

**Lecture note on**

**Entrepreneurship management and**

**Smart Technology**

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# ENTREPRENEURSHIP and MANAGEMENT & SMART TECHNOLOGY

1. Entrepreneurship (Joseph Alois Schumpeter is known as father of entrepreneurship)

## Concept / Meaning of Entrepreneurship

Entrepreneurship is the ability to develop, Organise & run a business enterprise, along with any of its uncertainties in order to make a profit. The most important example of entrepreneurship is the starting of new businesses.

1. Land
2. Labour
3. Natural Resources
4. Capital (Money)

### Vision :-

- Maximum profit
- Risk taking
- Global Marketing

### Types of Entrepreneurship :-

It is classified into following types:

- (i) Small business Entrepreneurship
- (ii) Large Company Entrepreneurship
- (i) Small business Entrepreneurship → These businesses are hair dresser, grocery store, Carpenter, plumber, Electrician etc.  
- These people run their business and hire family members or local employees. For them the profit is able to feed to their family and not taking over an industry.
- (ii) Large Company Entrepreneurship → These companies have more life cycle.  
- Most of these companies grow & sustain by offering new and innovative products.  
- Their only motto and goal is to make more profit and change in technology, customer satisfaction and new competition.



# Characteristics of Entrepreneurship

## 1. Ability to take Risk →

Starting any new venture involves a considerable amount of failure risk. Therefore, an entrepreneur needs to be courageous & able to evaluate and take risks, which is an essential part of being an entrepreneur.

## 2. Innovation →

It should be highly innovative to generate new ideas, start a company & earn profits out of it. Change can be the launching of new product that is; new the market or a process that does the same thing but in a more efficient & economical way.

## 3. Visionary and Leadership quality →

To be successful, the entrepreneur should have a clear vision of his new venture. However, to turn the idea into reality, a lot of resources & employees are required. Hence, leadership quality is permanent because leader impart and guide their employees towards the right path of success.

## 4. Open-minded →

In a business, every circumstances can be an opportunity & used for the benefit of a company. For example, Paytm recognised the gravity of demoneyfisation & acknowledged the need for online transactions would be more, so it utilised the situation & expanded massively during this time.

## 5. Flexible →

An entrepreneur should be flexible & open to change according to the situation. To be on the top, a business person should be equipped to embrace change in a product & service, as and when needed.

## 6. Know your product →

A company owner should know the product offerings & also be aware of the latest trend in the market. It is essential to know if the available product or service meets the demands of the current market, or whether



It is time to tweak it a little. Being able to be accountable & then alter as needed is a vital part of entrepreneurship.

### 7. Creation of Employment →

Entrepreneurship generates employment which provides at entry level job required for any experience and training for unskilled workers.

### 8. Impact on Society and Community Development →

A society becomes greater if the employment gets larger ~~gets~~ on diversified which deals about changes in the society & promotes necessities like higher expenditure on education better sanitation & a highly level of home ownership, therefore entrepreneurship assist the organisation towards more stable and high quality of community life.

### 9. Increase standard of living →

Entrepreneurship helps to improve the standards of living of a person by increasing the income, the standard of living means increase in the consumption of various goods & services by a household for a particular period.

### 10. Supports Research and Development →

New procedure & services need to be researched and before launching in the market therefore an entrepreneur also dispenses finance & research & development with universities. This promote research & development in the economy.

## Entrepreneur

- (i) An entrepreneur is the one who understands and operates a new enterprise & assumes for the inherent risk.
- (ii) Entrepreneur is often synonymous with the founder.
- (iii) The person who starts & operates a business enterprise is an entrepreneur.
- (iv) The entrepreneur is a Co-ordinator as he coordinates all the 3 elements in production i.e.; Land, Labour, Capital.
- (v) A person who innovates something new is an entrepreneur.
- (vi) An entrepreneur, who leads and enterprise towards its vision to leadership and motivation.
- (vii) He bears risk of the firm for the sake of making it viable.

## Roles of Entrepreneur

1. Economic change
2. Social change
3. Technical change

## Entrepreneurship

- (i) Entrepreneurship is the practice of starting of organisation, particularly new businesses generally in response to identify opportunity.
- (ii) Entrepreneurship ranges in scale from solo projects to major undertakings, creating many job opportunities.
- (iii) The process in which an entrepreneur starts & cooperates each business enterprise.
- (iv) It is the co-ordination maintained by an entrepreneur.
- (v) The innovation of something new or the process of innovation is called as entrepreneurship.
- (vi) It is the way in which an entrepreneur leads each man power motivates them for achievement of the firm's goal.
- (vii) The risk bearing practice is done by the entrepreneur is called as entrepreneurship.



# Characteristics of Entrepreneur

1. Facilitating character →  
An entrepreneur must build a team & keeps themselves motivated.
2. Self Confidence →  
Entrepreneur must have believe in themselves & the ability to achieve their goal.
3. Work with a vision & Mission →  
He must be committed to the project with a time horizon.
4. High degree of Endurance →  
(patience)  
Success of entrepreneur demands the ability to work long hours.
5. Trouble shooting Nature →  
An entrepreneur must have intense desire to complete task for solve a problem.  
(more) (wish)
6. Initiative & ~~Self~~ Enterprising Personality →  
An entrepreneur must have initiative accepting personal responsibilities and making good use of resources.
7. Goal Setters →  
He must be able to set challenging and realistic goals.
8. Calculated Risk taking ability →  
An entrepreneur is must be a moderate risk taker and should learn from failure.

## (1) Types of Entrepreneur :-

1. Imitating Entrepreneur
2. Fabian Entrepreneur
3. Drone Entrepreneur (Traditional approach)

### 1. Imitating Entrepreneur

These are often disappear length referred to as "Copy cats", they copy existing successful system & replicate it in a manner who have all the deficiencies of the original, model are address of all, its deficiencies are retained.

### 2. Fabian Entrepreneur

These are very careful in their approaches. They are not to sudden decisions and try to shy away.

### 3. Drone Entrepreneur

They do not like change & want to do the business in the traditional or Orthodox manner that's why basically they are outdated.



## (2) Types of Entrepreneurs (On the basis of business)

### (i) Business Entrepreneur

They start business units after developing ideas for new products & public services.

### (ii) Trading Entrepreneur

They undertake buying and selling of goods but they do not engage in manufacturing.

### (iii) Corporate Entrepreneur

They establish and manage corporate firms as an organisation which has separate legal existence.

### (iv) Agricultural Entrepreneur

They undertake activities like raising & marketing of crops, fertilisers and other allied activities.

## (3) On the basis of Motivation

### (i) Pure Entrepreneur

They are basically motivated to become entrepreneur for their personal satisfaction.

### (ii) Induced Entrepreneur

They are induced to take on an entrepreneurial role by the assistance of govt. policies like incentives & subsidies.

### (iii) Motivated Entrepreneur

They are motivated by the desire to make a use of technical & personal expertise & skill.

### (iv) Spontaneous Entrepreneur

They are motivated by their desire to make use of their self-employment and to prove their excellence in job performance.

## (4) On the basis of Stages of development

### (i) 1st Generation Entrepreneurs

They do not possess any entrepreneurial background. They start industries by their own innovative skills.

### (ii) 2nd Generation Entrepreneurs

They inherit their family business and pass it to the next generation.



### (iii) Classical Entrepreneur

They aim to maximize their economic returns with or without an element of growth.

### (5) On the basis of use of technology

#### (i) Technical

They are task oriented & they focus mainly on production rather than marketing.

#### (ii) Non-technical

They focus mainly on marketing rather than production.

#### (iii) Professional

They start a business unit, operate, then sell the running business & start a new business later.

### (6) On the basis of Area

#### (i) Urban

They belong to urban areas and established their business in the same location to avail the local advantages.

#### (ii) Rural

Rural entrepreneurs are involved in trading or agricultural activities, they belong to rural areas.

### (7) On the basis of gender

#### (i) Female Entrepreneur

They are defined as women or group of women who initiate, organize & run a business enterprise.

#### (ii) Male Entrepreneur

They are defined as men or group of men.

### \* Social Entrepreneurs :-

A person who establishes an enterprise with the aim of solving social problems or affecting social change.



## \* Importance of Entrepreneurship

### (1) Promotes Capital formation :-

They promote capital formation by mobilizing the idle savings of public they employ their own as well as borrowed resources for their setting up their business such types of activities leads to creation wealth which is very essential for the industrial and economical of the country.

### (2) Creates large scale employment opportunities :-

Entrepreneur provides immediate large scale employment to the unemployed which is a major problem in under developed & developing nation.

### (3) Promotes Balanced regional development :-

They help to remove regional disparities through setting up industries in less developed and backward areas by improving the transport, health, education, entertainment.

### (4) Reduces Concentration of economic power :-

Economic power is the natural outcome of industrial and business activities which lead to the concentration of economic power in the hand of few individual, which results in growth of monopoly.

### (5) Increase per capita income :-

Entrepreneur explore & exploit opportunities encourage effective resource mobilisation thus increasing the per capita income of people in a country.

### (6) Improvement in the standard of living :-

A good entrepreneur enables people to avail better quality goods at lower prices which results in improvement of their standard of living.

### (7) Promotes Country's export trade :-

They produce goods and services in large scale for the purpose of earning huge amount of foreign exchange from export.

### (8) Meeting local demands :-

They focus their attention to manufacture / services to indigenous technology, local skills, local resources and local experiences.



## Entrepreneurial Motivation

It is the process of transforming of ordinary individual into a powerful business man who can create opportunity & helps in economic development.

(1) Internal factors :- (Under control of Self)

(i) Needs for Self-realisation

(ii) Optimism

(iii) positive attitude

(iv) Self-motivation

(v) Enthusiasm

(vi) Commitment

(vii) Education

(viii) Background

(ix) Financial Background

(2) External factors :- (Not under control of Self)

(i) Influence

(ii) Availability of resources

(iii) products demand

(iv) Govt. policies

(v) Information availability

(vi) Technology

(vii) Changing tastes

(3) Entrepreneurial personality :-

(i) Bold

(ii) Rational and practical

(iii) Original

(iv) perceptive (Sensitiveness)

(v) Direct

(vi) Sociable



↓  
Micro

- (i) Consumers
- (ii) Market
- (iii) Supplier
- (iv) Organisation
- (v) Intermediary
- (vi) Competitors

↓  
Macro

- (i) Demographic
- (ii) Economic
- (iii) Technological
- (iv) Political
- (v) Social



## Barriers in Entrepreneurship

Several obstacles restrict the entrepreneurial growth in a society. These factors may be divided into two groups, (i) economic obstacles and non-economic obstacles.

The obstacles affect entrepreneurial development in the less developed countries.

### Obstacles in Entrepreneurial Growth;

A) Economic factors: Shortage of capital, lack of infrastructural facilities, non-availability of raw materials, labour shortage, defective tax structure, lack of technology, indifferent attitude of bankers, <sup>etc.</sup> retard entrepreneurship.

### B) Non-economic factors:

Following non-economic factors obstruct the growth of entrepreneurship.

i) Social factors → Customs, traditions, lack of social mobility, rationality of society, social system etc.

ii) Personal factors → Lack of Creativity, low achievement motive, indifferent attitude, lack of entrepreneurial qualities, ~~suspect~~ personality etc.

iii) Other factors → Increasing competition, ineffective administration, lack of political will, complex laws, inadequate facilities of higher education, adverse attitude of the government etc.

### A) Economic factors inhibiting entrepreneurial growth;

The economic obstacles in the way of entrepreneurial growth include shortage of capital, lack of infrastructural facilities, non-availability of raw materials, shortage of skilled labour, lack of technology, indifferent attitude of banks, heavy taxation and the likes. The adverse economic conditions, resource scarcity and lack of technology restrict the entrepreneurial growth. We witnessed such situation before 1990 in India. As a result of this, entrepreneurship could not spread widely.

### B) Non-economic factors inhibiting entrepreneurial growth;

Besides economic obstacles, there are a number of non-economic obstacles affecting the entrepreneurial growth. They may be sub-divided as follows;



- i) Personal factors → These factors revolve around the person. If a person having no adventurous spirit, lack of interest, lack of ambition cannot become entrepreneur. The attitude and value system of a person create obstacles in turning to entrepreneurship.
- ii) Social factors → The customs, traditions, values and attitude of a society also create hindrances for entrepreneurship development. A society giving no recognition to wealth accumulation, business activities and materialism cannot stimulate entrepreneurship among its members. If the entrepreneurs are not respected in the society and accorded a higher status, people never think of becoming entrepreneur.
- iii) Political factors → Inefficient, corrupt administration, the adverse attitude of government towards entrepreneurship and the lack of political will, act as obstacles to the entrepreneurial growth. The stringent laws, heavy taxation, and less scope to private sector stand in the way of entrepreneurship development and the country remains backward.
- iv) Other factors → This sub-group includes factors like increasing competition, inadequate higher education facilities, poor infrastructure. These factors have negative impact on entrepreneurship development.



## Entrepreneur Vs. Manager

Any enterprise needs entrepreneurs to start the enterprise and run it. It also needs managers for the managerial role required for running day to day operations of the enterprise.

An Entrepreneur appoints a manager for carrying out some of his functions, An entrepreneur may also perform duties of a manager in getting done his creative activities and satisfying need of achievement. An entrepreneur takes a venture for his personal satisfaction, whereas a professional manager has functions like setting targets, following rules, procedures, attainment of set targets. Any failure of an enterprise may be a huge loss in the career of an entrepreneur.

A professional manager takes care of the general functions of running an organisation such as strategic planning, operation planning, organising the resources, staffing. He contributes on day to day operations in achieving the quality of goods produced, makes efficient use of the resources and enhancement of the standards.



A manager is appointed by the Organisation and paid as per the employment contract. An entrepreneur is not a paid manager. He is great motivator to start his new business and also manage it successfully. He is the investor and takes risks in the enterprise. He is an innovator and a manager ~~and~~ works for his satisfaction and he is happy to get positive results.

### Managers Vs Entrepreneurs

Basic	Manager	Entrepreneur
Running of Business	He runs an already existing business.	He sets up a new business enterprise.
Type of Skills	He possesses those managerial skills and business know how to operate a business enterprise.	He possesses the managerial, Creative and innovative skills to launch a business venture.
Working pattern	He works in the set up created by the entrepreneur. He performs day-to-day functions of the business.	He acts as an innovator and creates a set up for managers to work in.
Basic Manager Entrepreneur vision	He maintains the efficiency of the organisation.	He launches a new business and works for its growth and success.
Basic Motive	Wants promotion and traditional Corporate rewards. Power motivated.	Wants freedom, goal-oriented, Self-reliant, and self-motivated.
Focus	Primarily on events inside Corporation.	Primarily on technology and market place.
Background	Family members worked for large organisations.	Entrepreneurial small business, professional or agricultural background.
Degree of Risk	Careful	Like moderate risk, invests heavily, but expects to succeed.
Decision Making	Agrees with those in power. Delays decision until he gets a feel of what bosses want.	Follows private vision. Decisive and action oriented
Problem Solving Methodology	Works out problems within the system.	Pushing up and down problems get diluted or loosed around.



## Business

Business is a system created to satisfy the need of the people of the society.

Def: The organized efforts of certain person (i.e., Entrepreneur, Firm, producer or distributor) to earn profit with the fulfilling needs of the people.

- It creates employment
- It contributes to the economic growth of the country
- It improved the standard of living

"Business is a commercial activities done by certain person to earn profit".

### Objectives:

- The profit maximization is the prime objective, as well as sales revenue maximization and growth rate increase.
- For the maximization of managerial utility function
- Entry prevention and risk avoidance.
- Social benefits (awareness, instructions, and consequences)

A business organization usually takes the following forms in India,

- (1) Sole proprietorship
- (2) Partnership
- (3) Joint Hindu Family
- (4) Cooperative Society
- (5) Joint Stock Company

### Sole Proprietorship

It is the simplest and most easily formed business organization. The Sole Proprietorship is a form of business that is owned, managed and controlled by an individual. He has to arrange capital for the business and he alone is responsible for its management. He is therefore, entitled to the profits and has to bear the loss of business, however, he can take the help of his family members and also make use of the services of others such as a manager and other employees.



This type of business Organisation is also called single ownership or single proprietorship.

(e.g. - business primarily consists of trade, small factories and shops).

### Features of Sole proprietorship :-

The important features of a sole-proprietary organization include the following;

(i) **Individual Initiative** → One person is the owner in a sole proprietorship form of organization.

(ii) **Risk Bearing** → The proprietor is the sole beneficiary of profits in this form of organization. If there is a loss he alone has to bear it. Thus the risks of business are borne by the proprietor himself/herself.

(iii) **Management and Control** → Management and control of this type of organization is the responsibility of the sole proprietor. He may, however, employ a manager or other people for the purpose.

(iv) **Minimum government regulations** → The government does not interfere with the working of the sole proprietorship organization. However, they have to comply with the general laws and rules laid down by government.

(v) **Unlimited liability** → The sole proprietor has to bear the losses and is responsible for the liabilities of the business. If the business assets are not sufficient to meet the liabilities, he may also have to sell his personal property for that purpose.

(vi) **Secrecy** → All important decisions taken by the owner himself. He keeps all the business secrets only to himself.

### Merits of Sole proprietorship :-

A sole proprietorship organization has the following advantages;

(i) **Easy formation** → A sole proprietorship business is easy to form where no legal formality is involved in setting up this type of organization. It is not governed by any specific law. It is simply required that the business activity should be lawful and should comply with the rules and regulations laid down by local authorities.

(ii) **Better control** → In sole proprietorship organization, all the decisions relating to business operations are taken by one person, which makes functioning of business simple, easy and better control.



(iii) Sole beneficiary of profits → The sole proprietor is the only person to whom the profits belong. There is a direct relation between effort and reward. This motivates him to work hard and bear the risks of business.

(iv) Inexpensive Management → The sole proprietor ~~may~~ <sup>does</sup> not appoint any specialists for various functions. He personally supervises various activities and can avoid wastage in the business.

### Limitations of Sole proprietorship:-

A sole proprietor generally suffers from the following limitations:

(i) Limitation of management skills → A sole proprietor may not be able to manage the business efficiently as he is not likely to have necessary skills regarding all aspects of the business. This poses difficulties in the growth of business also.

(ii) Limitation of Resources → The sole proprietor of a business is generally at a disadvantage in raising sufficient capital. His own capital may be limited and his personal assets may also be insufficient for raising loans against their security. This reduces the scope of business growth.

(iii) Unlimited liability → The sole proprietor is personally liable for all business obligations. For payment of business debts, his personal property can also be used if the business assets are insufficient.

(iv) Lack of Continuity → A sole proprietary organisation suffers from lack of continuity. If the proprietor is ill this may cause temporary closure of business. And if he dies the business may be permanently closed.

### Partnership

Partnership is an association of persons who agree to combine their financial resources and managerial abilities to run a business and share profits in an agreed ratio.

The Indian Partnership Act 1932 defines partnership as "partnership" is the relation between persons who have agreed to share the profits of a business carried on by all or any one of them acting for all.



A partnership firm can be formed with a minimum of two partners and it can have a maximum of twenty partners.

### Features of partnership:-

The features of partnership are as follows;

- (i) **Existence of an agreement** → Partnership is formed on the basis of an agreement between two or more persons to carry on business. The terms & conditions of partnership are laid down in a document known as partnership Deed.
- (ii) **Engagement in business** → A partnership can be formed only on the basis of a business activity. Its business may include any trade, industry or profession. Thus, a partnership can engage in any occupation - production or distribution of goods and services with a view to earning profits.
- (iii) **Sharing of profits and losses** → In a partnership form, partners are entitled to share in the profits and are also to bear the losses, if any.
- (iv) **Agency relationship** → The partnership business may be carried on by all or any of the partners acting for all. Thus, each partner is a principal and so can act in his own right. At the same time he can act on behalf of other partners as their agent. Thus, every partner can bind the firm by his acts.
- (v) **Unlimited liability** → The liability of partners is unlimited. In case some obligation arises then not only the partnership assets but also the private property of the partners can be taken for the payment of liabilities of the firm.
- (vi) **Common Management** → Every partner has a right to take part in the running of the business. It is not necessary for all partners to participate in the day-to-day activities of the business but they are entitled to participate. Even if partnership business is run by some partners, the consent of all other partners is necessary for taking important decisions.
- (vii) **Restriction on transferability of share** → No partner can transfer his share in partnership to any other person. He may, however, do so with the consent of all other partners.



(viii) Registration → To form a partnership firm, it is not compulsory to register it. However, if the partners so decide, it may be registered with the registrar of firms. There are advantages of registration, ~~which~~ also available.

(ix) Duration → The partnership firm continues at the pleasure of the partners. Legally a partnership comes to an end if any partner dies, retires or becomes insolvent (unable to pay what you owe). However, if the remaining partners agree to work together under the original firm's name, the firm will not be dissolved and will continue its business after <sup>settling</sup> ~~settling~~ the claim of the outgoing partner.



## Formation and Registration:

### Partnership Deed

Since partnership rests on an agreement among persons, its formation does not involve any special legal problems. Generally, the partnership agreement is reduced to writing and a partnership deed is prepared. Partnership Deed lays down the terms and conditions of partnership and the rights, duties and obligations of partners. The following points are generally covered in the Deed;

### Types of partnership on the basis nature of agreement

According to the nature of agreement among partners, there can be three types of partnership as follows;

- i) partnership at will → Such a partnership exists on the will of the partners. That is, it can be brought to an end whenever any partner gives notice of his intention to do so.
- ii) particular partnership → A particular partnership is formed for undertaking a particular venture. It comes to an end automatically with completion of the venture.
- iii) Partnership for a fixed duration → Such partnership is for a fixed period of time say 2 years, 5 years or any other duration.



## Classification partnership on the basis of liability

(i) **General partnership**: In general partnership, the liability of partners is unlimited and joint. The partners enjoy the right to participate in the management of the firm and their acts are binding on each other as well as on the firm. Registration of the firm is optional. The existence of the firm is affected by the death, lunacy, insolvency or retirement of the partners.

(ii) **Limited partnership**: In limited partnership, the liability of at least one partner is unlimited whereas the rest may have limited liability. Such a partnership does not get terminated with the death, lunacy or insolvency of the limited partners.

The limited partners do not enjoy the right of management and their acts do not bind the firm or the other partners. Registration of such partnership is compulsory.

This form of partnership was not permitted in India earlier. The permission to form partnership firms with limited liability has been granted after introduction of New Small Enterprise Policy in 1991.

The idea behind such a move has been to enable the partnership firms to attract equity capital from friends and relatives of small scale entrepreneurs who were earlier reluctant to help, due to the existence of unlimited liability clause in the partnership form of business.

### Types of partners

The various types of partner found in partnership forms are as follows;

(i) **Active partners** → partners who take active part in the conduct of day-to-day business of the firm are called active partners. These partners carry on business on behalf of the other partners.

(ii) **Sleeping or dormant partners** → Sleeping or dormant partners are those who do not take active part in the management of the business. Such partners only contribute capital in the firm and are bound by the activities of other partners. However, they share in the profits and losses of the business.

(iii) **Others** → Active and sleeping partners are, as a matter of fact, the full-fledged partners i.e., they share in profits and losses of the business and are liable for its dues.



However, there are other types of partners also who may be associated with partnership directly or indirectly. They are not full-fledged partners, such partners may include the following:

(a) **Nominal partners**: Nominal partners are those who do not have interest in the business but lend their name to the firm. They do not make any Capital Contribution, and are not entitled to take part in management, but are liable, like other partners, to third parties. Such partners generally have a pecuniary interest (like a share in the profits) in lending their name to a firm. However in certain cases <sup>they</sup> may not have any pecuniary interest in doing so. For example, a reputed industrialist may, without any profit ~~and~~ motive lend his name to a firm run by his family members.

(b) **partners by holding out**: If a person by his words or conduct holds out to another that he is a partner, he will be prevented from denying that he is not a partner. The person who thus becomes liable to third parties to pay the debts of the firm is known as a partner by holding out.

### Merits of partnership

A partnership form of Organisation offers the following advantages;

(i) **Ease in formation** → A partnership is very easy to form. All that is required is an agreement among the partners. Even the expenses to be incurred for registration are not much.

(ii) **pooling of financial resources** → A partnership commands more financial resources compared to sole proprietorship. This helps in expanding business and earning more profits. As and when a firm requires more money, more partners can be admitted.

(iii) **pooling of Managerial skills** → A partnership facilitates pooling of managerial skills of all its partners. This leads to greater efficiency in business operations. For instance, in a big partnership firm, one partner can handle production function, another partner can look after all marketing activity, still another can attend to legal and personal problems; and so on.

(iv) **Balanced business decisions** → In a partnership firm, decisions are taken unanimously after considering all the major aspects of a problem.



This ensures not only balanced business decisions but also removes difficulties in the smooth implementation of those decisions.

(v) Sharing of risks → Unlike Sole Proprietary Organisation, the risk of partnership business are shared by partners on a predetermined basis. This encourages partners to undertake risky but profitable business activities.

### Limitations of partnership

- Uncertainty of existence (retirement, death, lunacy of any partner)
- Risks of implied authority (mistake of co-partners over whom he has no control)
- Risks of disharmony (if some partners may adopt rigid attitude)
- Difficulty in withdrawal from the firm (the withdrawal of a partner's share requires the consent of all other partners)
- Lack of institutional confidence (large financial resources can not be raised by partnership & growth of business can not be ensured)
- Difficulties of expansion (It is difficult for a partnership firm to undertake modernization of expansion of its operations. This is because of its inability to raise adequate funds for the purpose).

### Co-operative Organisation

Meaning:-

A Co-operative form of business Organisation is different from other forms of Organisation. It is a voluntary association of persons for mutual benefit and its aims are accomplished through self-help and collective effort.

- The main principle underlying a Co-operative Organisation is mutual help, i.e., each for one and all for each. A minimum of 10 persons are required to form a Co-operative Society. To be called a Co-operative Society it must be registered with the Registrar of Co-operative Societies under the Co-operative Societies Act. The Capital of a Co-operative Society is raised from its members by way of share capital. It can also obtain additional resources by way of loans from the state and Central Co-operative Banks. Also, registration is optional in the case of partnership but it is compulsory for a Co-operative Society.



## Types of Co-operative Societies

Co-operative Societies may be classified into different categories according to the nature of activities performed by them.

The main types of Co-operative Societies are;

1. Consumers Co-operative Societies
2. Producers Co-operative Societies
3. Co-operative marketing Societies
4. Co-operative Credit Societies
5. Co-operative Farming Societies
6. Co-operative housing Societies

## Characteristics of Co-operative Organisation

The following are the main characteristics of Co-operative Societies;

- (i) **Voluntary association** → In Co-operatives, the membership is voluntary. Anybody having a common interest is free to join a Co-operative Society. The member can also leave the society anytime after giving proper notice.
- (ii) **Equal voting rights** → In a Co-operative Society, the principle of one-man one vote is adopted. A member has only one vote irrespective of the number of shares held by him. Thus, a Co-operative Society is run on democratic principles.
- (iii) **Separate legal entity** → A Co-operative Society is required to be registered under the Co-operative Societies Act. Registration provides it a separate legal entity. Its existence is quite different from its members. The death, insolvency or lunacy of a member does not affect its existence. It can sue and be sued in its own name. It can make agreements as well as purchase and sell property in its own name.
- (iv) **Service motive** → A Co-operative Society is based on the service motive of its members. Its main objective is to provide service to the members and not to maximize profits. Earning profit is the most important objective of other forms of business organisation. It is not so in the case of Co-operatives.
- (v) **Distribution of Surplus** → Out of the profits of the Co-operative, members are paid dividend and bonus. The bonus is given according to the volume of business transacted by each member with the Co-operative.



Society. For example, in a Consumer Co-operative Society, bonus is paid in proportion to the purchases made by members during a year. In producers co-operative the valued goods delivered for sale from the basis of distributing bonus.

### Merits of Co-operative Organisations :-

- (i) Easy to form (registration is simple & can be done without much legal formalities)
- (ii) Open membership (open organisation to all having a common interest)
- (iii) Democratic management (All members have equal rights & can have a voice in its management)
- (iv) Limited Liability (They don't have to bear personal liability for the debts of the society)
- (v) Stability (fairly stable life & continues to exist for a long period)
- (vi) Economical operations (quite economical due to elimination of middleman)
- (vii) Government Support (Govt. gives loans at lower rates of interest & relief in taxation)
- (viii) Other benefits (Credit co-operatives, for instance, promote habits of thrift and producers co-operative encourage joint activity among members).

### Limitations of Co-operative Organisations :-

- i) Limited capital
- ii) Inefficient management
- iii) Absence of motivation
- iv) Differences and factionalism among members
- v) Rigid rules and regulations

### Company

The Company form of Organisation is considered to be most suitable for organising business activities on a large scale as it does not suffer from the limitations of capital and management of other forms of Organisation. The sole proprietorship, partnership and Co-operative Organisation are not capable of undertaking large scale activity due to lack of adequate capital and limited managerial abilities. In a Company Organisation these problems can be easily overcome. It has the advantage of attracting huge capital from the public due to the limited liability of members. With adequate capital it can also employ trained and experienced managers to run the business activities efficiently.



## Meaning

A Company is defined as a voluntary association of persons having separate legal existence, perpetual succession and a common seal. As per the definition, there must be a group of persons who voluntarily agree to form a company. Once formed the company becomes a separate legal entity with a distinct name of its own. Its existence is not affected by change of members. It must have a seal to be imprinted on documents whenever required. The capital of a company consists of transferable shares, and members have limited liability.

## Features of a Company :-

- (i) Registered body → A company comes into existence only after its registration. For that purpose, necessary legal formalities have to be completed as prescribed under the Companies Act.
- (ii) Distinct legal entity → A company is regarded as a legal entity separate from its members. Thus a company can carry on business in its own name, enter into contracts, sue, and be sued.
- (iii) Artificial person → A company is the creation of law and has a distinct entity. It is therefore, regarded as an artificial person. The business is run in the name of the company. But because it is an artificial person, its functions are performed by the elected representatives of members, known as directors.
- (iv) perpetual succession → A company has continuous existence independent of its members. Death, insolvency, or change of members has no effect on the life of a company. The common saying in this regard is that members may come, members may go, but the company goes on forever. The life of the company can come to an end only through the prescribed legal procedure.
- (v) Common Seal → Since a company is an artificial person, it has no physical existence. The activities of the company are carried through a group of natural persons elected by its members (called directors). Every company must therefore, have a common seal with its name engraved on it. Anyone acting on behalf of the company must use the common seal to bind the company.
- (vi) Limited liability → The liability of the members of a company is limited. It is limited to the extent of capital agreed to be contributed. Beyond that amount, the members cannot be personally



held liable for payment of the company's debts.

(vi) Transferability of shares → The capital of a company is divided into parts called shares. Normally the shares of a company are freely transferable by its members. However, transferability is restricted in the case of private company.

### Merits of a company

- (i) Collection of huge financial resources
- (ii) Limited liability of members
- (iii) Free transferability of shares
- (iv) Durability and stability
- (v) Growth and expansion
- (vi) Efficient management
- (vii) Public confidence
- (viii) Social benefits



## Limitations of Company Organisation :-

- (i) Lengthy and expensive legal procedure (registration is a long-drawn process)
- (ii) Excessive government regulations (A Company is subject to government regulations at every stage of its working, penalty for non-compliance of the legal requirements).
- (iii) Lack of incentive (Officials do not have investment in the Company and also do not bear the risks).
- (iv) Delay in decision-making and action (Individual managers are unable to take decisions on their own. They may have to consult others which may take a lot of time).
- (v) Conflict of interest
- (vi) Oligarchic management (Control by a small group of persons)
- (vii) Speculation (A Company organization provides scope for speculation in shares by the directors. Because directors have knowledge of all information about the functioning of company, they can use it to their personal advantage)
- (viii) Growth of monopolistic tendencies (eliminate competition, control the market and charge unreasonable prices to maximize profits).
- (ix) Influencing government decisions



## Limited Liability Partnership (LLP)

A legal form, available world wide, is now introduced in India and is governed by the Limited Liability Partnership Act 2008, with effect from April 1, 2009.

