

SUBJECT :TH 1

**ENTREPRENEURSHIP AND MANAGEMENT &
SMARTTECHNOLOGY**

JYOTI PATRA
[PTGF,E&TC]

CHAPTER 1:- **ENTREPRENEURSHIP**

- 1.1. Concept /Meaning of Entrepreneurship
- 1.2. Need of Entrepreneurship
- 1.3. Characteristics, Qualities and Types of entrepreneur, Functions
- 1.4. Barriers in entrepreneurship
- 1.5. Entrepreneurs vrs. Manager
- 1.6. Forms of Business Ownership: Sole proprietorship, partnership forms and others
- 1.7. Types of Industries, Concept of Start-ups
- 1.8. Entrepreneurial support agencies at National, State, District Level(Sources): DIC, NSIC,OSIC,,SIDBI, NABARD, Commercial Banks, KVIC etc.
- 1.9. Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks.

ENTREPRENEUR:-

Defination:-

The term entrepreneur is derive from the French word entrepreneur which means to undertake.

Entrepreneur is a person who tries to do something new , finds a business opportunity , organizes the necessary resources for setting up a business or enterprise and bears(handles) the risk involved. So an entrepreneur may be term as an innovator since he or she introduces new products into the market & find out new marketing strategy etc.

He bears the risk & the uncertainties in the business activities & combines the resources to make the business venture successful

ENTRPRENEURSHIP:-

Defination:-

Entrepreneurship refers to the function perform by an entrepreneur it is the process involving various activities undertaken by the entrepreneur in establishing a new business or enterprise.

So entrepreneurship can be viewed as a function of:-

- i. Identifying & evaluating business opportunity.
- ii. Converting ideas into actions.
- iii. For gathering necessary resources.

- iv. Undertaking promotional activities to launch an enterprise.
- v. Striving for excellence in his / her field of work.
- vi. Bearing the risks involved.

Enterprise:-

An **enterprise** is a business organization that is from which provides goods & services , create jobs , contribute to national income , export & contribute to overall economic development.

Concept Of Entrepreneurship:-

Entrepreneur → Entrepreneurship →

Enterprise



Person

Process of Action

Outcome

NEED OF ENTREPRENEURSHIP:-

- a) **Life-line of a nation:** *No country can progress without the development of entrepreneurship. Every country is trying to promote its trade so that it is able to share the benefits of development. Therefore, entrepreneurship is the yardstick to measure the level of development of a country.*
- b) **Provides innovation:** *Entrepreneurship provides new ideas, imagination and vision to the enterprise. An entrepreneur is an innovator as he tries to find new technology, products and markets. He increases the productivity of various resources. The entrepreneur stands at the center of the whole process of economic development. He conceives business ideas and puts them into effect, to enhance the process of economic development*
- c) **Change of growth/Inclusive growth:** *An enterprise operates in a changing environment. The entrepreneur moulds the enterprise in such a changing environment. The latter moulds not only the enterprise, but also alters the environment itself, to ensure the success of the enterprise. In order to meet the challenge of automation and the complexities of advanced technology, there is a need for the development of entrepreneurship.*
- d) **Increased profits:** *Profits can be increased in any enterprise, either by increasing the sales revenue or reducing cost. To increase the sales revenue is beyond the control of*

an enterprise. Entrepreneurship, by reducing costs, increases its profits and provides opportunities for future growth and development

- e) **Employment opportunities**: *Entrepreneurship and its activities provide the maximum employment potential. Large numbers of persons are employed in entrepreneurial activities in the country. The growths in these activities bring more and more employment opportunities.*
- f) **Social Benefits**: *It is not only beneficial to the business enterprise, but to the society at large. It raises the standard of living by providing good quality products and services at the lowest possible cost. It also makes the optimum use of scarce resources and promotes peace and prosperity in the society.*

Characteristics/ Nature of Entrepreneurship-

1. Ability to Innovate
2. Economic activity
3. Risk bearing Capacity
4. In Search of opportunities
5. Organization Creation
6. Result of high achievement /Ambitions
7. Based on Principles not on intuition
8. Professional activity
9. Result of changes
10. Entrepreneur is a behavior not a Personality Trait
11. Essential in all types of Business
12. Essential in all activities
13. Different types of Entrepreneurship
14. It is global phenomenon
15. Independent life style

