Assets		By Opening Balance of P & L A/c	
To Loss on Sale of Fixed Assets		By Profit on Sale of Fixed Assets	
To Loss on Sale Investments		By Excess provision written back	
To Goodwill written off		By Dividend received on investment	
To Discount on shares written off		By Revaluation of fixed assets	
To Transfer to reserve		By Fund From Operations	
To Preliminary expenses written off		(Balancing Figure)	
To Provision for Tax			
To Proposed Dividend			
To Closing Balance of P & L A/c			
	* * *		* * *

Illustration: 1

From the following Profit and Loss Account, Calculation fund from operation :

Profit and Loss Account

	Rs.		*Rs.*
To Rent	6,000	By Gross Profit b/d	50,000
To Salaries	14,000	By Transfers to General Reserve	7,000
To Advertisement	3,000	By Preliminary Expenses	1,000
To Office Expenses	2,000	By Profit on Sale of Investment	2,000
To Depreciation on Plant	5,000		
To Good will written off	3,000		
To Loss on Sales of Plant	2,000		
To Provision for Tax	4,000		
To Interim Dividend	3,000		
To Net Profit	18,000		
	60,000		60,000

Solution:

Calculation of Fund From Operations

Particulars	*Amount Rs.*	*Amount Rs.*
Net Profit or Retained Earnings (Closing Balance of P & L A/c)		18,000
Add : Non-Fund or Non-Trading items already debited to P & L A/c :		
Depreciation on Plant	5,000	
Goodwill written off	3,000	
Loss on Sale of Plant	2,000	
Provision for Tax	4,000	
Interim Dividend	3,000	

Particulars	*Amount Rs.*	*Amount Rs.*
Preliminary Expenses	1,000	
Transfer to General Reserve	7,000	25,000
		43,000
Less : Non-Fund or Non-Trading items already Credited to P & L A/c :		
Profit on Sale of Investments	2,000	2,000
Fund From Operations		41,000

Note : Provision for tax and Interim Dividend are not treated as current liability.

Alternatively

Adjusted Profit and Loss Account

To Depreciation on Plant	5,000	By Profit on sale of Investment	2,000
To Goodwill Written off	3,000	By Fund From Operations	41,000
To Loss on Sale of Plant	2,000	(Balancing figure)	
To Provision for Tax	4,000		
To Interim Dividend	3,000		
To Preliminary Expenses	1,000		
To Transfer General Reserve	7,000		
To Net Profit (Closing Balance of P & L A/c)	18,000		
	43,000		43,000

Illustration: 2

Calculate Fund from Operations from the following Profit and Loss Account

To Salaries	45,000	By Gross Profit b/d	2,00,000
To Rent & Rates	15,000	By Profit on Sale of Plant	10,000
To Office Expenses	15,000	By Dividend received on Investment	4,000
To Administrative Expenses	20,000		
To General Expenses	5,000	By Preliminary Expenses	2,000
To Depreciation on Machinery	25,000	By Transfer to General Reserve	4,000
To Depletion of Natural Resources	10,000		
To Depreciation on Building	5,000		
To Loss on Sale of Building	10,000		
To Good will Written off	10,000		
To Discount Written off	3,000		
To Advertisement Written off	5,000		
To Net Profit	52,000		
	2,20,000		2,20,000

Solution:

Calculation of Fund from Operations

Particulars	*Amount Rs*	*Amount Rs.*
Net Profit or Retained Earnings (Closing Balance of Profit & Loss A/c)		52,000
Add : **Non-fund or Non-Trading items already debited to P & L A/c :**		
Depreciation on Plant & Machinery	25,000	
Depreciation on Building	5,000	
Depletion of Natural Resources	10,000	
Loss on Sale of Building	10,000	
Good will Written off	10,000	
Discount Written off	3,000	
Advertisement Written off	5,000	
Preliminary Expenses	2,000	70,000
		1,22,000
Less : **Non-Fund or Non-Operating items already credited to P & L A/c :**		
Profit on Sale of Plant	10,000	
Dividend received on Investment	4,000	
Transfer to General Reserve	4,000	18,000
Fund From Operations		1,04,000

Alternatively

Solution:

Adjusted Profit & Loss Account

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Depreciation on Plant and Machinery	25,000	By Profit on Sale of Plant	10,000
To Depreciation on Building	5,000	By Dividend received on Investment	4,000
To Depletion of Natural Resources	10,000	By Transfer to General Reserve	4,000
To Loss on Sale of Building	10,000	By Fund from Operations (Balancing figure)	1,04,000
To Good will Written off	10,000		
To Discount Written off	3,000		
To Advertisement Written off	5,000		
To Preliminary Expenses	2,000		
To Net Profit (Closing Balance)	52,000		
	1,22,000		1,22,000

II. STATEMENT OF CHANGES IN WORKING CAPITAL

It is also termed as Statement of Changes in Working Capital. Before preparation of fund flow statement, it is essential to prepare first the schedule of changes in working capital and fund from operations. Statement of changes in working capital is prepared on the basis of items in current assets and current liabilities of between two balance sheets. This statement helps to measure the movement or changes of working capital during a particular period. The term working capital refers to excess of current assets over

current liabilities. The working capital may be "Increase in working capital" or "Decrease in working capital." An increase in the amount of an item of current assets in the current year as compared to the previous year represents to an increase in working capital. Similarly, a decrease in the amount of an item of current assets in the current year as compared to the previous year would represent decrease in working capital. In the same way over all changes in working capital is calculated and presented in the schedule of changes in working capital. The final result of Net Decrease in Working Capital refers to Source of Funds or Inflow of Funds. Like this, Net Increase in Working Capital represent Application of Fund or Uses of Funds.

Principle or Rules for Preparation of Working Capital Statement

The following rules may be kept in mind while preparing working capital statement:

(1) Increase in Current Asset ⟶ Increases Working Capital

(2) Decrease in Current Asset ⟶ Decreases Working Capital

(3) Increase in Current Liability ⟶ Decreases Working Capital

(4) Decrease in Current Liability ⟶ Increases Working Capital

Specimen Form of Schedule of Changes in Working Capital :

The following is a specimen form may be used for preparation of schedule of changes in working capital.

Schedule of Changes in Working Capital
(or)
Statement of Changes in Working Capital

Particulars	*Previous Year* Rs.	*Current Year* Rs.	*Effect on Working Capital*	
			Increase	*Decrease*
Current Assets :				
Cash in Hand				
Cash at Bank				
Sundry Debtors				
Bills Receivable				
Short-Term Investments				
Stock				
Prepaid Expenses				
Outstanding Incomes				
Total Current Assets (A)	* * *	* * *		
Current Liabilities :				
Sundry Creditors				
Bills Payable				
Bank Overdraft				
Outstanding Expenses				
Short-Term Loans				
Total Current Liabilities (B)	* * *	* * *		
Working Capital (A – B)	* * *	* * *		
Net Increase / Decrease In Working Capital	* * *	—	—	* * *
Total	* * *	* * *	* * *	* * *

Illustration: 3

From the following Balance Sheet of Gupta Ltd., prepare Schedule of Changes in Working Capital:

Balance Sheet

Liabilities	*2002* Rs.	*2003* Rs.	*Assets*	*2002* Rs.	*2003* Rs.
Creditors	55,000	83,000	Cash in Hand	15,000	10,000
Bills Payable	20,000	16,000	Cash at Bank	10,000	8,000
Share Capital	1,00,000	1,50,000	Debtors	1,60,000	2,00.000
General Reserve	7,000	8,000	Stock	77,000	1,09,000
Debenture	1,00,000	1,00,000	Bills Receivable	20,000	30,000
	2,82,000	3,57,000		2,82,000	3,57,000

Solution:

Schedule of Changes in Working Capital

Particulars	*2002* Rs.	*2003* Rs.	*Changes in Working Capital*	
			Increase	*Decrease*
Current Assets :				
Cash in Hand	15,000	10,000	—	5,000
Cash at Bank	10,000	8,000	—	2,000
Debtors	1,60,000	2,00,000	40,000	—
Stock	77,000	1,09,000	32,000	—
Bills Receivable	20,000	30,000	10,000	—
Total (A)	2,82,000	3,57,000		
Current Liabilities :				
Creditors	55,000	83,000	—	28,000
Bills Payable	20,000	16,000	4,000	—
Total (B)	75,000	99,000		
Working Capital (A – B)	2,07,000	2,58,000		
Net Increase in Working Capital	51,000	—	—	51,000
	2,58,000	2,58,000	86,000	86,000

Illustration: 4

You are required to prepare a Schedule of changes in working capital from the following Balance sheet of Nancy Ltd., at the end of 2002 and 2003.

Balance Sheet

Liabilities	*2002* Rs.	*2003* Rs.	*Assets*	*2002* Rs.	*2003* Rs.
Share Capital	50,000	75,000	Cash at Bank	15,000	25,000
General Reserve	25,000	30,000	Plant	50,000	70,000
Bill Payable	10,000	15,000	Building	50,000	60,000
Debenture	30,000	50,000	Stock	30,000	35,000
Trade Creditors	40,000	50,000	Bills Receivable	25,000	40,000
Short-Term Loans	30,000	40,000	Trade Debtors	15,000	30,000
	1,85,000	2,60,000		1,85,000	2,60,000

Solution:

Schedule of Changes in Working Capital

Particulars	*2002* Rs.	*2003* Rs.	*Changes in Working Capital*	
			Increase	*Decrease*
Current Assets :				
Cash at Bank	15,000	25,000	10,000	—
Stock	30,000	35,000	5,000	—
Bills Receivable	25,000	40,000	15,000	—
Trade Debtors	15,000	30,000	15,000	—
Total (A)	85,000	1,30,000		
Current Liabilities :				
Bills Payable	10,000	15,000	—	5,000
Trade Creditors	40,000	50,000	—	10,000
Short-Term Loans	30,000	40,000	—	10,000
Total (B)	80,000	1,05,000		
Working Capital (Total A – B)	5,000	25,000		
Net Increase in Working Capital	20,000	—	—	20,000
	25,000	25,000	45,000	45,000

Illustration: 5

From the following Balance Sheet of John Ltd. prepare a Schedule of changes in working capital:

Balance Sheet

Particulars	*2002* Rs.	*2003* Rs.
Assets :		
Cash Balances	30,000	40,000
Debtors	60,000	56,000
Stock	1,10,000	1,44,000
Building	1,60,000	2,00,000
Machinery	30,000	20,000
	3,90,000	4,60,000
Liabilities :		
Capital	1,26,000	2,00,000
Long-Term Loans	1,00,000	1,20,000
Sundry Creditors	84,000	78,000
Bank Overdraft	70,000	50,000
Outstanding Expenses	10,000	12,000
	3,90,000	4,60,000

Solution:

Schedule of Changes in Working Capital

Particulars	*2002*	*2003*	*Changes in Working Capital*	
	Rs.	*Rs.*	*Increase*	*Decrease*
Current Assets :				
Cash Balances	30,000	40,000	10,000	—
Debtors	60,000	56,000	—	4,000
Stock	1,10,000	1,44,000	34,000	—
Total (A)	2,00,000	2,40,000		
Current Liabilities :				
Sundry Creditors	84,000	78,000	6,000	—
Bank Overdraft	70,000	50,000	20,000	—
Outstanding Expenses	10,000	12,000	—	2,000
Total (B)	1,64,000	1,40,000		
Working Capital (Total A – B)	36,000	1,00,000		
Net Increase in Working Capital	64,000	—	—	64,000
	1,00,000	1,00,000	70,000	70,000

III. FUND FLOW STATEMENT

In the analysis and interpretation of financial statements fund flow statement is one of the important technique. The statement of changes in working capital is prepared with the help of current assets and current liabilities. Similarly, fund from operation is prepared on the basis of profit and loss account to find out the exact movement of funds in different operations. After preparing schedule of changes in working capital and fund from operations, at the last stage a comprehensive fund flow statement can be prepared on the basis of component of non-current assets, non-current liabilities of balance sheet and relavent information. In other words, this statement is prepared with the help of the changes in non-current assets and non-current liabilities of balance sheet.