LLP Combines the advantages of ease of running a partnership and Separate legal entity status and limited liability aspect of a company.

### Main features of a LLP

- LLP is a separate legal entity separate from its partners, can own assets in its name, sue and be sued.
- Unlike Corporate shareholders, the partners have the right to manage the business directly.
- One partner is not responsible or liable for another partner's misconduct or negligence.
- Minimum of 2 partners and no maximum should be 'for profit' business.
- Perpetual succession
- The duties and obligations of Designated partners shall be as provided in the law.
- Liability of the partners is limited to the extent of his contribution in the LLP. No exposure of personal assets of the partner, except in cases of fraud.
- LLP shall maintain annual accounts. However, audit of the accounts is required only if the contribution exceeds Rs. 25 lakhs or annual turnover exceeds Rs. 40 lakhs.

### Merits

- Lower cost of formation
- Lesser compliance requirements
- Easy to manage and run
- Easy to wind-up and dissolve
- No requirement of minimum capital contributions.
- partners are not liable for the acts of the other partners.
- No minimum alternate tax (as of date).



## Demerits

- LLP cannot raise money from the public.
- Financial Institution may not lend the large amount to the LLP.

## Start-up Company

Startups are young companies founded to develop a unique product or service, bring it to market and make it irresistible and irreplaceable for customers.

Startups are rooted in innovation, addressing the deficiencies of existing products or creating entirely new categories of goods and services, thereby disrupting entrenched ways of thinking and doing business for entire industries. That's why many startups are known within their respective industries as 'disruptors'.

You may be most familiar with startups in 'Big Tech' - think Facebook, Amazon, Apple, Netflix, Google, collectively known as FAANG stocks - but even companies like WeWork, Peloton and Beyond Meat are considered startups.

## Difference between Startup and Small business :-

### 1. Innovations

One of the most important differences between startups and small business is product or service innovation.

Small business does not make any claims as to uniqueness. (e.g., hairdressing salon, restaurant).

Innovations are the most important things for a start-up. Startups are meant to create something new and to improve what already exists.

### 2. Scopes

Small business makes progress within limits established by a businessperson oneself. In other words, you put limitations on the growth of the company and focus on service of a certain circle of customers.

A startup, as a rule, does not put any limitations on its growth and focused on winning over as much market share as possible. You are ready to increase your influence until you become a leader in the industry.



### 3. Rate of growth

Small business should grow fast but a high-priority task is to make a profit. When a business opens benefits, its growth happens as and when necessary.

Startup should always grow and within the shortest possible time. Creating a reproducible business model, you should be able to reproduce the success of the Company worldwide.

### 4. Profit

Small business is focused on getting earnings and if possible, a profit from the very first day. A closing gain of the company depends on a chief's appetites let alone plans for business expansion. It might take months or even years for a startup to gain first cents. A top target is to create a product, which consumers will like and will take on a market. If this aim will be achieved, profit of the company will be millions. (e.g. present evaluation of Uber Company is 50 billion dollars)

### 5. Finance

Small business: In order to start one's own business, as a rule, private savings, investments on the part of one's family, friends, banking credits and/or investor funds will do.

Startup many projects are run by private means or with the help of family members and close ones. Startup should reach out the stage of development, which is why it requires additional capital before the company begins making profits. In this case, investors wait for an extra financial return, which creates additional pressure on the company.

### 6. Technologies

Small business - There are no special technologies required.

Technologies in the sphere of marketing, accountant's solutions, etc.

Startup - Technologies are oftentimes the main product of startup.

But even if it is not so, startup can not help but using new technologies to achieve fast growth and scale-up.

### 7. Lifecycle

Small business - 32% of enterprises are shutdown in the first three years, which is not bad comparing to startups.

Startup - 92% of enterprises are shutdown during the first three years.



## 8. Team and Management

For a small business as many workers are usually hired, as needed so a company operate within the established limitations of growth.

Startup manager should develop a leader and managing qualities from the very beginning as long as startup should grow as fast as possible.

## 9. Way of life

Small business compared to startups, takes less of a risk and duties. In timework and personal life ratio has to be balanced.

Startup - If there are investors funds, the company will start making profit earlier. So, a balance between work and personal life is out of the question. Work, work and work again!

## 10. Exit strategy

Small business - Two versions here; make it a family business or to sell it.

Startup - Usually moves towards next stage via a large deal or sale or IPO (Initial public offering)

It is possible for a small business to become a startup or vice versa, but everything depends on a founder's decision. Sometimes it depends on a founder's intentions (meaning whether a company is wished to be seen in another role), sometimes is conditioned by external factors (a product demand changed, market conditions).



## Type of Industry

### Industry

The industry refers to the production of finished goods from raw materials. It denotes the production activities of the business. The goods produced in the industry are both producers' goods and consumers' goods. The activities performed in industries require both technical and mechanical skills.

A group of firms which produce the same goods and services are termed as an industry. The industry is a business which involves processing, raising, and producing goods. It leads to the formation of utility by creating consumer goods ready for direct consumption. Growth of industrial sector is important for the development of the country. Industries are the one responsible for the commerce and trade of the country.

- Commerce involves all the activities that aid in promoting the exchange of goods and services from the manufacturer to the last customers <sup>(help)</sup>.
- Trade is referred to as a basic economic activity that involves buying & selling of different goods and services between two or more parties involved in the transaction.



## Primary Industry

This sector of a nation's economy includes agriculture, forestry, fishing, mining, quarrying, and the extraction of minerals. It may be divided into two categories: genetic industry, including the production of raw materials that may be increased by human intervention in the production process; and extractive industry, including the production of exhaustible raw materials that cannot be augmented through cultivation.

The genetic industries include agriculture, forestry, and livestock management and fishing—all of which are subject to scientific and technological improvement of renewable resources. The extractive industries include the mining of mineral ores, the quarrying of stone, and the extraction of mineral fuels.

Primary industry tends to dominate the economies of undeveloped and developing nations, but as secondary and tertiary industries are developed, its share of the economic output tends to decrease.

It is one which uses natural resources as their raw materials. These industries depend upon nature for carrying out of their activities. These take out the raw materials from the earth's surface. They are found in areas where these



natural resources are easily found. Breeding and Reproduction of species come under the primary industry. These industries require little effort and don't require any processing stage. These are divided into two Extractive industry & Genetic industry. The extractive industry is one which acquires natural resources. The genetic industry is one which aims at the breeding of species.

## Secondary Industry

These industries depend on the primary industry for their activities. They use the goods produced by the primary industry as their raw material. These industries create form utility by producing consumer-ready products. It involves the conversion of raw material into finished good using manpower and machines. Secondary industries are of 2 types: **Manufacturing** and **Assembling industry**.

This sector, also called manufacturing industry, (1) takes the raw materials supplied by primary industries and processes them into consumer goods, or (2) further processes goods that other secondary industries have transformed into products, or (3) builds capital goods used to manufacture consumer and nonconsumer goods. Secondary industry also includes energy-producing industries (*e.g.*, hydroelectric industries) as well as the construction industry.

Secondary industry may be divided into heavy, or large-scale, and light, or small-scale, industry. Large-scale industry generally requires heavy capital investment in plants and machinery, serves a large and diverse market including other manufacturing industries, has a complex industrial organization and frequently a skilled specialized labour force, and generates a large volume of output. Examples would include petroleum refining, steel and iron manufacturing, motor vehicle and heavy machinery manufacture, cement production, nonferrous metal refining, meat-packing, and hydroelectric power generation.

Light, or small-scale, industry may be characterized by the nondurability of manufactured products and a smaller capital investment in plants and equipment, and it may involve nonstandard products, such as customized or craft work. The labour force may be either low skilled, as in textile work and clothing



manufacture, food processing, and plastics manufacture, or highly skilled, as in electronics and computer hardware manufacture, precision instrument manufacture, gemstone cutting, and craft work.

### Tertiary Industry

These industries are termed as aids to trade as they help in trade. This industry provides service facilities to other industries. Primary & secondary industry depends on these industries for their role. They do not produce any goods like primary and secondary industry. Examples of tertiary industry: transport, insurance & banking industry.

This sector, also called **service industry**, includes industries that, while producing no tangible goods, provide services or intangible gains or generate wealth. In free market and mixed economies this sector generally has a mix of private and government enterprise.

The industries of this sector include banking, finance, insurance, investment, and real estate services; wholesale, retail, and resale trade; transportation, information, and communications services; professional, consulting, legal, and personal services; tourism, hotels, restaurants, and entertainment; repair and maintenance services; education and teaching; and health, social welfare, administrative, police, security, and defense services.

### **Small Scale Industries**

Essentially small scale industries comprise of small enterprises who manufacture goods or services with the help of relatively smaller machines and a few workers and employees. Basically, the enterprise must fall under the guidelines set by the Government of India. At the time being such limits are as follows,

- For Manufacturing Units for Goods: Investment in plant and machinery must be between 25 lakhs and five crores.



- For Service Providers: Investment in machinery must be between 10 lakhs and two crores.

In developing countries like India, these small scale industries are the lifeline of the economy. These are generally labour-intensive industries, so they create much employment. They also help with per capita income and resource utilization in the economy. They are a very important sector of the economy from a financial and social point of view.

Examples- bakeries, school sanitariums, water bottle, leather belt, small toy , paper bag etc

### **What are Large Scale Industries?**

Industries which require huge infrastructure and manpower with an influx of capital assets are Large Scale Industries. In India, large-scale industries are the ones with a fixed asset of more than one hundred million rupees or Rs. 10 crores.

The Indian economy relies heavily on such industries for economic growth, generation of foreign currency, and the creation of job opportunities for millions of Indians.

What are Large Scale Industries?

Large scale industries are referred to as those industries that are having huge infrastructure, raw material, high manpower requirements and large capital requirements. Those organisations having a fixed asset of more than 10 crore rupees are considered to be large scale industries.

The growth of the economy is very much dependent on these industries. Such industries work towards bringing in foreign reserves, generating employment opportunities and paving the way for economic growth.

Large Scale Industries in India



Large scale industries in India can be categorised into the following types of industries:

1. Iron and Steel Industry
2. Automobile Industry
3. Textile Industry

#### Advantages of Large Scale Industries

Large scale industries offer the following advantages:

1. Large scale industries use the latest machinery and technology, which helps in improving the production. Due to large scale production, the companies benefit as well as it is beneficial for the economy as a whole.
2. Large scale industries help in the development of industries in the economy, which is essential for industrialisation.
3. Large scale industries require skilled workers and therefore, the development of large scale industries help in the development of a skilled workforce in the country.
4. Large scale industries require large amounts of raw materials, which opens up employment opportunities in the related sectors.
5. As large scale industries are involved in large scale production, it provides an opportunity to reduce the cost of goods and services as these are produced in bulk.
6. Large scale industries help in the development of small scale industries, as the requirement of items cannot be met only by a single industry.  
  
Hence, small scale industries are required to produce the ancillary products and therefore small scale industries thrive on the growth of large scale industries.
7. Large scale industries can incur expenses required for research and development as they have a high influx of capital. Such research will help in generating more profits in future.



8. Large scale industries also help improve the quality of life of its employees by providing them with adequate remuneration and other benefits.

### **What is Medium Scale Business?**

Before we go into the different aspects of medium scale business, we need to understand what is medium scale business. When we look at it, according to the Indian Government, we call a company medium scale industry when their overall investment is more than Rs. 5 crores, and also less than Rs. 10 crores.

Medium-scale industries in India contribute significantly to manufacturing output, employment, and exports of the country. It is estimated that in terms of value, the sector contributes 45% of manufacturing production and 40% of total exports of the country. The area is assessed to utilize around 69 million people in more than 26 million units all through



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### **Entrepreneurial support agencies at national level and district level:**

#### **(1) District Industries Centers :-**

- The DICs came into existence in the year 1978. The realization of the need to make the district as a focal point of industrial planning and development crystallized in the establishment of DICs.
- The DICs are considered as an institutional innovation to assist small scale industrial units at three important stages viz., pre-investment, investment and post-investment stages. They are also considered as a single window of clearance for industrial units.
- The DIC therefore is expected to provide all the services and facilities to entrepreneurs under a single roof for setting up small and village industries.
- There are three important functions, which the DICs could discharge profitably.
- The DICs should act as a data bank, an information bank and a dissemination centre, for giving prompt up-to-date and reliable information to anybody trying to set up a small scale unit and the information would not only be with regard to licensing procedures but also about what is in the realm of feasibility and what is not.
- The DICs should function in a close coordination with all agencies related to industrial development at the district level. To ensure this, there should be a single



line of command operating from the DIC for the entire field staff connected with industrial promotion activities.

### **Functions of District Industries Centers:**

- (i) To survey existing, traditional and new industries, raw materials and human resources; to identify schemes and make market forecasts for different items; to prepare sample techno-economic feasibility reports and offer investment advice to entrepreneurs.
- (ii) To assess the machinery and equipment requirements of small scale, tiny and village industries; indicate the locations where machinery and equipment for different plants may be available for entrepreneurs, to liaison with research institutions and arrange for the supply of machinery on hire purchase basis;
- (iii) To arrange for training of entrepreneurs of small and tiny units and liaison with small scale industries service institute, small scale industrial extension training institute and other institutions, to keep abreast of research and development in selected product lines and quality control methods;
- (iv) To ascertain the raw material requirements of various units, their sources and prices and to arrange for their bulk purchases and distribution to entrepreneurs;
- (v) To liaison with lead banks and other financial institutions, appraise applications, monitor the flow of industrial credit in the district, and arrange for financial assistance to entrepreneurs;
- (vi) To organize marketing outlets, to liaison with government procurement agencies, convey market intelligence to entrepreneurs, organize market surveys and market development programs;
- (vii) To give particular attention to the development of Khadi and Village and other cottage industries, to liaison with State Khadi and Village Industries Board and organize training programs for rural artisans;
- (viii) To provide immediate aid required by entrepreneurs in respect of power supply, licenses required under municipal and health departments and Factories Act for establishment of industries;
- (ix) To assist entrepreneurs in allotment of work sheds or sites required for establishment of industries in industrial estates;



- (x) To help in arranging hundred percent loans to educated unemployed belonging to scheduled castes, scheduled tribes and socially or economically backward communities for starting industries under special employment schemes;
- (xi) To help in extending suitable technical training to rural youth to pursue self-employment schemes;
- (xii) To assist in arranging grant of central and state government concessions and interest free sales tax loans, to provide capital for purchase of plant and machinery, construction of buildings and allotment of sites to new industrialists;
- (xiii) To assist entrepreneurs of small-scale units in establishing industries collectively by formation of industrial cooperatives;

- Each of the DIC is headed by one General Manager; who is responsible for the overall coordination and development of small scale industries including village industries in the district, and ensures the implementation of action plans drawn up for promoting and developing small scale, cottage and village industries , initiating the massive program of rural industrialization; identification of growth centers in the district.
- Four functional managers assist the general manager. They look after four disciplines viz., Economic Investigation-Information & Infrastructure (EI&I), Credit, Raw Materials & Marketing and Village Industries & Training (VI&T). They are to be assisted by three project managers and a number of extension officers.

### **National Small Industries Corporation (NSIC)**

The NSIC was set up in 1955 with the objective of **supplying machinery and equipment** to small enterprises on a **hire-purchase basis** and assisting them in procuring Government orders for various items of stores. NSIC provides a wide range of promotional services to small scale units .

The Corporation's Head Office is at Delhi and it has four regional offices at Delhi, Bombay, Madras and Calcutta, and eleven branch offices. It has one central liaison office at Delhi and depots and sub-centres. The main functions of NSIC are:



- **Composite Term Loan Scheme:** To promote small-scale sector, NSIC has launched a Composite ,Term Loan Scheme for the benefit of existing and prospective entrepreneurs to acquire land and building, machinery and equipment and working capital under one roof to the tiny units.
- **Hire Purchase Scheme:** Supply of indigenous and imported machinery and equipment on each financial terms with special focus on women entrepreneurs, weaker sections, handicapped and ex-servicemen and SC/ST entrepreneurs.
- **Equipment Leasing:** It is done mainly to facilitate SMEs to expand their capacities or diversify and/or upgrade their technology according to the needs of the market.
- **Working Capital Finance:** This Scheme aims at augmenting working capital of viable and well managed units, on selective basis in case of emergent requirements in enable them to pay-off their purchase of consumable stores, spares and production related overheads particularly electricity bills, statutory dues.
- **Raw Material Assistance:** It facilitates availability of scarce raw material either through the domestic market or by importing.
- **Marketing Support Programme:** NSIC has been trying to act as a major agency to bring SMEs closer to various Governmental purchasing agencies with the intending of creating confidence in the purchasing agencies about SMEs, and their capabilities to supply goods and services of requisite quality economic prices and adherence to agreed delivery scheduling.
- **Tender Marketing:** To participate in bulk global tender on behalf of Small Scale Industrial Enterprises. It is a immediate assisting SSI's with the ability to manufacture quality products but which lack brand equity & credibility or have limited financial capabilities.
- **Integrated Marketing Support:** NSIC has been operating an Integrated Marketing Support Programme in which bills pertaining to supplies made by small scale units to eligible purchasers are discounted by NSIC up to a certain specified limited.



- **Government Stores Purchase Programme:** The units registered with the Corporation for participation in government purchase programme are considered at or with individual purchase organisations and derive all the benefits like free supply of tender forms, exemption from payment of earnest money, security deposits, etc.
- **Technology Up gradation:** Excellent technical support is provided to SSIs/SMEs through five NSIC-Technical Service Centres. These centres have been recognised by Council of Scientific and Industrial Research for in-house R&D. NSIC has set up a Technology Transfer Centre. The latest information is provided to on-line connections and networks of computers on matching technology seekers and technology providers are arranged through the Technology Transfer Centre.
- **Software Technology Parks:** NSIC has set up a NSIC-STP Complex under Software Technology Parks of India (STPI). Software Technology Parks facilitates small scale units to establish their units for the 100% export of software and also act as the major point activate software exports directly through NSIC.
- NSIC-STP Complex at Okhla, New Delhi is one of such Parks set up by the National Small Industries Corporation under the Software Technology Parks of India to promote small entrepreneurs in software development. NSIC-STP provides high speed better communication facilities through VSNI/SATCOM networks, built-up office space and uninterrupted power supply break-up and other administrative support.
- **Exports:** NSIC is providing a complete package of export assistance, testing facilities, pre shipment credit facility, export incentives etc. apart from exposure to the products of SSFC in trade fairs, buyer and seller meets etc. the corporation has been endeavouring to increase share of India.
- Industries in purchases to United Nations Organisation, it being the largest single buyer in the world.



### **Orissa Small Industries Corporation Limited (O.S.I.C.)**

The Orissa Small Industries Corporation Limited (O.S.I.C.) was established in the year 1972 under the Companies Act, 1956. Its main objective is to aid, assist and promote Small Industries in Orissa and to provide them with assistance for the procurement and acquisition of raw material for their business and assist them to improve their methods of manufacture, technique of production and marketing of their goods.

In order to achieve the above objectives, the Government has introduced many promotional

schemes through O.S.I.C., such as :—

- (i) Hire Purchase Loan Scheme
- (ii) Seed Capital Loan Scheme
- (iii) Raw Material Credit Assistance Scheme
- (iv) Factoring (Marketing) Assistance Scheme,
- (v) Lunched O.T.S. Scheme for financial settlement of due for defaulting S.S.Is.

**Industrial Finance Corporation of India Ltd.:** The Industrial Finance Corporation of India was set up by the Government of India under IFCI Act in July 1948. It is an important financial institution which gives financial assistance to the entrepreneurs through rupee and foreign currency loans, underwriting, direct subscriptions to shares, debentures and guarantees. It also extends other financial facilities like equipment procurement, equipment finance, buyer's and supplier's credit, equipment leasing and finance to leasing and hire-purchase companies.

The IFCI has devised new promotional schemes such as

- Consultancy fees, subsidy schemes for assisting small scale entrepreneurs in marketing sector.
- Interest subsidy schemes for women entrepreneurs.
- Pollution control in small and medium scale enterprises.
- Encouraging the modernisation of tiny, small and medium scale industries

### **Commercial Banks**

Commercial Banks are those profit seeking institutions which accept deposits from general public and advance money to individuals like household, entrepreneurs, businessmen etc. with the prime objective of earning profit in the form of interest,



commission etc. Examples of commercial banks – ICICI Bank, State Bank of India, Axis Bank, and HDFC Bank

## **Functions -**

The main functions of commercial banks are accepting deposits from the public and advancing them loans.

However, besides these functions there are many other functions which these banks perform. All these functions can be divided under the following heads:

1. Accepting deposits
2. Giving loans
3. Overdraft
4. Discounting of Bills of Exchange
5. Investment of Funds
6. Agency Functions
7. Miscellaneous Functions

### **1. Accepting Deposits:**

The most important function of commercial banks is to accept deposits from the public. Various sections of society, according to their needs and economic condition, deposit their savings with the banks. These deposits are in different forms.

#### **(i) Current Deposits:**

The depositors of such deposits can withdraw and deposit money whenever they desire.

#### **(ii) Fixed Deposits (Term deposits)**

These are the deposits which are deposited for a definite period of time. This period is generally not less than one year and, therefore, these are called as long term deposits.

#### **(iii) Saving Deposits:**

In such deposits, money upto a certain limit can be deposited and withdrawn once or twice in a week. On such deposits, the rate of interest is very less.

#### **(iv) Recurring deposits:**

In such deposits money is deposited for a fixed period in monthly installments basis and is repaid to the depositors along with the interest on maturity.

### **2. Giving Loans:**



The second important function of commercial banks is to advance loans to its customers. Banks charge interest from the borrowers and this is the main source of their income.

Banks generally give following types of loans and advances:

(i) **Cash Credit:**

In this type of credit scheme, banks advance loans to its customers on the basis of bonds, inventories and other approved securities.

(iii) **Demand loans:**

These are such loans that can be recalled on demand by the banks. The entire loan amount is paid in lump sum by crediting it to the loan account of the borrower, and thus entire loan becomes chargeable to interest with immediate effect.

(iv) **Short-term loan:**

These loans may be given as personal loans, loans to finance working capital or as priority sector advances. These are made against some security and entire loan amount is transferred to the loan account of the borrower.

**3. Over-Draft:**

Banks advance loans to its customer's upto a certain amount through over-drafts, if there are no deposits in the current account. For this banks demand a security from the customers and charge very high rate of interest.

**4. Discounting of Bills of Exchange:**

Under this system, banks advance loans to the traders and business firms by discounting their bills. In this way, businessmen get loans on the basis of their bills of exchange before the time of their maturity.

**5. Investment of Funds:**

The banks invest their surplus funds in three types of securities—Government securities, other approved securities and other securities. Government securities include both, central and state governments, such as treasury bills, national savings certificate etc.

Other securities include securities of state associated bodies like electricity boards, housing boards, debentures of Land Development Banks units of UTI, shares of Regional Rural banks etc.

**6. Agency Functions:**

Banks function in the form of agents and representatives of their customers. Customers give their consent for performing such functions. The important functions of these types are as follows:



- (i) Banks collect cheques, drafts, bills of exchange and dividends of the shares for their customers.
- (ii) Banks make payment for their clients and at times accept the bills of exchange: of their customers for which payment is made at the fixed time.
- (iii) Banks pay insurance premium of their customers. Besides this, they also deposit loan installments, income-tax, interest etc. as per directions.
- (iv) Banks purchase and sell securities, shares and debentures on behalf of their customers.
- (v) Banks arrange to send money from one place to another for the convenience of their customers.

### **7. Miscellaneous Functions:**

Besides the functions mentioned above, banks perform many other functions of general utility which are as follows:

- (i) Banks make arrangement of lockers for the safe custody of valuable assets of their customers such as gold, silver, legal documents etc.
- (ii) Banks give reference for their customers.
- (iii) Banks collect necessary and useful statistics relating to trade and industry.
- (iv) Banks facilitating foreign trade, banks undertake to sell and purchase foreign exchange.
- (v) Banks advise their clients relating to investment decisions as specialist
- (vi) Banks does the under-writing of shares and debentures also.
- (vii) Banks issue letters of credit.
- (viii) During natural calamities, banks are highly useful in mobilizing funds and donations.
- (ix) Banks provide loans for consumer durables like Car, Air-conditioner, and Fridge etc.

### **KHADI AND VILLAGE INDUSTRIES COMMISSION (KVIC)**

KVIC was established in 1953 with the primary objective of developing Khadi and Village industries and improving rural employment opportunities. Its wide range of activities include training of artisans, extension of assistance for procurement of raw materials, marketing of finished products and arrangement for manufacturing and



distribution of improved tools, equipment and machinery to producers on concessional terms.

KVIC provides assistance to Khadi and Village industries which are characterised by low capital intensity and ideally suited to manufacturing utility goods by using locally available resources. There are about 26 specified village industries such as processing of cereals and pulses, leather, cottage matches. Gur and Khandsari, palm gur, non-edible oils and soaps, bee-keeping, village pottery, carpentry and blacksmithy, gobargas, household aluminium utensils, etc.

KVIC's policies and programmes are executed through 30 State Khadi and Village Industries Boards, 2320 institutions registered under the Societies Registration Act, 1960 and about 30,600 Industrial Cooperative Societies registered under State Cooperative Societies Act. Activities involving pioneering types of work, such as developing new industries in hilly, backward and inaccessible areas are undertaken by KVIC directly.

### **National Bank for Agriculture and Rural Development (NABARD)**

NABARD (the National Bank for Agriculture and Rural Development) was established on **12 July 1982** to implement the National Bank for Agriculture and Rural Development Act 1981. It replaced the Agricultural Credit Department (ACD) and Rural Planning and Credit Cell (RPCC) of Reserve Bank of India, and Agricultural Refinance and Development Corporation (ARDC).

It is one of the premier agencies to provide credit in rural areas.

NABARD is India's specialised bank. NABARD Associates ranges from World Bank-affiliated organizations to global developmental agencies working in the field of agriculture and rural development. These organizations help NABARD by advising and providing monetary aid for the upliftment of the people in the rural areas and optimizing the agricultural process.

NABARD has its head office at Mumbai, India. NABARD operates throughout the country through its 28 Regional Offices and one Sub-office, located in the capitals of all the states/union territories. Each Regional Office [RO] has a Chief General Manager [CGMs] as its head, and the Head office has several Top executives like the Executive Directors [ED], Managing Directors [MD], and the Chairperson. It has 336 District Offices



across the country, one Sub-office at [[Port Blair]] and one special cell at Srinagar. It also has 6 training establishments.

The Government of India, which now holds 99% stake of NABARD .

### **Role**

NABARD is the apex institution in the country which looks after the development of the cottage industry, small industry and village industry, and other rural industries. NABARD also reaches out to allied economies and supports and promotes integrated development. And to help NABARD discharge its duty, it has been given certain roles as follows:

- Serves as an apex financing agency for the institutions providing investment and production credit for promoting the various developmental activities in rural areas.
- Takes measures towards institution building for improving absorptive capacity of the credit delivery system, including monitoring, formulation of rehabilitation schemes, restructuring of credit institutions, training of personnel, etc.
- Co-ordinates the rural financing activities of all institutions engaged in developmental work at the field level and maintains liaison with Government of India, State Governments, Reserve Bank of India (RBI) and other national level institutions concerned with policy formulation
- Undertakes monitoring and evaluation of projects refinanced by it.
- NABARD refinances the financial institutions which finances the rural sector.
- The institutions which help the rural economy, NABARD helps develop.
- NABARD also keeps a check on its client institutes.
- It regulates the institution which provides financial help to the rural economy.
- It provides training facilities to the institutions working the field of rural upliftment.
- It regulates the cooperative banks and the RRB's, and manages talent acquisition through IBPS CWE.

NABARD's refinance is available to State Co-operative Agriculture and Rural Development Banks (SCARDBs), State Co-operative Banks (SCBs), Regional Rural Banks (RRBs), Commercial Banks (CBs) and other financial institutions approved by RBI. While the ultimate beneficiaries of investment credit can be individuals, partnership concerns,



companies, State-owned corporations or co-operative societies, production credit is generally given to individuals.

NABARD is also known for its 'SHG Bank Linkage Programme which encourages India's banks to lend to [[self-help group (finance)|self-help groups]] (SHGs). Because SHGs are composed mainly of poor women, this has evolved into an important Indian tool for microfinance. As of March 2006 22 lakh SHGs representing 3.3 crore members had to been linked to credit through this programme.

NABARD also has a portfolio of Natural Resource Management Programmes involving diverse fields like Watershed Development, Tribal Development and Farm Innovation through dedicated funds set up for the purpose.

## 9) **Technology Business incubator (TBI)**

**Technology Business incubator (TBI)** is an entity, which helps technology-based start-up businesses with all the necessary resources/support that the start-up needs to evolve and grow into a mature business. Typically, TBIs provide budding entrepreneurs all necessary infrastructure support, technology/prototype development support, research assistance, help in getting funding, business consulting assistance, marketing assistance and do whatever is necessary to make the start-up a success.

The primary goal of a business incubator is to facilitate economic development by improving survival and growth of new entrepreneurial units. Incubators accelerate the development of young entrepreneurial units from 'idea stage' to independent self-sustaining successful business. The phenomenal growth of the incubators has taken place world over in last two decades. The concept has benefited many countries in utilizing technology as a means for their economic development.

In the form of a business centre, the TBI provides incubatees an initial place of operation equipped with supportive environment in which services such as assistance in technology, hands-on management, mentoring, business plan development, exposure to



Venture Capital and Institutional Capital and all other operational business/finance related needs involved in starting and growing a technology company.

## **Science & Technology Entrepreneurs Park (STEP)**

The Science & Technology Entrepreneurs Park (STEP), was the scheme launched by the Department of Science & Technology, Government of India in the early part of 1980's. The core philosophy behind the programme was to convert "Job Seekers to become Job Creators". Its main objective was to help in creating an atmosphere and awareness for youth to take up entrepreneurship, initiate active interaction between academic institutions and industries for sharing ideas, knowledge, experience and facilities for the development of new technologies and their rapid transfer to the end user.

In a period spanning 15 years, about 14 STEPs were established in premier academic Institutions from both Government and Private Sector.

### **Objectives**

- To forge a close linkage between universities, academic and R&D institutions on one hand and industry on the other.
- To promote entrepreneurship among Science and Technology persons, many of whom were otherwise seeking jobs soon after their graduation.
- To provide R&D support to the small-scale industry mostly through interaction with research institutions.
- To promote innovation based enterprises.



## Project Report Preparation

### Preliminary Project report

Preliminary Project report is a formal document that describes specific activities, events, occurrences, or subjects of a project to explain progress of the project up to a certain point in time (but not later than completion time). This document is presented and communicated at project status meetings to explain what goals, deliverables and results are produced and what activities are still in progress. The document serves as the basis for developing the final project report.

The preliminary project report should include;

- i) **problem/need** → A clear description of the problem or need the project aims to handle.
- ii) **proposed solution** → The idea for solving the problem should be described. This need not be complete yet but should include specific ideas.
- iii) **work effort** → An analysis summary of work relevant to the project.
- iv) **status** → Current state of project work, including activities completed and unfinished.
- v) **evaluation** → an analysis and assessment of project work by specific criteria such as cost-effectiveness, feasibility, manageability, performance, others.
- vi) **Schedule** → a timeline with specific milestones and events related to project work.

### Detailed Project Report (DPR)

- A detailed project report is extremely important in order to turn the idea of the project into reality.
- A DPR acts as a ladder towards success to make the project reach greater heights.
- If the project report is prepared by putting a tremendous amount of work into details we will surely get the good results later.



→ The important points of DPR are;

i) Minimising the risk → It is crucial to identify and to reduce the risks as much as possible so that the project is implemented without any obstacles. That means it reporting the risk to the project manager before the implementation that makes the room for improvement.

ii) Managing the budget → Managing the budget or expenditure is not an easy task especially when you have to look at so many aspects of your project. Hence a DPR comes to rescue and helps to plan and manage the budget.

iii) Project progress follow up → It must have control on the project progress so that we can keep a track of schedule of the project and eliminate problems.

iv) Hold over the project → Project reporting maintains hold over the higher authority such as managers over the project so that they can keep a check on progress and eliminate factors that can cause a halt on progress on the project.