Characteristics of Entrepreneurship:

Not all entrepreneurs are successful; there are definite characteristics that make entrepreneurship successful. A few of them are mentioned below:

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

- ii. **Innovation-** It should be highly innovative to generate new ideas, start a company and earn profits out of it. Change can be the launching of a new product that is new to the market or a process that does the same thing but in a more efficient and economical way.
- iii. **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 and employees are required. Here, leadership quality is paramount because leaders impart and guide their employees towards the right path of success.
- d) **Open-Minded-** In a business, every circumstance can be an opportunity and used for the benefit of a company. For example, Paytm recognised the gravity of demonetization and acknowledged the need for online transactions would be more, so it utilised the situation and expanded massively during this time.
- e) **Flexible-** An entrepreneur should be flexible and open to change according to the situation. To be on the top, a businessperson should be equipped to embrace change in a product and service, as and when needed.

Know your Product-A company owner should know the product offerings and 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 and then alter as needed is a vital part of entrepreneurship

CHARACTERISTICS OF ENTREPRENEURSHIP:-

The different characteristics of entrepreneurship are:-

- 1) Innovator:-An entrepreneur is the person who innovates new things such as new methods of production, new marketing techniques, new sources of raw materials & new working methods. So, an entrepreneur is expected to do something new which is not done earlier
- 2) Skillful Person:-He has to arrange various factors of production & coordinate activities of various employees. She / He should be a skillful person so that He /She is able to synchronize different activities of organization.
- 3) Decision Maker:-An entrepreneur has to take decision with establishment of business & its management, co-ordination of various resources & activities of business need proper decision making. So the entrepreneur should take decision by solving various problems arising in the company.

- 4) Planning:-It is one of the most important function of an entrepreneur. He / She formulates basic plan of the organization with the help of planning with his or her employees or team members.
- 5) Passion & Determination:-Passion for making business successful since it is a difficult task to make a business successful
- 6) Risk Taking:-Entrepreneur is a risk taker which He / She should be ready to face any problem arising in the case of uncertainty. Successful entrepreneur take calculated risks at the right time.
- 7) Money Management:-It takes time to take profit for any company till then capital is limited & hence it needs to be used wisely. So money management is the method of budgeting , saving , spending & investing the capital.
- 8) Networking Capabilities / Abilities :-Developing and using the contacts made in business purpose beyond the reason for the initial contact is a great skill of an entrepreneur.

QUALITIES OF AN ENTREPRENEUR:-

- 1) **Self-confidence** others will trust you only when you trust yourself. This is the most important trait of an entrepreneur, who should have the confidence to take one's own decisions.
- 2) **Risk-taking ability**:-Business is all about taking risks and experimenting . Entrepreneurs need to have risk-taking ability.
- 3) **Decision-making ability** Entrepreneurs should have the willingness and capability to take decisions in favour of the organization all the time.
- 4) **Competitive** Entrepreneurs should always be ready to give and face competition.
- 5) **Intelligent** Entrepreneurs always need to keep their mind active and increase their IQ and knowledge.
- 6) **Visualization** Entrepreneurs should have the ability to see things from different point of views.
- 7) **Patience** This is another virtue which is very important for entrepreneurship as the path to success is often very challenging and it requires a lot of patience for sustenance.
- 8) **Emotional tolerance** The ability to balance professional and personal life and not mixing the two is another important trait of an entrepreneur.

- 9) **Leadership quality** Entrepreneurs should be able to lead, control and motivate the mass.
- 10) **Technical skill** To be in stride with the recent times, entrepreneurs should at least have a basic knowledge about the technologies that are to be used.
- 11) **Managerial skill** Entrepreneurs should have the required skill to manage different people such as clients, employees, co-workers, competitors, etc.
- 12) **Conflict resolution skill** Entrepreneurs should be able to resolve any type of dispute.
- 13) **Organizing skill** They should be highly organized and should be able to maintain everything in a format and style.
- 14) **High motivation** Entrepreneurs should have high level of motivation. They should be able to encourage everyone to give their level best.
- 15) **Creative** They should be innovative and invite new creative ideas from others as well.
- 16) **Reality-oriented** They should be practical and have rational thinking