Components of Sources and Application of Funds

The following are the components of different sources and applications of funds:

Components of Sources of Funds

(1) Fresh Issue of Equity Share Capital.

(2) Fresh Issue of Preference Share Capital.

(3) Issue of Debentures and Bonds.

(4) Long-Term Loans raised from bank, financial institutions and public.

(5) Long-Term Loans on Mortgage.

(6) Sale of Fixed Assets.

(7) Sale of Long-Term Investments.

(8) Non-Trading Incomes.

(9) Fund From Operations.

(10) Net Decrease in Working Capital (as per schedule of changes in working capital).

Components of Applications of Funds

Generated funds from various sources may be utilized in the following ways for meeting the future productive programmes of the business:

(1) Redemption of shares and debentures.

(2) Repayment of loans raised from bank, financial institutions and public.

(3) Purchase of Fixed Assets.

(4) Purchase of Long-Term Investments.

(5) Non-Trading Expenditure.
Payment of Tax;
Payment of Dividend.

(6) Fund Lost in Operations.

(7) Net Increase in Working Capital (as per schedule of changing in working capital).

Specimen Form of Fund Flow Statement

The following are the two usual formats for preparation of Sources and Application of Fund is presented below:

(1) Statement Form.

(2) Account Form.

(1) Statement Form

Fund Flow Statement

Particulars	*Amount Rs.*	*Amount Rs.*
Sources of Funds :		
Fund From Operations		
Issue of Share Capital		
Issue of Debentures		
Long-Term Loans		
Sale of Fixed Assets		
Sale of Investments		
Non-Trading Incomes		
Decrease in Working Capital (as per schedule of changes in working capital)	* * *	* * *
Total Sources (or) Total Inflows (A)		* * *
Application or Uses of Funds :		
Fund Lost in Operations		
Redemption of Shares		
Redemption of Debentures		
Purchase of Fixed Assets		
Repayment of Long-Term Investments		
Non-Trading Expenditure		
Payment of Tax		
Payment of dividend		
Increase in Working Capital (as per schedule of changes in working capital)	* * *	* * *
Total Application or Total Outflows (B)		* * *

(2) Account Form

Fund Flow Statement

Sources of Funds	*Amount Rs.*	*Application of Funds*	*Amount Rs.*
Fund From Operations		Fund Lost in Operations	
Issue of Share Capital		Redemption of Shares	
Issue of Debentures		Redemption of Debenture	
Long-Term Loans		Purchase of Fixed Assets	
Sale of Fixed Assets		Repayment of Long-Term Loans	
Sale of Investments		Non-Trading Expenditure	
Non-Trading Incomes		Payment of Tax	
Decrease in Working Capital (As per schedule of changes in working capital)		Payment of Dividend	
		Increase in Working Capital (as per schedule of changes in working capital)	
Total Inflow	* * *	Total Outflow	* * *

Illustration: 6

From the following Balance sheet of William & Co. Ltd., you are required to prepare a Schedule of Changes in Working Capital and Statement of Sources and Application of Funds.

Balance sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Capital	80,000	85,000	Cash in Hand	4,000	9,000
P & L A/c	14,500	24,500	Sundry Debtors	16,500	19,500
Sundry Creditors	9,000	5,000	Stock	9,000	7,000
Long-Term Loans	—	5,000	Machinery	24,000	34,000
			Building	50,000	50,000
	1,03,500	1,19,500		1,03,500	1,19,500

Solution:

Schedule of Changes in Working Capital

Particulars	*2002 Rs.*	*2003 Rs.*	*Changes in Working Capital*	
			Increase	*Decrease*
Current Assets :				
Cash at Bank	4,000	9,000	5,000	—
Sundry Debtors	16,500	19,500	3,000	—
Stock	9,000	7,000	—	2,000
Total (A)	29,500	35,500		
Current Liabilities :				
Sundry Creditors	9,000	5,000	4,000	—
Total (B)	9,000	5,000		
Working Capital (Total A – B)	20,500	30,500		
Net Increase in Working Capital	10,000	—	—	10,000
	30,500	30,500	12,000	12,000

Fund Flow Statement

Sources of Fund	*Rs.*	*Application of Fund*	*Rs.*
Issue of Capital (80000 – 85000)	5,000	Purchase of Machinery (24,000 – 34,000)	10,000
Long-Term Loans	5,000	Net Increase in	
Fund From Operations (14,500 – 24,500)	10,000	Working Capital	10,000
	20,000		20,000

Illustration: 7

From the following Balance sheet of RR & Co. Ltd., you are required to prepare (a) Schedule of Changes in Working Capital (b) Fund Flow Statement and (c) Fund From Operations.

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Equity Capital	1,00,000	1,00,000	Good Will	6,000	6,000
General Reserve	14,000	18,000	Patents	6,000	6,000
Profit & Loss A/c	16,000	13,000	Building	50,000	46,000
Bank Overdraft	3,000	2,000	Machinery	27,000	26,000
Sundry Creditors	5,000	3,400	Investments	10,000	11,000
Bills Payable	1,200	800	Stock	20,000	13,400
Provision for Taxation	10,000	11,000	Bills Receivable	12,000	13,200
Proposed Dividend	6,000	7,000	Debtors	18,000	19,000
Provision for Doubtful Debts	400	600	Cash at Bank	6,600	15,200
	1,55,600	1,55,800		1,55,600	1,55,800

Additional Information

(1) Depreciation Charged on Machinery Rs. 4,000 and on Building Rs. 4,000.

(2) Provision for Taxation of Rs. 19,000 was made during the year 2003.

(3) Interim Dividend of Rs. 8,000 was Paid during the year 2003.

Solution:

Calculation of Fund from Operations

Particulars	*Amount Rs.*	*Amount Rs.*
Profit and Loss A/c (Closing Balance of 2003)		13,000
Add : Non-Fund or Non-Trading items already Debited to P&L A/c :		
Depreciation on Machinery	4,000	
Depreciation on Building	4,000	
Interim Dividend Paid	8,000	
Transfer to General Reserve	4,000	

Particulars	*Amount*	*Amount*
Provision for Tax (See Note 1)	19,000	
Proposed Dividend	1,000	40,000
		53,000
Less : Non-Fund or Non-Trading items already Credited to P&L A/c :		
Profit and Loss A/c (Opening balance as per 2002)		16,000
Fund From Operations		37,000

Schedule of Changes in Working Capital

Particulars	*2002*	*2003*	*Changes in Working Capital*	
	Rs.	*Rs.*	*Increase*	*Decrease*
Current Assets :				
Cash at Bank	6,600	15,200	8,600	—
Debtors	18,000	19,000	1,000	—
Stock	20,000	13,400	—	6,600
Bills Receivable	12,000	13,200	1,200	—
Total (A)	56,600	60,800		
Current Liabilities :				
Bank Overdraft	3,000	2,000	1,000	—
Sundry Creditors	5,000	3,400	1,600	—
Provision for Doubtful Debits	400	600	—	200
Bills Payable	1,200	800	400	—
Total (B)	9,600	6,800		
Working Capital (Total A – B)	47,000	54,000		
Net Increase in Working Capital	7,000	—	—	7,000
	54,000	54,000	13,800	13,800

Fund Flow Statement

Sources of Fund	*Rs.*	*Application of Funds*	*Rs.*
Fund From Operations	37,000	Purchase of Machinery	3,000
		Tax Paid (see Note 3)	18,000
		Investment Purchased (10,000 – 11,000)	1,000
		Interim Dividend Paid	8,000
		Net Increase in Working Capital	7,000
	37,000		37,000

Machinery Account

To Balance b/d	27,000	By Depreciation	4,000
To Bank (Purchase of Machinery balancing figure)	3,000	By Balance c/d	26,000
	30,000		30,000

Building Account

To Balance b/d	50,000	By Depreciation	4,000
		By Balance c/d	46,000
	50,000		50,000

Provision for Taxation

To Bank	18,000	By Balance b/d	10,000
(Balancing figure)		By Provision for Taxation	19,000
To Balance c/d	11,000		
	29,000		29,000

Illustration: 8

From the following are the comparative Balance Sheet of Gupta & Co., you are required to prepare (a) Schedule of Changes in Working Capital (b) Fund Flow Statement and (c) Fund From Operations.

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	90,000	1,00,000	Goodwill	12,000	10,000
General Reserve	14,000	18,000	Buildings	40,000	36,000
Profit & Loss A/c	19,500	12,000	Machinery	37,000	36,000
Provision for Taxation	16,000	17,000	Stock	30,000	25,400
Sundry Creditors	8,000	5,400	Sundry Debtors	20,000	22,200
Bills Payable	6,200	1,300	Cash at Bank	6,600	15,200
Provision for Doubtful Debts	1,900	2,100	Investments	10,000	11,000
	1,55,600	1,55,800		1,55,600	1,55,800

Additional Information

(1) Depreciation charged on Machinery was Rs. 4000 and on building Rs. 4000.

(2) Interim Dividend paid during 2003 was Rs. 7500.

(3) Provision of Rs. 5000 was made for taxation during the 2003.

Solution :

Calculation of Fund From Operations

Particulars	*Rs.*	*Rs.*
Net Profit (Closing Balance)		12,000
Add : Non-fund or Non-operating items		
Which already Debited to P & L A/c :		
Good Will Written off	2,000	
Depreciation on Machinery	4,000	
Depreciation on Building	4,000	
Interim Dividend Paid	7,500	

Particulars	*Rs.*	*Rs.*
Transfer to General Reserve	4,000	21,500
		33,500
Less : Non-Fund or Non Operating items already Credited to P & L A/c :		
Net Profit (Opening Balance)		19,500
Fund From Operations		14,000

Schedule of Changes in Working Capital

Particulars	*2002*	*2003*	*Changes in Working Capital*	
	Rs.	*Rs.*	*Increase*	*Decrease*
Current Assets :				
Stock	30,000	25,400	—	4,600
Sundry Debtors				
(Less: Provision For Doubtful Debts)	18,100	20,100	2,000	
Cash Balances	6,600	15,200	8,600	—
Total (A)	54,700	60,700		
Current Liabilities :				
Sundry Creditors	8,000	5,400	2,600	—
Bills Payable	6,200	1,300	4,900	—
Prevention for Tax	16,000	17,000	—	1,000
Total (B)	30,200	23,700		
Working Capital (Total A – B)	24,500	37,000		
Net Increase in Working Capital	12,500	—	—	12,500
	37,000	37,000	18,100	18,100

Fund Flow Statement

Sources of Funds	*Rs.*	*Application of Funds*	*Rs.*
Issue of Share Capital (90,000 – 1,00,000)	10,000	Purchase of Machinery	3,000
		Purchase of Investments	1,000
Funds From Operations	14,000	Interim Dividend Paid	7,500
		Net Increase in Working Capital	12,500
	24,000		24,000

Machinery Account

To Balance b/d	37,000	By Depreciation	4,000
To Bank (Purchase of Machinery Balancing figure)	3,000	By Balance c/d	36,000
	40,000		40,000

Building Account

To Balance b/d	40,000	By Depreciation	4,000
		By Balance c/d	36,000
	40,000		40,000

Illustration: 9

From the following Balance sheet of X Y Z Ltd., on 31st Dec. 2002 and 2003, you are required to prepare (a) Fund From Operations (b) Schedule of Changes in Working Capital and (c) Fund Flow Statement.

Balance Sheet

Liabilities	*2002* *Rs.*	*2003* *Rs.*	*Assets*	*2002* *Rs.*	*2003* *Rs.*
Bills Payable	20,000	22,000	Cash Balances	10,000	7,000
Creditors	20,000	22,000	Debtors	20,000	20,000
Ramesh's Loan	25,000	—	Bills Payable	10,000	30,000
Loan from Kannan	40,000	50,000	Stock	35,000	25,000
Equity Share Capital	1,00,000	1,00,000	Machinery	80,000	55,000
Preference Share Capital	25,000	53,000	Land	40,000	50,000
			Building	35,000	60,000
	2,30,000	2,47,000		2,30,000	2,47,000

Additional Information

(1) During the year machine costing Rs. 10,000 (accumulated depreciation Rs. 3,000) was sold for Rs. 5,000.