## Techno economic Feasibility

Objective of techno-economic feasibility is to determine the technical feasibility and financial viability of the project, assess the risks associated with the project and specify immediate actions that are required to be taken. It helps a client to get a detailed evaluation of a project.

Techno-economic feasibility studies cover the following based on the clients requirement:

- Markets
- Raw materials & Fuel
- plant setting, Location & Infrastructure
- Project technical concept
- Logistics
- Environment
- Implementation planning
- Human Resources (Requirement and Cost)
- Investment Cost (Fund requirement)
- Operating Cost
- Financial Appraisal
- Risks and Mitigation



## Project Viability

Every business project has stated outcomes that needs to be met in order to be viable or profitable.

### (i) Cost

A project is not viable if its value exceeds the cost. Sometimes the cost viability of a project can change over the course of projects development.

### (ii) Time

A project that is not on track from a perspective can loose its viability.

### (iii) Manpower

Loosing key members of the staff can cause a project loosing its viability.

### (iv) Quality

If the quality of a project is not as per expected or anticipated then the project can loose its viability.

## Project Presentation Guidelines

- i) The presentation should be 15 minutes long with a 5 minutes of question session afterwards.
- ii) The presentation should be polished and a carefully planned performance.
- iii) The outline included in the document must be followed.
- iv) Include a short performance like demonstration of a program or a powerpoint presentation.
- v) Each member of the group must play a significant role during the presentation.

## Project Presentation Outline

- ① Introduction → It should summarise the projects purpose and program.
- ② Goals → Related programme going into the project.
- ③ Constraints → The limitations to be faced during the course of project.
- ④ Ethics → Ethical concerns (Moral value).
- ⑤ Challenges → Both expected and encountered
- ⑥ Demo → to show something about the project.
- ⑦ Accomplishment → The objectives we have met
- ⑧ Future work → What will be continued with the project in any form
- ⑨ Leave time for questions



## Tips on giving good presentation

- i) Practice ahead of time
- ii) Start with an Outline and end with a Conclusion
- iii) Be confident
- iv) Speak clearly
- v) Maintain eye contact with audience
- vi) Use visual aids
- vii) Consider using handouts.

## Projects Status Reports

Project status reports is accomplished to serve the following purpose;

- (i) To keep an updated flow of information related projects progress.
- (ii) To immediately address issues and concerns during the implementation of the project.
- (iii) To document reasons for changes and adjustment made to the original plan.
- (iv) To monitor the utilisation of fund.
- (v) To serve as a basis for decision making and addressing problem.
- (vi) To keep a track of individual performance as well teams performance.
- (vii) To act as a uniform procedure for communicating project development to stake holders.



# Management Principles

## Definitions of Management

Management is the process of designing and maintaining an environment in which individuals working together in groups, effectively accomplish desired goals.

Management is a process involving planning, Organising, staffing, directing and controlling human effort to achieve Organisation objectives.

(i) Management as an economic resource :-

The four important economic resources;

- (a) Land
- (b) Labour
- (c) Capital
- (d) Entrepreneurship

(ii) Management as a group :-

Management embrace all duties and functions as a group to obtain a certain goal.

(iii) Discipline :-

Management is a multidisciplinary disciplines.

(iv) Management as human process :-

Management is an art of directing and inspiring people.

(v) Management as a process :-

Management is distinct process consist of planning, Organising, staffing, directing & performing.

## Characteristics of Management

Management is ;

- (i) Goal Oriented
- (ii) process
- (iii) Group Activity
- (iv) universal
- (v) science
- (vi) dynamic process
- (vii) Important Organ of society
- (viii) Economic resource

- (ix) profession
- (x) system of Authority



## Objectives of Management

- i) Market standing
  - ii) Innovation
  - iii) Productivity
  - iv) Physical and financial resources
  - v) Profit
  - vi) Management performance
  - vii) Worker performance
  - viii) Public responsibility
- i) **Market standing** → Management should set objectives indicating where it would be like to among the competitors.
- ii) **Innovation** → Management should set objectives specifying its commitment to the development of new method of co-operation.
- iii) **Productivity** → Management should set objectives outlining the target of production.
- iv) **Physical and financial resources** → Management should set objectives with regard to use and maintenance of capital and monetary resources.
- v) **Profit** → It should specify the profit the company would likely to generate.
- vi) **Management performance** → It should specify the managerial productivity and growth.
- vii) **Worker performance** → It should specify the workers productivity and growth.
- viii) **Public responsibility** → Management should work for the upliftment of the society.

## Importance of Management

According to Peter Drucker, Management is the dynamic, life giving element in every business, without it the resources of production will remain resources and never become production.

The following are the importance of management;

- It provides effectiveness to human efforts.
- It is a critical ingredient in countries growth.
- It brings order to projects.



- It provides judgement and courage.
- It helps in achieving group goals.
- It ensures efficient use of resources.
- It assists in meeting the challenges of the rapidly growing environment.
- It is a crucial factor in economic and social development.

## Managerial Skills

(i) Conceptual skills

(ii) Human skills

(iii) Technical skills

(iv) Diagnostic skills

- Management requires several skills to be successful in his/her job.
- A manager is successful when he is able to make smooth functioning team of people working under him.
- He/she has to plan and organise the operations of the enterprise so that the subordinates are able to use the material resources in the best possible manner.

→ The skills of a manager may be classified into several categories;

(i) Conceptual skills → Such skills comprise the ability to see the organisation as a whole, to recognise interrelationship among different functions of the business and external forces and to guide the organisation in the most efficient manner.

(ii) Human skills → This consists of the ability to work ably with other people both as individual and as a team. These skills are the abilities needed to resolve conflicts, motivate, lead and communicate effectively with others.

(iii) Technical skills → Such skills refers to the ability and knowledge in using the equipments techniques and procedure involved in performing different tasks.

(iv) Diagnostic skills → Such skills include the ability to determine by analysis & examination the nature and the circumstances of a particular condition. Thus diagnostic skills are the abilities to quickly get at the true cause of a certain situation through data, observation, and facts.



Q.1/ Management is an Art or Science? Explain.

Ans: In the management literature, it is often discussed whether management is an art or a science.

(i) Art is concerned with the application of knowledge and skills to achieve concrete results.

(ii) Since each and every manager has to apply certain knowledge and skills while dealing with the people to achieve the desired results, management is an art.

(iii) Management requires a vast knowledge and certain innovating, initiating, implementing and integrating skill in relation to goals, resources techniques and results. The skills that a manager needs are planning skills, the organising skills, the staffing skills, the directing skills and the controlling skills.

(iv) As Koontz and O'Donnell have rightly pointed out, the work of managing a business or any group activity is an art. But for this the organised body of knowledge is required. So management is also a science.

(v) Science is a systematically organised body of knowledge based on proper findings and exact principles and is capable of verification.

(vi) The principles of management have been evolved the practical experience and theoretical research over several decades. The researchers in management use scientific techniques to collect and analyse data about human behaviour. Several principles have been developed which establish cause and effect relationship.

(vii) However, management is not a perfect science, because it deals with human beings and it is very difficult to predict the human behaviour accurately.

(viii) Thus, management is neither exclusively an art nor exclusively a science, but a combination of both.



Q2) Managers are born or made? Enlighten.

- Ans- (i) Managing involves planning, Organising, Staffing, directing and Controlling for the accomplishment of Organisational goals. Any person who performs these functions is a manager.
- (ii) The basic job of a manager is the effective utilisation of human and other resources to achieve Organisational objectives.
- (iii) The attributes, a successful manager often possesses, are good personality, sound health, clear voice, high stamina, patience, sharp memory, initiative, education and training, intelligence, leadership, technical skill, knowledge of the Organisation and above all self confidence.
- (iv) Some of the above qualities are inborn, while others can be acquired in order to be successful in the work, These additional qualities can be added or improved only through training and management development programmes.
- (v) Combination of trained and inborn qualities can make good managers.
- (vi) It has been now established and accepted that it is through proper learning and training process that skilled managers are developed.
- (vii) It is more important that the person to be a good manager must possess technical and vocational knowledge of the Organisation.
- (viii) Hence, the need for a definite programme designed specially for executive development should be emphasized.

~~These~~ These principles establishes the cause and effect relationship between two or more variables in order to provide guidelines for managerial decision making and action.

Need of Management principles :-

- To increase the efficiency of management in understanding & solving the managerial problems.
- To crystallize the nature of management.
- To train and develop managers.
- To influence human behaviour.
- To ensure the constant supply of goods & service.
- To attain the social objectives.
- To improve research in management.



## Nature of Management principle :-

The principles of management have been developed and established on the basis of experience and observation of facts. Hence the management principles are characterised by the following features;

1. **Universal** → Management principles are universal that means they can be applied in different situations like military, hospital, school etc.
2. **Evolutionary** → Management principles are evolutionary in the sense that they have been developed on the basis of facts and observations.
3. **Dynamic** → This means they are flexible in nature. It can be applied in different ways under different situations.
4. **Relative** → Management principles are relative not absolute. They must be utilised in changing and special conditions. It is a matter of knowing how to make use of these principles intelligently and with experience.
5. **Behavioural** → These are behavioural in the sense that it aims at influencing individual efforts and motivating them towards the maximization of resources with minimum wastage.

## Universality of Management principles :-

- (i) The concepts and principles of management have universal application.
- (ii) This concept of universality of management suggest that the knowledge may be transferred from one country to another or from one Organisation to another within the same country.

### Favours :-

- The universality of principle of management is due to emphasis on the functions of management that are planning, staffing, organising, directing, controlling.
- The <sup>ability</sup> universality is due to fundamentals of management not due to techniques of management.
- The universality is due to common problems of effective use of resources like time efforts and capital.

### Against :-

- (i) Peter F. Drucker argued that the skills and the experience of management can not be transferred and applied from one Organisation to another having different objectives.



- (i), Earnst Dale argued that no individual can be a good administrator in both democratic and Communist countries.
- (ii), Mc Millan argued that philosophy is culture bound and not universal.

## Functions of Management

The elements of management process are known as functions of management. The functions of management are generally divided into 5 categories;

- (i), planning
- (ii) Organising
- (iii) Staffing
- (iv) Directing
- (v) Controlling

### (i) planning

- It is the primary function of management.
- It involves determining the objectives and selecting a course of action to achieve them.
- It is an intellectual process.

### (ii) Organising

- It is the process of establishing responsibility relationship among the members of the enterprise.

- The process of Organising consists of

- (a) determining the activities required to achieve the goals.
- (b) Grouping in units
- (c) Assigning specific duties to specific person.
- (d) Defining the responsibility of every person
- (e) Establishing vertical and horizontal authority responsibility.

### (iii) Staffing

- It is the process of filling all the position in the Organisation with qualified personnel.

- It consists of man power, recruitment, training, maintenance of employees.



## (iv) Directing

- Directing is the managerial function of guiding, supervising, motivating and leading people towards the attainment of targets.
- Directing consists of the process and techniques utilised in issuing instructions and certain that the operations are carried out as per planned.

## (v) Controlling

- It is the managerial function that relates to measurement and correction of performance.
- It is the process of determining what is to be accomplished that is the standard, what has been accomplished that is the performance and if necessary taking the corrective measures.
- It basically involves;
  - (i) Establishing of standard
  - (ii) Measurement of performance
  - (iii) Comparing the performance with standard
  - (iv) Correcting the deviations.

## Level of Management in Organisation

Most organizations have three management levels:

- (1) Low-level managers
- (2) Middle-level managers and
- (3) Top-level managers.

These managers are classified in a hierarchy of authority and perform different tasks. In many organizations, the number of managers in every level resembles a pyramid.

### (1) Low-level managers

Supervisors, Section Leads, and Foremen are examples of low-level management titles. These managers focus on controlling and directing.

Low-level managers usually have the responsibility of;

- Assigning employees tasks
- Guiding and supervising employees on day-to-day activities.
- Ensuring the quality and quantity of production
- Making recommendations and suggestions and
- Up channelling employee problems.



Also referred to as first-level managers, low-level managers are role models for employees. These managers provide

- Basic supervision
- Motivation
- Career planning
- Performance feedback; and
- Staff supervision

## (2) Middle-level Managers

General managers, branch managers, and department managers are all examples of middle-level managers. They are accountable to the top management for their departments' function.

Middle-level managers devote more time to organizational and directional functions than top-level managers. Their roles can be emphasized as;

- Executing organizational plans in conformance with the company's policies and the objectives of the top management.
- Defining and discussing information and policies from top management to lower management, and most importantly inspiring and providing guidance to low-level managers towards better performance.

Some of their functions are as follows;

- Designing & implementing effective group and intergroup work and information systems.
- Defining & monitoring group-level performance indicators;
- Diagnosing & resolving problems within and among work groups
- Designing & implementing reward systems supporting cooperative behaviour.

## (3) Top-level Managers

The board of directors, president, vice-president, and CEO are all examples of top-level managers.

These managers are responsible for controlling & overseeing the entire organization. They develop goals, strategic plans, company policies, and make decisions on the direction of the business.

In addition, top-level managers play a significant role in the mobilization of outside resources.

Top-level managers are accountable to the shareholders and general public.



## Market Survey and Opportunity Identification (Business planning)

### Business planning

A business plan is a written document giving in detail all relevant internal & external elements that affect business and strategy for starting a new venture.

A business plan must describe the company, its product and its management team. It should also state from where money will come and how it will be spent.

In preparing a business plan an entrepreneur can take help of experts in different fields like finance, legal, marketing, technical consultants etc.

A business plan can be used by an entrepreneur for a variety of objectives. Some of the objectives are as follows;

- Getting loan from banks or getting equity funding from various investors.
- Attracting business partners or key alliances.
- To clarify exact nature of the business.

While writing a business plan following things should be taken care of;

- **Defining purpose** → Recording the purpose of business plan in advance or; using the business plan for securing loan or attracting business partners, etc. helps in customising it according to the need of the audience.
- **Information collection** → It is important to list out all the information that is already available with you regarding business and the industry.
- **Financial Analysis** → All costs & revenues estimates have to be calculated. Financial statements have to be drafted. This exercise will finally lead to sensitivity analysis, calculation of ROI (Return on Investment), break even analysis & various financial ratios. It should be taken care that financial analysis is realistic & practical.



A business plan consists of the following sections; ← explain everything (10)

## Components

- (i) Title page
- (ii) Executive Summary
- (iii) Description of Business
- (iv) Description of Product/Services ← important & interesting (10)
- (v) Market Analysis
- (vi) Competitive analysis
- (vii) Operation & Management
- (viii) Financial Components ← important & interesting (10)

(i) Title page → A business plan should be presented with a cover listing the name of the business, address, phone number, email, website address & the date. It must look professional & should be easy to read and well put together.

(ii) Executive Summary → The executive summary or the statement of purpose concisely describes the reason for writing the business plan & tells the reader, what is to be expected right upfront.  
- It should contain business concept, financial features, financial requirements, current business position & major achievements.

(iii) Description of Business → The business description usually begins with a short explanatory point when describing the industry what is going on now as well as the outlook of the future.  
- With necessary research we can provide information on all the various markets within the industries including references to new product or development that could benefit or hinder the business.

(iv) Description of product/service → While describing the product or service we should make sure that the reader has clear idea what we are talking about.

- It should explain how people are going use the product or service and talk about what makes these product different from the others available in the market.

(v) Market Analysis → A thorough market analysis will help defining the prospects as well as help to establish pricing, distribute promotional strategies that will allow the company to succeed against the competitors both in short term and long term.



(vi) Competitive Analysis → The purpose of Competitive analysis is to determine the strengths and the weaknesses of the competitors within your market means who ever reads our business plan should get a clear idea about our target market and how we will stand a part from our competitors.

(vii) Operation & Management → It design to describe how the business function on a continuing basis. The operation plan highlights the logistics of the organization, responsibilities of the management team & the task ~~assigned~~ assigned to each within the company.

(viii) Financial Components → After defining all the components three financial statements which are the backbone of the business.

## Market Surveys

Market surveys are the ways in which companies obtain information about the customer, noncustomers for their business, and how their customers & consumers views on companies product & services.

### Types of Market Surveys

- 1) One on one
  - 2) Focus group
  - 3) Telephonic
  - 4) Online survey
  - 5) Mail survey
- 1) One on one → One on one market survey is another market survey technique used on introducing new products.
- 2) Focus group → In focus group type market survey a company may interview customers.
- 3) Telephonic → These surveys are conducted over phone, such as customer.
- 4) Online Survey → Online surveys open appear on the companies website in the form of notifications.
- 5) Mail survey → A company may use mail on survey to determine why some of its customers have stopped purchasing the companies product.

### A Suggestive Outline of a business plan :-

- 1) Business plan cover page
  - Business name,
  - Company Logo,
  - Address,
  - Tel & Fax No. and email id



- 2) Table of Contents
- 3) Executive Summary
- 4) vision, Mission Statement
- 5) Summary Description of Business -
  - Structure (wholesale, retail, manufacturing or service-oriented)
  - Legal form of ownership (sole, partner, Company, Cooperative)
  - Size (tiny, SSI, MSE, LSI)
  - Production
  - Performance levels.
- 6) SWOT Analysis
- 7) Detailed Description of product/service -
  - What value the customer gets.
  - What need it fulfills.
  - Type of product
  - Features of product
- 8) Marketing plan -
  - Target market and demand forecast
  - Industry analysis
  - Competitor analysis
  - Marketing strategy - 4Ps, Service delivery
- 9) Organisation
  - Location
  - Capacities
  - Legal structure of the enterprise
  - Legal requirements (licenses, clearances, NOCs etc.)
  - procurement of utility services (like water, power, communication facilities etc.)
  - Operations
  - Accounting methods
  - IP protection and insurance (if required)
- 10) Management and Team Composition
- 11) Financials
  - Personal financial statement
  - Start-up expenses - Capital expenditure & working capital
  - Sources of funds
  - First 12 months profit and loss projection
  - First 4 year projection of profit & loss, cash flow & balance sheet & break-even analysis



- Major assumptions made

12) Exit strategy

13) Appendices

- Questionnaires
- Surveys, market research studies
- Detailed list of equipment to be purchased
- Copies of lease agreements, offers for equipments & important inputs.
- Letters of support from potential customers
- Any other material needed to support the assumptions made in the plan.

### Micro, Small, medium enterprise (investment limit MSME)

In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two classes;

(a) **Manufacturing Enterprises** → The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the Industries (Development and Regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The manufacturing enterprises are defined in terms of investment in plant & machinery.

(b) **Service Enterprises** → The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

The limit for investment in plant & machinery / equipment for manufacturing / service enterprises, as notified, vide S.O. 1642 (E) dtd. 29-09-2006 are as under:

Manufacturing Sector	
Enterprises	Investment in plant & machinery
Micro	Does not exceed 25 Lakh rupees
Small	More than 25 lakh rupees but does not exceed 5 Crore rupees.
Medium	More than 5 Crore rupees but does not exceed 10 Crore rupees
Service Sector	
Enterprises	Investment in equipments
Micro	Does not exceed 10 lakh rupees
Small	More than 10 lakh rupees but does not exceed 2 Crore rupees
Medium	More than 2 Crore rupees but does not exceed 5 Crore rupees.



The investment in plant & machinery is the Original Cost excluding land and building and other items specified by the Ministry of Small Scale Industries vide its notification.

**Ancillary industry** - Ancillary industry which manufacture parts, components, tools intermediaries for heavy industry or large industry.

The investment on plant & machinery should not exceed 1Cr.

**Tiny industry** - The investment on plant & machinery should not exceed 25 lakh irrespective of the location of the unit.

### Time Schedule plan

The time schedule is a contractual document between the client and the contractor which defines the forecast sequence and progress of the work and the contractual start, finish and milestone dates.

The time schedule could contain the budget cost of the project which creates the project cash flow and could contain the manpower as well which creates manpower histograms.

### Types of the time-Schedule

There are few types of time schedule depend on the stage of the project;

1. Tender schedule
2. Master Time schedule
3. Detailed Time schedule
4. Baseline Time schedule
5. Updated Time schedule
6. Revised Time schedule

### The Importance of Scheduling :-

Scheduling is the art of planning your activities so that you can achieve your goals and priorities in the time you have available. when it's done effectively, it helps you;

- Understand what you can realistically achieve with your time.
- Make sure you have enough time for essential tasks.
- Add contingency time for "the unexpected".
- Avoid taking on more than you can handle.
- Work steadily toward your personal and career goals.
- Have enough time for family and friends, exercise and hobbies.
- Achieve a good work-life balance.



## Agencies to be contacted for project Implementation

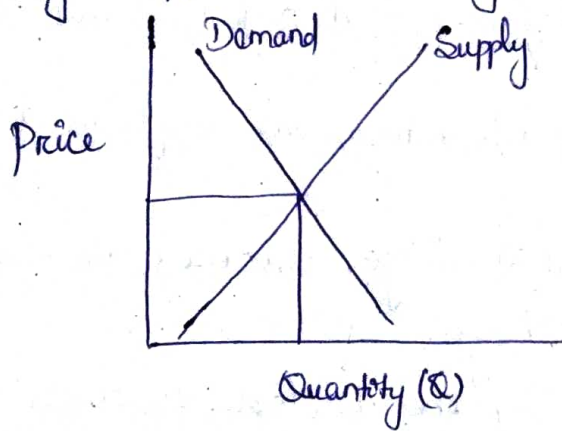
Approvals/Clearances Required	Department to be Approached and Consulted
Incorporation of Company	Registrar of Companies
Registration / IEM / Industrial License	District Industry Center for Small Scale Industries (SSI) Secretariat of Industrial Assistance (SIA) for large and medium industries
Allotment of Land	State DI / State Industrial Development Corporation (SIDC) Infrastructure Corporation / Small Scale Industrial Development Corporation (SSIDC)
permission for land use (in case industry is located outside an industrial area)	a. State DI b. Department of Town and Country planning c. Local authority / District Collector
NOC and Consent under water and Air pollution Control Acts	State pollution Control Board (SPCB)
Approval of Construction Activity & building plan	a. Town and Country planning b. Municipal and local authorities c. Chief Inspector of Factories d. pollution Control Board e. Electricity Board
Sanction of power	State Electricity Board
Use & storage of explosives	Chief Controller of Explosives
Boiler Inspection Certificate	Chief Inspector of Boilers
Finance	i. State financial Corporation / SIDC for term loans ii. For loans higher than Rs. 15 million, all India financial institutions like Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Finance Corporation of India (IFCI) etc.
Registration under states sales Tax Act, and Central and State Excise Act	i. Sales Tax Department ii. Central & State Excise Depts.
Extraction of Minerals	State Director of Mines and Geology
ISI Certificate	Regional office of the Bureau of Indian Standards (BIS)
Quality Marking Certificate	Quality Marking Center of the State Government
Weights and Measures	Inspector of weights and Measures



# Assessment of Demand and Supply and potential areas of Growth

## Supply and Demand

- i) In the Context of supply and demand discussion demands.
- ii) An important distinction to make the differences between demand and quantity demanded. The quantity demanded refers to the specific amount of that product that the Consumers are willing to purchase at the given price. This relationship between price and the quantity of product demanded at that price is defined as demand relationship.
- iii) Supply is defined as the total quantity of product or service that the market can afford.
- iv) The quantity supplied is amount of service that suppliers are willing supply in given prices. This relationship between price and amount of product or service supplied is called as supply relationships.
- v) When thinking about demand and supply together the supply relationship & demand relationships are mirror to each other at equilibrium.
- vi) The quantity supplied and quantity demanded are same at equilibrium.



## Identifying Business Opportunity

To establish an industry one need an idea & then converts it into project and reality. So he has to create such situations to catch the right opportunity and convert it into enterprise. Opportunity do not come by chance they are visible to those who constantly search of them. The entrepreneur has to collect necessary resources to convert the opportunity to successful business.

Business opportunity can be describe as an economic ideas, which can be adjustable to new situation to make a business and earn profits. For searching business opportunity one has to contact various person and collect lot of informations. He has to meet entrepreneur of similar line.



He need to contact future persons gather knowledge from them. He has to collect information of a number of business opportunity and analyse them. Before selecting an business opportunity one has to considered following things.

- Market scope of the product.
- Demand supply gap of the market
- Future demand of the product in the market
- Rate of return in investment
- Study the technical, production, managerial feasibility
- Own knowledge, capability and skill to handle the project.

### Objectives

- To keep a watch over the possibility market of the commodity (product) or service to be produced.
- To decide a high level group of manager so that the venture may be started.
- To make an assessment over financial resources by making financial forecast.
- To explore the opportunities for possible entry in other areas.
- To assess the requirements of labour, capital and materials for the industries.
- To findout the possibilities of short term and long term development in various areas of economy.
- To have the desire for technical knowledge, awareness towards new opportunities and acceptance for changes.
- To see the possibilities of diverting the available resources towards achieving the business goal.
- To identify those industries which are not based on local sources but which may be economically considered for future.

### Factors affecting Business Opportunity

- (i) Analysis of internal demand → Business opportunities may be identified by assessment of internal demand of the existing and proposed products that means what will be the possibilities of future demands.
- (ii) Availability of raw materials → If the raw materials will easily available the production cost will be low it also makes the entrepreneur ready to establish the industrial unit.



(iii) **External Assistance** → Role of external assistance like Govt., Supplier investors and specific institutions is also important in identification of business opportunities.

(iv) **Knowledge about industrial development** → By obtaining detailed knowledge about proposed industrial development from various sources, the entrepreneur may know the establishment of which type of industries will be profitable.

(v) **Internal Sources** → If the sources of production are regularly available to the entrepreneur he may take positive approach for the setup of industrial unit.

(vi) **Risk in business opportunities** → Every business involves risk. It goes on increasing or decreasing in such conditions the entrepreneur has to identify when and how much risk is to be taken.

(vii) **Performance of existing unit** → He must analyse the performance of existing unit (Manufacturing, packaging, distributing, Marketing).

(viii) **Promote entrepreneurial activity** → The entrepreneur must promote entrepreneurial activity for development of industries.

### Final Product Selection

Once an industry is finalised now it is time to decide the type of product produced and quantity. While doing this he has to make a comparison of all products he has thought in the mind.

One must understand that marketing the product is more important than producing it, so market survey is more important in selection of a product.

One can go for any product but he must consider following things;

- Behaviour of competitors
- Consumers respond and buying behaviour
- All profitable factors
- Feasibility of the products
- Market scope, rate of return.



# Unit-5

## Functional areas of management

### a) Production management

#### **Production & Productivity :-**

Production is the transformation of inputs into goods and services. The main objectives of a production process are :

- (i) optimum use of resources at optimum cost.
- (ii) manufacture of the desired quality and quantity of goods and services.

Production may be referred to as the process concerned with the conversion inputs (raw materials, machinery, information, manpower, and other factors of production) into output (semi finished and finished goods and services) with the help of certain processes (planning, scheduling and controlling etc.)

#### **Definition :-**

A few definitions of production management are being reproduced here under to understand the meaning of the term clearly :



“Production management then becomes the process of effectively planning and regulating the operations of that part of an enterprise which is responsible for actual transformation of materials into finished products”.

Production management, thus, is assigned with the following tasks –

- (i) Specifying and accumulating the input resources, i.e., management, men, information, materials, machine and capital.
- (ii) Designing and installing the assembly or conversion process to transform the inputs into output, and
- (iii) Coordinating and operating the production process so that the desired goods and services may be produced efficiently and at a minimum cost.

The operation system includes both manufacturing sector as well as service sector, but when you use the word PM, you should be careful to note that it refers to the manufacturing sector but not the service sector.

## **Productivity**

Productivity can be defined in many ways. Some of them are as follows:

- i. Productivity can also be defined as human endeavour (effort) to produce more and more with less and less inputs of resources so that the products can be purchased by a large number of people at affordable price.
- ii. Productivity is nothing but the reduction in wastage of resources such as labour, machines, materials, power, space, time, capital, etc.
- iii. Productivity aims at the maximum utilization of resources for yielding as many goods and services as possible, of the kinds most wanted by consumers at lowest possible cost.
- iv. Productivity processes more efficient works involving less fatigue to workers due to improvements in the layout of plant and work, better working conditions and simplification of work. In a wider sense productivity may be taken to constitute the ratio of all available goods and services to the potential resources of the group.



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Productivity is a common measure on how well resources are being used. In the broadest sense, it can be defined as the following ratio:

Productivity = output / input

### **Production, planning & control**

Planning and control are interrelated and interdependent. Planning is meaningless unless control action is taken to ensure the success of the plan. Similarly, control is dependent on planning as the standards of performance are laid down under planning. Therefore, production planning and control should be considered an integrated function of planning to ensure the most efficient production and regulation of operations to execute the plans successfully.

Production, planning & control (PPC) defined as "the direction and coordination of the firms materials and physical facilities towards the attainment of pre specified production goal, in the most efficient and effective manner".

According to Samuel Elton PPC defined as "the highest efficiency in production is obtained by manufacturing the required quantity of the product of required quality at required time by the best and cheapest method".

In simple word PPC means plan your work and work your plan . it is a complete plan, procedure to employ right quantity, right person, at right place to get the job at most economic way.

PPC regulates and controls how, where, and when work is to be done.

### **Objectives-**

Production cannot possible without material, man, and machine. The PPC system integrate and coordinate the use of all three for the efficient production.

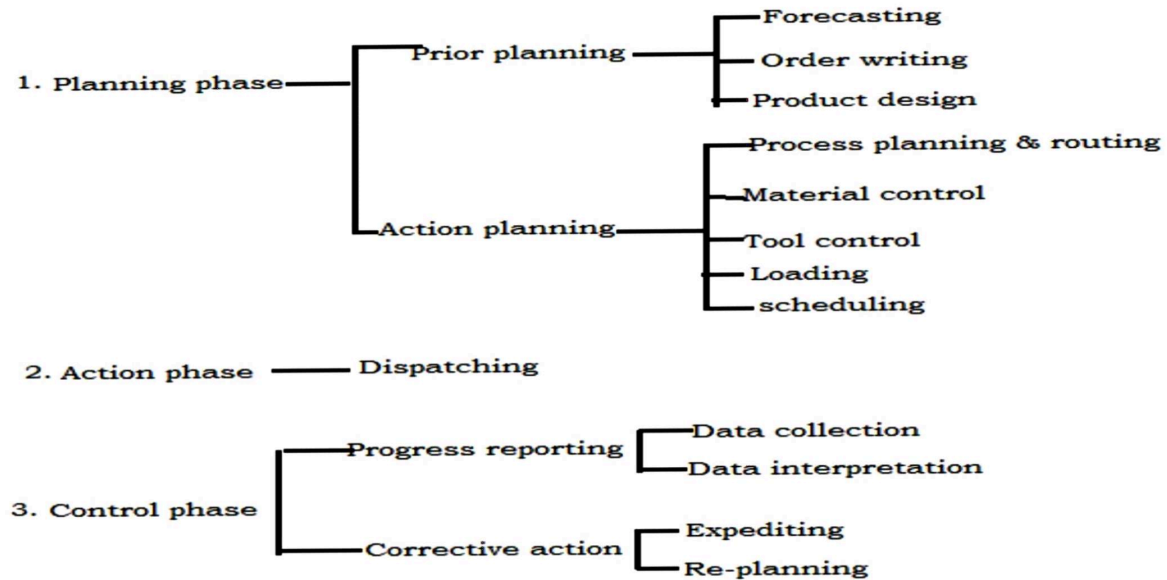
- i. To design a system and plan to carry out production so that delivery date can be meet.
- ii. Ensure smooth flow of production.
- iii. Effective utilisation of production facilities.
- iv. Coordinate the man, machine and materials in most economic way.
- v. Coordinate the production activities of various departments.
- vi. Ensure production of right product in right quality at right time.



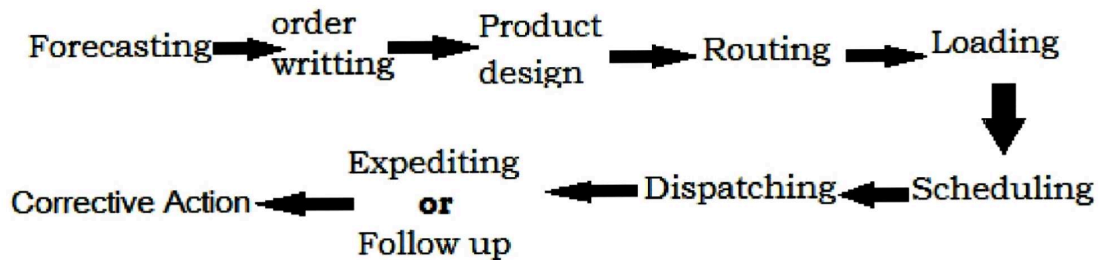
- vii. Maintain flexibility in operation to meet changes.
- viii. Establish target and check against performance.

### Function of PPC:

The functions of PPC mainly grouped into 3 categories.



### Steps of PPC



A standard Process of production planning and control may follow following steps discuss below.

1. Forecasting :- defined as the estimation of future activities . This provides the basis for establishing requirements of men, materials, time and money.
2. Order writing :- it is the authorisation given to persons to do a particular job.



3. Product design :- after preparing work authorisation the next step is to describe the work in details or preparing specification under which the job will be done . it includes blue print preparation, drawing, bill of materials etc.

#### 4. Routing

It is the process of determining the most advantageous path to be followed in which various operations will be carried out.

It consists of the determination of operations through which the product must pass and the arrangement of operations in the sequence that will require a minimum of handling, transportation, storage and deterioration through exposure. It is the job related to plant layout, material handelling and temporary storage of materials.

A route for the movement of a manufacturing lot through the factory results from the determination of where each operation on a component part, subassembly, or assembly is to be performed.

Routing is an essential element of production control because other production control functions are dependent on routing function.

The routing procedure depends on considerations of type of work stations, characteristics of individual machines, needs of personnel etc. In general, the following routing procedure is followed :

**(i) Determining What to Make and What to Buy :** The product is analysed, from manufacturing point of view, to find out how many parts or components can be manufactured in the plant and how many can be purchased from outside directly. **(ii) Ascertaining the Requirements of Materials :** After the decision to manufacture is taken, the production department decides the exact quantity and quality of materials required for the manufacture of the components or the product. A parts list and a bill of materials is prepared showing name of each part, quantity, material specifications, amount of materials required, etc. The necessary materials, thus, can be procured.

**(iii) Preparation of Route Sheet :** Route sheets are prepared in advance .The chief prepare a route sheet in tabular form on which the path that a particular item is to follow through production.



A route sheet is to be prepared for every production order showing the individual parts to be completed for each finished individual parts to be completed for each finished product before any group can be assembled.

While preparing a route sheet, it is essential to bear in mind that the route selected is the shortest and the most economical of all possible alternative routes.

**(iv) Determining Lot Sizes :** When the work orders are received from the customers, it is necessary to determine the lot sizes so as to keep the route free and ready for smooth operations.

**(v) Determining Scrap Factors :** A scrap factor is the anticipated normal scrap encountered in the course of manufacturing process. The routing department should determine the amount of possible scrap and rejection in each order or lot. **(vi) Estimation of the cost of the Product :** The cost of the component or product is analysed and estimated through the information obtained in steps (i) to (v) above. The cost consists of material, wages, and other specific and indirect expenses.

**(vii) Preparation of Production Control Forms :** To collect detailed information relating to production control, the production department prepares the various forms such as job cards, inspection cards, move tickets, tool tickets, etc.

## 5. Loading

Once the route has been established, the work can be loaded against the selected machine. Loading deals with the amount of work assigned to a machine or a worker.

It deals with the record of work-load of different shops. The total time required to perform the operations is computed by multiplying the unit operation time given on the standard process sheet by the number of parts to be processed. The total time is then added to the work already planned for the work station. The process results in a tabulated list or chart showing the planned utilisation of machines or work stations in the plant. From the chart, it is easy to assess the spare capacity of the plant.



If the loading charts indicate sufficient spare capacity, efforts may be directed through the sales department to obtain more orders for the utilisation of spare capacity. Under load of certain departments may also arise from ineffective planning. In such a case, the remedy lies in proper planning. But if, on the other hand, there is an overload in any workshop, action on any one or more of the following lines may be taken to relieve the bottleneck

- (a) by arranging for overtime work;
- (b) by introducing an additional shift;
- (c) by transferring operations to another shop; and
- (d) by sub-contracting of the excess load.

## **6. Scheduling**

Scheduling involves fixing priorities for different jobs and operations and providing time for their performance. A schedule is a time-table of operations specifying the time and date when each job/operation is to be started and completed. Scheduling is, thus, the determination of the time that should be required to perform each operation and also the time necessary to perform the entire series,

The objective of scheduling is to ensure that every job is started at the right time and it is completed before the delivery date.

Scheduling and routing are inter-dependent and the two should, therefore, be integrated properly. To be effective, scheduling should be flexible and due provision should be made for contingencies like delay in the availability of materials, breakdown of machines, absence of key personnel, etc.

## **7. Dispatching (release of work order)**

Dispatching may be defined as “the setting of productive activities in motion through release of orders and instructions, in accordance with previously planned timings as embodied on operation sheet, route card and loading schedules”.



Dispatch provides official authorization for

- (i) Movement of materials to different work stations,
- (ii) movement of tools and fixtures necessary for each operation,
- (iii) beginning of work on each operation,
- (iv) recording of beginning and completion time,
- (v) movement of work in accordance with a routing schedule,
- (vi) control of progress of all operations and making of necessary adjustments in the release of operations.

Dispatching requires co-ordination among all the departments concerned.

## **8. Expediting or Follow Up**

Follow up or expediting is that branch of production control procedure which regulates the progress of materials and parts through the production process.

It involves determination of the progress of work, removing bottlenecks in the flow of work and ensuring that the productive operations are taking place in accordance with the plans.

It spots delays or deviations from the production plans. It helps to reveal defects in routing and scheduling, misunderstanding of orders and instructions under loading or overloading of work etc. All problems and deviations are investigated and remedial measures are undertaken to ensure the completion of work by the planned date.

## **9. Corrective Action**

Corrective action is needed to make effective the system of production planning and control. By resorting to corrective measures, the production manager maintains full control over the production activities.

For instance, routing may be defective and the schedules may be unrealistic and rigid. The production manager should try to rectify the routes and lay down realistic and flexible schedules. Many a time, production schedules are not met in time or if they are met, the goods are of substandard quality. If the causes of these are due to the poor



performance of the employees, certain personnel decisions like demotion, transfer and training may be essential.

### **Objectives of Production Planning and Control**

The main objective of production planning and control is to ensure the coordinated flow of work so that the required number of products are manufactured in the required quantity and of required quality at the required time at optimum efficiency. In other words, production planning and control aims at the following purposes :

**(i) Continuous Flow of Production :** It tries to achieve a smooth and continuous production by eliminating successfully all sorts of bottlenecks in the process of production through well-planned routing and scheduling requirements relating to production work.

**(ii) Planned Requirements of Resources :** It seeks to ensure the availability of all the inputs i.e. materials, machines, tools, equipment and manpower in the required quantity, of the required quality and at the required time so that desired targets of production may be achieved.

**(iii) Co-ordinated work Schedules :** The production activities planned and carried out in a manufacturing organizations as per the master schedule. The production planning and control tries to ensure that the schedules to be issued to the various departments/ units/supervisors are in coordination with the master schedule.

**(iv) Optimum Inventory :** It aims at minimum investment in inventories consistent with continuous flow of production.

**(v) Increased Productivity :** It aims at increased productivity by increasing efficiency and by being economical. This is achieved by optimising the use of productive resources and eliminating wastage and spoilage.

**(vi) Customer Satisfaction :** It also aims at satisfying customers requirements by producing the items as per the specifications or desires of the customers. It seeks to ensure delivery of products on time by co-ordinating the production operations with customers' orders.



**(vii) Production and Employment Stabilization :** Production planning and control aims at ensuring production and employment levels that are relatively stable and consistent with the quantity of sales.

**(viii) Evaluation of Performance :** The process of production planning and control is expected to keep a constant check on operations by judging the performance of various individuals and workshops and taking suitable corrective measures if there is any deviation between planned and actual operations.

### **Importance of Production Planning and Control**

The system of production planning and control serves as the nervous system of a plant. It is a co-ordinating agency to co-ordinate the activities of engineering, purchasing, production, selling and stock control departments. An efficient system of production planning and control helps in providing better and more economic goods to customers at lower investment. It is essential in all plants irrespective of their nature and size. The principal advantages of production planning and control are summarized below :

**(i) Better Service to Customers :** Production planning and control, through proper scheduling and expediting of work, helps in providing better services to customers in terms of better quality of goods at reasonable prices as per promised delivery dates. Delivery in time and proper quality, both help in winning the confidence of customers,

improving relations with customers and promoting profitable repeat orders.

**(ii) Fewer Rush Orders :** In an organisation, where there is effective system of production planning and control, production operations move smoothly as per original planning and matching with the promised delivery dates. Consequently, there will be fewer rush orders in the plant and less overtime than, in the same industry, without adequate production planning and control.

**(iii) Better Control of Inventory :** A sound system of production planning and control helps in maintaining inventory at proper levels and, thereby, minimising investment in inventory. It requires lower inventory of work-in-progress and less finished stock to give efficient service to customers. It also helps in exercising better control over raw-material inventory, which contributes to more effective purchasing.



**(iv) More Effective Use of Equipment :** An efficient system of production planning and control makes for the most effective use of equipment. It provides information to the management on regular basis pertaining to the present position of all orders in process, equipment and personnel requirements for next few weeks. The workers can be communicated well in advance if any retrenchment, lay-offs, transfer, etc. is likely to come about. Also, unnecessary purchases of equipment and materials can be avoided. Thus, it is possible to ensure proper utilization of equipment and other resources.

**(v) Reduced Idle Time :** Production planning and control helps in reducing idle time i.e. loss of time by workers waiting for materials and other facilities; because it ensures that materials and other facilities are available to the workers in time as per the production schedule. Consequently, less man-hours are lost, which has a positive impact on the cost of production.

**(vi) Improved Plant Morale :** An effective system of production planning and control co-ordinates the activities of all the departments involved in the production activity. It ensures even flow of work and avoids rush orders. It avoids 'speeding up' of workers and maintains healthy working conditions in the plant. Thus, there is improved plant morale as a byproduct.

**(vii) Good Public Image :** A proper system of production planning and control is helpful in keeping systematised operations in an organisation. Such an organisation is in a position to meet its orders in time to the satisfaction of its customers. Customers satisfaction leads to increased sales, increased profits, industrial harmony and, ultimately, good public image of the enterprise.

**(viii) Lower Capital Requirements :** Under a sound system of production planning and control, everything relating to production is planned well in advance of operations. Where, when and what is required in the form of input is known before the actual production process starts. Inputs are made available as per schedule which ensures even flow of production without any bottlenecks. Facilities are used more effectively and

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inventory levels are kept as per schedule neither more nor less. Thus, production planning and control helps, in minimising capital investment in equipment and inventories.

### **Limitations of Production Planning and Control**

Undoubtedly, the system of production planning and control is a must for efficient production management; but in, practice, sometimes, it fails to achieve the expected results because of the following limitations :

**(i) Lack of Sound Basis :** Production planning and control is based on certain assumptions or forecasts about availability of inputs like materials, power, equipment etc. and customers orders. In case these assumptions and forecasts do not go right, the system of production planning and control will become ineffective.

**(ii) Rigidity in Plant's Working :** Production planning and control may be responsible for creating rigidity in the working of the plant. Once the production planning has been completed, any subsequent change may be resisted by the employees.

**(iii) Time consuming Process :** Production planning is a time consuming process. Therefore, under emergencies it may not be possible to go through the process of production planning.

**(iv) Costly Device :** Production planning and control is not only a time consuming process but is a costly process also. Its effective implementation requires services of specialists for performing functions of routing, scheduling, loading, despatching and expediting. Small firms cannot afford to employ specialists for the efficient performance of these functions.

**(v) External Limitations :** The effectiveness of production planning and control is sometimes limited because of external factors which are beyond the control of production manager, Sudden break-out of war, government control, natural calamities, change in fashion, change in technology, etc. are factors which have a negative impact on the implementation of production planning and control.

### **Requirements Of Efficient Production Planning And Control :-**



A system of production planning and control is said to be efficient when it does its job well and successfully without wasting time or energy. To be efficient it must have the following prerequisites or conditions or requirements:

**(i) Sound Organisational Structure :** An effective system of production planning and control requires a sound organisational structure. The management as a team should recognise the need for production planning and control and must be willing to delegate authority and create responsibility at all levels. In case the work schedules are centrally

determined, the supervisors must recognise that this is merely an extension of functional specialisation to make it possible for them to devote more of their time to those activities for which they are best qualified. This attitude produces co-operative effort.

**(ii) Reliable and Detailed Information :** For successful production planning and control, reliable, detailed and up-to-date information must be available to all concerned regarding the following :

(a) products required to be produced;

(b) the number and types of each production machine and processing unit, together with the fees, speeds, and productive capacities.

(c) the manufacturing time required and the sequence of operations of each part going into the finished product;

(d) requirements and availability of material labour;

(e) requirements and availability of the proper tools, jigs, and fixtures for each part of the product to be manufactured;

(f) work-in-progress, etc.

**(iii) Trained Personnel :** A competent system of production planning and control presupposes the existence of trained personnel in the use of special tools, jigs and fixtures, etc. The personnel must have the required aptitude for the work to be completed and understand the various aspects of production planning and control. They must have built-in motivation for achieving goals of the firm.

**(iv) Standardisation :** The term 'standardisation' refers to the process of making things that conform to a fixed size, colour, quality, etc. for achieving an effective

system of production planning and control, standardisation is required for the following :

- (a) materials purchased and fabricated;
- (b) operations on all parts as far as design permits;
- (c) tools and equipment as far as practical;
- (d) procedures of operations and organisational set up including delegation of authority and fixed responsibility;
- (e) production standards for employees and method of remuneration for employees;
- (f) quality requirements and adequate inspection to guarantee quality maintenance;
- (g) reports on production performance in comparison with scheduled production, etc.

**(v) Flexibility :** Something or someone that is flexible is able to change easily and adopt to different conditions and circumstances as they occur. To be successful, the system of production planning and control should have built-in flexibility so that it may adapt to changes like power failure, break down of machinery, shortage of raw materials, absence of key personnel, etc.

**(vi) Periodic Appraisal :** An appraisal of a situation is a careful judgement about what is happening and why is happening. Since production planning and control is a continuous process, a periodic appraisal of its various aspects is required so that superfluous ones may be identified and removed. The process of continuous checking is quite helpful in keeping the system efficient and in line with the requirements of the particular organisation and its customers.

## **Financial management**

### **1. Meaning & Importance :-**



Financial management may be defined as, "Financial management is the integral part of general management engaged in raising of finance, allocation and utilization of finances or funds and other managerial function for the overall growth of the enterprise."

### **objectives of financial management:-**

- **Procurement of Funds-** Financial management concerned with the collection of funds from different sources. The collection of fund includes- identification of sources of funds, raising of funds, consideration of cost of capital.
- **Effective Use Of Funds-** Financial management concerned with the effective use of funds collected from various sources. Effective utilization of funds ensures safety, liquidity and profitability of funds collected from different sources.
- **Flexibility-** Financial management is flexible in articulating the changes in the economic activities within the enterprise and outside the enterprise.
- **Managerial Decision Making-** Financial management takes different types of decision in respect of financial activities of a firm. It takes the following decision- INVESTMENT, FINANCING, and DIVIDEND.
- **Financial Planning-** Financial management frames financial planning which includes-determination of capital requirement, methods of raising funds, etc.
- **Financial Analysis-** Financial management makes financial analysis of the performance of any enterprise to assess the effectiveness of the financial activities.
- **Financial Control-** Financial management implements control over the financial activities of the business enterprise. Financial control ensures effective use of funds in a planned way.
- **Credit Management-** Financial management arranges for credit management. Credit management ensures the flow of cash in the business enterprise.

### **Functions of Financial Management**

Financial management performs different function for the effective management of funds of any organization. Financial management is concerned with the supervision of the capital invested in the business enterprise, allocation of finance to resources and overall increase in the value of business.

Jim Mc Menamin proposes the following interrelated activities of financial management-Financial analysis, financial decision making, financial planning, and financial control. The function of financial management include the following-

- Resource mobilization from the economy
- Resource development
- Resource generation and distribution for growth and risk comparison

Now we will discuss the finance related functions of financial management. Basically these decisions are divided under three broad categories. These are financial decision, investment decision and dividend decisions. We will discuss them one by one.

- **Financial Decision-** Financing decision of an enterprise includes decision for short term capital and long term capital requirement. Financing decision include decision upon the needs and source of new outside financing and caring on negotiations for new outside financing. Financing means procurement of finance at most convenient and economic rates.
- **Investment Decisions-** Funds acquired from different sources are to be invested in profitable projects so that maximum profit can be earned and the value of the wealth becomes maximum. Long term funds are invested for the acquisition of fixed assets and current assets also. The investment of funds in different projects should be made carefully so that the funds can be utilized in the maximum possible ways. Capital budgeting techniques is used or making investment decisions. Investment decision considers the management of current assets such as cash, marketable securities, etc. Capital budgeting which includes identification, selection, implementation of capital projects, etc. and management of mergers, reorganization, disinvestment, etc.



- **Dividend Decisions**- The financial managers takes dividend decisions. For taking decision in respect of dividend, the factor to be consider include- availability of cash, tax position of the shareholders, trend of earnings, requirements of funds for the future, etc. Dividend decision considers the allocation of net profit. Dividend decision gives emphasis on the checking on financial performance. The financial manager takes initiatives to take proper dividend decisions as to the amount of dividend to be paid and the time of payment of dividend. He tries to set balance between dividend retention and distribution. Dividend decisions are taken considering the overall liquidity and profitability of the enterprise. Dividend decisions are taken taking into account the disposition of profits between dividend and retained earnings.

## **Capital –**

**Fixed capital** -Fixed capital means that capital, which is used for long-term investment of the business concern. For example, purchase of permanent assets. Normally it consists of non-recurring in nature.

**Working Capital** - Working Capital is another part of the capital which is needed for meeting day to day requirement of the business concern. For example, payment to creditors, salary paid to workers, purchase of raw materials etc., normally it consists of recurring in nature. It can be easily converted into cash. Hence, it is also known as short-term capital.

### **Definition And Classification Of Working Capital:**

Working capital refers to the circulating capital required to meet the day to day operations

of a business firm. Working capital may be defined by various authors as follows:

1. According to Weston & Brigham - "Working capital refers to a firm's investment in short term assets, such as cash amounts receivables, inventories etc.

### **Concept Of Working Capital**

Working capital can be classified or understood with the help of the following two important concepts.

### **Gross Working Capital**

Gross Working Capital is the general concept which determines the working capital concept.

Thus, the gross working capital is the capital invested in total current assets of the business

concern. Gross Working Capital is simply called as the total current assets of the concern.

$$\text{GWC} = \text{CA}$$

### **Net Working Capital**

Net Working Capital is the specific concept, which, considers both current assets and current liability of the concern. Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

If the current assets exceed the current liabilities it is said to be positive working capital; it is reverse, it is said to be Negative working capital.

$$\text{NWC} = \text{CA} - \text{CL}$$

### **Component of Working Capital :-**

Working capital constitutes various current assets and current liabilities. This can be illustrated by the following chart.

<b>Current asset</b>	<b>Current liability</b>
Cash in Hand	Bills Payable
Current Assets	Sundry Creditors
Current Liability	Outstanding Expenses
Cash at Bank	Short-term Loans and Advances
Bills Receivable	Dividend Payable
Sundry Debtors	Bank Overdraft
Short-term Loans Advances	Provision for Taxation
Inventories	
Prepaid Expenses	
Accrued Income	

### **TYPES OF WORKING CAPITAL**



Working Capital may be classified into three important types on the basis of time.

### **Working Capital**

1. Permanent Working Capital
2. Temporary Working Capital
3. Semi Variable Working Capital

#### **1. Permanent Working Capital**

It is also known as Fixed Working Capital. It is the capital; the business concern must maintain certain amount of capital at minimum level at all times. The level of Permanent Capital depends upon the nature of the business. Permanent or Fixed Working Capital will

not change irrespective of time or volume of sales.

#### **2. Temporary Working Capital**

It is also known as variable working capital. It is the amount of capital which is required to

meet the Seasonal demands and some special purposes. It can be further classified into Seasonal working capital and Special working capital.

The capital required to meet the seasonal needs of the business concern is called as Seasonal working capital. The capital required to meet the special requirements such as launching of extensive marketing campaigns for conducting research, etc.

#### **3. Semi Variable Working Capital**

Certain amount of Working Capital is in the field level up to a certain stage and after that it

will increase depending upon the change of sales or time.

### **NEEDS OF WORKING CAPITAL**

Working Capital is an essential part of the business concern. Every business concern must maintain certain amount of Working Capital for their day-to-day requirements and meet

the short-term obligations. Working Capital is needed for the following purposes.

**1. Purchase of raw materials and spares:** The basic part of manufacturing process is, raw materials. It should purchase frequently according to the needs of the business concern. Hence, every business concern maintains certain amount as Working Capital to purchase raw materials, components, spares, etc.

**2. Payment of wages and salary:** The next part of Working Capital is payment of wages and salaries to labour and employees. Periodical payment facilities make employees perfect in their work. So a business concern maintains adequate the amount of working capital to make the payment of wages and salaries.

**3. Day-to-day expenses:** A business concern has to meet various expenditures regarding the operations at daily basis like fuel, power, office expenses, etc.

**4. Provide credit obligations:** A business concern responsible to provide credit facilities to the customer and meet the short-term obligation. So the concern must provide adequate Working Capital.

### **Working Capital Cycle**

Working Capital Cycle is also known as Operating cycle. Operating cycle is the total time gap between the purchase of raw material and the receipt from Debtors .

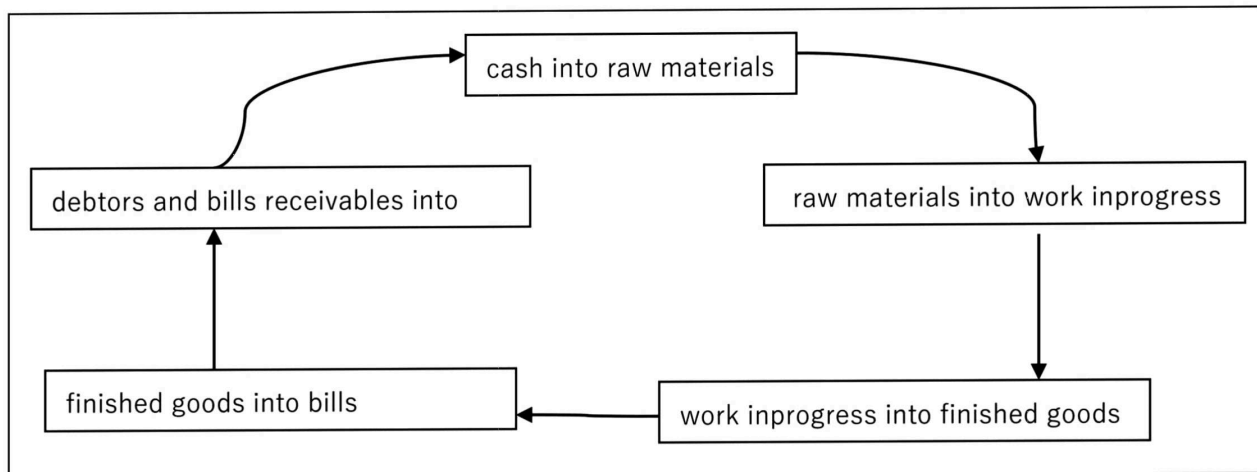
Working Capital Cycle measures the time duration between paying for goods supplied to you (procurement of raw materials) and final receipt of cash to you from the sale of finished product.

Working capital is needed till a firm gets cash on sale of finished products. The Working Capital Cycle (or operating cycle) is the length of time between a company's paying for material entering into stock and receiving the inflow of cash from sales. The movements in the cycle are different for different types of companies and are dependent on the nature of the company.

The duration of time required to complete the following sequence of events, in case of manufacturing firm, is called the operating cycle:

1. Conversion of cash into raw materials.
2. Conversion of raw materials into work-in- progress.
3. Conversion of work in process into finished goods.
4. Conversion of finished goods into debtors and bills receivables through sales.
5. Conversion of debtors and bills receivables into cash.





The length of cycle will depend on the nature of business. Non manufacturing concerns, service concerns and financial concerns will not have raw material and work-in-process so their cycle will be shorter. Financial Concerns have a shortest operating cycle.

Operating cycle consists of the following important stages:

1. Raw Material and Storage Stage, **(R)**
2. Work in Process Stage, **(W)**
3. Finished Goods Stage, **(F)**
4. Debtors Collection Stage, **(D)**
5. Creditors Payment Period Stage. **(C)**

$$\mathbf{O = R + W + F + D - C}$$

Each component of the operating cycle can be calculated by the following formula:

$$\mathbf{R = \frac{\text{Average Stock of Raw Material}}{\text{Average Raw Material Consumption Per Day}}}$$

$$\mathbf{W = \frac{\text{Average Stock of Raw Material}}{\text{Average Cost of Production Per Day}}}$$

$$F = \frac{\text{Average Finished Stock Inventory}}{\text{Average Cost of Goods Sold Per Day}}$$

$$D = \frac{\text{Average Book Debts}}{\text{Average Credit Sales Per Day}}$$

$$C = \frac{\text{Average Trade Creditors}}{\text{Average Credit Purchase Per Day}}$$

### Exercise 1

From the following information extracted from the books of a manufacturing company, compute the operating cycle in days and the amount of working capital required:

Period Covered	365 days
Average period of credit allowed by suppliers	16 days
Average Total of Debtors Outstanding	480 00
Raw Material Consumption	4,400 00
Total Production Cost	10,000 00
Total Cost of Sales	10,500 00
Sales for the year	16,000 00
Value of Average Stock maintained:	
Raw Material	320 00
Work-in-progress	350 00
Finished Goods	260 00

### Solution

#### Computation of Operating Cycle

(i) Raw material held in stock:

$$= \text{Average stocks of raw materials held} / \text{Average consumption per day}$$

$$= 320 / (4400 / 365) = (320 \times 365) / 4400 = 275 \text{ days}$$

Less: Average credit period granted by Suppliers = 16 days / 11 days

(ii) Work-in-progress:

$$= 350 / (10,000 / 365) = (365 \times 320) / 10,000 = 13 \text{ days}$$

(iii) Finished good held in stock:



$$= 260 / (10,500 / 365) = (260 \times 365) / 10,500 = 9 \text{ days}$$

(iv) Credit period allowed to debtors:

$$= 480 / (16,000 \times 365) = (365 \times 480) / 16,000 = 11 \text{ days}$$

Total operating cycle period: (i) + (ii) + (iii) + (iv) = 44 days

Number of Operating cycles in a year =  $365 / 44 = 8.30$

Amount of Working Capital required

$$= \text{Total operating cost} / \text{Number of operating cycles in a year}$$

$$= 10,500 / 8.3 = \text{Rs. } 1,265$$

Alternatively, the amount of working capital could have also been calculated by estimating the components of working capital method, as shown below:

Value of Average Stock Maintained	<b>320</b>
Raw Material	<b>350</b>
Work-in-progress	<b>260</b>
Finished Goods	<b>480</b>
Average Debtors Outstanding	<b>1410</b>
<b>Less:</b> Average Creditors Outstanding	<b>-145</b>
	<b>1265</b>

## 1. Account

In actual practice, the individual transactions of similar nature are recorded, added and subtracted at one place. Such place is customarily the meaning of debit and credit, it is essential to understand the meaning and form of an account.

**An account** is a record of all business transactions relating to a particular person or asset or liability or expense or income. In accounting, we keep a separate record of each individual, asset, liability, expense or income. The place where such a record is maintained is termed as an 'Account'.

### Type of accounts -:

Therefore, accounts can also be classified into Personal, Real and Nominal. The classification may be illustrated as follows

**I. Personal Accounts :** The accounts which is dealing with persons. Who may be debtor or creditor. Personal accounts include the following.

**a) Natural Persons :** Accounts which relate to human being. For example, Mohan's A/c, Shyam's A/c etc.

**b) Artificial persons :** Accounts which relate to a group of persons or firms or institutions. For example, HMT Ltd., Indian Overseas Bank, Life Insurance Corporation of India, Cosmopolitan club etc.

**c) Representative Persons:** Accounts which represent a particular person or group of persons. For example, outstanding salary account, prepaid insurance account, etc.

**II. Impersonal Accounts:** - All those accounts which are not personal accounts. This is further divided into two types viz. Real and Nominal accounts.

a) **Real Accounts:** Accounts relating to properties and commodities, which are owned by the business concern. Real accounts include tangible and intangible accounts. For example, Land, Building, Goodwill, Purchases, etc.

b) **Nominal Accounts:** These accounts are those that record incomes and expenses and gains and losses of a business concern. For example, Salary Account, Dividend Account, etc.

**Accounting-** it is the act of recording ,classifying ,summarizing and reporting business transaction & interpreting their effect on the affairs of a business entity.

**some terminology of accounting-**

**Assets-** properties that are owned and have some monetary values.

**Current asset-** assets which can be easily converted into cash within a short period (e.g cash in bank, cash in hand, inventories)

**Fixed assets-** assets which have relatively permanent existence and can't be easily converted into cash within a short period (e.g land , building, furniture)

**Liabilities-** the claim on the business until they are paid is known as liabilities

**Current liabilities-** the claim (debt) which is to be repaid within short period.(year or less)

e.g- wages, short term loan etc

**fixed liabilities-** these are the obligations that are payable in more than a year which are not to be liquidated from the assets.

e.g- long term loan , bond payable, owner capital)

**capital-** the money invested in the business in order to yield an income is capital

**creditor-** is a person who supplies finance to other i.e he has got money from others



**debtor**- he has taken money from creditor so he has to repay it.

### **Golden Rules of Accounting (Rules for Debiting and Crediting)**

All the business transactions are recorded on the basis of the following rules.

S.No.	Name of Account	Debit Aspect	Credit Aspect
1	Personal	The receiver	The giver
2	Real	What comes in	What goes out
3	Nominal	All expenses and losses	All incomes and gains.

#### **Illustration : 1**

Classify the following items into Personal, Real and Nominal Accounts?

1. Capital
2. Sales
3. Drawings
4. Outstanding salary
5. Cash
6. Rent
7. Interest paid
8. Indian Bank
9. Discount received
10. Building
11. Bank
12. Chandrasekar
13. Murugan Lending Library
14. Advertisement
15. Purchases

#### **Solution:**

1. Personal account
2. Real account
3. Personal account
4. Personal (Representative) account
5. Real account
6. Nominal account
7. Nominal account
8. Personal (Legal Body) account
9. Nominal account
10. Real account
11. Personal account
12. Personal account
13. Personal account
14. Nominal account
15. Real account

## **2. Book-Keeping**

Book-keeping is that branch of knowledge which tells us how to keep a record of business transactions. The activities of book-keeping include recording in the journal, posting to the ledger and balancing of accounts.

“Book-keeping is the art of correctly recording in the books of account (all those business transactions) systematically.

#### **Objectives :-**

The objectives of book-keeping are

- To have permanent record of all the business transactions.