(2) The provision for depreciation against machinery on 1st Jan. 2003 was Rs. 25,000 and on 31st December was Rs. 40,000.

(3) Net profit for the year 2003 amounted to Rs. 45,000.

Solution:

Calculation of Fund From Operations

Particulars	*Rs.*	*Rs.*
Net Profit (Closing Balance P & L A/c)		45,000
Add : Non-Fund or Non-Operating items already debited to P & L A/c		
Loss on Sale of Machinery (see note 1)	2,000	
Depreciation on Machinery	18,000	20,000
		65,000
Less : Non-Fund or Non-Operating items already credited to P & L A/c	—	
Fund From Operations		65,000

Schedule of Changes in Working Capital

Particulars	2002 Rs.	2003 Rs.	Changes in Working Capital	
			Increase	Decrease
Current Assets :				
Cash Balances	10,000	7,000	—	3,000
Bills Payable	10,000	30,000	20,000	—
Stock	35,000	25,000	—	10,000
Total (A)	55,000	62,000		
Current Liabilities :				
Bills Payable	20,000	22,000	—	2,000
Creditors	20,000	22,000	—	2,000
Total (B)	40,000	44,000		
Working Capital (Total A – B)	15,000	18,000		
Net Increase in Working Capital	3,000	—		3,000
	18,000	18,000	20,000	20,000

Fund Flow Statement

Sources of Funds	Rs.	Application of Funds	Rs.
Fund from Operations	65,000	Ramesh Loan Repaid	25,000
Loan From Kannan	10,000	Drawings	17,000
Sale of Machinery	5,000	Purchase of Land	10,000
(See Note)		Purchase of Building	25,000
		Net Increase in Working Capital	3,000
	80,000		80,000

Machinery Account

To Balance b/d	1,05,000	By Provision for depreciation on machinery sold	3,000
		By Bank	5,000
		By Loss on sale of machinery	2,000
		By Balance c/d	95,000
	1,05,000		1,05,000

Provision for Depreciation on Machinery

To Machinery A/c	3,000	By Balance b/d	25,000
To Balance c/d	40,000	By P & L (depreciation Provided during the year – balancing figure)	18,000
	43,000		43,000

Capital Account :

	Rs.
Opening balance of Equity Share Capital	1,00,000
Opening balance of preference Share Capital	25,000
Net Profit during the year 2003	45,000
	1,70,000
Less : Closing balance of Equity and Preference Share Capital (Rs. 1,00,000 to Rs. 53,000)	1,53,000
Drawing	17,000

Illustration: 10

From the following Balance sheet of Mohan & Co. Ltd. as on 31st December 2002 and 2003, you are required to prepare: (a) Fund From Operations (b) A Schedule of Changes in Working Capital and (c) A Fund Flow Statement:

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Sundry Creditors	50,000	48,000	Cash in hand	25,000	22,000
Bills Payable	40,000	39,000	Cash at Bank	25,000	18,000
Bank Overdraft	13,000	90,000	Sundry Debtors	30,000	28,000
Outstanding Expenses	13,000	22,000	Bills Receivable	47,000	45,000
15% Debentures	90,000	70,000	Short-Term Investments	1,10,000	84,000
Depreciation Fund	40,000	44,000	Prepaid Expenses	1,000	2,000
General Reserve	60,000	50,000	Inventories	92,000	1,06,000
Profit and Loss A/c	16,000	23,000	Land & Buildings	50,000	50,000
Equity Share Capital	1,00,000	1,00,000	Furniture	50,000	50,000
Preference Share Capital	80,000	80,000	Plant & Machinery	72,000	8,000
	5,02,000	4,85,000		5,02,000	4,85,000

Additional Information

(1) Dividend was paid in cash was Rs. 18,000

(2) New machinery for Rs. 20,000 was purchased but old machinery costing Rs. 12,000 was sold for Rs. 4,000, accumulated depreciation was Rs. 6,000

(3) Rs. 20,000, 15% debentures were redeemed by purchase from open market @ Rs. 96

(4) Rs. 10,000 was debited to General reserve for settlement of previous tax liability

(5) Rs. 26,000 investments were sold at book value.

Solution:

(1) Statement of Changes in Working Capital

Particulars	*2002*	*2003*	*Change in Working Capital*	
	Rs.	*Rs.*	*Increase*	*Decrease*
Current Assets :				
Cash in hand	25,000	22,000	-	3,000
Cash at Bank	25,000	18,000	-	7,000
Sundry Debtors	30,000	28,000	-	2,000
Bills Receivable	47,000	45,000	-	2,000
Short-Term Investment	1,10,000	84,000	-	26,000
Prepaid Expenses	1,000	2,000	1,000	-
Inventories	92,000	1,06,000	14,000	-
Total Current Assets (A)	3,30,000	3,05,000		
Current Liabilities :				
Sundry Creditors	50,000	48,000	2,000	-
Bills Payable	40,000	39,000	1,000	-
Bank Overdraft	13,000	9,000	4,000	-
Outstanding Expenses	13,000	22,000	-	9,000
Total Current Liabilities (B)	1,16,000	1,18,000		
Working Capital (A – B)	2,14,000	1,87,000		-
Net Decrease in Working Capital		27,000	27,000	-
	2,14,000	2,14,000	49,000	49,000

(2) Calculation of Fund From Operations

Particulars	*Amount*	*Amount*
	Rs.	*Rs.*
Profit & Loss A/c (Closing Balance)		
Add : Non-Fund or Non-Operating items already been debited to P & L A/c		23,000
Depreciation on Machinery	10,000	
Loss on Sale of Machinery	2,000	
Dividend Paid	18,000	30,000
		53,000
Less : Non-Fund and Non-Operating items already been credited to P & L A/c		
Profit on redemption of debentures	800	
Profit and Loss A/c (Opening balance)	16,000	16,800
Fund From Operations		36,200

Dr. **(3) Fund Flow Statement** **Cr.**

Sources of Fund	*Amount*	*Application of Funds*	*Amount*
	Rs.		*Rs.*
Sale of Machinery	4,000	Dividends Paid	18,000
Fund From Operations	36,200	Purchase of Machinery	20,000
Net Decrease in Working Capital	27,000	Tax Paid	10,000
		Debenture Redeemed	19,200
	67,200		67,200

Dr. **(4) Machinery Account** **Cr.**

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Balance b/d	72,000	By Bank (Sold)	4,000
To Bank (New Machinery)	20,000	By Depreciation Fund (A/c)	6,000
		By Profit & Loss A/c (Loss) (6,000 + 4,000 – 12,000)	2,000
		By Balance c/d	80,000
	92,000		92,000

Dr. **(5) Depreciation Fund Account** **Cr.**

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Machinery A/c	6,000	By Balance b/d	40,000
To Balance c/d	44,000	By Profit & Loss A/c (Depreciation)	10,000
	50,000		50,000

Illustration: 11

From the following Balance sheet of Hari & Co. Ltd. as on 31st December 2002 and 2003, you are required to prepare: (a) Fund From operations (b) A Schedule of Changes in Working Capital and (c) A Fund Flow Statement :

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Equity Share Capital	2,00,000	2,00,000	Fixed Assets at Cost	10,00,000	10,00,000
7% Preference Share Capital	2,00,000	3,00,000	*Less :* Depreciation	2,60,000	3,10,000
				7,10,000	6,90,000
Capital Reserve		20,000	Trade Investments	1,10,000	90,000
General Reserve	1,80,000	2,10,000	Sundry Debtors	1,50,000	2,00,000
Debenture	3,00,000	2,00,000	Bills Receivable	1,70,000	2,50,000
Profit and Loss A/c	70,000	90,000	Preliminary Expenses	30,000	20,000
Sundry Creditors	50,000	50,000			
Bills Payable	30,000	20,000			
Bank Overdraft	50,000	50,000			
Provision for Income Tax	80,000	60,000			
Proposed Dividend	40,000	50,000			
	12,00,000	12,50,000		12,00,000	12,50,000

Additional Information

(1) During the year 2003 depreciation provided for Rs. 1,00,000

(2) Redeemed the debentures at Rs. 105

(3) Sold one machine for Rs. 4,00,000 the cost of the machine was Rs. 80,000 and the depreciation provided for it amounted to Rs. 30,000

(4) Sold some trade investments at profit which was credited to capital reserve

(5) Decided to value the stock at cost whereas previously the practice was value stock at cost less 10%. The opening stock according to books was Rs. 63,000. The stock on 31st December 2003 was correctly valued at cost.

Solution:

(1) Schedule of Changes in Working Capital

Particulars	*2002*	*2003*	*Changes in Working Capital*	
	Rs.	*Rs.*	*Increase*	*Decrease*
Current Assets :				
Sundry Debtors	1,50,000	2,00,000	50,000	-
Bills Receivable	1,70,000	2,50,000	80,000	-
Inventory	7,000	-	-	7,000
Total Current Assets (A)	3,27,000	4,50,000		
Current Liabilities :				
Sundry Creditors	50,000	50,000	-	-
Bills Payable	30,000	20,000	10,000	-
Bank Overdraft	50,000	50,000	-	-
Total Current Liabilities (B)	1,30,000	1,20,000		
Working Capital (A – B)	1,97,000	3,30,000		
Net Increase in Working Capital	1,33,000	-	-	1,33,000
Total	3,30,000	3,30,000	1,40,000	1,40,000

(2) Calculation of Fund From Operations

Particulars	*Rs.*	*Rs.*
Net Profit (Closing Balance)		90,000
Add : Non-Fund and Non-operating items which already been debited to profit and loss A/c :		
Loss on sale of machinery	10,000	
Loss on redemption of debenture	5,000	
Depreciation provided	1,00,000	
Preliminary expenses (Rs. 30,000 – Rs. 20,000)	10,000	
Proposed dividend	50,000	
Transfer to General Reserve (Rs. 2,10,000 – Rs. 1,80,000)	30,000	
Provision for income tax	60,000	2,65,000
		3,55,000
Less : Non-Fund and Non-Operating items which already credited to Profit and Loss A/c :	-	
Opening Stock Written off	70,000	
Net Profit (Opening balance)	70,000	77,000
Fund From Operations		2,78,000

Fund Flow Statement

Sources of Funds	*Rs.*	*Application of Funs*	*Rs.*
Equity Share Capital	-	Purchase of Fixed Assets	1,00,000
7% Preference Share Capital (2,00,000 – 3,00,000)	1,00,000	Redemption of Debenture	1,05,000
		Proposed Dividend for 2002 (Assumed to be paid)	40,000
Sale of Trade Investments (Rs.1,10,000 + 20,000 – 90,000)	40,000	Provision for Taxation for (2002 assumed to be paid)	80,000
Sale of Machine	40,000	Net Increase in Working Capital	1,33,000
Fund From Operations	2,78,000		
	4,58,000		4,58,000

Dr. **Fixed Assets Account** **Cr.**

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Balance b/d	10,00,000	By Cash (Sale)	40,000
To Cash (Purchase) Balancing figure	1,00,000	By Accumulated depreciation	30,000
		By Adjusted P & L (Loss on Sale)	10,000
		By Accumulated depreciation (Fixed Asset Written off)	20,000
		By Balance c/d	10,00,000
	11,00,000		11,00,000

Dr. **Debenture Account** **Cr.**

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Bank	1,05,000	By Balance b/d	3,00,000
To Balance c/d	2,00,000	By Adjusted P & L A/c (Loss on redeemed)	5,000
	3,05,000		3,05,000