- To keep records of income and expenses in such a way that the net profit or net loss may be calculated.
- To keep records of assets and liabilities in such a way that the financial position of the business may be ascertained.
- To keep control on expenses with a view to minimize the same in order to maximize profit.
- To know the names of the customers and the amount due from them.
- To know the names of suppliers and the amount due to them.
- To have important information for legal and tax purposes.
- **Control over Borrowings:** Many businessmen borrow from banks and other sources. These loans are repayable. Just as he must have a control over assets, he should have control over liabilities.
- **Identifying Do's and Don'ts :** Book keeping enables the proprietor to make an intelligent and periodic analysis of various aspects of the business such as purchases, sales, expenditures and incomes. From such analysis, it will be possible to focus his attention on what should be done and what should not be done to enhance his profit earning capacity.
- **Fixing the Selling Price :** In fixing the selling price, the businessmen have to consider many aspects of accounting information such as cost of production, cost of purchases and other expenses. Accounting information is essential in determining selling prices.
- **Taxation:** Businessmen pay sales tax, income tax, etc. The tax authorities require them to submit their accounts. For this purpose, they have to maintain a record of all their business transactions.
- **Management Decision-making:** Planning, reviewing, revising, controlling and decision-making functions of the management are well aided by book-keeping records and reports.
- **Legal Requirements:** Claims against and for the firm in relation to outsiders can be confirmed and established by producing the records as evidence in the court.

### **Double Entry System Of Book Keeping**

Double entry system was introduced to the business world by an Italian merchant named Lucas Pacioli in 1494 A.D.

### **Double Entry System**

There are numerous transactions in a business concern.



Each transaction, when closely analysed, reveals two aspects. One aspect will be “receiving aspect” or “incoming aspect” or “expenses/loss aspect”. This is termed as the “**Debit aspect**”.

The other aspect will be “giving aspect” or “outgoing aspect” or “income/gain aspect”.

This is termed as the “**Credit aspect**”.

The double entry system is so named since it records both the aspects of a transaction.

In short, the basic principle of this system is, for every debit, there must be a corresponding credit of equal amount and for every credit, there must be a corresponding debit of equal amount.

## Features

- Every business transaction affects two accounts.
- Each transaction has two aspects, i.e., debit and credit.
- It is based upon accounting assumptions concepts and principles.
- Helps in preparing trial balance which is a test of arithmetical accuracy in accounting.
- Preparation of final accounts with the help of trial balance.

## Advantages

The advantages of this system are as follows:

- **Scientific system:** This is the only scientific system of recording business transactions. It helps to attain the objectives of accounting.
- **Complete record of transactions:** This system maintains a complete record of all business transactions.
- **A check on the accuracy of accounts:** By the use of this system the accuracy of the accounting work can be established by the preparation of trial balance.
- **Ascertainment of profit or loss:** The profit earned or loss occurred during a period can be ascertained by the preparation of profit and loss account.
- **Knowledge of the financial position :** The financial position of the concern can be ascertained at the end of each period through the preparation of balance sheet.

- **Full details for control:** This system permits accounts to be kept in a very detailed form, and thereby provides sufficient informations for the purpose of control.
- **Comparative study :** The results of one year may be compared with those of previous years and the reasons for change may be ascertained.

### Distinction between Book-keeping and Accounting

Sl.No.	Basis of Distinction	Book-keeping	Accounting
1	Scope	Recording and maintenance of books of accounts.	It is not only recording and maintenance of books of accounts but also includes analysis, interpreting and Communicating the information.
2	stage	Primary stage	Secondary stage
3	objective	To maintain systematic record of the transaction.	To ascertain the net result of the business operation.
4	Nature	Often routine and clerical in nature.	Analytical and executive in nature.
5	responsibility	A book-keeper is responsible for recording business transactions.	An accountant also responsible for the work of a book-keeper.
6	Supervision	The book-keeper does not supervise and check the work of an accountant	An accountant supervises and checks the work of the book-keeper.
7	Staff involved	Work is done by the junior staff of the organisation.	Senior staff performs the accounting work.

### 3. (i) Journal

In the accounting process, the first step is the recording of transactions in the books of accounts.. *Journal* is one of the **books of original entry** in which transactions are originally recorded in a chronological (day-to-day) order according to the principles of Double Entry System.

Journal is a date-wise record of all the transactions with details of the accounts debited and credited and the amount of each transaction.

#### Format

#### Journal



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

- **Helps in decision making:** The management may be able to obtain sufficient information for its work, especially for making decisions. Weaknesses can be detected and remedial measures may be applied.
- **Detection of fraud:** The systematic and scientific recording of business transactions on the basis of this system minimizes the chances of fraud.

e.g-

1. goods sold for rs 600
2. mohan paid -425 discount paid to mohan -15
3. goods purchase from dutts-800

**Journal entry is**

Date	Particulars	L.F.	Debit Amount Rs.	Credit Amount Rs.
1/1/2020	Cash account Dr To sale account	1	600	600
2/1/2020	Mohan Dr To cash account To discount account	2	425	410 15
3/1/2020	Purchase account Dr To Dutt ( goods purchase from Dutt)	3	800	800

**(ii) Ledger**

In the Journal, each transaction is dealt with separately. Therefore, it is not possible

to know at a glance, the net result of many transactions. So, in order to ascertain the net effect of all the transactions relating to a particular account are collected at one place in the Ledger.

All transactions from the journal are classified ,sort-out and entered in a book called ledger. The process of entry is called posting.

The ledger that is normally used in a majority of business concern is a bound note book. This can be preserved for a long time. Its pages are consequently numbered.

Each account in the ledger is opened preferably on a separate page. If one page is completed, the account will be continued in the next or some other page.

Ledger is the reference book of accounting.

Ledger split into two parts debit (Dr)on left side and credit (Cr) on right side

e.g-

cash a/c

Dr.				Cr.			
date	particulars	f.o	amount	date	particulars	f.o	amount
1/1/2020	To sale a/c	1	600	2/1/2020	By mohan	1	410

Sale a/c

Dr.				Cr.			
date	particulars	f.o	amount	date	particulars	f.o	amount
				1/1/2020	By cash a/c	1	600

Discount a/c

Dr.				Cr.			
date	particulars	f.o	amount	date	particulars	f.o	amount
				2/1/2020	By mohan a/c	1	15



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## Utility of ledger

Ledger is a principal or main book which contains all the accounts in which the transactions recorded in the books of original entry are transferred. Ledger is also called the '**Book of Final Entry**' or '**Book of Secondary Entry**', because the transactions are finally incorporated in the Ledger. The following are the advantages of ledger.

### **i. Complete information at a glance:**

All the transactions pertaining to an account are collected at one place in the ledger. By looking at the balance of that account, one can understand the collective effect of all such transactions at a glance.

### **ii. Arithmetical Accuracy**

With the help of ledger balances, Trial balance can be prepared to know the arithmetical accuracy of accounts.

### **iii. Result of Business Operations**

It facilitates the preparation of final accounts for ascertaining the operating result and the financial position of the business concern.

### **iv. Accounting information**

The data supplied by various ledger accounts are summarised, analysed and interpreted for obtaining various accounting information

## **3. (iii) Trial Balance**

The next step in the accounting process is to prepare a statement to check the arithmetical accuracy of the transactions recorded so far. This statement is called '**Trial Balance**'.

**Trial balance** is a statement which shows debit balances and credit balances of all accounts in the ledger. Since, every debit should have a corresponding credit as per the rules of double entry system, the total of the debit balances and credit balances should tally (agree). In case, there is a difference, one has to check the correctness of the balances

brought forward from the respective accounts. Trial balance can be prepared in any date

provided accounts are balanced.

## Objectives

The objectives of preparing a trial balance are:

- i. To check the arithmetical accuracy of the ledger accounts.
- ii. To locate the errors.
- iii. To facilitate the preparation of final accounts.

S.N	Particulars	Dr. Amount	Cr. Amounts
1.	Cash a/c	600	410
2.	Sale a/c		600
3.	Purchase a/c	800	
4.	Discount a/c		15
5.	Mohan a/c	425	
6.	Dutt a/c		800
	Balance on 03/01/2020	<u>1825</u>	<u>1825</u>

## 1. CASH BOOK

In every business house there are cash transactions as well as credit transactions. All credit transactions will become cash transactions when payments are made to creditors or cash received from debtors. Since, cash transactions will be numerous, it is better to keep a separate book to record only the cash transactions.

### Features

**A cash book** is a special journal which is used to record all cash receipts and cash payments. The cash book is a book of original entry or prime entry since transactions are recorded for the first time from the source documents. The cash book is a ledger in the sense that it is designed in the form of a cash account and records cash receipts on the debit side and cash payments on the credit side. **Thus, the cash book is both a journal**



**and a ledger. Cash Book will always show debit**

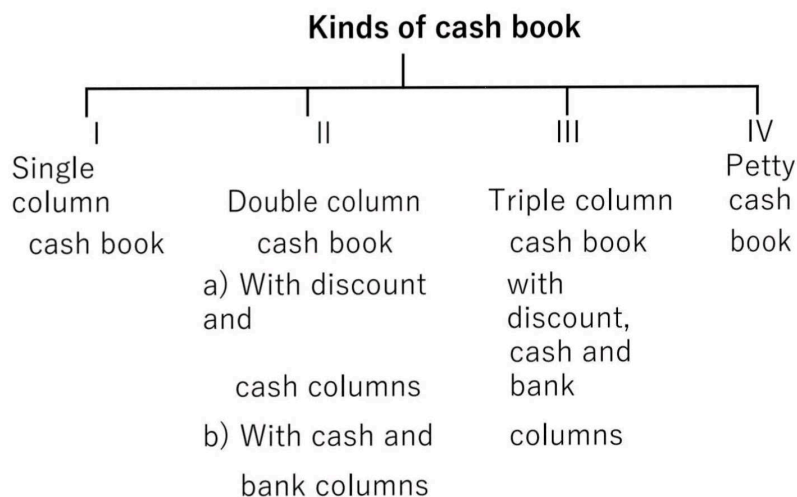
**balance**, as cash payments can never exceed cash available. In short, cash book is a special journal which is used for recording all cash receipts and cash payments.

### Advantages

- 1. Saves time and labour:** When cash transactions are recorded in the journal a lot of time and labour will be involved. To avoid this all cash transactions are straight away recorded in the cash book which is in the form of a ledger.
- 2. To know cash and bank balance:** It helps the proprietor to know the cash and bank balance at any point of time.
- 3. Mistakes and frauds can be prevented:** Regular balancing of cash book reveals the balance of cash in hand. In case the cash book is maintained by business concern, it can avoid frauds. Discrepancies if any, can be identified and rectified.
- 4. Effective cash management:** Cash book provides all information regarding total receipts and payments of the business concern at a particular period. So that, effective policy of cash management can be formulated.

### Kinds of Cash Book

The various kinds of cash book from the point of view of uses may be as follow:



#### a) **Single Column Cash Book**

Single column cash book (simple cash book) has one amount column in each side. All cash receipts are recorded on the debit side and all cash payments on the credit side.

In fact, this book is nothing but a Cash Account. Hence, there is no need to open cash account in the ledger. The format of a single column cash book is given below.

**b) Double Column Cash Book**

The most common double column cash books is Cash Book with discount and cash columns . On either side of the single column cash book, another column is added to record discount allowed and discount received. The format is given below.

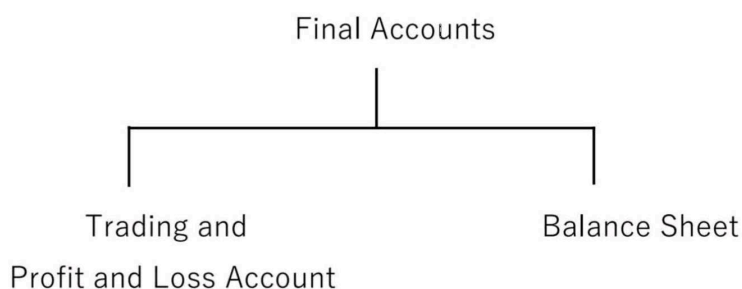
**c) Triple Column Cash Book**

Large business concerns receive and make payments in cash and by cheques. Where cash discount is a regular feature, a Triple Column Cash Book is more advantageous. This cash book has three amount columns (cash, bank and discount) on each side. All cash receipts, deposits into bank and discount allowed are recorded on debit side and all cash payments, withdrawals from bank and discount received are recorded on credit side.

**5. FINAL ACCOUNTS**

The businessman 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 period. The final accounts are prepared at the end of the year from the trial balance.

Hence the trial balance is said to be the connecting link between the ledger accounts and the final accounts.



**Parts of Final Accounts**

The final accounts of business concern generally includes two parts. The first part is Trading and Profit and Loss Account. This is prepared to find out the net result of the



business.

The second part is Balance Sheet which is prepared to know the financial position of the business.

### a) Trading Account

Trading means buying and selling. The trading account shows the result of buying and selling of goods. It is the first statement of balance sheet. . it has two side left side is debit and right side is credit

On debit side all direct expenses related to trading are recorded. On credit side all direct income related to trading are recorded.

The debit side posting of item start with **“To”** & on credit side start with **“By”**  
 If the credit total bigger than debit total it is written as **gross profit** on debit side of trading account and while transfer to P/L account it is posted on credit side.  
 If the credit total lesser than debit total, than the difference is written as **gross loss** on credit side of trading account and while transfer to P/L account it is posted on debit side.

Debit side - credit side = +ve ( gross profit)

credit side -Debit side = +ve ( gross loss)

e.g- prepare a final a/c from the given trail balance

S.N	Particulars	Dr. Amount	Cr. Amounts
1.	Capital a/c		20000
2.	Sale a/c		50000
3.	Purchase a/c	30000	
4.	Drawing a/c	6000	
5.	Shop, rent ,light a/c	4000	
6.	Wages salary a/c	6000	
7.	Shop,fixtute & fitting	15000	
8.	Amount due to supplier		5000
9.	Amount due from customer	6500	
10.	Cash in hand	7500	
		75000	75000

Soln=

#### Trading a/c-

Dr. Particulars	Amount	Particulars	Cr. amounts
--------------------	--------	-------------	----------------

To , purchase	30000	By sale	50000
To gross profit	20000		
	<u>50000</u>		<u>50000</u>

## b) Profit and Loss Account

After calculating the gross profit or gross loss the next step is to prepare the profit and loss account. To earn net profit a trader has to incur many expenses apart from those spent for purchases and manufacturing of goods.

If such expenses are less than gross profit, the result will be net profit. it is adjusted on debit side.

When total of all these expenses are more than gross profit the result will be net loss. & net loss adjusted on credit side.

### Items appearing in the debit side

Those expenses which are chargeable to the normal activities of the business are recorded in the debit side of profit and loss account. They are termed as **indirect expenses**.

- i. **Office and Administrative Expenses** : Expenses incurred for the functioning of an office are office and administrative expenses – office salaries, office rent, office lighting, printing and stationery, postages, telephone charges etc.
- ii. **Repairs and Maintenance Expenses** : These expenses relates to the maintenance of assets - repairs and renewals, depreciation etc.
- iii. **Financial Expenses** : Expenses incurred on borrowings – Interest paid on loan.
- iv. **Selling and Distribution Expenses** : All expenses relating to sales and distribution of goods - advertising, travelling expenses, salesmen salary, commission paid to salesmen, discount allowed, repacking charges etc.

### Items appearing in the credit side

Besides the gross profit, other gains and incomes of the business are shown on the credit side. The following are some of the incomes and gains.

- i. Interest received on investment



- ii. Interest received on fixed deposits.
- iii. Discount earned.
- iv. Commission earned.
- v. Rent Received

Solution-

**P/L account-**

Dr. Particulars	Amount	Particulars	Cr. amounts
To , shop,rent,lighting	4000	By gross profit b/d	20000
To, wages	6000		
To, net profit	10000		
	<u>20000</u>		<u>20000</u>

**c) Balance Sheet:**

It is a statement showing the financial position of a business. Balance sheet is prepared by taking up all personal accounts and real accounts (assets and properties) together with the net result obtained from profit and loss account.

On the left hand side of the statement, the liabilities and capital are shown. On the right hand side, all the assets are shown.

Balance sheet is not an account but it is a statement prepared from the ledger balances. So we should not prefix the accounts with the words 'To' and 'By'.

**Balance sheet** is defined as 'a statement which sets out the assets and liabilities of a business firm and which serves to ascertain the financial position of the same on any particular date'.

The right hand side of the balance sheet is asset side and the left hand side is liabilities side. All accounts having debit balance will appear in the asset side and all those having credit balance will appear in the liability side.

**Need:**

The need for preparing a Balance sheet is as follows:

- i. To know the nature and value of assets of the business
- ii. To ascertain the total liabilities of the business.
- iii. To know the position of owner's equity.

**Horizontal form of Balance Sheet:**

Balance Sheet of .....

as on .....

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Sundry creditors		x x x	Cash in hand		x x x
Bills payable		x x x	Cash at bank		x x x
Bank overdraft		x x x	Bills receivable		x x x
Outstanding expenses		x x x	Sundry debtors		x x x
Mortgage loans		x x x	Investments		x x x
Reserve fund		x x x	Closing stock		x x x
Capital	x x x		Prepaid expenses		x x x
Add: Net profit (or)			Furniture & fittings		x x x
Less: Net loss	x x x		Plant & machinery		x x x
	x x x		Land & buildings		x x x
Less: Drawings	x x x		Business premises		x x x
	x x x		Patents & trade marks		x x x
Less: Income tax	x x x		Good will		x x x
		x x x			
		x x x			x x x



e.g

soln=

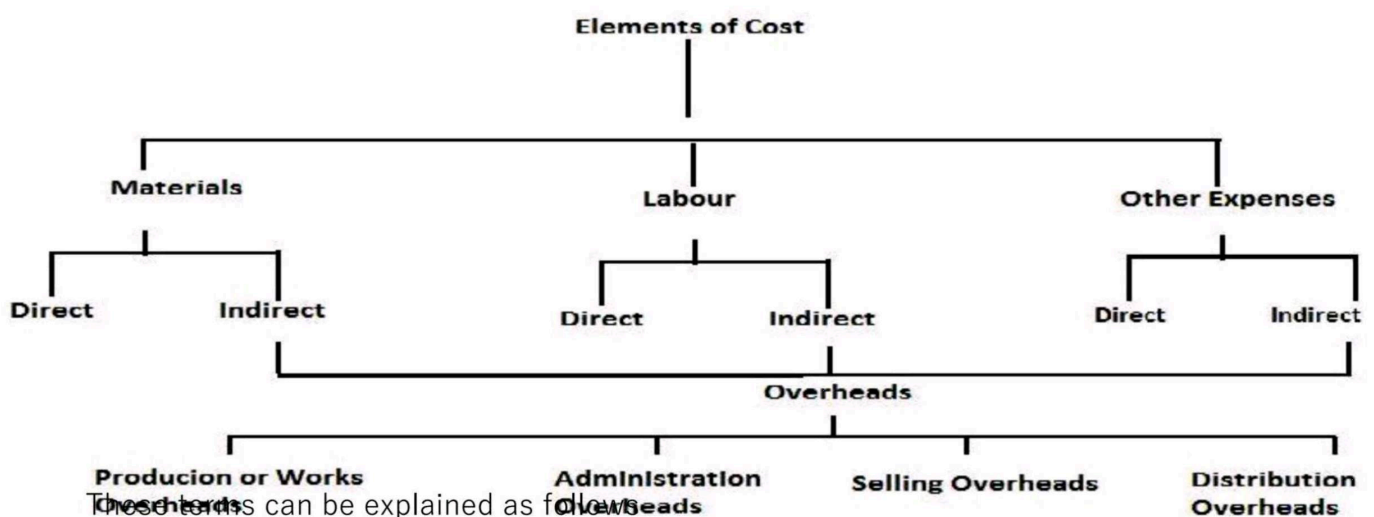
balance sheet- on date-04/01/2020

Liabilities	Amount	Assets	amounts
Amount due to supply	30000	Shop fitting, fixture	15000
Capital a/c	20000	Amount due from customer	6500
Balance = 20000		Cash at bank	7500
(+) net profit = 10000 (+)			
(-) drawing = 6000 (-)	24000		
	<u>29000</u>		<u>29000</u>

### Cost-

#### Elements of Cost-

The management of an organization needs necessary data to analyze and classify costs for proper control and for taking decisions for future course of action. Hence the total cost is analyzed by elements of costs ie by the nature of expenses. The elements of costs are three and they are materials, labour and other expenses. These can be further analyzed as follows.



These terms can be explained as follows

1. **Direct Materials** are those materials which can be identified in the product and can be conveniently measured and directly charged to the product. For example, bricks in houses, wood in furniture etc. Hence all raw materials, materials purchased specifically for a job or process like glue for book making, parts or components purchased or produced like batteries for radios and tyres for cycles, and primary packing materials are direct materials.
2. **Indirect Materials** are those materials which cannot be classified as direct materials. Examples are consumables like cotton waste, lubricants, brooms, rags, cleaning materials, materials for repairs and maintenance of fixed assets, high speed diesel used in power generators etc.
3. **Direct Labour** is all labour expended in altering the construction, composition, confirmation or condition of the product. Thus direct wages means the wages of labour which can be conveniently identified or attributed wholly to a particular job, product or process or expended in converting raw materials into finished goods. Thus payment made to groups of labourers engaged in actual production, or carrying out of an operation or process, or supervision, maintenance, tools setting, transportation of materials, inspection, analysis etc is direct labour.
4. **Direct Expenses** are expenses directly identified to a particular cost centre. Hence expenses incurred for a particular product, job, department etc are direct expenses. Example royalty, excise duty, hire charges of a specific plant and equipment, cost of any experimental work carried out especially for a particular job, travelling expenses incurred in connection with a particular contract or job etc.
5. **Overheads** may be defined as the aggregate of the cost of indirect materials, all indirect expenses are known as over head.  
indirect labour and such other expenses including services as cannot conveniently be charged direct ot specific cost units. Overheads may be sub-divided into (i) Manufacturing Overheads; (ii) Administration Overheads; (iii) Selling Overheads; (iv) Distribution Overheads; (v) Research and Development Overheads.



## 7. Cost sheet or Statement of Cost:

### Cost sheet:

When costing information is presented in the form of a statement, it is called "Cost Sheet". Cost sheet is a device used to determine and present the cost under unit costing.

It is a statement of costs incurred at each level of manufacturing a product or service. In a Cost sheet all the elements of cost is taken into consideration.

It includes Prime cost, Factory/manufacturing cost, cost of production, cost of sale Profit/loss etc. The information incorporated in a cost sheet would depend upon the requirement of management for the purpose of control.

### Items excluded from Cost Sheet:

1. Pure financial expenses like interest on capital, interest on loan, discount on debentures, loss on sale of fixed asset provision for bad debts and doubtful debts, writing off goodwill, copyright, preliminary expenses etc.
2. Pure financial incomes like interest received, profit on sale of investment, dividend received, rent received, commission received, discount received etc.

### Specimen of Cost Sheet or Statement of Cost

Specimen of Cost Sheet or Statement of Cost		
	Total cost	Cost per unit
	Rs	Rs
Direct Materials	xxx	xxx
Direct Labour	xxx	xxx
	Prime cost	xxxx
Add factory over head	xxx	xxx
	Factory cost	xxxx
Add office overhead	xxx	xxx
	Cost of production	xxxx
Add selling and distribution over head	xxx	xxx
	Cost of sale	xxxx
Add profit	xxx	xxx
	Total sale	xxxx

## . Linear Break-Even Analysis

The broader interpretation refers to that system of analysis which determines the probable profit at any level of activity. The relationship among cost of production, volume of production, the profit and the sales value is established by break-even analysis. Hence, this analysis is also designated as 'Cost-volume-profit' analysis.

### **Advantages :**

Such an analysis is useful to the management accountant in the following respects:

- (i) It helps him in forecasting the profit fairly accurately.
- (ii) It is helpful in setting up flexible budgets, since on the basis of this relationship, he can ascertain the costs, sales and profits at different levels of activity.
- (iii) It also assists him in performance evaluation for purposes of management control.
- (iv) It helps in formulating price policy by projecting the effect, which different price structures will have on cost and profits.
- (v) It helps in determining the amount of overhead cost to be charged at various levels of operations, since overhead rates are generally pre-determined on the basis of a selected volume of production.

### **Break-even point**

The point, (volume of sale or volume of production) at which there shall be neither profit nor loss, is regarded as break-even point. At this point, the income of the business exactly equals its expenditure.

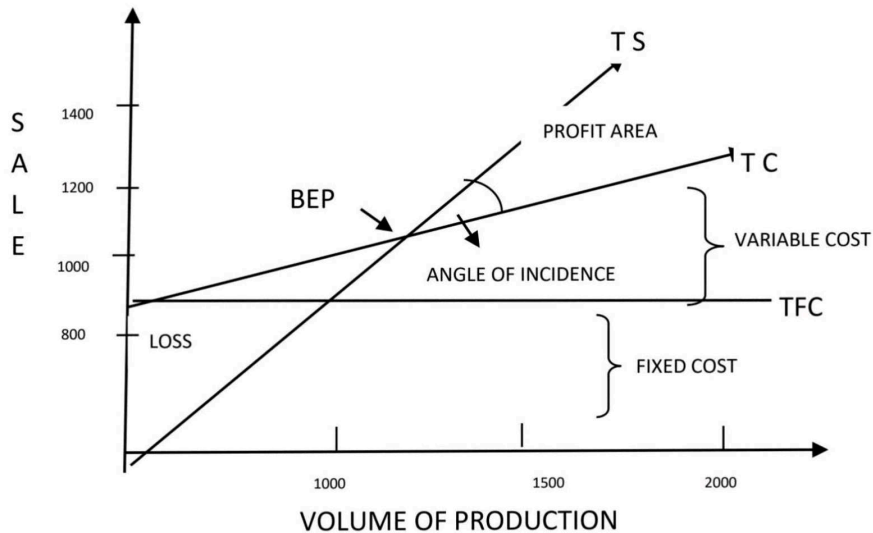
### **Assumption**

basic assumptions for breakeven analysis are:

- The behavior of both costs and revenues is linear throughout the relevant range of activity. (This assumption rule out the concept of volume discounts on either purchased materials or sales.)
- Changes in activity are the only factors that affect costs.
- Costs can be classified accurately as either fixed or variable.
- Constant total fixed cost;
- Variable cost must be directly proportional to output and variable cost per unit must be constant;
- All units produced are sold (there is no ending finished goods inventory).
- When a company sells more than one type of product, the sales mix (the ratio of each product to total sales) will remain constant.



- Constant sales price;



T.S= total sale      T C = Total cost      BEP = Break Even Point

### Construction of Break-even Chart:

Construction of break-even chart involves the drawing of fixed cost line, total cost line, and sales line as follows :-

- (1) Select a scale for production on the horizontal axis and a scale for costs and sales on the vertical axis.
- (2) Plot the fixed cost on the vertical axis and draw fixed cost line passing through this point parallel to horizontal axis.
- (3) Plot the variable costs for some activity levels starting from the fixed cost line and join these points. This will give the total cost line. Alternatively, obtain total cost at different levels, plot the points starting from horizontal axis and draw the total cost line.
- (4) Plot the maximum or any other sales volume and draw the sales line by joining zero and the point so obtained.

### Mathematical formula :

Marginal cost = Total variable cost

Or      = Total cost – Fixed cost

$$\begin{aligned} \text{Or} &= \text{Direct Material} + \text{Direct labour} + \text{Direct Expenses (Variable)} + \text{Variable overheads} \\ \text{Contribution} &= \text{Selling Price} - \text{Variable cost} \\ \text{Profit} &= \text{Contribution} - \text{Fixed cost} \\ \text{Fixed cost} &= \text{Contribution} - \text{Profit} \\ \text{Contribution} &= \text{Fixed cost} + \text{Profit} \end{aligned}$$

$$\begin{aligned} \text{Profit/Volume Ratio} &= \frac{\text{Contribution per unit}}{\text{Selling price per unit}} \\ \text{Or} &= \frac{\text{Total contribution}}{\text{Total sales}} \end{aligned}$$

In case P/V ratio is to be expressed as a percentage of sales, 100 as given above should multiply the figure derived from the formulae.

$$\begin{aligned} \text{Break-even point} &= \frac{\text{Fixed cost}}{\text{Contribution per unit}} \\ \text{Break-even point} &= \frac{\text{Fixed cost}}{\text{Total contribution}} \times \text{Total sale} \\ \text{Break-even point} &= \frac{\text{Fixed cost}}{1 - \frac{\text{Variable cost}}{\text{Selling price per unit}}} \\ \text{Break-even point} &= \frac{\text{Fixed cost}}{\text{P / V Ratio}} \end{aligned}$$

At break-even point the desired profit is zero, in case the volume of output of sales is to be computed for 'a desired profit', the amount of 'desired profit' should be added to Fixed Costs in the formulae given above.

For example:

$$\begin{aligned} \text{Units for a desired profit} &= (\text{Fixed cost} + \text{Desired profit}) / \text{Contribution per unit} \\ \text{Sales for a desired profit} &= (\text{Fixed cost} + \text{Desired profit}) / (\text{P/V Ratio}) \end{aligned}$$

This will be clear from the following illustrations:

**Illustration 1:** A factory manufacturing sewing machines has the capacity to produce 500 machines per annum. The marginal (variable) cost of each machine is Rs. 400 and each machine is sold for Rs. 450. Fixed overheads are Rs. 24,000 per annum. Calculate the break-even points for output and sales and show what profit will result if output is 90% of capacity?

**Solution:** Contribution per machine is Rs. 450 – Rs. 400 = Rs. 50.



Break-even point for output (Output, which will give 'contribution' equal to fixed costs Rs. 12,000)

$$\begin{aligned}\text{B.E.P. for output} &= \text{Total fixed cost} / \text{Contribution per unit} \\ &= 24,000 / 50 \\ &= 480 \text{ machines}\end{aligned}$$

### **Break-even point for sales**

$$\begin{aligned}&= \text{Output} \times \text{Selling price per unit} \\ &= 480 \times \text{Rs. } 450 = \text{Rs. } 2,16,000\end{aligned}$$

Break-even point for sales can also be calculated with the help of any of the following formulae:

$$\begin{aligned}\text{(i) B.E.P.} &= (\text{Total fixed cost}) / (1 - (\text{Variable cost per unit} / \text{Selling price per unit})) \\ &= 24,000 / (1 - (400 / 450)) \\ &= 24,000 / (1 - 0.888888) = 24,000 / (0.111111) \\ &= \text{Rs. } 2,16,000\end{aligned}$$

### **Margin Of Safety (MoS) -**

Margin of safety is the excess over the break-even sales, and represents the strength of the organisation. A high margin of safety gives confidence to the organisation. A sudden drop in volume will not affect the profit so much. On the other hand, an undertaking with low margin of safety may wipe off the profit and turn into a loss with a drop in sales. Margin of safety (MoS) can be mathematically expressed using the marginal cost equations, namely, —

Margin of safety = Sales at selected activity – Break-even Sales

When profit = Sales – Total cost, and P/V ratio = Contribution / Sales

When M/S is expressed in ratio

we get, MoS = Sales at selected activity - B. E. S. Sales at selected activity.

### **Angle Of Incidence:**

This is the angle formed by the sales line and the total cost line at the break-even point. Angle of incidence is an indicator of profit earning capacity above the break-even point. A wider angle will indicate higher profitability, while a narrow angle will indicate very low profitability.

If margin of safety and angle of incidence are considered together, they will provide significant information to management regarding profit earning position of the undertaking. A high margin of safety with a wider angle of incidence will indicate the most favourable condition of the business.

### **Limitations**

1. Break-even analysis is only a supply-side (i.e., costs only) analysis, as it tells you nothing about what sales are actually likely to be for the product at these various prices.
2. It assumes that fixed costs (FC) are constant. Although this is true in the short run, an increase in the scale of production is likely to cause fixed costs to rise.
3. It assumes average variable costs are constant per unit of output, at least in the range of likely quantities of sales. (i.e., linearity).

### **Human resource Management (HRM):-**

HRM is (helps) systematically forecast an organization's future demand for, and supply of employees so, HRM deals with recruitment, selection, training & other activities.

- Human resource planning helps an organization to staff itself with right people at right time.
- It consists with areas like
  - (a) Demand fore casting
  - (b) Supply fore casting & sources
  - (c) Productivity of employee & cost involve analysis
  - (d) Action planning (how to deal with forecast)
  - (e) Estimating Human resource budget & contract of the plans against them.

#### **(1) Recruitment:-**

Recruitments concern with the identification of sources from where the personnel can be employed.

(Def.) By Edwin-B- Flippo it is the process of searching for prospective employees & stimulating them to apply for job.

It helps management to select suitable employees for different job.

#### **Purpose of recruitment is**



- Determine present & future requirement of personal of the organization.
  - Increase no of job candidate(applicants) with win cost
  - Increase success rate of the selection process.
  - Help to reduce the probability that job applicant will not leave job once recruited
  - Meet organization legal & social obligation. Recruitment may be **internal or external**
- (i) **Internal:-** recruitment with in the industry because right no of people also available in side organization. This can be either by promotion or transfer as by companies tanning scheme.
- (ii) **External:-** Organization go for external search this can be done through  
 (i) Advertisement, (ii) employment agencies, (iii) Campus recruitment, (iv) Gate hiring etc.

## (2) Selection:-

Next to recruitments is selection.

- Selection is a deliberate effort of organization to select a fixed no of personal from large number of applicants
- It is essential that, if right type of person are not selected it will lead to huge loss to the organization in term of time, effort &
- The selection process varies from organization to organization & for different positions.

### Steps in selection

- (i) Screening of applications
- (ii) Selection test
- (iii) Interview
- (iv) Checking of references
- (v) Physical examination
- (vi) Approval by authority

## 5) Training & Development:-

Employment needs training to perform his/her duties effectively.

Training is the act of increasing knowledge, skill of an employee for a particular job.

### Importance of training:-

- (a) **Increase in efficiency:-** In training he learn how to do a job
- (b) **Increase moral:-** moral related to satisfactions they have the skill to performs job & understand if than their confidence level increase do well as satisfaction which helps to increase moral.
- (c) **Reduce supervision:-** because they know what & how to performance through training.
- (d) **Increase organizational flexibility & viability.:**Trained people can be placed as short term adjustment with loss of key personal.

### Methods of training:-

Two type : On job training, Off job training

**1) On job training:-** It is learning while an individual is actually engaged in work.

- (a) on specific job:- person develop skill on working
- (b) position rotation:- here emoloyee shifted to different position with in the organisation after a span of time. It is to increase organisations flexibility.
- (c) Apprenticeship:- The trainee is put under the supervision of person who may be an experiences

**2) Off Job training:-** Here trainee has to leave his place for working & spend whole time in training.Training may be inside or out side organization, Lecture, refresher course, seminar, conferences role playing, cases, Brains storming etc.

- **Special courses:-** Expert comes deliver speeches on concern subject creating awareness of the knowledge in the concern subjects
- **Conferences:-** participants discuss ideas & experiences with others in attempting to arrive an improved method to det with problem.



- **Role playing:-** In a group various individual given role of different managers who may required to solve a problem or reach at a decision this helps trainee to develop better ideas to perform the job.
- **Brain storming:-** Here a problem put in a group where the group find a solution for the problem by integrating all ideas generated in the group
  - Members may from different field
  - Members can frankly put their ideas with out interpretation & limitation.
  - Any evolution, criticism, judgment, comments not allowed during idea generation.
- **Cases:-** Written description of a problem of the organization with all aspects given to the members
  - There is an instructor who instructs each member of a group to present his analysis & to comments on others.
  - So analytical skill developed which helps in decision making.

### **Performance appraisal:-**

- It is a systematic evaluation of personal by superior or other familiar with their performance.
- It is also describe as the merit rating in which are individual is ranked as better or worse in comparison to other.
- Performance appraisal usually occur periodically. it may be semi-annually or annually.
- P.A. is the systematic & objective way of judging relative worth or ability of a sub ordinate in performing his job.
- Here same approach of P.A. applied for different person & both rater & rates know the system ..

### **Importance:-**

P.A. are conducted for various purpose such as In India P.A. is done for mainly 3 reasons.

- (i) Salary increase

- (ii) For training & development
  - (iii) For organization promotion & placement
  - (iv) Contrarily besides that it helps by providing
  - (v) Feedback to employee
- 
- (i) **Salary Increase:-** Normally salary increase of an employee depend on how he is performing his job. It regular scale have not been fixed.
  - (ii) **Promotion:-** same company's give promotion of the basis of merit & seniority.  
P.A. help to identify his strong & weak areas compactor of an employee on the light of this he can be promoted to next level.
  - (iii) **Training & development:-** P.A. tries to identify the strength & weakness of an employee on his present job which help in identifying type of training & development programmers appropriate for over coming weakness.
  - (iv) **Feed back:-** P.A. gives feed back to employee, about their performance. It tell them where are they this contributes two ways.
    - (a) The person gets feed back about his performance rectify it.
    - (b) The can relate their work with org. objective & how it can be improved & gets satisfaction knowing their contribution to organization.
  - **Pressure in employee:-** It put a small pressure on employee for better performance, If the employees are conscious that they are being appraised in respect of certain factor, automatically they shows positive behavior.  
It acts as a control device.

## 1. MARKETING

### Meaning Of Market

Generally, a "market place" is presumed as a "market". But conceptually market may differ from market place. Markets need not necessarily a place of exchange.

"Market is a set of existing and potential buyers for a defined product or services."

A market always defined in geographical terms like urban, rural etc. or a market is always defined for a product at a given time.



**Market place** – it is a physical place where one goes for shopping or exchange of goods taking place between buyers and sellers. Examples- Bazaar, Mall, Store etc.

**virtual market** - Virtual marketing is digital in nature and advertising via the internet (websites, programs, emails, etc), shopping through online etc vs. other forms of advertising such as radio, TV, print, etc. Virtual marketing is less expensive, and you can reach a great number of people

**metamarket :-**

The **metamarket**, a concept proposed by Mohan Sawhney, describes all complementary products and services that are closely related in the minds of consumers but are spread across a diverse set of industries. Example- The automobile metamarket consists of automobile manufacturers, new and used car dealers, financing companies, insurance companies, mechanics, spare parts dealers, service shops, auto magazines, classified auto ads in newspapers, and auto sites on the Internet. These complementary players attached with the main product are called metamediaries.

## **Defining Marketing**

We can distinguish management by a social and a managerial definition. According to a social definition, **marketing** is a societal process by which individuals and groups obtain what they need and want through creating, offering, and exchanging products and services of value freely with others.

As a managerial definition, marketing has often been described as “the art of selling products.”

The American Marketing Association offers this managerial definition:

**Marketing (management)** is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals.

## **Marketing Mix**

Marketers use numerous tools to draw the desired responses from their target markets.

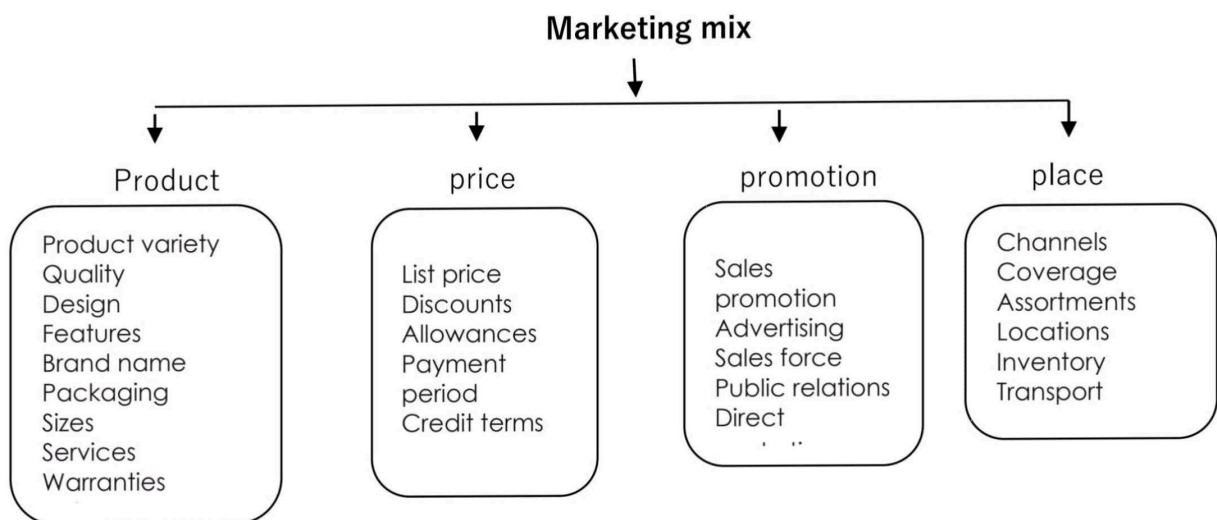
**Marketing mix** is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market. McCarthy classified these tools into four broad groups that he called the four Ps of marketing: product, price, place, and promotion.

Marketing-mix decisions must be made to influence the trade channels as well as the final consumers. Typically, the firm can change its price, sales-force size, and advertising

expenditures in the short run. However, it can develop new products and modify its distribution channels only in the long run. Thus, the firm typically makes fewer period-to-period marketing-mix changes in the short run than the number of marketing-mix decision variables might suggest.

**According to Philip Kotlar** —Marketing mix is the mixture of controllable marketing variables that the firm uses to pursue the sought level of sales in the target market || .

**According to William J. Stanton** —Marketing mix is the term used to describe the combination of the four inputs which constitute the core of a company's marketing system; The product, the price structure, the promotional activities and distribution system.



### Elements of Marketing Mix:

The elements of marketing mix are described below:

(i) **Product:** Product means anything which can satisfy consumers needs and wants through exchange process. The marketer may offer a single product or several products. The marketer should also revise the product design, make improvements in the products frequently so as to suit the changing tastes, habits and preferences of the consumers. Packaging and branding decisions are also included in product decision.



(ii) **Price:** Price is the value which is paid by the buyer to the manufacturer in exchange of the products and services. The marketer has to take into consideration the cost factors, profit margin, the possibility of sales at different price level and the competitors pricing policy as well as number of competitors.

(iii) **Promotion:** The marketers should provide information to the customers about its products and services and motivate customers to buy. Advertising, personal selling, publicity and other sales promotional programs are the various promotional activities. All these activities increase the volume of sales by expending as well as retaining the market share for the products. Promotion is done for three purposes – (a) informing, (b) persuading and (c) influencing consumers.

(iv) **Physical Distribution:** Distribution is the delivery of the product and transfer of ownership to the buyers and consumers. It includes channels and outlets through which products move to the buyer and arranging their physical movement to different market segments. It depends upon the middlemen, products and services, channels of distribution etc. It maintains the flow of products and services from the producers to the buyers.

### **Importance Of Marketing**

Business without marketing is just impossible. It satisfies human wants and also serves as an instrument for economic growth and social welfare.

The importance of marketing may be studied from both from the point of view of society and producer.

#### **Importance of marketing from society point of view:**

Some of the points which can explain its importance are as under:-

##### **i) Satisfies human wants :-**

The essence of marketing is to understand the needs and wants of consumers. It identifies unfulfilled human needs, convert them into business opportunities and as it involves in production and distribution process, through the exchange process satisfies the customers.

##### **ii) Generates Employment :-**

Marketing generates job opportunities directly or indirectly. Marketing involves in various functions like production, distribution, promotion etc. Thousands of people are employed in these sectors. Thus people gets work for their hands.

##### **iii) Improves standard of living :-**

Marketing facilitates introduction of new and better products and also as per needs of consumers. which improves the standard of living at large. Consumers may start consuming good quality products as marketing has converted —yesterday's || luxuries into today's necessities. This leads towards standard of living.

**iv) It helps to provide economic stability:** Good marketing system enables to maintain the price level stable by equalizing the demand and supply at various places and different period. This is possible by creating time and place utility.

**v) Creates utility :-**

Marketing is important as it creates form, time, place and possession utilities. Such utility creation gives satisfaction and pleasure to consumers.

### **Importance of marketing from producers/firms point of view**

Some of the points which can explain its importance are as under:-

**i) Achieves objectives :-**

With the help of the marketing activities, business firms can earn good amount of profit. This helps them to achieve business objectives like increase in market share, creating goodwill, expanding business and so on.

**ii) Marketing creates awareness**

Marketing creates awareness among potential consumers and motivates people to purchase the products and services to satisfy their needs and wants. In this process, the firms generate revenue by selling the goods and services with which the firms further produce and grow.

**iii) Introduction of new products :-**

In order to stay ahead in competition, it is necessary for an organisation to develop new products frequently. Marketing functions like research, product development etc. facilitate introduction of new products. As marketing starts with customer and ends with it also indentifies exact need of the people and according introduces the product.

**iv) Widens Markets :-**

Marketing widens market through large-scale movement of goods throughout the country. Marketing includes various promotional tools like advertising personal selling, sales promotion, direct marketing etc. These promotional tools help a firm to expand its market from local to regional to national and at international level.

**v) Facilitates specialisation and division of labour :-**

Marketing functions, if performed successfully, leads to specialisation, division of a labour and efficient performance of production of functions. Marketing gives basic ideas



about customers needs and requirements, business can arrange and allocate resources accordingly which leads to division of labour.

**vi) Connects the producers and consumers:**

Marketing connects the producers and consumers the producers produce goods and services for the purpose of selling. Therefore, the producers should be in touch with the consumers who require such goods and services. In the absence of marketing process, it would have been extremely difficult for producer to find out what customer want.

**vii) Channel of communication**

The marketing organization provides a channel of communication between the firm and the consumers. It is furnishing information about the consumers demands, tastes and preferences to the top managements. This process helps the firm to adjust its production schedule to suit the tastes of the consumers.

**viii) Economic growth :-**

Marketing brings industrial and economic growth as it creates new demands for goods and thereby encourages production activities. This leads to the creation of massive employment opportunities Thus marketing is the kingpin that sets revolving of the whole economy.

**1. Inventory control :-**

**Meaning of Inventory**

Inventory means **“a list of movable items which are required for the manufacturing the products and to maintain the plant facilities in working condition at a particular point of time.”** Inventory can be A) Direct Inventory or B) Indirect Inventory

Direct Inventory comprises of stocks of materials, components, work-in-progress, and finished products and stores and spares.

Indirect Inventory comprises of tools , supplies ,consumable stores, broom, welding rod, abrasive materials etc.

**Inventory Control**

Inventory Control means “making desired items of required quality and in required quantity available to various departments when needed at an economic rate”.

An optimum quantity of inventory should be maintained to avoid storage problem and to check production related disturbances due to unavailability of inventory.

The main objective of inventory control is to achieve maximum efficiency in production and sales with the minimum investment in inventory. Inventory control refers supervision of supply, storage and accessibility of items of inventory in order to ensure adequate supply without excessive oversupply. Material control is an important managerial function which is directed to ensure that required quantity and quality of material is provided at the proper time with the minimum amount of capital.

Inventory control is affected by coordination and control activities relating to planning, sourcing, purchasing, moving and storing of materials. Inventory control and material control are synonym.

### **Needs for Inventory :**

1. **To ensure against delay in deliveries** :- When order placed for fresh stock it will take time to reach. The time of placing the order and the time of stock arrival is often subjected to variation that's why firm must have reserve stock to continue.
2. **Allow for possible increase in output** :- if demand increases for finished goods the inventory must be capable to handle the increase demand.
3. **To take advantage of quantity discount** :- materials and components may be cheaper when purchased in huge quantity as well as paper work and inspection of materials is simplify when order quantity is large.
4. **Maintain smooth and efficient increase in production flow** :- Stock out of materials means interruption in production which rises production cost sufficient inventory could be able to avoid stock out even if against the scarcity of materials in the market.
5. **Better utilization of men and machine** :- sufficient inventory could be able to avoid stock out that result into better utilization of men and machine.

### **Advantages of Inventory Control**

- (a) Ensures uninterrupted flow of materials of the right quality at any stage of production.
- (b) Materials made available at economic rate.
- (c) Delay, Interruption in production due to non availability of materials may not occur.



- (d) Exact and accurate date of delivery can be forecast.
- (e) Materials are protected from spoilage, deterioration, destroy etc.
- (f) It eliminates wastages in use of raw materials and supplies in course of purchase, storage handling and use.
- (g) Reduces the risk of fraud and theft.
- h) Furnishes quickly and accurately the value of material and supplies used in various departments.
- i) Reduces to the minimum the capital locked up in inventories.
- j) Facilities preparation of accurate monthly financial statements required for various management information reports.
- k) Increase in overall efficiency and productivity of the company.

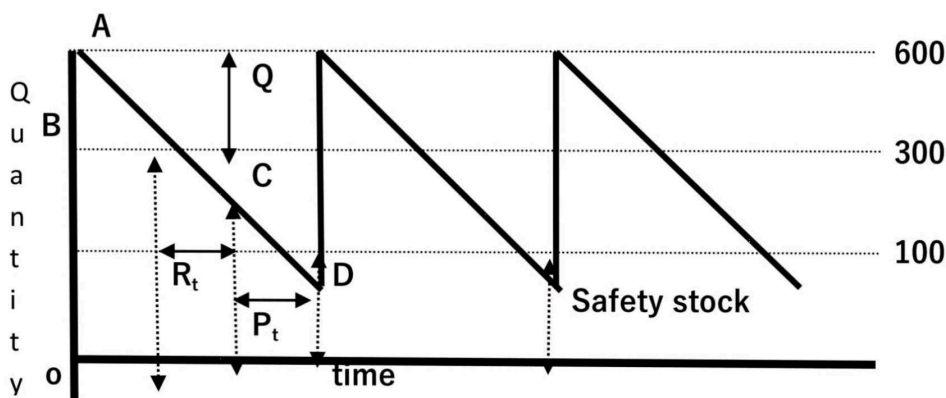
### Techniques of Inventory Control

The techniques or the tools commonly applied to effect control over the inventory are following:

- 1 Setting of Various Stock Levels.
- 2 ABC Analysis.
- 3 Determination of Economic Order Quantity.

#### 1. Setting of Various Stock Levels:

To avoid over-stocking and under-stocking each item of the inventory has the maximum levels, minimum levels and an order point.



##### (a) Minimum Level:

The lowest figure of inventory balance, which must be maintained in hand at all times, so that there is no stoppage of production due to non-availability of inventory. It is also

known as **'Buffer stock', 'Safety stock' 'minimum limit' or 'Minimum stock'**.

The main considerations for the fixation of minimum level of inventory are as follows:

1. Information about maximum consumption and maximum delivery period in respect of each item to determine its re-order level.
2. Average rate of consumption for each inventory item.
3. Average delivery period for each item. This period can be calculated by averaging the maximum and minimum period.

The formula used for its calculation is as follows:

**Minimum level of inventory = Re-order level – (average rate of consumption x average time of inventory delivery)**

**(b) Maximum Level:**

It indicates the maximum quantity of inventory quantity held in stock at any time. It is also known as **'Maximum limit' or 'Maximum stock'**.

The important considerations which should govern the fixation of maximum level for various inventory items are as follows:

1. The fixation of maximum level of an inventory item requires information about its re-order level. The re-order level itself depends upon its maximum rate of consumption and maximum delivery period. It in fact is the product of maximum consumption of inventory item and its maximum delivery period.
2. Knowledge about minimum consumption and minimum delivery period for each inventory item should also be known.
3. The determination of maximum level also requires the figure of economic order quantity.
4. Availability of funds, storage space, nature of items and their price per unit are also important for the fixation of maximum level.
5. In the case of imported materials due to their irregular supply, the maximum level should be high.

The formula used for its calculation is as follows:

**Maximum level of inventory = Re-order-level + Re-order quantity - (Minimum Consumption x Minimum re-order period)**



**(c) Re-Order Level:**

It is also known as '**Ordering level**', '**Reorder point**'. Order point is a point at which order for supply of materials or goods is placed. This level lies between minimum and the maximum levels in such a way that before the material orders is received into the stores, there is sufficient quantity on hand to cover both normal and abnormal consumption situations. In other words, it is the level at which fresh order should be placed for replenishment of stock.

The formula used for its calculation is as follows:

**Re-order level = Maximum re-order period x maximum Usage**

**(or) = Minimum level + (Average rate of consumption x Average time to obtain fresh supplies).**

**(d) Average Inventory level:**

This level of stock may be determined by using the following equal formula:

Average inventory level = Minimum level +  $\frac{1}{2}$  Re-order quantity

Average inventory level =  $(\text{Maximum level} + \text{Minimum level}) \div 2$

**(e) Danger Level:**

It is the level at which normal issues of the raw material inventory are stopped and emergency issues are only made. As and when the danger level is reached, the material has to be purchased at any price at which available.

The formula used for its calculation is as follows:

Danger level = Average Consumption x Lead time for emergency purchases

**(f) Lead time**

It is the time interval between the time need for the materials is determined and the time the materials actually received.

$$L = P_t + R_t$$

**Illustration: 1**

Two Components, A and B are used as follows:

Normal usage	50 per week each
Maximum usage	75 per week each
Minimum usage	25 per week each

Re-order quantity	A : 300; B : 500
Re-Order period	A : 4 to 6 Weeks B: 2 to 4 weeks

Calculate for each component (a) Re-ordering level, (b) Minimum level, (C) Maximum level (d) Average Stock level.

**Solution:**

**(a) Re-ordering level:**

Maximum usage per week x Maximum delivery period.

Re-ordering level for component A = 75 units x 6 Weeks = 450 units

Re-ordering level for component B = 75 units x 4 Weeks = 300 units

**(b) Minimum level :**

Re-order leave – (Normal usage x average period)

Minimum level for component A = 450 units - 50 units x 5 weeks = 200 units

Minimum level for component B = 300 units - 50 units x 3 weeks = 150 units

**(c) Maximum level :**

ROL + ROQ – (Min. Usage x Minimum period)

Maximum level for component A = (450 units + 300 units) – (25 units x 4weeks) = 650 units  
Maximum level for component B = (300 units + 500 units) – (25 units x 2 weeks) = 750 units

**(d) Average stock level :**

$\frac{1}{2}$  (Minimum + maximum) Stock level

Average stock level or component A =  $\frac{1}{2}$  (200 units + 650 units)  
= 425 units. Average stock level for component B =  $\frac{1}{2}$  (150 units + 750 units) = 450 units.

**1. ABC Analysis:**

This system exercises control over different items of stores classified on the basis of the investment involved. Usually the items are divided into three categories according to their importance, namely, their value and frequency of replenishment during a period.

- (i) **'A'** Category of items consists of only a small percentage i.e. about 10% of the total items handled by the stores but require heavy investment about 70% of



inventory value, because of their high prices or heavy requirement or both.

- (ii) **'B'** Category of items is relatively less important; they may be 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories.
- (iii) **'C'** Category of items does not require much investment; it may be about 10% of total inventory value but they are nearly 70% of the total items handled by store.

'A' Category of items can be controlled effectively by using a regular system which ensures neither over-stocking nor shortage of material for production. Such a system plans its total material requirements by making budgets. The stocks of materials are controlled by fixing certain levels like maximum level, minimum level and re-order level. a reduction in inventory management costs is achieved by determining economic order quantities after taking into account ordering cost and carrying cost. To avoid shortage and to minimize heavy investment in inventories, the techniques of value analysis, variety reduction, standardization etc., may be used.

In the case of 'B' category of items, as the sum involved in moderate, the same degree of control as applied in 'A' category of items is not required the orders for the items, belonging to this category may be placed after reviewing their situation periodically.

For 'C' category of items, there is no need of exercising constant control. Orders for items in this group may be placed either after six months or once in a year, after ascertaining consumption requirements. In this case the objective is to economies on ordering and handling costs.

**Illustration - 2:**

A factory uses 4,000 varieties on inventory. In terms of inventory holding and inventory usage, and following information is compiled:

No. of varieties of inventory	Percentage (%)	%value of inventory holding (average)	%of inventory usage(in product)
3,875	96.875	20	5

110	2.750	30	10
15	0.375	50	85
4,000	100	100	100

Classify the items of inventory as per ABC analysis with reasons.

**Solution:**

Classification of the items of inventory as per ABC analysis

1. 15 number of varieties of inventory items should be classified as 'A' category items because of the following reasons:
  - (i) Constitute 0.375% of total number of varieties of inventory handled by stores of factory, which is minimum as per given classification in the table.
  - (ii) 50% of total use value of inventory holding (average) which is maximum according to the given table.
  - (iii) Highest in consumption about 85% of inventory usage (in end-product).
2. 110 number of varieties of inventory items should be classified as 'B' category items because of the following reasons :
  - (i) Constitute 2.750% of total number of varieties of inventory items handled by stores of factory.
  - (ii) Requires moderate investment of about 30% of total use value of inventory holding (average).
  - (iii) Moderate in consumption about 10% of inventory usage (in end-product).
3. 3,875 number of varieties of inventory items should be classified as 'c' category item because of the following reasons:
  - (i) Constitute 96.875% of total varieties of inventory items handled by stores of factory
  - (ii) Requires about 20% of total use value of inventory holding (average).
  - (iii) Minimum inventory consumption i.e. about 5% of inventory usage (in end-product).

**Advantages of ABC analysis:** the advantages of ABC analysis are the following:

- (i) **Continuity in production:** It ensures that, without there being any danger of



interruption of production for want of materials of stores, minimum investment will be made in inventories of stocks of materials or stocks to be carried.

- (ii) **Lower cost:** The cost of placing orders, receiving goods and maintaining stocks is minimized specially, if the system is coupled with the determination of proper economic order quantities.
- (iii) **Less attention required:** management time is saved since attention need be paid only to some of the items rather than all the items as would be the case if the ABC system was not in operation.
- (iv) **Systematic working:** With the introduction of the ABC system, much of the work connected with purchases can be systematized on a routing basis to be handled by subordinate staff.

## 2. Economic Order Quantity (EOQ) :

Purchase department in manufacturing concerns is usually faced with the problem of deciding the 'quantity of various items' which they should purchase. The matter under consideration is not 'how much to purchase' but 'how much to purchase at one time.' If purchases of material are made in bulk then inventory carrying cost will be high. On the other hand if order size is small each time, then the ordering cost will be high. In order to minimize ordering and carrying costs it is necessary to determine the order quantity which minimizes these two costs.

Economic order quantity is an order size. The size of the order for which both ordering and carrying cost are minimum, is known as economic order quantity.

**Ordering Cost:** The cost which is associated with the purchasing or ordering of material. It includes costs of staff posted for ordering for goods, expenses incurred on transportation of goods purchased, inspection cost of incoming material etc.

**Carrying Cost:** The cost for holding the inventories. It includes the cost of capital invested in inventories. Cost of storage, insurance cost etc.

**Assumptions underlying E.O.Q.:** The calculation of economic order of materiel to be purchased is subject to the following assumptions:

- (i) Ordering cost per order and carrying cost per unit per annum are known and they are fixed.

(ii) Anticipated usage of material in units is known.

(iii) Cost per unit of the material is constant and is known as well.

(iv) The quantity of material ordered is received immediately i.e. the lead time is zero.

The famous mathematician Wilson derived the formula which is used for determining the size of order for each of purchases at minimum ordering and carrying costs.

The formula given by Wilson for calculating economic order quantity is as follows:

$$EOQ = \sqrt{\frac{2AO}{C}}$$

Where,

A = Annual usage in units

O = Ordering cost per order

C = Annual carrying cost of one unit, i.e., carrying cost per unit per annum  
(Carrying cost percentage x cost of one unit)

### Illustration - 3:

Calculate the Economic order Quantity from the following information. Also state the number of orders to be placed in a year.

Consumption of materials per annum	:	10,000 kg.
Order placing cost per order	:	Rs. 50
Cost per kg. of raw material	:	Rs. 2
Storage costs	:	8% on average inventory

### Solution:

$$EOQ = \sqrt{\frac{2AO}{C}}$$

A = Annual consumption in units

O = Ordering cost per order

C = Inventory carrying cost per unit per annum

$$EOQ = \sqrt{\frac{2 \times 10,000 \times 50}{2 \times 8}} = \sqrt{\frac{2 \times 10,000 \times 50 \times 50}{4}}$$



$$= 2,500\text{kg}$$

$$\begin{aligned} \text{Total Consumption of materials per annum} &= \frac{\text{No. of order to be placed in a year}}{\text{EOQ}} \\ &= \frac{10,000\text{kg}}{2,500\text{kg}} = 4 \text{ order per year} \end{aligned}$$

**Illustration - 5:**

About 50 items are required every day for a machine. A fixed cost of Rs. 50 per order is incurred for placing an order. The inventory carrying cost per item amounts to Rs. 0.02 per day. The lead period is 32 days. Computer:

- (I) Economic order quantity.
- (II) Re-Order level.

**Solution:**

$$\text{Annual consumption (A)} = 50 \text{ items} \times 365 \text{ days} = 18,250 \text{ items}$$

$$\text{Fixed cost per order (O) or Ordering cost} = \text{Rs. } 50$$

$$\text{Inventory carrying cost per item per annum} = \text{Rs. } 0.02 \times 365 = \text{Rs. } 7.30$$

(C)

$$\text{EOQ} = \sqrt{\frac{2 \times 18250 \times 50}{7.3}} = \sqrt{\frac{1825000}{7.3}}$$

$$\text{Re-order level} = \text{Maximum usage per day} \times \text{Maximum lead time}$$

$$= 50 \text{ items per day} \times 32 \text{ days}$$

$$= 1,600 \text{ items}$$

# Unit-6

# Leadership and Motivation

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## Leadership

- Leadership is an important attribute for the development of organization which can change on unsuccessful organization to successful organization.
- Leadership is the personal quality of an individual who organized the effort of followers & direct their activities to obtain organizational goal.
- So one can say that leadership is the process of influencing the activities of an individual or a group for goal achievement in a given situation.
- Leadership process comprises of 3 factors (i) Leader (ii) follower (iii) other variables

## Definitions:-

- By-knouts and O'Donnell- leadership is the ability to exert interpersonal influence, by mean of communication towards the achievement of goal.
- By George R. Tony: - Leadership is the activity to influencing people to strive willingly for group objectives.
- "Keith Davis":- Leadership is the ability to parse to seek defined objectives enthusiastically.
- Haimann theory:- Leadership is the process by which an executive imaginatively direct and influence the work of others by choosing and



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attaining specific goals by mediating between the individual & the organization” such a way that both will get maximum satisfaction.

- In general “ the leadership is the process of influencing the behavior attitudes activities and efforts of an individual or a group achieving common goal.”

### **Characteristic of leadership:-**

1. There must be a group of followers:- with out followers leadership can't imagine & leader can't exert his authority.
2. Leadership is a personal quality of character and behavior in a man to exert interpersonal influence.
3. Leadership is a reciprocal relationship between leaders & led both influence each other.
4. Leadership is the process of influencing the attitudes activities & efforts of individual.
5. Leadership is guide individual or group to active comm.
6. Leadership is related to a particular situation at a point of time and under the specific set of circumstances its styles may change time to time.
7. Leadership is a shared function:- A leader shares credits, balance, ideas, opinions and experiences everything with his followers.

### **Importance of Leadership:-**

- Leadership is an important factor making organization successful with out good leader organization can't function efficiently & effectively.
  - As organization has an objective & created by people. So Activities of the people need to be directed & it is done by leader only.
1. **Motivating people:-**As higher motivation, better would be the performance, So a good leader by exercising his leadership motivated he employees for high performance
    - A good leadership is it self a motivating factor for individual.
  2. **Creating confidence:-**
    - A good leader may create confidence in his followers by directing them, giving them advice & getting though them good result in the organization.
    - Sometimes individual fail to recognize their quality & capabilities to work in absence of good direction.

### 3) **Building Morale:-**

- Moral- attitudes of employee towards organization
- High morale leads to high productivity & organizational stability. Through good leadership employee morale can be raised high.

### 4) **Better utilization of man power:-**

- Leader mobilizes the work force engage them to get higher performance & coordinate their efforts to get maximum output.

### 5) **Fulfilling social responsibility:-**

- Good leader is always concerned with the need of satisfaction & dissatisfaction of its work force, provides high standards of living to workers and high productivity, low process to consumers, high national production increase revenue to good profit & return to invest, so fulfilling responsibility i.e. responsibilities towards different section of society is consumer, workers investor & good.