Dr. **Accumulated Depreciation Account** **Cr.**

Particulars	*Amount Rs.*	*Particulars*	*Amount Rs.*
To Fixed Assets (Depreciation on Machinery Sold)	30,000	By Balance b/d	2,60,000
		By Adjusted P & L A/c (Depreciation during the year)	1,00,000
To Fixed Assets Written off (Rs. 7,10,000 – Rs. 6,90,000)	20,000		
To Balance c/d	3,10,000		
	3,60,000		3,60,000

Illustration: 12

The following summarized balance sheets are given to you by Pilh & Co. Ltd. :

Balance Sheet

Liabilities	*2002* Rs.	*2003* Rs.	*Assets*	*2002* Rs.	*2003* Rs.
Share Capital	10,00,000	11,00,000	Fixed Assets		
Reserves	3,50,000	3,00,000	*Less :* Depreciation	11,70,000	16,90,000
Profit & Loss A/c	80,000	70,000	Investments	2,00,000	1,50,000
Loans @ 10%	6,00,000	8,00,000	Sundry Debtors	5,00,000	4,50,000
Provision for tax	2,10,000	2,40,000	Stock in Trade	4,50,000	3,90,000
Provision for Doubtful debts	30,000	20,000	Cash at Bank	90,000	60,000
Sundry Creditors	3,10,000	2,90,000	Goodwill	2,70,000	2,00,000
Proposed Dividend	1,00,000	1,20,000			
	12,00,000	29,40,000		26,80,000	29,40,000

Additional Information

(1) Investments were sold during 2003 at a loss of 20% on the cost

(2) An item of fixed assets, cost Rs.70,000, depreciation provided for Rs.66,000 had to be discarded in 2003 without any scrap value

(3) Depreciation provided during 2003 came to Rs.1,80,000

(4) The increase in share capital was because of issue of bonus shared out of reserves. Prepare the fund flow statement for the year ended 31st December 2003.

Solution:

Statement of Changes in Working Capital

Particulars	*2002* Rs.	*2003* Rs.	*Effect on Working Capital*	
			Increase	*Decrease*
Current Assets :				
Sundry Debtors	5,00,000	4,50,000	-	50,000
Stock in Trade	4,50,000	3,90,000	-	60,000
Cash at Bank	90,000	60,000	-	30,000
Total Current Assets (A)	10,40,000	9,00,000		
Current Liabilities :				
Sundry Creditors	3,10,000	2,90,000	20,000	-
Provision for Tax	2,10,000	2,40,000	-	30,000
Provision for doubtful debts	30,000	20,000	10,000	-
Total Current Liabilities (B)		5,50,000	5,50,000	
Working Capital (A – B)		4,90,000	3,50,000	
Net Decrease in Working Capital	-	1,40,000	14,000	-
	4,90,000	4,90,000	1,70,000	1,70,000

Fund Flow Statements

Sources of Fund	*Amount Rs.*	*Particulars*	*Amount Rs.*
New Loans raised		Fixed Assets acquired	7,04,000
(8,00,000 – 6,00,000)	2,00,000	Dividend Paid	1,00,000
Sale of Investments	40,000		
Net Decrease in			
Working Capital	1,40,000		
Fund From Operations	4,24,000		
	8,04,000		8,04,000

Calculation of Funds From Operations

Particulars	*Amount Rs.*	*Amount Rs.*
Profit & Loss A/c (Closing Balance)		70,000
Add : Non-fund and Non-operating		
items which have already been		
debited to P & L A/c:		
Proposed dividend for 2003	1,20,000	
Loss on investment 20% of Rs.50,000	10,000	
Loss on fixed assets scraped	4,000	
Depreciation provided	1,80,000	
Goodwill Written off	70,000	
Transfer to reserves	50,000	4,34,000
		5,04,000
Less : Non-fund and Non-operating		
items which have already been		
credited to P & L A/c:		
Profit & Loss A/c (opening balance)	80,000	80,000
Fund From Operations		4,24,000

Fixed Assets Account

Particulars	*Amount* Rs.	*Particulars*	*Amount* Rs.
To Balance b/d	11,70,000	By Book Value of item Scraped	4,000
To Bank A/c	7,04,000		
(Purchase of new assets)			
		By Depreciation	1,80,000
		By Balance c/d	16,90,000
	18,74,000		18,74,000

Movement of Reserves :	Rs.
Opening Balance of Reserves	3,50,000
Less : Utilised for bonus shares	1,00,000
	2,50,000
Closing Balance of Reserves	3,00,000
Addition during the year	50,000

QUESTIONS

1. What is mean by Fund Flow Statement?
2. Explain the Changes of Financial Position.
3. Briefly explain the Flow of Funds and No Flow of Funds. Illustrate with numerical examples.
4. What are the components of Flow of Fund?
5. What do you understand by Fund Flow Statement? How is it Prepared?
6. Explain the importance of Fund Flow Statement.
7. Distinguish between
   (a) Fund Flow Statement and Income Statement
   (b) Fund Flow Statement and Balance Sheet
8. Explain the limitations of Fund Flow Statement.
9. Explain the procedure for preparation of Fund Flow Statement.
10. What do you understand by Fund From Operations?
11. What is meant by Schedule of Changes in Working Capital How is it prepared?

PRACTICAL PROBLEMS

(1) From the following Balance sheet of X Y & Co. as on 31st Dec. 2002 and 2003, you are required to prepare Statement of Changes in Working Capital.

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Equity Share Capital	1,00,000	1,25,000	Cash Balances	30,000	47,000
Preference Share Capital	1,00,000	1,25,000	Debtors	60,000	60,000
Creditors	40,000	20,000	Bills Payable	60,000	55,000
Bills Payable	30,000	25,000	Stock	40,000	45,000
Retained Earnings	10,000	23,000	Short-Term Loan	40,000	45,000
			Building	50,000	66,000
	2,80,000	3,18,000		2,80,000	3,18,000

[Ans : Net Increase in working capital Rs. 47,000].

(2) From the following information, you are required to prepare: (a) Fund From Operations (b) Statement of Changes in Working Capital and (c) Fund Flow Statement:

Comparative Balance Sheet

Particulars	*2002 Rs.*	*2003 Rs.*
Liabilities and Capital :		
Share Capital50,000	40,000	
Reserve and Surplus	15,000	5,000
Secured Loans	35,000	40,000
Current Liabilities	50,000	60,000
Total Liabilities and Capital	1,50,000	1,45,000
Assets :		
Fixed Assets	31,000	30,000
Investments	1,500	—
Cash Balances	2,500	1,250
Stock	75,000	78,750
Sundry Debtors	40,000	35,000
Total Assets	1,50,000	1,45,000

Additional Information

(a) The net profit for the year after adjustments Rs. 1,00,000.

(b) Additional fixed assets during the year Rs. 4,000 and depreciation for the year Rs. 3,000.

[Ans : (a) Fund From Operations Rs.1,30,000;
(b) Statement of changes in working capital Rs. 12,500 (Net Increase in Working Capital);
(c) Fund Flow Statement Rs. 23,000].

(3) From the following particulars, you are required to prepare Schedule of Changes:

Working Capital

Particulars	*2002 Rs.*	*2003 Rs.*
Capital and Liabilities :		
Share Capital15,000	18,750	
Trade Creditors	5,300	3,500
Profit and Loss A/c	700	1,550
Total Liabilities	21,000	23,800
Assets :		
Plant and Machinery	3,500	5,000
Bills Payable6,050	6,800	
Trade Debtors	9,050	8,500
Cash Balances	2,400	3,500
Total Assets21,000	23,800	

[**Ans :** Increase in Working Capital Rs. 31,000].

(4) Calculate funds from operations from the following Particulars:

	Rs.
Transfer to General Reserve	5,000
Loss on Sale of Investments	5,000
Depreciation on Machinery	10,000
Depreciation on Building	4,000
Discount on Issue of Debenture	15,000
Provision for Taxation	10,000
Proposed Dividend	20,000
Closing Balance of P & L A/c	30,600
Opening Balance of P & L A/c	30,500

[**Ans :** Funds From Operations Rs. 69,100].

(5) The following Balance Sheets of X and Y Ltd. for the year 2002 and 2003, you are required to prepare (a) Funds from Operations (b) Statement of Changes in Working Capital and (c) Funds Flow Statement:

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	50,000	50,000	Good will	6,000	6,000
General Reserve	7,000	9,000	Buildings	20,000	18,000
Profit & Loss A/c	8,000	6,500	Machinery	18,500	18,000
Trade Creditors	4,000	2,700	Investments	5,000	5,500
Bills Payable	600	400	Stock	15,000	11,700
Provision for Taxation	8,000	9,000	Bills Receivable	1,000	1,600
Provision for Doubtful Debts	200	300	Trade Debtors	9,000	9,500
			Cash Balance	3,300	7,600
	77,800	77,900		77,800	77,900

Additional Information

(1) Depreciation charged on machinery was Rs. 2000 and on Building was Rs. 2000.
(2) Provision for taxation of Rs. 9,500 was made during the year 2003.
(3) Interim dividend of Rs. 4,000 was paid during the year 2003.

[**Ans :** Funds From Operations Rs. 18,000; Statement of Changes in Working Capital Rs. 3,500; Fund Flow Statements Rs. 18,000].

(6) Following are the summarized Balance sheet of ABC Ltd. as on 31st December 2002 and 2003

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	2,00,000	2,50,000	Land & Buildings	2,00,000	1,90,000
General Reserves	50,000	60,000	Machinery & Plant	1,50,000	1,69,000
Profit & Loss A/c	30,500	30,600	Stock	1,00,000	74,000
Bank Loan	70,000	-	Sundry Debtors	80,000	64,200
Sundry Creditors	1,50,000	1,35,200	Cash	500	600
Provision for taxation	30,000	35,000	Bank	-	8,000
			Goodwill	-	5,000
	5,30,500	5,10,000		5,30,500	5,10,000

Additional Information

(1) During the year ended 31st December 2003
   (a) Dividend was paid Rs. 23,000
   (b) Assets of another company were purchased for a consideration of Rs. 50,000 payable in shares. The following assets were purchased : stock Rs. 20,000; machinery Rs. 25,000
   (c) Machinery was purchased for Rs. 8,000
   (d) Depreciation written off : Building Rs. 10,000 ; Machinery Rs. 14,000
   (e) Income Tax paid during the year Rs. 28,000 ; provision of Rs. 33,000 was charged to profit and loss A/c

Prepare a statement of sources and application of funds for the year ended 31st December 2003.

[**Ans :** Fund From Operations Rs. 90,100;
Decrease in Working Capital Rs. 18,900;
Sources and Applications of fund Rs. 1,29,000]

(7) The Balance sheet of Jai & Co. Ltd. as at 31st December 2002 and 2003 are given below :

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	1,00,000	1,50,000	Freehold Land	1,00,000	1,00,000
Share Premium	-	50,000	Plant at Cost	1,04,000	1,00,000
General Reserve	50,000	60,600	Furniture at Cost	7,000	9,000
Profit & Loss A/c	10,000	17,000	Investment at Cost	60,000	80,000
6% Debentures	70,000	50,000	Sundry Debtors	30,000	70,000
Provision for			Stock	60,000	65,000
Depreciation on Plant	50,000	56,000	Cash at Bank	30,000	45,000
Provision for					
Depreciation	70,000	6,000			
on furniture					
Provision for taxation	20,000	30,000			
Sundry Creditors	86,000	95,000			
	3,91,000	4,69,000		3,91,000	4,69,000

A plant purchased for Rs.40,000 (Depreciation Rs.2,000) was sold for cash Rs.800 on 30th September 2003. On 30th June 2003 an item of furniture was purchased for Rs.2,000. These were the only transactions concerning fixed assets during 2003.

Depreciation was provided on plant at 8% on cost (the sold out item is not taken in to consideration) and on furniture at 12 ½ % on average cost. A dividend of 22 ½ % on original shares was paid.

Prepare a schedule of changes in working capital and also a statement of sources and application of funds during 2003.

[**Ans :** Net increase in Working Capital Rs. 41,000
Fund From Operations Rs. 49,700
Sources and Application of fund Rs. 1,05,500]

(8) From the following Balance sheet of XY & Co. Ltd. as on 31st December 2002 and 2003, you are required to prepare a funds flow statement showing change in working capital.

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Equity Share Capital	3,00,000	4,00,000	Buildings	2,50,000	3,00,000
Preference Share Capital	2,00,000	-	Machinery	3,00,000	3,20,000
Capital Redemption Reserve	-	1,00,000	Furniture	20,000	18,000
General Reserve	2,00,000	1,20,000	Investments	1,00,000	1,50,000
Share Premium	30,000	30,000	Stock	3,00,000	2,50,000
Profit and Loss A/c	1,20,000	1,80,000	Debtors	1,40,000	2,00,000
10% Debenture	2,00,000	3,00,000	Cash at Bank	20,000	32,000
Creditors	80,000	1,40,000			
	11,30,000	12,70,000		11,30,000	12,70,000

Additional Information

(1) Preference share were redeemed at 10% premium
(2) Rs.20,000 was transferred to reserve fund from profit and loss account
(3) Investment (book value Rs. 40,000) were sold for Rs. 70,000
(4) Depreciation provided on building, machinery and furniture Rs. 20,000, Rs. 30,000 and Rs. 2,000 respectively.
(5) Depreciation paid Rs. 50,000 and income tax paid Rs. 45,000

[**Ans :** Net Decrease in Working Capital Rs. 38,000
Fund From Operations Rs. 2,17,000
Sources and Application Funds Rs. 5,25,000]

(9) From the following Balance Sheet of Saxena & Co. Ltd. as on 31st December 2002 and 2003, you are required to prepare the Fund Flow Statement.

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	10,00,000	10,00,000	Land & Building at Cost	6,00,000	6,00,000
Capital Reserve	50,000	50,000	Plant & Machinery at Cost	3,30,000	4,50,000
Long-Term Loans	5,00,000	6,50,000	Furniture at Cost	3,00,000	3,00,000
Sundry Creditors	6,00,000	7,85,000	Stock in Trade	4,10,000	5,60,000
			Sundry Debtors	3,40,000	2,10,000
			Cash at Bank	20,000	5,000
			Profit & Loss A/c	1,50,000	3,60,000
	21,50,000	24,85,000		21,50,000	24,85,000

Additional Information

During the year 2003 Depreciation provided on Land and Building was Rs. 50,000; Plant and Machinery was Rs. 50,000 and Furniture was Rs. 15,000.

(10) The following are the summarized Balance sheet of Gupta & Co. Ltd. as at 31st December 2002 and 2003, you are required to prepare a statement showing the sources and application of funds for the year 2003 and a schedule setting out changes in working capital

Balance Sheet

Liabilities	*2002 Rs.*	*2003 Rs.*	*Assets*	*2002 Rs.*	*2003 Rs.*
Share Capital	2,00,000	2,60,000	Goodwill	-	20,000
Profit & Loss A/c	39,690	41,220	Plant & Machinery	1,12,950	1,16,200
General Reserve	50,000	50,000	Buildings	1,48,500	1,44,250
Tax Provision	40,000	50,000	Stock	1,11,040	97,370
Bank Overdraft	59,510	-	Sundry Debtors	87,490	73,360

Bills Payable	33,780	11,525	Cash at Bank	2,500	2,700
Sundry Creditors	39,550	41,135			
	4,62,480	3,53,880		4,62,480	3,53,880

Additional Information

(1) During the year 2003 an interim dividend of Rs. 26,000 was paid
(2) The assets of another company were purchased for Rs. 60,000 payable in fully paid share of Gupta & Co. Ltd. These assets include stock Rs. 22,000 and machinery Rs.18,000 p.a. In addition sundry machinery amounted to Rs. 5,600.
(3) Income tax paid during the year for Rs. 25,000
(4) Net profit for the year before tax was Rs. 62,530

[**Ans :** Increase in Working Capital Rs. 42,530
Fund From Operations Rs. 77,130
Total Fund Flow Statement Rs. 1,37,130]

(11) The summarized balance sheet of Karunya & Co. Ltd. as at 31st December 2002 and 2003, you are required to prepare a statement of sources and application of funds.

Balance Sheet

Liabilities	*2002* *Rs.*	*2003* *Rs.*	*Assets*	*2002* *Rs.*	*2003* *Rs.*
Share Capital	4,50,000	4,50,000	Land & Building	2,00,000	1,00,000
General Reserve	3,00,000	3,10,000	Plant & Machinery	2,00,000	1,20,000
Profit & Loss A/c	56,000	68,000	Investments	50,000	60,000
Sundry Creditors	1,68,000	1,34,000	Stock	2,40,000	2,10,000
Provision for Taxation	75,000	10,000	Sundry Debtors	2,10,000	4,55,000
Mortgage Loan	-	2,70,000	Bank Balances	1,49,000	1,97,000
	10,49,000	12,42,000		10,49,000	12,42,000

Additional Information

(1) Investment costing Rs. 8,000 were sold during the year 2003 for Rs. 8,500
(2) Provision for tax made during the year was Rs. 9,000
(3) During the year part of the land and buildings costing Rs. 10,000 were sold for Rs. 12,000 and the profit was included in profit and loss account and
(4) Dividend paid during the year announced to Rs. 40,000

[**Ans :** Fund From Operations Rs. 1,38,500
Total Sources Rs. 4,29,000
Applications Rs. 1,32,000]

(12) Prepare a fund flow statement of Kumar & Co. Ltd. for the year 2003 from the following information :

Balance Sheet

Liabilities	*2002* *Rs.*	*2003* *Rs.*	*Assets*	*2002* *Rs.*	*2003* *Rs.*
Bills Payable	15,000	12,000	Cash at Bank	40,000	44,400
Capital	35,000	43,500	Bills Receivable	10,000	20,700
Bonds Payable	22,000	22,000	Stock	15,000	15,000
Bonds Payable Discount	(2,000)	(1,800)	Land & Building	20,000	16,000
Retained Earnings	15,000	19,500	Plant & Machinery	15,000	17,000
Sundry Creditors	15,000	15,000	Accumulated Depreciation	5,000	2,800
			Patents and Trade Marks	1,000	900
	1,00,000	1,15,200		1,00,000	1,15,200

Additional Information

(1) Income for the period Rs. 10,000
(2) The building that costs Rs. 4,000 and which had a book value of Rs. 1,000 was sold for Rs. 1,400
(3) The depreciation charged for the period was Rs. 800
(4) There was an issue of capital stock Rs. 5,000

(5) Cash dividends Rs. 2,000 and stock dividend of Rs. 3,500 were declared.

[**Ans :** Net Increase in Working Capital Rs. 13,100
Fund From Operational Rs. 10,700
Total of Fund Flow Statement Rs. 17,100]

(13) From the following Balance sheet of Ramasamy & Co. Ltd. as on 31st December 2003 you are required to prepare a Fund Flow Statement:

Balance Sheet

Liabilities	*2002* *Rs.*	*2003* *Rs.*	*Assets*	*2002* *Rs.*	*2003* *Rs.*
Equity Share Capital	3,00,000	3,50,000	Fixed Assets	5,10,000	6,20,000
Preference Share Capital	2,00,000	1,00,000	Investments	30,000	80,000
10% Debenture	1,00,000	2,00,000	Sundry Creditors	40,000	75,000
Reserves	1,10,000	2,70,000	Stock	1,00,000	2,00,000
Provision for Doubtful Debts	10,000	15,000	Bills Receivable	1,00,000	1,00,000
Sundry Creditors	35,000	45,000	Discount on Debenture	10,000	5,000
Bills Payable	35,000	1,00,000			
	7,90,000	10,80,000		7,90,000	10,80,000

Additional Information

(1) Provision for depreciation stood at Rs.1,50,000 on 31st December 2002 and at Rs.1,90,000 on 31st December 2003.
(2) During the year 2003, a machine costing Rs.70,000 (book value Rs. 40,000) was disposed off for Rs. 25,000
(3) Preference share redemption was carried out at a premium of 5% on 1st January 2003 and
(4) Dividend @ 15% was paid on equity shares for the year 2002.

[**Ans :** Fund From Operations Rs. 2,34,000
Net Increase in Working Capital Rs. 55,000
Total Flow of Funds Rs. 4,84,000]

❑❑❑

30

CASH FLOW STATEMENT

In the previous lesson, you have learnt various types of analysis of financial statements and its tools such as comparative statements, common size statement and trend analysis, etc. You have also learnt various kinds of accounting ratios such as liquidity, activity, profitability, solvency, etc. You have learnt that accounts are mainly maintained on accrual basis but cash also plays significant role. Cash is mainly generated for operating activities which is buying assets and discharging liabilities. Cash is also raised from the issue of shares and debentures or loans but adequate cash should be available for use in time and no cash should remain idle. For this another tool of analysis is used which is cash flow statement.. In this lesson, you will learn about cash flow statement and its methods of preparation.

OBJECTIVES

After studying this lesson, you will be able to :

- state the meaning of cash flow statement;
- explain objectives of cash flow statement;
- explain the method of preparing cash flow statement as per format;
- state the limitations of cash flow statement.

30.1 MEANING AND OBJECTIVES

Cash plays a very important role in the economic life of a business. A firm needs cash to make payment to its suppliers, to incur day-to-day expenses and to pay salaries, wages, interest and dividends etc. In fact, what blood is to a human body, cash is to a business enterprise. Thus, it is very essential for a business to maintain an adequate balance of cash. For example, a concern operates profitably but it does not have sufficient cash balance to

pay dividends, what message does it convey to the shareholders and public in general. Thus, management of cash is very essential. There should be focus on movement of cash and its equivalents. Cash means, cash in hand and demand deposits with the bank. Cash equivalent consists of bank overdraft, cash credit, short term deposits and marketable securities.

Cash Flow Statement deals with flow of cash which includes cash equivalents as well as cash. This statement is an additional information to the users of Financial Statements. The statement shows the incoming and outgoing of cash. The statement assesses the capability of the enterprise to generate cash and utilize it. *Thus a Cash-Flow statement may be defined as a summary of receipts and disbursements of cash for a particular period of time. It also explains reasons for the changes in cash position of the firm.* Cash flows are cash inflows and outflows. Transactions which increase the cash position of the entity are called as inflows of cash and those which decrease the cash position as outflows of cash. Cash flow Statement traces the various sources which bring in cash such as cash from operating activities, sale of current and fixed assets, issue of share capital and debentures etc. and applications which cause outflow of cash such as loss from operations, purchase of current and fixed assets, redemption of debentures, preference shares and other long-term debt for cash. In short, a cash flow statement shows the cash receipts and disbursements during a certain period. The statement of cash flow serves a number of objectives which are as follows :

- Cash flow statement aims at highlighting the cash generated from operating activities.

- Cash flow statement **helps in planning the repayment of loan** schedule and replacement of fixed assets, etc.

- Cash is the centre of all financial decisions. It is used as the basis for the projection of future investing and financing plans of the enterprise.

- Cash flow statement helps to ascertain the liquid position of the firm in a better manner. Banks and financial institutions mostly prefer cash flow statement to analyse liquidity of the borrowing firm.

- Cash flow Statement helps in efficient and effective management of cash.

- The management generally looks into cash flow statements to understand the internally generated cash which is best utilised for payment of dividends.

- Cash Flow Statement based on AS-3 (revised) presents separately cash generated and used in operating, investing and financing activities.
- It is very **useful in the evaluation of cash position** of a firm.

Cash and relevant terms as per AS-3 (revised)

As per AS-3 (revised) issued by the Accounting Standards Board

1. (a) Cash fund :

Cash Fund includes (i) Cash in hand

(ii) Demand deposits with banks, and

(iii) cash equivalents.