### Difference between management & leadership:-

- Leadership may be viewed as a process of **influencing behavior of an individual or group with reasons**
- It may be **own goal or a friend's goals** & may or may not be same with **organization goal**.
- But in management there can be managers only where **organized structure create such roles**
- A manager has to perform **all functions** like planning, organizing, directing, staffing & controlling.
- But leadership function comes **under directing**



- Subordinates are **guided by rules & regulation** enforced by authority so only 60/65% of their capability used.;
- Leadership induce **zealous** response on the part of followers which insist them to use 100% capability.
- Leaders have followers but managers have subordinates to obey because of their authority
- Leaders have emotional appeal:- **Leaders expected to be charismatic** people or with great vision they can alter the mood of individual But **managers are rational decision maker & problem solvers.**
- **Leader** gives **emphasis** to their **follower's need** but **manager** give emphasis to **organizational need**, though both fulfill organizational & personal need.
- According to Peter Drucker, **management is to do the right thing leadership is doing the right thing.**

### Leadership style:-

- Leadership style means the behavior exhibited by the leader during supervision of subordinates.
- There may be many dimensions of leadership style.
  - (a) Power dimension where superior using varying degree of power (authority)
  - (ii) Orientation dimension i.e. employee & task oriented.
  - (iii) Motivational:- All these are leader oriented but there are also followers & situation oriented.

Such classification may not be strict because, in a particular classification some elements of other may appear so, basically styles are listed out.

- (b) Autocratic (ii) Democratic (iii) free-rein

### (i) **Autocratic-style/Authoritative/Directive style:-**

- An autocratic leader centralizes power and decision-making in himself & exercise complete control over subordinates.
- He sets the group goals and they do what they are told. Situation for subordinates and they do what they are told.

- He holds over the head of his subordinates by the threat of penalties and punishment.
- The subordinates know what to do but not why.
- There are 3 categories of autocratic leader.
  - (a) Strict autocrat:- He follows autocratic style in very strict sense, His method of influencing subordinates' behavior imposing penalty.
  - (b) Benevolent autocrat:- Here decision making power is centralized but his motivational style is positive,
    - He can be effective in getting efficiency in many situations & some subordinates get satisfaction under such leadership.
  - (c) Incompetent autocrat: - some times superiors adopt autocratic leadership style just to hide their incompetence because in other styles they may be exposed before their subordinates.

Autocratic is applied with success in situations

- Subordinates lack knowledge or company goals
- Subordinates are inexperienced & lack in track
- The company enforces fear & punishment as an access disciplinary technique.
- The leader prefers to be active and dominant decision making.

### **Advantages:-**

- 1) There are many subordinates who prefer to work under, centralized work & strict discipline & derive satisfaction.
- 2) It provides strong motivation and rewards to a manager exercising this style,
- 3) It permits very quick decision making as a single person takes decision.
- 4) Less competent subordinates have scope to work in organization (as they have less involvement in planning & decision making)

### **Dis Advantages:-**

- People in the organization dislike it specially when it is strict the motivational style is negative.



- There is minimum scope for developing leaders among subordinates as they are more dependent & less individuality.
- Subordinate avoid responsibility initiative & innovative behaviors.
- In autocratic situation frustration, low morale and conflict develop easily. Which is effect organization efficiency?

## 2) **Participative leadership style:- ( Democratic/consultative ideographic)**

- The democratic leader likes y-theory invites decision making & practice leadership theory by consultation.
- Here authority is decentralized, decision are arrived at after consultation with follows & participation by them instead of taking unilateral decision.
- A demo critic leader gives high importance to work & people.
- The participation style is two type (i) Real (ii) Pseudo
  - (I) Real:- Here superior gives credit to sub ordinate suggestion and ideas in taking decision.
  - (II) Pseudo:- Here superior appreciate participation theory but do not prefer it in practice.

Participative style is gives good result when

- (i) The organization has communicated its goal & objective to subordinate & they accept it
- (ii) Reward & involvement are used as mean of motivation.
- (iii) The leader truly desires to hear the ideas of his employee before talking decision.
- (iv) Sub ordinate must be knowledgeable & experienced.
- (v) The sub ordinates desire active & time involvement in matters that affects them.

### **Advantages:-**

- Highly motivating technique to employee as they feel elevated when their ideas are given weight in decision making.

- Share responsibility with superior & try to save grand him also.
- The employees productivity is high because they are party to decision.
- It provides organizational stability by raising moral further leader are also prepared to take organizational positions.

### **Dis Advantage:-**

- (a) Complex nature of organization requires through understanding of its problems which lower level employee may no able to do.
- (b) If interaction among superior & subordinate is minimum than participative leadership is not remain meaningful.
- (c) This type of leadership takes enough time to take decision. It is top job for the leader to provide a relaxed atmosphere to the sub ordinates so that they actively participate in decision making.

### **Autocratic**

- Manager exhibiting this style is rebelled as theory-X teacher
- Leader is auto critic, task oriented & restrictive
- Leader structures the task strives to find out better methods & keeps the employee busy on task.
- Communication is one way
- Decision making centralized and quick decisions is taken.

### **Democratic**

- Manager style rebelled as theory leader
- Leader is democratic, follower oriented, permissive,
- Leader is considerate of his sub ordinates recognizes their needs & respect their human dignity
- Two way communication
- Decision making deconstructed slow process of decision making.



### 3) Free-rein/Leissser-fair:-

- It means complete freedom to subordinate
- In this style manager once determines, polices programmers & limitations for action & entire process left to sub ordinates
- Delegation of authority into hands of the sub ordinate
- Group members perform every thing and the manager usually maintains contacts with out side persons to brings the information & materials which the group need.
- Such leader avoids power, & the reasons may be lack of self confidence, fear & failure etc.

#### **Free-rein style would seem appropriate under the conduit**

- The organizational goal have been communicated well & are acceptable to the sub-ordinates
- The leader is infested in delegating decision making
- The sub ordinates them selves are well trained & highly knowledge, concerning their task & ready to take responsibility.

### **MOTIVATION**

Motivation : The term motivation derived from the word motive. Which may be defined as need, wants, drives or impulses with in an individuals.

Need: more broad sense a psychological desire(e.g. to get status in an organization. Full fill basic need)

Wants : used in narrow sense & includes that desires, which a person can spend money/power to satisfy that desire. (e.g. desire for a car/bus etc)

Definition: "Scott" has defined motivation as "the process of stimulating people to action to accomplish desire goals"

“Mac Farland” has defined motivation as a way which urges, drives, derives, aspiration, striving, needs, direct control or explain the behavior of human being.

“Knoolz & O'Donnell” motivation is a general term applying to the entire class of drives, derives, needs wishes & similar forces that include an individual or group of people to work.

So motivation is a psychological phenomenon which generate with in an individual where as needs are feeling arising in the mind & lack of certain things. Which effect the behavior of the person.

Motivation inspires the employees to give their best to wards the goals of the enterprise.

### **Characteristics:**

one type of need in different – individual produces different behavior.

- Need keep on changing absolutely & their interesting changes from time to time.
- In any situation more than one need operating
- Person motivated in totality not in part, each individual in the organization is a self contained & in separate & his all need are interrelated more over feeling of need is continuous process. So it creates continuity in human being.

### **Importance of motivation:**

Every superior in the organization, must motivate his sub-ordinates for the right type of behaviour, which plays important factor in determining organizational efficiency.



(1) So, **diagnosing human behaviour** & analyzing them put them irrespective of the nature of the organization is the prime importance of motivation.

(2) **High performance:** Motivated people put higher performance as compare to other according to William James. Motivated people worked closed to 80-90% of their ability.

(3) Low employee turn over:- Motivated people stay in the organization & their a absenteeism is quite low. So, indirectly it is saving, money and time of the organization.

(4) **Acceptance of organizational change:-**Organization may face change in technology value system, culture. So, it has to cope with that change.

- ❖ When such changes are introduce in the organization there is a tendency to resist this changes by the employee. If people are well motivated then implementation of changes are easier & they accept such changes.

### **Nature of motivation:-**

- ❖ Motive is internal to man:- Motivation can't be seen only through the behavior one can feel.
- ❖ A single motive can cause different behavior. (A person with single desire to become prestigious may join politics, additional education, change its appearance.
- ❖ Different motive can cause single behavior:- It a person buy a car, his buying behavior may cause by many motives i.e. color, price, mileage.
- ❖ Motive comes and go:- Motive arise at a point of time may not remain with the same intensity at other point of time.

(A boy concern about his dress & hair at adolescences age may give more attention to health & education in youth stage)

**Theories of Motivation:** The theory of motivations is basically to find out the answer of the question relating to what motivate people.

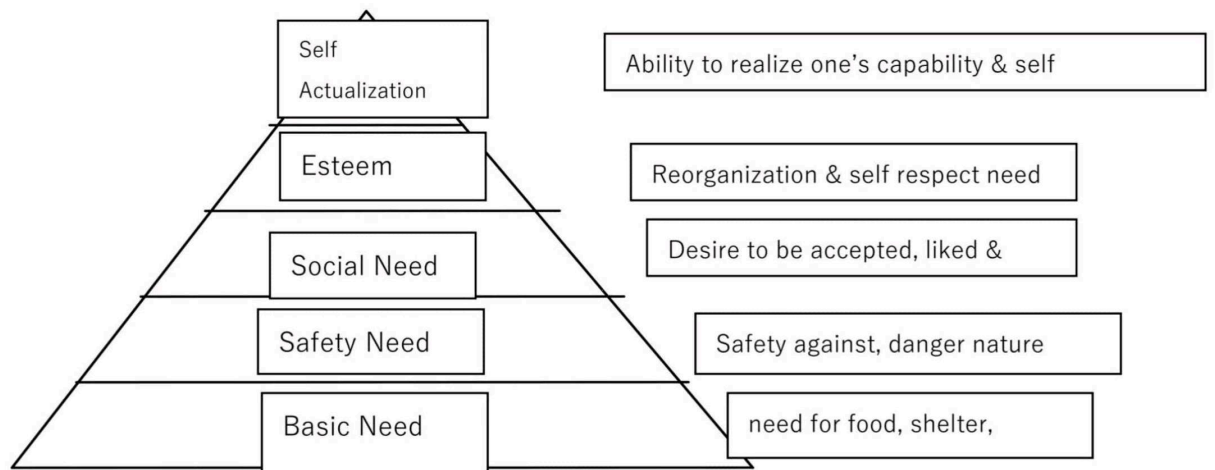
Human being complex in nature motivational factors are for different person as well as it depend on time, places surrounding & circumstances. Various theories have been developed by eminent authors on motivation.

1. **Maslows theory of need hierarchy:-**

A.H. Maslow suggest/find out/advance there importance proposition about human behavior.

- (i) Man are wanting being :- Their needs are unlimited & continuous. As soon as one need is satisfied another appears in its place. The process is un ending & this keeps man to work continuously.
- (ii) Fresh needs can motivate person to work:- A satisfied need is not a motivator of behavior only those needs which are not satisfied are capable of motivating individual.
- (i) Man's needs have a hierarchy of importance: According to him man's needs are arranged in a series of levels.





The lower level needs have priority over higher level

Needs can be broadly two type -:

1. **Primary needs**

- a.) Basic Need b) Safety need

2 **Secondary needs**

- a. Social need  
b. esteem need  
c. self actualization.

1. **Physiological need:** These are the basic need & are essential for every day to remain alive. Such needs are food, shelter, cloth, water.

These needs motivate worker to do work & earn sufficient amount of money to fulfill them.

2. **Safety need:-** (Security need) Security need arises when the basic needs are fulfilled.

- The needs arises because most people thing about future as much as they think about present.
- Once people achieve sufficient food, shelter, cloth. They protection against danger, In work place individual, views these needs in terms of safety working condition job security. Increase salary etc.

3. **Social needs:-** When an individual primarily needs fulfill then social needs become an important motivator of his behavior,

- Man wants to live with respect in the society. He wants to maintain relation with different type of , group of people, because man is a social being & can't live alone.
- In an organization workers find satisfaction through inter personal interaction acceptance by other i.e. belonging to informal groups.
- Even if a person getting social need fulfill with out satisfying primary needs/he may become resistance, violent & non- cooperative.

4. **Esteem need/ego need/status need:-** These level of needs are related to self respect and receiving respect and receiving respect from others for accomplishment as well as developing self confidence and prestige.

- ❖ They are expressed in an individual's desire for strength for achievement for mastery.
- ❖ They work to earn skill; they take pride in maintaining high performance, standards and find better way to do the job.
- ❖ This involve other opinions and includes such thing as desire, prestige, status, reorganization, dominance importance.
- ❖ Satisfaction in esteem need not always obtained.

5. **Self actualization needs:-** It is the need to maximize ones potential what ever it may be.



- ❖ Those who have strong realization need to devote much of their energy skill and potential to develop their creative potential.
- ❖ Self actualization work differently in each individual i.e. one want to be an ideal teacher another may be good manager or develop himself realization need mean they like to perform in the work (i) challenges (ii) permit them to use innovative approaches (iii) allow them to set their goal (iv) develop their creative potential.

A man with high intensity of achievement need will be restless unless, he can find fulfilment in doing what he is fitted to do.

Maslow said these need as the desire to become more and more what one is to become every thing that one is capable of becoming.

Maslow suggest that the various level are interdependent, over lapping since one need does not partially satisfied in each area.

Even though a need in satisfy, it still influence behavior of individuals due to inter relationship

This theory gives an idea for the understanding management task in relation of human resources.

Management at all level must be sensitive to the changing needs of sub ordinates/individuals to provide best atmosphere for productivity and satisfaction

.

**Demerits:-**

Maslow's work is the pioneer work in study of motivation. It has certain demerits like

Most of human needs are recurring and never satisfied

Most of the needs co-exist and there is no such hierarchy of needs.

The self actualization need is theoretical. No person can ever know his maximum potential.

### -Herzberg's two factor motivation theory:-

Two factor theory was proposed by Fredrick Herzberg (U.S.A.) He interviewed 200 engineers/accounts of different companies about their job in which they felt exceptionally good/exceptionally bad.

From the response of engineers and accountants. He identify some suggestion. Which is commonly known as two factor theory, according to him?

- (a) The factors- that are present where job satisfactory is produced are distinct from the factors that lead to job dissatisfactory.
- (b) The opposite of job dissatisfaction is not job satisfaction.
- (c) The opposite of job satisfaction is not dissatisfaction he also suggest two sets of factor (i) **hygiene**, (ii) **motivator**, responsible for job satisfaction or dissatisfaction.

- i) **Hygiene/ maintenance factor:** - Factors which did not motivate the person. When present in the job but their absence causes dissatisfaction.

These factors prevents dissatisfaction and sickness



(i) Administration/ company policy (ii) Supervision (iii) salary (iv) working condition (v) status (vi) inter personal relationship with subordinate (vii) security (viii) relation with peers (ix) relation with supervisors (x) personal life

(ii) **Motivator :-** The factor which are concern with motivation is known as motivator.

These factors are (i) challenging works (ii) responsibility (iii) recognition (iv) Advancement (v) advancement

Demerits:- Herzberg theory was criticized for :-

- (i) This theory did not propose any measure for assessment of satisfaction
- (ii) The theory did not consider situational factors
- (iii) Satisfaction and dissatisfaction are subjective view of respondent
- (iv) This theory explain basically job satisfaction not motivation.

### COMUNICATION

An organizational communicational objective can be fulfill by coordinating, integrating activities of individual working their. In an organization individual are performing different activities which are interrelated the working and maintaining of this relation is possible through the communications in general it provide foundation for human interaction and also helps in transmitting information facts ,felling And ideas there by making the coordination effort possible. If the organization is complex one than their large number f employees are engaged degree of specialization and division of labor is high so coordination among them is more necessary which can be achieve through communication only.

**Defination-** derives from a Latin word comunis common,

“ It is the process through which two or more persons come to exchange idea, understanding among themselves.”

It has two aspects **1.** There is some thing which transmitted facts, feeling, ideas etc implies that there must be a receiver. **2.** The communication emphasis the understanding element sharing of understanding would be possible only when the person to whom the message is meant, understand it in the same sense. in which the sender of the message want him to understand.

Communication involves something more mere transmission of message and reception of message .the correct interpretation and understanding of message is important from the point of view organizational efficiency.

Communication process-

John Kottler has defined communication as a consisting of a sender transmitting a message through the media to a receiver who responds.

Sender---- message ----- receiver

But a dynamic interaction both affecting and effect by many variable so there is no unanimity among various thinker and author. But a communication process may involve following steps

**Sender – ideas ---- encoding -----channel-----receiver---- decoding –**



- **Sender (source)**-the person who initiate the communication in an organization. He is the person with information, need or desire. the with out reason or desire the sender has no need to send a message ,the manager communicate information to the members of the department.



- **Ideas** – It is the subject matter of communication this might be opinion, attitude , feeling , views , suggestions , and information
- **Encoding**- since subject matter is abstract and intangible transition required the use of symbols such word action gesture picture.

Generally sender chose symbol, word, gesture, for the message believing that those have the same meaning for receiver.

The process of converting subject matter into such symbol is known as encoding.

- **Channel**- these symbol are transmitted through certain channels e.i. radio, telephone, air etc. the sender must choose appropriate channel for communication to make more effective (e.g telephone conversation would be an unsuitable channel for transmitting a complex engineering diagram fax, mail may be appropriate one.
- **Receiver**- he is the person to whom message is meant for .receiver may be a single person or may be a large number of receivers.
- **Decoding**- It is the process by which a receiver interpret the message and translates it into meaningful information. it is a two step process 1) the receiver must perceive the message 2) then interpret it . Decoding is effected by the receiver s past experiences , personal assessment of symbols and gestured , mutuality with meaning of sender . in general the more the receivers decoding matches the sender intended message, the more effective the communication has been.(e.g one manager asked a subordinate if he would like to work overtime on Sunday , but earlier the person had made special plan for the Sunday he interpreted managers offer as demand or canceled earlier program , but in reality manager meant that there were number of subordinates, but he thought he would appreciated an opportunity to earn extra income.
- **Noise**- It is the factor that confused or otherwise interferes with communication. it may be internal or external (when disturbed by other sound in the environment). Noise can occur at any stage of the communication process . it may occur during passage through the channel ,encoding or decoding .
- **Feedback**- Feedback is necessary to ensure that the receiver has received the message and understand it in the same sense as sender want

. it is the reversal of communication process in which a reaction to the senders communication is expressed.

## **ONE WAY AND TWO WAY COMMUNICATION-**

**One way communication-** The sender communicates with out expecting feedback from the receiver (e.g polices , statements ) .It is less time consuming ,less accurate but more orderly .

**Two-way communication-** this exist when receiver provides feed back to sender (e.g making suggestion to subordinates receiving question ). Some cases one way communication is adequate while many case two way communication is essential to attain clarity and commitment of employee.

## **TYPES OF COMMUNICATION-**

The subject matter of communication i.e message are intangible in nature so their transmission required certain symbol which may be 1) VERBAL 2)NON-VERBAL

**VERBAL-COMMUNICATION-** When subject mater of communication express in term of words.

- **ORAL-COMMUNICATION-** Here sender and receiver exchange their ideas through oral words either face to face communication or through any mechanical devices. Oral communication is helpful in face to face communication where person can exchange their felling and clarify any doubt in communication. Here interchange of information is speedy and completely.
- **WRITTEN COMMUNICATION-** Communication in written words, graphs, diagram, pictures etc e.g letter, circular, note . It can be store for further references, communication efforts may be minimized by simultaneous communication to various points such as through circular. Communication takes place between distantly placed party with out much cost.  
Demerits- It is very time consuming and great chance of communication being misunderstood.



i) The communication flow within the organization where two parties at the different managerial level is known as inter-scalar/vertical communication.

ii) When communication takes place between two persons of the same hierarchical level it is known as horizontal or lateral communication.

**i) Inter-scalar/vertical communication**

**a) Down ward communication:-**

- Down ward communication within the organization flows from a superior to subordinate either in the same line of command or in the different one.
- Such communication stands a great force of controlling, influencing of organization members.
- People at lower level have a high degree of hear & respect towards such communication.
- (e.g. order, instruction, direction about understanding of job organizational policies & procedures)

**b) Up-ward communication:-**

This communication flows from a subordinate position to a superior position.

(e.g.) sub ordinates work performance, feed back of understand of order & instruction, opinion, attitude feeling, suggesting new ideas etc.

**ii) Horizontal-communication:- (informal communication)**

- It is the flow of information between persons of the same mechanical level, line & staff.
- (i.e.) communication with peers, in addition to providing task coordination also furnishes emotional & social support to the individual)
- Creation of various departments in an organization creates co-ordination problem. Which can be solve through horizontal communication.
- This communication helps in problem solving, developing inter personal relationships with peers.

## Communication Barriers:-

- The factors which obstruct/impede the flow of communication in the organization are the barriers in communication.
- There are numbers of communication barriers which abstract flow of communication.

### 1) External 2) organizational 3) Personal

#### 1) External:-

External barriers may affect communication in any content, such barriers may be in two form .

- Such barrier may be (i) **Semantic barrier** (ii) **Psychological**

#### (a) **Semantic Barriers:-**

Semantic barrier are obstructions cause in the process of receiving & understanding of message during the process of decoding & encoding ideas & words.

- These barriers arise from the linguistic capacity of the parties involve.
- (i) **Badly expressed message:-** lack of clarity & precision in a message make it badly expressed such as poor chosen empty words use of phrases, jargons, inadequate vocabulary lack of coherence, are some common founts found in this case.
  - (ii) **Faculty translation:-** every managers receives communication as well as send information to peers subordinate & superior the must translate in to language suitable to each. Hence the message has to put into words appropriate to the frame work in which the receiver understood so faculty translation lead to inefficiency & heavy cost
  - (iii) **Specialist language:-** some times technical persons & special groups develops a peculiar and technical language of their econ. This ereats communication barrier as receive ignores such type of language.

#### (b) **Emotional or psychological barrier:-**

- It is the prime barrier in inter-personal communication
- The importance of a message depends upon the emotional or psychological status of both partials involved.



- In every message there is a meta-message what one gets out of a message when decoding
- To getting a meta-message the emotion or emotional status. of the wavelength of communication.
- Offer these barrier are the filter paper others there by making communication in adequate.

### Some evaluation barriers are:-

- (i) **Premature evaluation:-** It is the tendency of prematurely evaluating communication, rather than to keep an uncompromised position during the interchange.

Such evaluation stop the t transfer of information of the sender feels a sense of useless

- (ii) **In Attention:-** The pre occupied mind of receiver & the resultant non-listening is one of the major chronic psychological barrier,

- It is common phenomena that people fail to react bulletins, notices, reports

- (iii) **Loss by transmission & poor retention:-** when communication passes through various levels in the organization successive transmission of the solve message are decreasing accurate. i.e. in oral communication 30% of information lost.

- It is shown that people retain only 50% of the information they gets.

- (iv) **Distrust of communicator-** it arises out of ill considered judgments on illogical decision or

Frequent. Due to this receivers action become delay & unenthusiastically

- (v) **Failure to communicate:-** many time manager fail to transmit the needed message this might be because of laziness of sender or assuming that every body knows or bogging information.

### (2) Organizational barrier:-

(i) **Organizational policy:-** organizational policy is overall guideline to every person working in the organization how he is normally expected to behave.

- It has to be interpreted by top order manager if it is not supportive to the flow of communication in different directions communication flow would not be smoothly & adequate.

(i) **Organizational rules & regulation:-**

- The rules may restrict the flow of certain message and may leave many important are and may leave many important one.
- Communication through proper channel is specified way prescribed by these rules delay it and works. Against the willing ness of persons to convey the message.

(ii) **Status relationship:** - placing of people in superior & sub-ordinate compositing in formal organization structure also block the flow of communication i.e. particularly in up ward communication.

- Greater the difference between hierarchical positions in term of their status greater would be the possibility of communication barrier.

(iii) **Complexity in organizational structure:-** In an organization where the are a number of managerial levels communication gets delay.

(i.e. in case up ward communication people generally do not like to pass up the advance criticism either or themselves or of their superior)

(3) **Personal Barriers:-**

- As communication is basically a interpersonal process so sender & receiver to this process exert important influences on its operation.

(A) **Barriers in superior:-** (in up ward communication)

(i) **Attitudes of superior:-** It attitudes of superiors towards communication in general is unfavorable. There is a greater possibility that ménages would not flow adequately.



(ii) **Fear of challenge to authority:-** manager generally try to with hold the information coming down. The line or going up as frequent passing of information may disclose their weakness.

(iii) **Ignoring communication:-** come times superior deliberately ignore the communication from their sub ordinate to maintain their importance.

(iv) **Lack of time:-** superior are overburdened with the work & they have little time of talk to their sub ordinate

(v) **Lack of awareness:-** some times they may lack the awareness about the significance & usefulness of communication in different direction.

### **(B) Barriers in sub ordinates:-**

There are various factors which have been traced in the subordinates that adversely affects their active participation in communication. Some factors are (i) attitude (ii) time availability (iii) Awareness but besides this common factor, there are also two important barriers found in sub ordinates.

#### **(i) Unwillingness to communicate:-**

If a sub-ordinate feels that he is likely to be adversely affected by a particular piece of information to his superior. He would not will to supply it.

- It any unfavorable happening or if its supplication is way so as to protect their own interest.

#### **(ii) Lack of proper incentives:-** lack of motivation to communicate also restrict them to communicate upwards

- Rewards & punishment system is responsible for it
- Even if a good suggestion didn't given any attention from the organization he would not convey it.

### **Methods of overcoming the Barriers:-**

- Co-ordering the importance of effective communication in the successful functioning of business organization.
- It is essential for the management to over come these barriers.
- Though all barrier can't eliminated, yet suitable managerial action in this direction can minimized the effect of these barrier.

### **Making communication effective:-**

Various measures discussed earlier will be creating condition for effective communication. But the communicator may take some specific steps to make it effective in a given condition.

- These are the guidelines for making effective communication.

i) **Clarity in idea:-** sender must be quite clear abbot what he want to communicate.

ii) **Purpose of communication:-** Every communication has some purpose the basic purpose of any communicative being to get behavioral response from the receive of the communication.

iii) **Empathy in communication:-** The way for effective communication is to be sensitive to wards receiver needs feelings, perceptions this is the empathy in communication.

- i.e. projecting one self into the view point of the other person.
- When sender of the message looks at the problems from the receiver's point of view many of misunderstanding is avoided.

iv) **Two way communication:-** Two way communication being two mind together,

- It involves a continuous dialogue between senders as receiver.
- It is fact that for successful of organization up ward communication is necessary.

v) **Appropriate language:-** It the words are used, the language by receiver.



- Technical terminology & specialist knowledge should be avoided.
- Use of repetitive language with which the receiver is familiar makes communication simple.

vi) **Credibility in communication:-** effectiveness of managerial communication depends on credibility or believability. Subordinates obey the orders of the superior because he has demonstrated through his competence that he is worthy for trust.

Distending:- communicator has to be a good listener by this is giving chance to other to speak and gather information for further communication.

## Human relationship and performance in Organisation

It signifies the relationship that should exist between the human beings engaged in industry. A human relation is the relationship between human resources of the Organisation. It incorporates management-employees, employees-employees relationship.

It also consists of relationship between the Organisation's human resource & outsiders (such as clients, suppliers). healthy human relations lead to increased productivity and efficiency. It also plays crucial role in growth and success of the Organisation.

### Employee productivity

Productivity is shown to increase when relationships between managers and employees is positive and supportive. Relationships between employees who are dependent upon each other also directly influence productivity. Individuals are more likely to produce quality results when they are treated with respect and are made to feel as though they are being recognised for making a positive contribution to the Company's success.

### Employee Motivation

Motivation is directly tied to the idea of increased productivity. If an employee feels that his needs will be met by performing his job tasks, he is more likely to be motivated to do them. For example, when a manager recognises an employee's work performance by congratulating him for an outstanding job, the employee feels appreciated and valued. By having his esteem needs met, he is more likely to repeat his current behaviour.

### positive perception

Good communication and interpersonal skills promote feelings of goodwill between individuals and companies. It creates a perception of the individual as either being a superior, adequate or a poor performer. Even if an individual's technical skills are superb, if he is unable to cultivate solid relationships with superiors and co-workers, he may be viewed as someone who is not a positive contributor.



## Company Loyalty

When employees and customers are treated with respect, they are more likely to feel good about maintaining an existing business relationship. Turnover is often linked to poor relationships between employees and managers. Establishing a sense of mutual value and trust creates an environment where employees and customers feel as though they matter.

## Employee Collaboration and Workplace Culture

Human relations in the workplace are a major part of what makes a business work. Employees must frequently work together on projects, communicate ideas and provide motivation to get things done. Without a stable and inviting workplace culture, difficult challenges can arise both in the logistics of managing employees and in the bottom line.

## Improving Employee Retention

The quality of workplace relations is critical to employee retention. Employee retention may seem trivial - especially in a workplace that is used to a high turnover - but managers must remember that turnover is financially very costly. Every new employee requires a substantial investment of time and energy in their recruitment and training. In addition, severing ties with old employees can sometimes be challenging, especially if the circumstances are not particularly amicable. Making sure quality employees remain interested and engaged in the business requires patience, compassion and flexibility, but can actually make the business more financially sound.

## Encouraging Employee Creativity

The modern business environment often rewards businesses that are able to quickly develop products that meet changing consumer needs. In some industries - such as technology, for example - employees' ability to come up with effective new ideas is often the difference between the entire company's success and failure. Employees' creativity is often dependent on their ability to communicate with other employees and share ideas. Without quality workplace relationships, employees are less likely to be able to develop and share the solutions that a business needs to survive.



## Language and Culture

Populating your workforce with a diverse group helps you provide sales and service employees that can effectively interact with customers from different cultures. Additionally, some customers in certain communities may not speak English as a primary language, which makes employees fluent in multiple languages a plus.

## Relation with peers, Superior and Subordinates

It is always an experience to interact with the peer, superior and subordinate groups. All the three groups of people give a different feel and learning, when we interact with them. All the three groups are important and very much existent in all areas of life. Whether it is family, office, friends, mentors, teachers, bosses, acquaintances, etc. all of them are typically divided into three categories.

### Peers:

The first category will always be peers because we respond & reciprocate to them very easily & very fondly. They are typically the same level as us either in intelligent quotient or status or family structure or in any other way at par with us. We normally tend to be comfortable with them in terms of talking and interacting. One more reason of a person being comfortable with peers is they have similar problems and they empathize very well with each others. For example colleagues in office, friends, cousins, acquaintances, social circles, etc.

### Superiors:

The second category is superiors. The teachers, mentors, bosses, family, etc. generally fall in this category. They are the ones who are higher than us as far as the knowledge or experience or intellect quotient or relationship goes. They expect a certain kind of respectful treatment from us, while we deal with them. We normally tend to take time to interact with them directly; more so, particularly because they also have an expectation barrier to break first with us. They are the ones from whom you learn effortlessly because we know that they know more than us. For example uncles, aunts, bosses, bosses of bosses, mentors, aged consultants; senior positions in any way, etc.



## Subordinates:

The third category opens up the scope of being a mentor to others, as well as taking work from them or helping them to cope up. They are lesser liked by age, experience, knowledge or relationship and that's why we feel good dealing with them and sometimes even show them off our seniority. They are the ones who need our reciprocation for their growth but still our responses to them are important; if we have to take work from them or they are in our social circles or have to be in a team to achieve targets in professional fronts.

## TQM Concepts

### Total Quality Management - (TQM)

Total Quality Management is mainly concerned with continuous improvement in all work. It is a long term planning. It is the consistent improvement in the quality. It is a never ending process. Total Quality Management consists of three words; Total, Quality and Management.

**Total** - Make up of the whole.

**Quality** - Degree of excellence a product or service provides.

**Management** - TQM is the art of managing the whole to achieve excellence. TQM covers all the set rules, regulations, guidelines and principles that contribute in improving the organization continuously. It is a continuous process of improvement for individuals, groups of people and the whole organization. TQM integrates all the fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach.