(b) Cash equivalents are short-term, highly liquid investments, readily convertible into cash and which are subject to insignificant risk of changes in values.

2. Cash Flows are inflows and outflows of cash and cash equivalents.

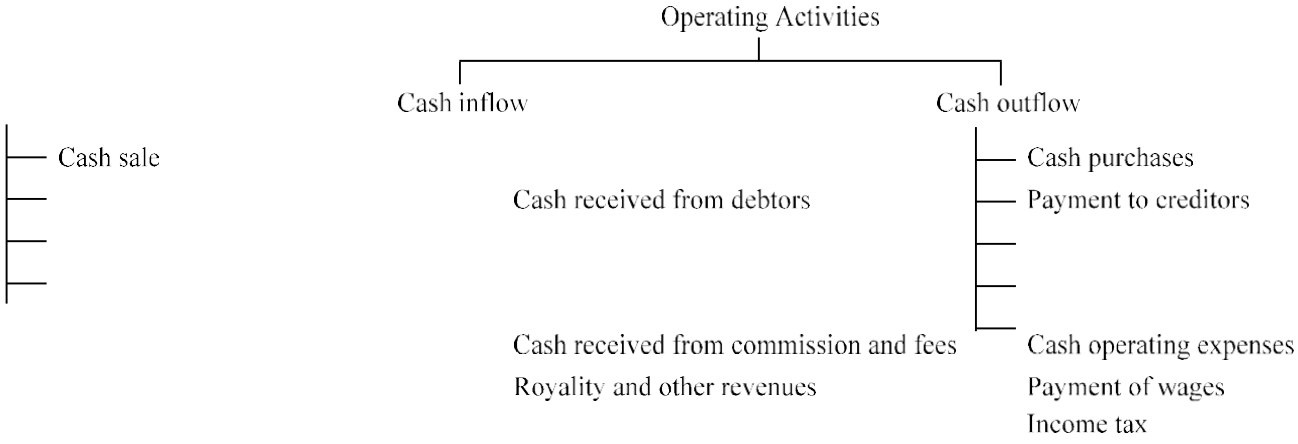
The statement of cash flow shows three main categories of cash inflows and cash outflows, namely : operating, investing and financing activities.

(a) **Operating activities** are the principal revenue generating activities of the enterprise.

(b) **Investing activities** include the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

(c) **Financing activities** are activities that result in change in the size and composition of the owner's capital (including Preference share capital in the case of a company) and borrowings of the enterprise.

As per AS-3 the inflow and outflow of cash are :



Investing Activities

Cash inflow	Cash outflow
Sale of fixed assets	Purchase of fixed assets
Sale of investment	Purchase of investment
Interest received	
Dividend received	

Financing Activities

Cash inflows	Cash outflows
Issue of shares	Cash repayments of amounts borrowed
Issue of debentures in cash	Interest paid on loans/debentures
Proceeds from long term short term borrowings	Dividends paid on equity and preference share capital

INTEXT QUESTIONS 30.1

Fill in the blanks with suitable word/words

(i) Cash flow statement deals with flow of cash which includes cash and .....

(ii) Cash flow statement is a ..... statement.

(iii) Cash flow statement shows cash ..... and ..... during a particular period.

(iv) As per AS 3 (revised), cash fund includes cash, demand deposit with bank and .....

30.2 METHOD OF PREPARING CASH FLOW STATEMENT

There are two methods of preparing the Cash Flow Statement. Both methods give the same results in respect of the final total as well as sub-totals of the three sections – operating, investing and the financing. They differ only in the manner the information regarding cash flow from operating activities is presented.

Indirect Method

Format of Cash Flow Statement for the year ended .....
As per Accounting Standard - 3 (Revised)

Particulars			Rs
(i) Cash flows from operating Activities		xxx	xxx
Net Profit as per Profit and Loss A/c or difference between closing balance and opening balance of Profit and Loss A/c			
Add :	Transfer to reserve	xxx	
Proposed dividend for current year		xxx	
Interim dividend paid during the year		xxx	
Provision for tax made during the current year		xxx	
	Extraordinary items, if any, debited to Profit and Loss A/c	xxx	xxx
		xxx	xxx
Less :	Extraordinary Items, if any, credited to Profit and Loss A/c	xxx	
Refund of Tax credited to Profit and Loss A/c		xxx	xxx
			xxx
A. Net profit before taxation and Extra ordinary items Adjustment for Non-Cash and Non-Operating Items.			
B. Add :			
–	Depreciation	xxx	
–	Preliminary expenses	xxx	
–	Discount on issue of shares and debentures written off	xxx	
–	Interest on borrowings and debentures	xxx	
–	Loss on sale of fixed assets	xxx	xxx
			xxx
C. Less :			
–	Interest income/received	xxx	
–	Dividend income received	xxx	
–	Rental income received	xxx	
–	Profit on sale of fixed asset	xxx	xxx
			xxx

D. Operating profits before working capital changes (A + B – C)		xxx	
			xxx
E.	Decrease in current assets and increase in current liabilities		xxx
F.	Less : Increase in current assets and decrease in current liabilities		xxx
G.	Cash generated from operations (D + E – F)		xxx
H.	Less : Income tax paid (Net tax refund received)		xxx
I.	Cash flow from before extraordinary items		xxx
	Adjusted extraordinary items (+/–)		xxx
J.	Net cash from operating activities		xxx
(ii)	Cash from investing accounting		
	Add :		
	– Proceeds from sale of fixed assets		xxx
	– Proceeds from sale of investments		xxx
	– Proceeds from sale of intangible assets		xxx
	– Interest and dividend received		xxx
			xxx
	Less :		
–	Rent income	xxx	
–	Purchase of fixed assets	xxx	
Purchase of investment		xxx	
–	Purchase of intangible assets like goodwill	xxx	xxx
			xxx
Advanced extraordinary items (+/–)			xxx
Net cash from (or used in) investing activities			xxx
			xxx
(iii) Cash flows from financing activities			
Add :			
Proceeds from issue of shares and debentures		xxx	

Proceeds from other long term borrowings	xx
	x
	xx
	x
Less :	
Final dividend fund	xx
	x
Interim dividend fund	xx
	x
Interest on debentures and loans paid	xx
	x

	Repayment of loans	xxx	
	Redemption of debenture preference shares	xxx	xxx
	Adjust extraordinary items (+/–)	xxx	xxx
	Net cash from (or used in) financing activities		xxx
			xxx
	(iv) Net increase/Decrease in cash and cash equivalent (i + ii + iii)		xxx
(v)	Add : cash and cash equivalents in the beginning of the year		
–	cash in hand	xxx	
–	cash at bank overdraft	xxx	
–	short term deposit	xxx	
–	marketable securities	xxx	
(vi)	Less : cash and cash equivalents in the end of the year		
	– cash in hand	xxx	
	– cash at Bank (by bank overdraft)	xxx	
	– short term deposits	xxx	
	– Cash flow from operation	xxx	xxx
			xxx

- **Direct method**

Format for Cash flow Statement for the year ended .....

As per Accounting Standard-3 (Revised)

Particulars			Rs
(i)	Cash flow from operating activities		
A.	Operating cash receipts		
–	Cash sales	xxx	
–	Cash received from customers	xxx	
–	Trading commission received	xxx	
–	Royalties received	xxx	xxx
B.	Less : Operating cash payment		
–	Cash purchase	xxx	
–	Cash paid to the supplier	xxx	
–	Cash paid for business expenses like office expenses, Manufacturing expenses, selling and distribution expenses	xxx	xxx
C.	Cash generated from operation (A – B)		xxx
D.	Less Income tax paid (Net of tax refund received)		xxx
E.	Cash flow before extraordinary items		xxx

F.	Adjusted extraordinary items (+/–)/Receipt/payment	xxx
G.	Net cash flow from (or used in) operating activities	xxx
(ii)	Cash flow from investing activities (calculation same as under indirect method)	xxx
(iii)	Cash flow from financing activities (Calculation same as under indirect method)	xxx
(iv)	Net increase/decrease in cash and cash equivalents (i + ii + iii)	xxx
(v)	Add cash and cash equivalent in the beginning of the year (same as under indirect method)	xxx
(vi)	Less cash under cash equivalent in the end of the year	xxx
		xxx

Some facts about cash flow statement :

(i) Only listed companies are required to prepare and present Cash flow statement.

(ii) The Accounting period for the Cash Flow Statement is the same for which Profit and Loss Account and Balance Sheet are prepared.

(iii) Cash flow items are as (a) Cash flow from operating activities :(b) Cash flow from investing activities (c) Cash flow from financing activities.

(iv) Operating activities include revenue producing activities which are not investing and financing activities.

(v) There are two methods of calculating cash flow from operating activities namely Direct method and Indirect method. SEBI (Securities Exchange Board of India) Guidelines recommend for only direct method.

(vi) Extra ordinary Items : The Cash flow associated with extra ordinary items should be classified as arising from operating, investing financing activities. For example, the amount received from Insurance Company on account of Loss of Stock or loss from earthquake should be reported as cash flow from operating activities.

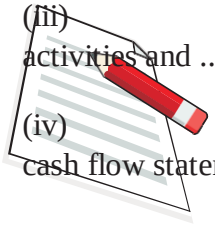
INTEXT QUESTIONS 30.2

Fill in the blanks with appropriate word/words.

(i) Only ..... companies prepare cash flow statement.

(ii) There are two methods for calculating cash flow from operations i.e. (i) Direct method (ii) ..... method.

(iii) Cash flows are classified in to three i.e. operating activities, financing activities and ..... activities.



(iv) SEBI guidelines recommend only ..... method for preparing cash flow statement.

Notes

30.3 PREPARATION OF CASH FLOW STATEMENT

(i) Operating Activities

Cash flow from operating activities are primarily derived from the principal revenue generating activities of the enterprise. A few items of cash flows from operating activities are :

(i) Cash receipt from the sale of goods and rendering services.

(ii) Cash receipts from royalties, fee, Commissions and other revenue.

(iii) Cash payments to suppliers for goods and services.

(iv) Cash payment to employees

(vi) Cash payment or refund of Income tax.

Determination of cash flow from operating activities

There are two stages for arriving at the cash flow from operating activities

Stage-1

Calculation of operating profit before working capital changes, It can be calculated in the following manner.

Net profit before Tax and extra ordinary Items		xxx
Add Non-cash and non operating Items		
which have already been debited to profit and Loss Account i.e.		
Depreciation	xxx	
Amortisation of intangible assets	xxx	
Loss on the sale of Fixed assets.	xxx	
Loss on the sale of Long term Investments	xxx	
Provision for tax	xxx	
Dividend paid	xxx	xxx
		xxx

Less : Non-cash and Non-operating Items which have already been credited to Profit and Loss Account i.e.

Profit on sale of fixed assets	xxx	
Profit on sale of Long term investment	xxx	xxx
Operating profit before working Capital changes.		xxx

Stage-II

After getting operating profit before working capital changes as per stage I, adjust increase or decrease in the current assets and current liabilities.

The following general rules may be applied at the time of adjusting current assets and current liabilities.

A. Current assets

(i) An increase in an item of current assets causes a decrease in cash inflow because cash is blocked in current assets.

(ii) A decrease in an item of current assets causes an increase in cash inflow because cash is released from the sale of current assets.

B. Current liabilities

(i) An increase in an item of current liability causes a decrease in cash outflow because cash is saved.

(ii) A decrease in an item of current liability causes increase in cash out flow because of payment of liability.

Thus,

> Cash from operations = operating profit before working capital changes + Net decrease in current assets + Net Increase in current liabilities – Net increase in current assets – Net decrease in current liabilities.

Illustration 1

The net Income reported in the Income Statement for the year was Rs. 110,000 and depreciation of fixed assets for the year was Rs. 44000. The balances of the current assets and current liabilities at the beginning and end of the year are as follows. Calculate cash from operating activities.

Items Notes		End of the year Amount (Rs.)	Beginning of the year Amount (Rs.)
	Current		
Cash		130,000	140,000
Debtors		200,000	180,000
Inventories		290,000	300,000
Prepaid expenses		15,000	16,000
Account payables		102,000	1,16,000

Solution

Cash from operating Activities

Details		Amount (Rs.)
Net Income		1,10,000
Adjustment for non cash and Non-operating items		
Add Depreciation		44,000
Operating Profit before working capital changes		154,000
Current Assets :		
Add : (a) Decrease in inventories	10,000	
(b) Decrease in prepaid expenses	1000	11000
		165,000
Deduct : (a) Increase in Debtors	(20,000)	
Current liabilities		
(b) Decrease in Account payables	(14,000)	34,000
Net Cash flow from operating Activities		131,000

Step - II

Investing Activities

Investing Activities refer to transactions that affect the purchase and sale of fixed or long term assets and investments.

Examples of cash flow arising from Investing activities are

1. Cash payments to acquire fixed Assets
2. Cash receipts from disposal of fixed assets
3. Cash payments to acquire shares, or debenture investment.
4. Cash receipts from the repayment of advances and loans made to third parties.

Thus, Cash inflow from investing activities are

– Cash sale of plant and machinery, land and Building, furniture, goodwill etc.

– Cash sale of investments made in the shares and debentures of other companies

– Cash receipts from collecting the Principal amount of loans made to third parties.

Cash outflow from investing activities are :

– Purchase of fixed assets i.e. land, Building, furniture, machinery etc.

– Purchase of Intangible assets i.e. goodwill, trade mark etc.

– Purchase of shares and debentures

– Purchase of Government Bonds

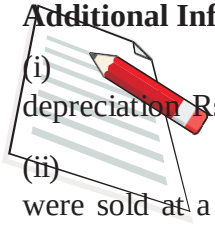
– Loan made to third parties

Illustration 2

From the following information calculate the cash flow from investing activities

Particulars	Opening	Closing
Machinery (at cost)	400,000	420,000
Accumulated Depreciation	100,000	110,000
Patents	280,000	160,000

Additional Information :



(i) During the year a machine costing Rs 40,000 with this accumulated depreciation Rs 24000 was sold for Rs 20,000

(ii) Patents were written off to the extent of Rs 40,000 and some patents were sold at a profit of Rs 20,000

Notes

Solution.

Cash Flow from Investing Activities

Particulars	Rs
Inflow from sale of machinery	20,000
Inflow from sale of patent (2)	100000
	120000
Outflow on purchase of machinery (1)	(60000)
Net cash flow from investing activities	60000

Working notes

Machinery A/c

Balance b/d	400000	Bank (Inflow)	20,000
Profit and Loss A/c (Profit on sale of machine)	4000	Accumulated depreciation (Depreciation on machinery sold)	24000
Bank A/c	60000	Balance c/d	420000
	464000		464000

Patent A/c

Balance b/d	280000	Bank A/c (Inflow)	100000
Profit and Loss A/c (Profit)	20000	Balancing figure	40000
		Profit and Loss A/c	160000
		Balance c/d	
	300000		300000

Step- III

Financing Activities

The third section of the cash flow statement reports the cash paid and received from activities with non-current or long term liabilities and

shareholders Capital. Examples of cash flow arising from financing activities are

– Cash proceeds from issue of shares or other similar instruments.

– Cash proceeds from issue of debentures, loans, notes, bonds, and other short-term borrowings

– Cash repayment of amount borrowed

Cash Inflow from financing activities are

– Issue of Equity and preference share capital for cash only.

– Issue of Debentures, Bonds and long-term note for cash only

Cash outflow from financing activities are :

– Payment of dividends to shareholders

– Redemption or repayment of loans i.e. debentures and bonds

– Redemption of preference share capital

– Buy back of equity shares.

Illustration 3

From the following information. Calculate the Cash from financing activities:

Particulars	31.12.2006 Rs	31.12.2007 Rs
Equity share capital	400,000	500,000
10% debentures	150,000	100,000
Securities premium	40000	50000

Additional Information : Interest paid on debentures Rs10000.

Solution. Calculation of Cash from financing activities

Particulars	Rs	
Cash proceeds from the issue of shares (Including premium)		110000
Interest paid on debenture	10000	
Redemption of debenture	50000	60,000
		50,000

Illustration 4

Classify the following into cash flows from operating activities investing activities financing activities

(a) Cash sale of goods

Notes

(b) Cash paid to suppliers of raw material

(c) Cash payments of salaries and wages to employees.

(d) Cash payment to acquire fixed assets

(e) Cash proceeds from issues of shares at premium.

(f) Payment of dividend

(g) Interest received on investment

(h) Interest on debenture

(i) Payment of income tax

(j) Cash payment of a long term loan

Solution

A. **Cash Flow from operating Activities**

(a) **Cash sale of goods :** Normal business activity of selling Inventories or goods (Cash inflow)

(b) **Cash paid to suppliers** of raw materials

Routine payments for purchasing the goods (Cash outflow)

(c) **Cash payment of salaries and wages :**

Cash payments to employees for their services in the office (Cash outflow)

(i) **Payment of Income Tax :** Payment of tax on business Income (Cash outflow)

B. **Cash Flow from investing Activities**

(a) **Cash payment to acquire fixed assets :** Purchase of long term assets (Cash outflow)

(b) **Interest received on Investment :** it is an Income on Investment (Cash inflow)

C. Cash Flow from financing Activities

(a) Cash proceeds from issuing shares at premium : (Cash inflow)

(b) **Payment of dividends :** It is related to issue of share capital, a (Cash outflow)

(c) **Interest paid on debentures :** Payment associated with loan capital (Cash outflow)

(i) **Cash payment of a long term loan :** Redemption of loan or borrowed capital (Cash outflow)

INTEXT QUESTIONS 30.3

Classify the following items into (i) Operating (ii) Investing and Financing activities.

(i) Refund of income tax

(ii) Payment of dividend to shareholder

(iii) Purchase of land and building

(iv) Purchase of plant

(v) Interest paid on debentures.

30.4 TREATMENT OF SPECIAL ITEMS

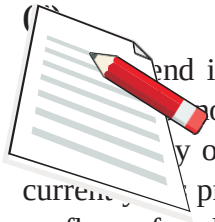
(i) Payment of Interim Dividends

The following procedure is followed

(i) The amount of interim dividend paid during the year is shown as outflow of cash in cash flow statement.

(ii) It will be added back to the profits for the purpose of calculating cash provided from operating activities.

(iii) No adjustment is necessary if the cash provided from operating activities is calculated on the basis of revised figure of net profit.



Notes

(ii) Proposed dividend

end is always declared in the general meeting after the preparation of Balance Sheet. It is non-operating item which should not be permitted to affect the calculation of cash y operating activities. Thus, the amount of proposed dividends would be added back to current profit and payments made during the year in respect of dividends would be shown as an outflow of cash.

(iii) Share Capital

The increase in share capital is regarded as inflow of cash only when there is a increase in share capital. For example, if a company issues 10000 equity shares of Rs.10 each for cash only, Rs. 100,000 would be shown as inflow of cash from financing activities. Similarly, the redemption of preference share is an outflow of cash. But where the share capital is issued to finance the purchase of fixed assets or the debentures are converted into equity shares there is no cash flow. Further, the issue of bonus shares does not cause any cash flows.

(iv) Purchase or sale of fixed Assets

The figures appearing in the comparative balance sheets at two dates in respect of fixed assets might indicate whether a particular fixed asset has been purchased or sold during the year. This would enable to determine the inflows or outflows of cash. For example, If the plant and machinery appears at Rs 60,000 in the current year and Rs.50,000 in the previous year, the only conclusion, in the absence of any other information is that there is a purchase of fixed assets for Rs.10000 during the year. Hence, Rs.10000 would be shown as outflow of cash.

(v) Provision for Taxation

It is a non-operating expenses or an item of appropriation in the Income statement/Profit and Loss Account and therefore should not be allowed to reduce the cash provided from operating activities. Hence, if the profit is given after tax and the amount of the provision for tax made during the year is given, the same would be added back to the current year profit figure.

In the cash flow statement the tax paid would be recorded separately as an outflow of cash. The item of provision for taxation, would not be treated as current assets.

Sometimes, the only information available about provision for taxation is two figures appearing in the opening balance sheet and closing balance

sheet. In such a case the figure in the opening balance sheet is treated as an outflow of cash while the figure in the closing balance sheet is treated as a non-cash and non-operating expense and thus is added back to net Income figure to find out the cash provided from operating activities.

Illustration 5

The comparative balance sheets of Bansal Private Limited at two different dates provide the following information.

2006		2007
Assets	Amount (Rs)	Amount (Rs)
Plant and machinery	1350000	1440000

It is informed that depreciation amounting to Rs. 60,000 has been provided during the year. Find the changes that have taken place in the asset and also state their effect on cash flows.

Solution :

In order to identify the transaction affecting the asset account, the proper procedure is to prepare the plant and machinery account as shown below:

Plant and machinery Account

Particulars	Amount	Particulars	Amount
Balance b/d	1350000	Depreciation (given)	60,000
Bank A/c (New machine purchased)	150000	Balance c/d	1440000
	1500000		1500000

Note

– In the absence of specific information, it may be presumed that the additional machinery was purchased for Rs.1,50,000.

– The amount spent on the plant and machinery represents a reduction in the cash and its equivalent. It is, therefore, an example of outflow of cash.

Illustration 6

In the comparative balance sheet of Wilson Pvt., the position of Building Account is given as under.

Liabilities	2006 Amount Rs.	2007 Amount Rs.	Assets	2006 Amount Rs.	2007 Amount Rs.
Accumulated depreciation (Building)	700000	790000	Building	3840000	3910000

Additional Information

A part of the building of Rs.74,000 was sold for Rs.60,000. The accumulated depreciation on building sold was Rs.20,000 Analyse the transaction.

Solution

The different transactions affecting the building account are to be identified by preparing the following accounts :

Building Account

Dr Cr.

Particulars	Amount	Particulars	Amount
Balance b/d	3840000	Cash (Inflow)	60000
Profit and loss Account (gain on sale)	6000	Accumulated Depreciation A/c	20000
Bank A/c			
Purchase (outflow)	144000	Balance c/d	3910000
	3990000		3990000

Accumulated Depreciation Account

Dr Cr.

Particulars	Amount	Particulars	Amount
Building	20000	Balance b/d	700000
	790000	Profit and Loss A/c	110000

A/c Balance c/d	810000		810000

Note

– The gain on sale of building (i.e. Rs 6000) would be deducted from the reported Income (or profit)

– Purchase of building for Rs.144,000 is identified from the balancing figure in the Building account as an outflow of cash.

– Rs.110,000 a charge to Profit and Loss Account is non-cash expenses and would be added back to the reported net income (profit)

Illustration 7

The following information is given to you about the provision for taxation for 2006 and 2007 of M/s Gill Private (Pvt) Limited (Ltd.).

Liabilities	2006 Rs	2007 Rs
Provision for taxation	15000	20000

Net Income for the year 2006 is Rs.50,000

How would you deal with this item assuming it as non-current liability?

Solution

Provision for the year 2006 is an outflow of cash. Provision for the 2007 shall be dealt with as follows

	Rs.
Net Income for the 2007	50,000
Add provision for Taxation for 2007	20000
Cash provided from operating activities	70,000

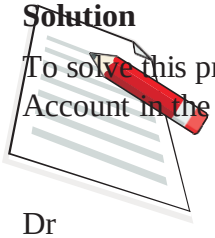
Illustration 8

The following relevant Information is obtained from the book of Venugopalan Limited (Ltd.).

Liabilities	2006 Rs	2007 Rs
Provision for Taxation	50000	70000

The amount of tax paid during 2007 amounted to Rs.40000. How would you deal with this item presuming to be non current? You are also given net profit after taxation was Rs.80000.

Solution



To solve this problem, one should find out the amount of provision for tax charged to Profit and Loss Account in the year 2007.