Total Quality Management (TQM) is a management approach for an organization, centered on quality, based on the participation and commitment of all the internal and external customers and aiming at strategically long-term success through customer satisfaction, and benefits to all members of the organization and to society.

### Characteristics/Nature of TQM

- TQM starts from top management →

The quality concept is initiated by the top management. Only the top management can create an environment that develops team-oriented environment and creates quality oriented culture that can prevent problems and continually improve.



It is a steady process →

To produce quality product and service is not an easy job. Sometimes it takes years to give the desired results. All the employees have to work consistently as a team in one direction to improve all the processes in the Organisation.

It is a part of Strategic planning and Thinking →

TQM policy is a long term planning. The quality policy must be the part of strategic planning to get the desired results.

It is Customer Focused/Oriented →

The end result of TQM is complete satisfaction of customers by giving them quality products and services. It is possible only when TQM programme is customer centric.

It is a Team work →

Success in terms of standard quality is possible only when the Organisation has a culture of team formation and the employees work in teams and give their maximum.

Teams can be formed vertically and horizontally. When top management is involving the lower level employees it is vertically and when the different departmental employees are involved then it is horizontally (employees of marketing, sales, production and finance departments are working for critical and complex projects).

It is Related with Consistency Improvement of Quality →

To deliver quality products and services is not an easy job. All the processes have to be developed and standardised by consistent improvement.

Every Employee is involved in Quality Improvement Aspect →

All the employees internal as well as external are involved in the TQM programme.

Internal employees include all the employees included from top to bottom and external employees are suppliers, banks and other institutions which are involved in the TQM process.

Every Employee is Responsible for the Success of TQM →

If all the employees are determined and committed for the quality products and services, then only quality could be delivered.



## The TQM practices followed by Multinational Companies

All the MNC's like Sony, Toyota, Xerox, Motorola follow the Total Quality Management practices. The salient features of TQM approach followed by the best companies are as following;

- The Companies create a sense of an environment of mutual trust, respect and dignity.
- The management act immediately on new ideas and suggestions.
- The Companies are meeting and exceeding customers requirements and expectations on consistent basis.
- The Companies hear and learn from the dissatisfied / unhappy customers and responsible for complete customer satisfaction.
- The Companies are committed to their both internal as well as external employees. They know the value of workers involvement and intensive training.
- The Companies develop the teams to have broad decision-making powers and responsibilities.
- They apologise for the complaints.
- The Companies know that labour-management relations could do more for quality and productivity.
- The Companies empower their employees to make them responsible.
- The Companies implement Statistical process control and monitor defect rates.

## Quality Management

Quality management includes all the functions of the Organisation to design and provide quality products and services which fulfils the needs of the customers and generate ultimate satisfaction.

The Core concept of quality management is quality planning, quality controlling and quality improvement.

The traditional approach of quality management covers typical inspection aspect and the 'do it right from the first time' concept.



## Quality planning

The first and foremost step in quality planning is to plan and know who your customer is, and what are his needs and wants. After optimising the product or service features, the Organisation designs and develops the product or service. The next step is to standardise ~~the~~ the processes ~~so~~ that the products or services can be standardised. The consistent production of desired quality products and services require high involvement & contribution of employees in planning.

## Quality Control

It is a very important step in quality management. It requires extensive, proper and consistent training of employees so that errors can be controlled. Inconsistency in products and services can be avoided by using statistically process control techniques.

## Quality Improvement

The final step in the quality management is quality improvement is mainly concerned with continuous improvement in all work. It is a long term planning. It is the consistency improvement in the quality. It is a never ending process.

## Quality System

What is a Quality System?

A quality management system (QMS, alternatively "quality system") is a mechanism for managing and continuously improving core processes to "achieve maximum customer satisfaction at the lowest overall cost to the organization". By bringing together philosophies, standards, methodologies and tools, the QMS helps an organization achieve its quality-related goals.

A quality system is a specific implementation of quality philosophies/concepts, standards, methodologies and tools, for the purpose of achieving quality-related goals. When implemented, a quality system will be unique to an organization. Its structure, however, may be similar to quality systems in ~~some~~ other organizations (for example, if all ISO 9001 clauses are addressed).



Components of a Quality System  
The International Organization for Standardization (ISO) prescribes a minimum standard for the elements of a QMS through ISO 9001:2000. (This part did not change in ISO 9001:2015).

To build an ISO 9001 Compliant QMS, you need to:

- Identify and map processes (Administrative, Organization, Operational)
- Determine how processes are interrelated (that is, identify and map cross-cutting activities that span organizational boundaries)
- Plan for Operations and Control of these processes, recognizing that the conditions and specifications for control of each of the processes may be different from one another.
- Plan for dynamically allocating resources to accommodate the demands of the operations and control of the processes.
- Apply systems thinking and describe the environment that your inter dependent processes were embedded within.
- Identify mechanisms to measure, monitor, analyze and continuously improve the processes in the context of the organization and its environment
- Establish an Action plan for proactively deploying the QMS through the organization and ensure that records are kept that track compliance to the QMS and changes that are made to the QMS itself.

### Safety

The condition of being safe from undergoing or causing hurt, injury, or loss.

### Industrial Accident

An accident (industrial) is a sudden and unexpected occurrence in the industry which interrupts the orderly progress of the work.

According to the Factories Act, 1948: "It is an occurrence in an industrial establishment causing bodily injury to a person who makes him unfit to resume his duties in the next 48 hours".

In other words, accident is an unexpected event in the course of employment which is neither anticipated nor designed to occur. Thus, an accident is an unplanned & uncontrolled event in which an action or reaction of an object, a substance, a person, or a radiation results in personal injury.



## What are the main causes of Industrial Accidents?

There are a number of factors that can lead to industrial accidents, including everything from improper lifting techniques to mishandling hazardous materials. Below are some common causes of accidents in the workplace.

### Environmental Causes (Unsafe Condition)

Unsafe working conditions are the biggest cause of accidents. Accidents which occur from environmental causes refer to those workplace accidents that happen because of the working environment. The environmental factors can be both natural and man-made such as workplace design. Common environmental causes of accidents include:

#### - Poor lighting

Low visibility is a common cause of slips, trips and falls.

#### - Ambient temperature

If a workplace is too hot, overheating can occur. If the workplace is too cold, frostbite or hypothermia can occur.

#### - Air pollution

Breathing issues can develop if a workplace has poor ventilation and/or air pollution.

#### - Sound pollution

The sound in a workplace can cause injury to a worker's hearing.

### Mechanical causes of Industrial Accidents

Mechanical causes of industrial accidents are factors that refer to machine or equipment failure or breakdown. Generally, with proper maintenance and safety processes in place, these types of accidents are preventable. Common mechanical causes of accidents include;

#### • Broken or damaged machine -

Parts can be easily broken or damaged if made of poor quality metal.

#### • Power failure -

Total or partial power failure can lead to serious injury.

#### • Fire or explosion -

Cooling failure or a small spark can lead to a mechanical fire or explosion.

#### • Fair wear and tear -

The older machine, the more wear and tear on the parts which can lead to a higher risk of mechanical accident.



## Human Factors that Cause Accidents

Accidents caused by human factors refers to incidents in which the accident is directly attributed to the worker involved in the accident.

Common human factors that cause industrial accidents include;

- Poor housekeeping - An unkempt work space can lead to slips, trips, and falls.
- Fatigue - When a body is tired, injury is more likely to occur.
- Overexertion - Overexertion injuries are the most common type of workplace injury.
- Stress - Workers who are stressed are often more distracted and of greater risk of injury.
- Dehydration - It is important to consume enough water to ensure your body functions properly.
- Improper lifting - Lower back strains and shoulder injuries are common among workers who use improper lifting techniques.

## Tips for the prevention of Industrial Accidents

When it comes to industrial accidents, incidents are almost always preventable when proper safety measures and employee training are in place.

Tips for avoiding industrial accidents include;

- Developing an employee safety plan with feedback from all level employees.
- Requiring monthly employee training and promote safety awareness with an internal safety committee.
- Focusing on skill development and education of all employees.
- Ensuring supervisors are monitoring and reporting on the progress of all safety measures.
- Providing avenue for employees to share safety concerns and ideas for improving safety.
- Establishing a planned maintenance schedule for all machines - daily, weekly, monthly based on manufacturer suggestion.
- Quickly repairing and addressing all defective or broken machine parts.
- Testing all equipment before use.
- Creating a regular inspection schedule and put mechanisms in place to ensure it is adhere to while there is no absolute guarantee that industrial



Accidents will not occur within any given Company, proper planning and training are two keys to drastically reducing the risk of incident.

### Major Accidents in the Last Decade:

Bhopal, December 1984: In world's worst chemical disaster, a methylisocyanate gas leak from the Union Carbide plant in the city killed over 4000 people. Thousands suffered irreversible health damage.

### Purpose

The Company's primary objectives are to ensure the safety and health of our employees, and to protect Company property. Our goal is to provide safe and healthy working conditions for all Company employees.

Safety rules have been developed with input from supervision and employees. While held to a minimum, the rules address behaviors and work practices that can lead to accidents and injuries.

Each employee should become familiar with and follow General and Departmental safety rules. Supervisors must enforce safe work practices through strict adherence to safety rules.

Most accidents can be prevented if everyone uses assigned safety equipment and follows the established safety rules. To operate a safe and successful business, we must work as a team to THINK SAFE, WORK SAFE, AND BE SAFE.

### General Safety Rules

1. Report all work injuries and illnesses immediately.
2. Report all unsafe acts or unsafe conditions to your supervisor.
3. Use seat belts when on Company business in any vehicles.
4. Firearms, weapons, or explosives are not permitted on Company property.
5. Use, possession, sale or being under the influence of illegal drugs, misuse of prescription drugs and/or alcohol is not permitted on Company property or while "on duty".
6. Only authorized and trained employees may repair or adjust machinery and equipment. Lock and Tag Out procedures must be followed before removing any machine guards or working on powered machinery and equipment. Replace all guards when the job is completed.
7. Only qualified & trained employees may work on or near exposed energized electrical parts or electrical equipment. Follow electrical safety rules when working with electrically powered machinery and equipment.



8. Only authorized and trained employees may enter a posted confined space. All confined spaces will be posted confined space - permit required. Entry is allowed only after permits are properly issued.

9. Only authorized and trained employees may dispense or use chemicals. It is your responsibility to know where SDS's (Safety Data Sheets) are located and that they are available for your use and review.

10. Keep work areas clean and aisles clear. Do not block emergency equipment or exits.

11. Wear and use the prescribed personal protective safety equipment. This includes foot protection, head protection, gloves etc.

12. Smoking is permitted only in the designated "Smoking Areas".

### Personal protective Equipment (PPE)

What is personal protective equipment?

Personal protective equipment, commonly referred to as "PPE". It is an equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses.

These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.

Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits.

What can be done to ensure proper use of personal protective equipment?

All personal protective equipment should be safely designed and constructed and should be maintained in a clean and reliable fashion. It should fit

comfortably, encouraging worker use.

If the personal protective equipment does not fit properly, it can make the difference between being safely covered or dangerously exposed. When engineering work practice, and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment to their workers and ensure its proper use.

Employees are also required to train each worker required to use personal protective equipment to know;

- When it is necessary
- What kind is necessary
- How to properly put it on, adjust, wear and take it off
- The limitations of the equipment
- Proper care, maintenance, useful life, and disposal of the equipment.

If PPE is to be used, a PPE program should be implemented. This program should address the hazards present; the selection, maintenance, and use of PPE; the training of employees, and monitoring of the program to ensure its ongoing effectiveness.

(399) Personal Protective Equipment (PPE)

? management, maintenance, disposal of PPE



## Legislation

### Intellectual Property Rights (IPR), Patents, Trademarks, Copyrights

#### Introduction

Intellectual Property Rights (IPR) refers to the legal rights granted to the inventor or manufacturer to protect their invention or manufacture product. These legal rights grant an exclusive right on the inventor/manufacturer or its operator who makes full use of its his invention/product for a limited period of time.

IP rights include trade secrets, utility models, patents, trademarks, geographical indications, industrial design, layout design of integrated circuits, Copyright and related rights, and new varieties of plants.

There are many types of Intellectual property protection. A patent is a recognition for an invention that satisfies the criteria of global innovation, and industrial application. IPR is essential for better identification, planning, Commercialization, rendering, and thus the preservation of inventions or Creativity. Each industry should develop its speciality based on its IPR policies, management style, strategies, and so on.

IPR is a strong tool, to protect the investment, time, money and effort invested by the inventor/creator of the IP, as it gives the inventor/creator an exclusive right for a certain period of time for the use of its invention/creation. Thus, IPR affects the economic development of a country by promoting healthy competition and encouraging industrial growth & economic growth.

The objective of intellectual property protection is to encourage the Creativity of the human mind for the benefit of all and to ensure that the benefits arising from exploiting a creation benefit the creator. This will encourage creative activity and give investors a reasonable return on their investment in research and development.

The intellectual property right is a kind of legal right that protects a person's artistic works, literary works, inventions or discoveries or a symbol or design for a specific period of time.



Intellectual property owners are given certain rights by which they can enjoy their property without any disturbances and prevent others from using them, although these rights are also called monopoly rights of exploitation, they are limited in geographical range, time and scope.

Why promote and protect Intellectual Property?

There are several reasons for promoting and protecting intellectual property, some of them are:

- progress and the good of humanity remain in the ability to create and invent new works in the field of technology and culture.
- IP protection encourages publication, distribution, and disclosure of the creation to the public, rather than keeping it a secret.
- promotion & protection of intellectual property promote economic development, generates new jobs and industries, and improves the quality of life.

Intellectual property helps in balancing between the innovator's interests and public interest, provide an environment where innovation, creativity and invention can flourish and benefit all.

Kinds of intellectual property :-

The subject of intellectual property is very broad. There are many different forms of rights that together make up intellectual property.



# INTELLECTUAL PROPERTY RIGHT

\* There are 3 different type of property :

1. Real property → Land, Real estate
2. Personal property → House, Jewellery, Book
3. Intellectual property

## \* INTELLECTUAL

\* Intellectual refers to a highly developed element on mental ability to think, reason & understand.

\* Intellectual property means a property created by human brain.

→ It is called intellectual property because it is the product of human imagination, creativity & inventiveness.

\* Intellectual property is the creation of human mind like invention, literatures and artistic works, symbols, names, images and designs used in commerce.

It is any product of human intellect that is intangible but has value in the market place.

The most noticeable difference between intellectual property and other forms of property gives that intellectual property is intangible that is it can't be defined or identified by its own physical parameter.



⇒ I.P. can be defined as a conceptual or virtual product produce from the intellectual capacity of a certain person. For e.g. an author writes a book and an engineer prepares a design.

⇒ Thus a book, a picture, a design, a poem, a music note, the design of a product which is the creation of one's mind which is an I.P.

⇒ I.P. created in this way they could be useful for others.

⇒ For e.g.; a design created by someone may be used for production of goods or a ~~the~~ trade mark created by a company has a good will in the market.

⇒ It has an economic value thus economic value must be protected hence the concept of protection of I.P. has been brought in the framework of law.

### Intellectual Property Rights

\* The concept of intellectual property rights emerged as a result of globalization, privatization and liberalization that has been necessitated the protection of rights of production, design, trademark etc.

\* IPR is a field or law that aims a protecting the knowledge created through human effort.



Order to Stimulate & promote further Creativity.

- \* Under IPR Owners are granted certain exclusive rights to a variety of intangible assets such as literary, musical, artistic works, discoveries, inventions, symbols, designs etc.
- \* These are the legal rights associated with Creative effort or Commercial reputation and good will.
- \* These rights safeguard Creator & other producers of intellectual goods and services by granting certain time limited rights to control their views.
- \* IPR like other form of property can be a matter of trade which can be owned, sold or bought.

\* These rights are outlined in article 27 of the universal declaration of human rights which provides for the right to benefit from the protection of moral and material interest resulting from authorship of scientific, literary or artistic production.

\* The importance of IP was first recognised in the "Paris Convention" for the protection of industrial property (1883). And the "Berne Convention" for the protection of literary and artistic works in 1886 both the treaties were administered by the



## World Intellectual Property Organisation (WIPO).

→ The important reason for the development of IPR is that a person who creates a work or a good idea which he develops has right and to control the use and exploitation of ~~the~~ it and prevents other from taking unfair advantage of his effort.

### TYPES OF IP

1. Trademark
2. Copy right
3. patent
4. Trade secret
5. Industrial design
6. Lay out design for Integrated Circuits
7. Geographical indications
8. protection of New plant variety

### ③ Patent

- A patent is an exclusive right granted for an invention - a product or process that provides a new way of doing something or that offers a new technical solution to a problem.
- It provides protection to the owner of the patent for his invention.
  - The protection is granted for a limited period generally 20 years.
  - Patent protection means no one can make, use, sell, distribute, or market the invention without the consent of the patent holder.
  - A patent holder has the right to decide who may or may not use the patented information for the period for which it is protected.
  - Patent owners may give permission to all license ~~to~~ other parties to use their inventions on mutually agreed terms.
  - The owner may also sell his invention rights to someone else who then becomes the new ~~one~~ owner of the patent.
  - The granted patent may be periodically renewed to ~~renew~~ the right on it.
  - If it is not renewed periodically as per the Statute, a patent becomes the public property that it becomes available to commercial exploitation by others.



## ① Trademark →

- This is a design of a picture used by certain Company for its' specific product.
- It is generally in a symbolic form.
- It may be one or a combination of words, letters and numerals.
- They may consist of drawing, symbols, 3-D signs, such as shape and packaging of goods.
- Trademark protection ensures that the owners of the marks have exclusive right to use them or to authorise others to use them in return for payment.
- It helps consumer to identify and purchase a product or service based on specific characteristics and quality as indicated by its' unique trademark.



→ Initially a trademark is valid for not less than 7 years but generally it is for 10 years. But it can be renewed from time to time.

Ex- Certification marks add gives for compliance with the different standards.

The internationally accepted ~~ISO~~ "ISO 9000" quality standards are example of such widely recognised certification, and ecolabels for product with the reduce environmental impact. A trademark identifying and distinguishes the product of service ~~from~~ one person from those of another.

Other e.g.:

- Trademark for Cadbury.



- Trademark for Nestle



- Trademark for Nike





## ② Copy right

- Copy right is a form of protection granted to authors, <sup>artist</sup> and other creators for their original works.
- It prohibits other from copying or publishing the written materials, pictures etc.
  - It includes literary works such as novels, poems,

places, reference marks, news papers and computer programmes, films, paintings, compositions, photographs, sculptures, technical drawings, advertisements etc.

- But it does not include titles, names, ~~or~~ short phrases or list of ingredients.
- The Creator holds the exclusive right to use or authorise others to use the work on agreed terms.
- Many types of work protected under this law of copy right requires mass distribution, communication, and financial investment for their successful dissemination.
- Hence, creators often transfer these rights to company better able to develop and market the work in return for compensation in the form of payments and/ or royalties.
- This payment have a time limits (other than photograph is for life of author plus 70 years after creators death).
- It also include the right to oppose or changes to the work that would harm the creator's reputation.
- Registration of copy right is only ~~optional~~ optional optimum and non-registration does not deprive the author to file civil and criminal proceeding against the intruders.



## Copyright

Copyright laws grant authors, artists and other creators protection for their literary and artistic creations, generally referred to as "works". A closely associated field is "related rights" or rights related to copyright that encompass rights similar or identical to those of copyright, although sometimes more limited and of shorter duration.

The beneficiaries of related rights are performers (such as actors and musicians) in their performances, producers of phonograms (for example, compact discs) in their sound recordings, and broadcasting organizations in their radio and television programs.

works covered by copyright include, but are not limited to novels, poems, plays, reference works, newspapers, advertisements, computer programs, databases, films, musical compositions, choreography, paintings, drawings, photographs, sculpture, architecture, maps and technical drawings.

What are the benefits of protecting copyright and related rights?

Copyright law deals with the protection and exploitation of the expression of ideas in a tangible form.

In the modern world, the law of copyright provides a legal framework for the protection of the traditional beneficiaries of copyright, the individual writer, composer or artist.

Copyright acknowledges both the economic and moral rights of the owner.

Copyright and related rights protection is an essential component in encouragement of human creativity and innovation.

It is giving authors, artists and creators incentives in the form of recognition and fair economic reward increases their activity and output and can also enhance the results.

By ensuring the existence and enforceability of rights, individuals and companies can more easily invest in the creation, development and global dissemination of their works.

This, in turn, helps to increase access to and enhance the enjoyment of culture, knowledge and entertainment the world over, and also stimulates economic and social development.

## Factories Act

The objective of the Factories Act is to regulate the conditions of work in manufacturing establishments coming within the definition of the term "factory" as used in the Act.

The factories Act of 1948 came into force on 1st April 1949; it applies to factories, as defined in the Act, all over India, including the state of Jammu and Kashmir.



# Features of Factories Act 1948

## ① Working hours →

No adult worker shall be required/allowed to work in a factory for more than 48 hrs in a week. There should be a weekly holiday.

## ② Health →

- Cleanliness in factory
- proper drainage system
- adequate lighting
- ventilation
- temperature
- adequate arrangements for drinking water
- Sufficient latrines & urinals should be provided.

## ③ Safety →

- Machinery should be fenced.
- in confined spaces - provision for manholes of adequate size so that in case of emergency the workers can escape.

## ④ Welfare →

- Washing facilities should be provided and maintained for the use of workers.
- facilities for drying clothing, facilities for sitting, first aid appliances, shelters, rest rooms, lunch rooms, etc. should be there.

## ⑤ Penalties →

- If FA 1948 / any rules under act / any provision is violated, it is treated as an offence.
- Imprisonment ( $\leq 1$  yr)
- Fine ( $\leq 1$  lakh)
- both fine and imprisonment
- If any worker misuses an appliance / safety & health of workers / in relation to discharge of his duties  $\approx 500/-$  fine can be imposed.



## Features of payment of Wages Act 1936

### Rules for payment of wages (Section 3-6)

- Responsibility for payment of wages (Section 3) by employer.
- Fixation of wage period ( $\neq$  1 month)

### Time of payment of wages (Section-5)

- between 7-10 days of following wage period.
- In case of termination wages to be paid before expiry of 2nd working day from the day of termination.
- exemption on Govt. Order.
- wages to be paid on a working day.

### Modes of payment of wages (Section-8)

- Currency coin/ notes or both.
- Credit wages in bank account.

### Deduction from wages (Section 7-13)

- Fine
- absence from duty
- damage/loss
- services (house accommodation)
- recovery of advances
- recovery of loans
- payment to co-operative societies & insurance schemes.
- other deductions (IT, order of court/authority, insurance schemes)

### Maintenance of registers & records (Section-13A)



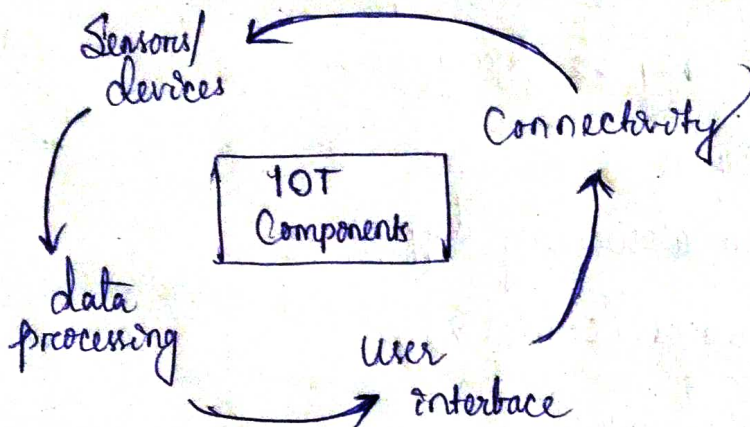
# Unit-9 Smart Technology

## Concept of IOT

It refers to the billions of physical devices around the world that are now connected to the internet, all collecting & sharing data.

ex- smart bulb, laptops, smartwatch, smartphones, fitness band etc.

## How IOT works

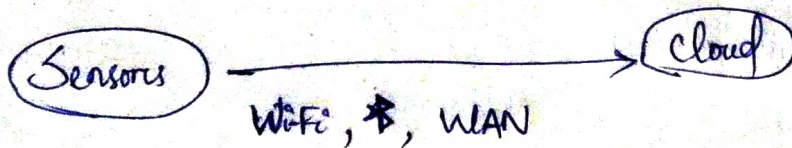


### 1. Sensors/Services

- GPS, Camera,
- Collect data from surroundings.

### 2. Connectivity

Collected data is sent to a cloud infrastructure.



### 3. Data processing

Once data is collected & it gets to the cloud, the software performs processing on the acquired data.

ex checking AC temperature on AC.

### 4. User Interface

Information made available to the end user in some way.



# Components of IIOT

- Sensors/devices
- Networks/connectivity layer
- Security layers (to label 'data')
- Computer engines
- Technology & governance standards
- Intelligent insights & actions

## 1. Sensors/devices

For any IIOT use case, the components of the endpoint are sensors. Sensors capture electric pulse or analog signals which are passed through the IIOT ecosystems.

- For example, smart phones & smart wearables are equipped with sensors like accelerometer, Gyroscope sensors, etc. Data obtained from these IIOT endpoints can be used in various domains like human activity recognition, medical stability etc.

- Based on the use case and precision requirements sensors can be chosen keeping the following parameters in mind:

→ Accuracy of the input readings

→ Reliability percentage of the inputs

→ The purpose of the use case, for example, sensors required for a temperature dependent use case, will differ from use cases based on motions.

## 2. Networks/connectivity layer

In a typical IIOT ecosystem, sensors are connected with computation layers and intelligent layers via network or connectivity layers.

An IIOT network consists of various network components like routers, gateways, switches, various network protocols, etc.

- Based on the use case and domain proper network infrastructure is needed to be chosen.



### 3. Security layers

The heart of any industry-grade IoT use story is 'data'. In a standard use case, analog or digital signal is acquired by sensors and the signal is then converted to a format.

In the total flow of data, proper security systems and methodologies need to be enforced. The data can be compromised in any layers starting from the data acquisition to business insights derivations.

We can enforce proper security by using strong encryption in various layers of communication, using proper firmware and anti-malware systems, etc.

### 4. Compute engines

The data collected from smart devices are converted and preprocessed to a format on which machine learning models are developed. Customers can use any cloud partners of their choice or develop their own infrastructure to execute a use case.

### 5. Technology and Governance Standards

Sensitve information flow over the various components of the IoT ecosystem.

- Typical technical standards : Wi-Fi, WAN, etc.

- Network protocol : HTTP, IP, UDP, etc.

- Data management standards : ETL, CAP (for distributed systems) etc.

- IoT systems need to follow the regulations and quality standards of respective regulatory authorities and business standards.

### 6. Intelligent Insights and Actions

Most of the practical and industry-grade IoT use cases are intended to derive business insights or actionable recommendations.

For example in the heavy manufacturing industry, the data obtained from various machinery can be used to predict the fault of the machine which can help to reduce manufacturing downtime and increase efficiency.



# Characteristics of IOT

The following are the major characteristics of the Internet of Things;

## 1. Connectivity

With the surge of the IOT, the connectivity of devices has never been stronger. Connectivity is the ability to communicate with & share information between two or more devices.

The IOT has created a world where everything is connected, which opens up a world of possibilities for the future.

Connectivity is possible using wired LAN or wireless technologies like Wi-Fi, LPWAN, LORA, ZigBee, etc.

## 2. Identity of Things

Identity is the unique characteristic of a person, group, place or thing. Every identity has a name and an identification number. The combination of the name and number makes up the identity. This is what helps identify people & things on the internet.

Identity can be used to distinguish between different devices, give them a name, and allow them to be controlled.

For ex, An IP address of a device is a unique identifier that represents a device in a network.

## 3. Data

The IOT is made up of interconnected devices that are able to share data with each other. The data from these devices can be used to improve the performance of these devices and make them more efficient.

Data is now being collected on the Internet of Things. This means that you can now track your fitness, exercise, and sleep patterns through smart devices such as Fitbit, Apple watch, and sleep trackers.

## 4. Intelligence

The intelligence of IOT devices is the intelligence of smart sensors and devices to sense data, interact with each other & collect a huge amount of data for analysis.



The Internet of things is only as good as the intelligence that goes into it. If you want your IoT device to be smart, then you need to make sure that it is always up-to-date with the latest software and firmware.

## 5. Network Communication

The IoT is on the rise and it is predicted that by 2030 there will be 29 billion devices connected to the internet. With this many devices, it is important to be able to communicate with these devices in order to make them work properly. There are a few ways to communicate with these devices. One way is through a cloud service, a type of software that allows the device to be connected to the internet. Another way is through a gateway which is a device that connects with other devices to allow them to communicate with each other.

The IoT is essentially a network of interconnected devices that are able to exchange data over the internet, often without human interaction. As these devices become more & more prevalent, the ability to connect them together & build larger networks become easier.

## 6. Scalability

Scalability is often defined as the ability of a system to grow without affecting its performance. This can be achieved by adding more hardware resources or by adding additional software layers to an existing system. In other words, the system can handle more users and more data without compromising its performance. The IoT needs scalability in order to grow at the pace that it needs to.

## 7. Architecture - Common Ecosystem

In the IoT, there are many manufacturers and products that are using the architecture to support their own devices. With the increase in the number of devices, the importance of the architecture is heterogeneous (ability to support diverse technologies, protocols, and devices).

The architecture is mostly responsible for making sure that the devices work together and communicate with each other. It also is a key component in ensuring that the devices do not interfere with each other.



## 8. Security

The IoT is growing at an exponential rate, which means that there are more and more devices and appliances being connected to the internet. There are also more and more cyber-attacks on these devices and appliances, which is why it is important to take security into consideration when developing a product or service.

Data protection is a big concern with the internet of things because personal information can be collected and shared without consent. There are also other challenges like privacy, data ownership, and hacking.

## Categories of IoT

- Consumer IoT (Smartphones, wearables, fashion items).
- Enterprise IoT (to reduce manual work & increase business efficiency)
- Industrial IoT (IoT for manufacturing & management in industries).

## Applications of IoT

### Smart Cities

- City lighting applications
- City transit applications
- Environmental & wastewater management applications

### Smart Transportation

- Improve traveller experience.
- Increase safety
- Reduce congestion & energy use.
- Improve operational performance
- more efficient
- dynamic roadside message signs
- autonomous vehicles.
- video surveillance, solutions.



## Smart Home

- Measuring home condition (Temp<sup>n</sup>, humidity, light & proximity)
- Managing home appliances
- Controlling home access
- Optimisation of spending (electricty, water & gas consumption).
- Environmental Impact (autonomous LED lighting, power consumption & waste management system).
- Improved comfort.
- enhance security

## Smart Healthcare

- IoT devices will give ~~to~~ b.p & heart rate monitoring cubts, Calorie Count, exercise check, appointments, blood pressure variation of patients.
- with IoT physicians can track patients health & provide immediate treatment if required.
- hospitals use IoT for realtime tracking location of medical equipments. Deployments of medical stables at different locations can also be analysed.
- health insurance companies also detect fraud claims & identity prospects for underwriting. IoT brings transparency between insurers & customers in underwriting pricing, claims handling, ~~and~~ risk assessment process.

## Smart Industry

IoT employs a networks of sensors to collect critical production data & uses cloud software to turn this idea into valuable insights about the efficiency of manufacturing operations.



## Smart Agriculture

- real time update on climate condition
- precise farming (helps farmers to generate data with the help of sensors & analyze that information to take intelligent & quick decisions).
- Agricultural drones (Monitoring, Spraying, analysis).
- Smart greenhouse (water consumption and green house state can be monitored, pressure, humidity, temperature & light levels can be monitored).
- Data analytics.

## Smart Energy Management

- Empowering energy efficient smart buildings
- Saves hundreds of man hours for utility provider.
- reduces energy bills.
- Support green business initiative
- Minimize carbon emissions.
- Optimize asset maintenance.
- automate processes.
- Cut operational expenses.
- Identify malfunction in time & prevent them.
- effectively combat outage, and blackouts.
- predict consumption, spending & plan accordingly.