Notes

Provision for Taxation Account

Dr Cr

Particulars	Amount Rs.	Particulars	Amount Rs.
Bank (payment)	40,000	Balance b/d	50000
Balance c/d	70000	Profit and loss A/c (Balances Figure)	60000
	110000		110,000

(i) Rs. 40000 is an outflow of cash

(ii) Cash provided from operating activities will be calculated as

Net Income after taxation	80000
Add: Provision for taxation treated as non-cash expense	60,000
	140,000

Illustration 9

The following comparative balance sheets contain the relevant information about provision for taxation.

Labilities	2006 Rs.	2007 Rs.
Provision for Taxation	20000	30000

You are informed that Rs. 50,000 was charged to Profit and Loss Account for the year 2007. Ascertain how much cash was used.

Solution

Provision for Taxation Account

Dr Cr

Particulars	Amount Rs	Particulars	Amount Rs
Bank (Balancing	40000	Balance b/d	20000
	30000	Profit and Loss Account	50000

figure) Balance c/d	70000		70000

Note :

– Rs. 40,000 would be shown as an outflow of cash

– Rs. 50,000 would be treated as non cash expense and added back to net Income figure to compute cash provided from operations.

Illustration 10

From the summarised cash account of ABC Limited (Ltd.) prepare cash flow statement for the year ended 31st December 2006 in accordance with AS-3 (Revised) using the direct method and indirect method. The company does not have any cash equivalents :

Summarised Cash A/c

Particulars	Amount (Rs. 000)	Particulars	Amount (Rs. 000)
Balance on 1.1.2006	50	Payment to Suppliers	2000
Issue of equity shares	300	Purchase of fixed assets	200
Receipts from customers	2800	Overhead expenses	200
Sale of fixed assets	100	Wages and salaries	100
		Taxation	250
		Dividend	50
		Repayment of Bank Loan	300
		Balance on 31.12.2006	150
	3250		3250

Additional information : Net profit before tax for the year 2006 was Rs 500000.

Solution :

Cash flow statement of ABC Ltd
for the year ended 31st December 2006 (Indirect method)

	Rs 000	Rs 000
A. Cash flow from operating activities		
Net profit before tax	500	
Income tax paid	(250)	
Net cash from operating activities		250

B. Cash flow from investing activities		
Purchase of fixed assets	(200)	
Sale of fixed assets	100	
Net cash used in investing activities		(100)
C. Cash flow from financing activities :		
Issue of equity shares	300	
Repayment of bank loan	(300)	
Dividend paid	(50)	
Net cash used in financing activities		(50)
Net increase in cash (A+B+C)		100
(Net cash inflow from activities)		

Cash Flow Statement (Direct Method) of ABC Ltd. for the year ended 31st December 2006

	Rs 000	Rs 000
A. Cash flows from operating activities		
Cash receipts from customers	2800	
Cash payments to suppliers	(2000)	
Cash paid for wages and salaries	(100)	
Cash paid for overhead expenses	(200)	
Income tax paid	(250)	
Net cash from operating activities		250
B. Cash flows from investing activities		
Purchase of fixed assets for cash	(200)	
Proceeds from sale of fixed assets	100	
Net cash used in investing activities		(100)
C. Cash flows from financing activities		
Proceeds from issue of equity shares	300	
Payment of bank loan	(300)	
Dividend paid	(50)	
Net cash used in financing activities		(50)
Net increase in cash (A+B+C) i.e. Net cash from activities		100
Cash at the beginning		50

Cash at the end		150

Illustration 11

From the following Information, you are required to prepare the cash flow statement of Classic Ltd. for the year ended 31st March (both methods) :

Balance Sheets as at 31st March

Liabilities	2005 Rs.	2006 Rs.	Assets	2005 Rs.	2006 Rs.
Share Capital	70,000	70,000	Fixed Assets	50,000	91,000
Secured Loans	-	40,000	Inventory	15000	40,000
Creditors	14,000	39,000	Debtors	5,000	20,000
Tax payable	1,000	3,000	Cash	20,000	7,000
Profit & Loss A/c	7,000	10,000	Prepaid expenses	2,000	4,000
	92,000	162,000		92,000	1,62,000

Profit and loss Account
for the year ended 31st March 06

Dr. Cr.

Particulars	Amount Rs.	Particulars	Amount Rs.
Opening Stock	15,000	Sales	100,000
Purchases	98,000	Closing Inventory	40,000
Gross profit c/d	27000		
	1,40,000		1,40,000
General Expenses	11,000	Gross profit c/d	27000
Depreciation	8,000		
Provision for tax	4,000		
Net Profit c/d	4,000		
	27,000		27,000
Dividend (interim)	1,000	balance b/d	7,000

balance c/d	10000	Net profit b/d	4,000
	11,000		11,000

Solution

Cash Flow Statement (Direct Method) for the year ended, March 31, 2006

Notes

Particular			Amount Rs
(A)	Cash flow from operating Activities		
	Cash receipts from Debtors (see Debtors A/c)		85,000
	Cash payment for :		
	Cash paid to suppliers (see creditors A/c)	(73,000)	
	General expenses	(13,000)	(86,000)
	Cash from operating activities		(1,000)
	Taxes paid		(2000)
	Net Cash from operating activities		(3,000)
(B)	Cash flow from Investing Activities		
	Purchase of fixed Assets	(49,000)	
	Net cash used in investing Activities		(49,000)
(C)	Cash flow from financing Activities		
	Proceeds from Raising secured loans	40,000	
	Dividend paid	(1,000)	
	Net cash from Financing Activities		39,000
	Net Decrease in cash (– 3000 – 49000 + 39000) [A + B + C]		(13,000)

Working Notes :

Debtors A/c

Dr. Cr.

Particulars	Amount Rs.	Particulars	Amount Rs.
Balance b/d	5,000	Cash A/c (Received) (Bal. Fig.)	85000
Sales A/c (Credit)	1,00,000	Balance c/d	20,000
	1,05,000		1,05,000

Creditors A/c

Dr. Cr.

Particulars	Amount Rs.	Particulars	Amount Rs.
Cash A/c (Bal. Fig.)	73,000	Balance b/d	14,000
Balance c/d	39,000	Purchases A/c	98,000
	1,12,000		1,12,000

Fixed Assets A/c

Particulars	Amount Rs		Amount Rs
Balance b/d	50,000	Depreciation	8,000
Purchase of fixed asset	49,000	n Balance c/d	91,000
	99,000		99,000

Cash flow Statement (Indirect Method) For the year ended march, 31, 2006

Particulars		Rs.
(A) Cash flow from Operating Activities		
: Net profit as per Profit and Loss A/c		4,000
Add : Provision for Tax (See provision for Tax Account) Net		4,000
profit be fore Tax		8,000
Add : Depreciation		8,000
Operating profit before working Capital		
Changes		16,000
Add : Decrease in Current Assets or		
Increase in Current liabilities		
Increase in Creditors	25000	
Less : Increase in current assets or		
Decrease in Current liabilities		
Increase in Debtors	(15000)	
Increase in Inventory	(25000)	
Increase in prepaid expenses	(2,000)	(17000)
Cash from Operating Activities		(1,000)
Taxes paid		
Net cash from Operating Activities		(2,000

)
(3,0 00)

Notes

(B) Cash flow from Investing Activities :		
Purchase of Fixed Assets (See fixed assets)	(49000)	
Net cash used in Investing Activities		(49000)
(C) Cash Flow from financing Activities		
Proceeds from Raising Secured loan	4000	
Dividend paid	(1000)	
Net Cash flow from Financing Activities	39000	
Net Decrease in Cash a Cash equivalent		(13000)

Working Notes :

1.

Fixed Assets A/c

Particulars	Amount Rs.	Particulars	Amount Rs.
Balance b/d	50,000	Depreciation A/c (Given)	8,000
Cash A/c (Purchases) (Bal. fig.)	49,000	Balance C/d	91,000
	99,000		99,000

2.

Provision for Tax Account (Tax Payable A/c)

Dr. Cr.

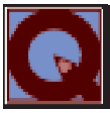
Particulars	Amount Rs.	Particulars	Amount Rs.
Cash A/c (Tax paid) (Bal Fig)	2,000	Balance C/d (Given)	1,000
Balance c/d (Given)	3,000	Profit & loss A/c (Provision made during the year)	4,000
	5,000		5,000

Limitations of cash flow statement

Though it is true that cash flow statement is very useful now-a-days and serves many purposes. But it is necessary to take certain precautions while making use of this important tool. The reason is that misleading conclusions might be found by not properly relating net income figure to the cash flow. Some of the significant limitations of Cash Flow Statement are given below:

- It is very difficult to precisely define the term 'cash'
- There are controversies over a number of items like cheques, stamps, postal orders etc. to be included in cash or not.

- As the present business moves from the cash basis to accrual basis, the prepaid and credit transactions might be represented an increase in working capital and it would be misleading to equate net income to cash flow because a number of non cash items would affect the net income.



INTEXT QUESTIONS 30.4

Fill in the blanks with suitable word/words

(i) Provision for taxation is ..... expenses.

(ii) Increases in share capital is .....

(iii) purchase of fixed assets is .....

(iv) Decrease in share capital is .....

(v) Sale a fixed assets is .....

(vi) Issue of debentures is .....

WHAT YOU HAVE LEARNT

- Cash flow statement deals with flow of cash which includes cash equivalent as well as cash.
- Cash flow statement is a summary of cash receipts and disbursements during a certain period.
- Cash flow statement is prepared as per AS-3 (Revised).
- There are two methods for preparing cash flow statement : (i) Direct method (ii) Indirect method.
- Cash flow statement shows three categories of cash inflows and outflows i.e. (i) Operating activities (ii) Investing activities (iii) Financing activities
- Operating activities are the revenue generating activities of the enterprise.
- Investing activities constitute the acquisition and disposal of long term assets and other investments not included in cash and its equivalents.
- Financing activities are activities that result in change in the size and composition of the share capital and borrowings of the enterprise.
- The cash flows from extraordinary items are to be stated separately as arising from operating, investing and financing activities.

Notes

TERMINAL QUESTIONS

1. What do you mean by Cash Flow Statement? State main objectives of cash flow statement.

2. Define cash as per AS-3 (revised). How the various activities are classified as per AS-3 revised while preparing cash flow statement.

3. Give three examples of operating activities.

4. Give two examples of investing activities.

5. Presented below is the comparative balance sheets of Anjali Ltd. as on 31st March 2007

Details	2007 Amount (Rs)	2006 Amount (Rs)
Cash	40000	57000
Account Receivables	77000	64000
Inventory	132000	140000
Prepaid expenses	12140	16540
Land	125000	150000
Equipment	200000	175000
Accumulated Depreciation (Equipment)	(60000)	(42000)
Building	250000	250000
Accumulated Depreciation (Building)	(75000)	(50000)
	701140	760540
Account payables	33000	45000
Bond payables	235000	265000
Equity share capital (Rs 10 per share)	280000	250000

Retained earnings	153140	200540
	701140	760540

ANS TO INTEXT QUESTIONS

Intext Questions 30.1

(i) Cash equivalents (ii) financial

(iii) Cash inflow, cash outflow (iv) Cash equivalent

Intext Questions 30.2

(i) listed (ii) indirect

(iii) investing (iv) Direct

Intext Questions 30.3

(i) Operating activities (ii) Financing activities

(iii) Investing activities (iv) Investing activities

(v) Investing activities

Intext Questions 30.4

(i) Non operating (ii) Cash inflow

(iii) Cash outflow (iv) Cash outflow

(v) Cash inflow (vi) Cash inflow

Activ

Visit the office of a joint stock company and study the cash flow statement prepared by the company. Prepare a list of already possible items (two each) that may increase and decrease the fund from

(a) Operating activities

(b) Investing activities

(c) Financing activities

Activity		
Operating	1.	1.
	2.	2.
Investing	1.	1.
	2.	2.
Financing	1.	1.
	2.	2.