TYPES OF ENTREPRENEURSHIP:-

It is classified into four types:-

- 1) **Small Business Entrepreneurship**-These businesses are a hairdresser, grocery store, travel agent, consultant, carpenter, plumber, electrician, etc. These people run or own their own business and hire family members or local employee. For them, the profit would be able to feed their family and not making 100 million business or taking over an industry. They fund their business by taking small business loans or loans from friends and family.
- 2) **Scalable Start-up Entrepreneurship**-This start-up entrepreneur starts a business knowing that their vision can change the world. They attract investors who think and encourage people who think out of the box. The research focuses on a scalable business and experimental models, so, they hire the best and the brightest employees. They require more venture capital to fuel and back their project or business.
- 3) **Large Company Entrepreneurship**-These huge companies have defined life-cycle. Most of these companies grow and sustain by offering new and innovative products that revolve around their main products. The change in technology, customer preferences, new competition, etc., builds

pressure for large companies to create an innovative product and sell it to the new set of customers in the new market. To cope with the rapid technological changes, the existing organizations either buy innovation enterprises or attempt to construct the product internally.

- 4) **Social Entrepreneurship**-This type of entrepreneurship focuses on producing product and services that resolve social needs and problems. Their only motto and goal is to work for society and not make any profits.

DIFFERENT FUNCTIONS OF ENTREPRENEUR :-

The different functions of entrepreneur are:-

- 1) **Ideal Generation**:-It is possible using vision , observation , education , experience & training. Ideal generation means selection of different product , identification of goods & materials suitable for an organization & it is possible by proper market survey & research.
- 2) **Use of Funds**:-It is very important function of the entrepreneur. All the activities of the business depend upon finance & management. It is the responsibility of the entrepreneur only to increase the fund generation internally & externally.
- 3) **Supply of Raw Materials**:-Entrepreneur has to decide or identify cheap and regular sources of raw materials which will help in reduction of cost of production.
- 4) **Supply of Machine**:-It include or take into account the details of technology used or the capacity of the machine , name of the machine supplier , whether the machine is made in India or foreign made , different sales & services & the life span of the machine.
- 5) **Requirement of Man Power**:-Entrepreneurs have to perform following activities while undertaking man power selection.

The activities are:-

- i. Estimating man Power Requirement
- ii. Selection Process
- iii. Training & Placement

- 6) **Implementation of Product**:-A entrepreneur has to work on implementing different schedules, timeline of the project , action of the project. The identification of the project is to implement as per the timelines. Always all the activities have to be done by the entrepreneur by

implementing the schedule in such a way so that time over run can be avoided

- 7) **Market Research:-** It is a systematic collection of data regarding the product which is already present in the market. Entrepreneur has to undertake market research in order to know the details of the product, supply of the product , size of target audience , existing technology etc.
- 8) **Innovation:-**It is a introduction of new product or introducing a new method or technology, opening of a new company , supply of the right kind of raw materials & discovery of identification of new resources.

BARRIERS TO ENTREPRENEURSHIP:-

1) **Environmental barriers:**

Raw material: Non-availability of raw materials required for production during the peak season. This leads to an increase in the price of raw materials due to competition.

Labor:

1. Shortage of skilled labor
2. Lack of committed and loyal employees.
3. Quality and quantity of labor.

Machinery: Machines are necessary but they are also expensive and due to top change in technology they become obsolete and require replacement which requires cash in hand. It becomes very difficult for the small business organization to keep its production process updated.

Land and buildings: The acquisition of land and construction of a building at a prominent place requires huge expenditure. If the land is rented, it becomes a fixed cost and a constant concern for the entrepreneur.

Infrastructure support: Adequacy of electricity, proper road, water and drainage facilities, etc. Development authorities have little support due to red-tapism and corruption.

2) **Financial constraints:**

The availability of funds is a major concern. Delay in starting or running business results in a delay in the source of finance.

3) **Personal barrier:**

These are due to the emotional block of a person. They cause a mental blockage. They are: –

Lack of confidence: They feel that they will never get a successful business idea and will be unable to attract the necessary resources.

Therefore, they reject the idea of being self-employed.

Lack of dependence on others: The entrepreneur's aim is to gain their additional expertise through trial and error and experience rather than seeking further development or personal help from others.

Motivation: Loss interest and lack of motivation when thoughts do not work.

Lack of patience: When entrepreneurs faced with business challenges/problems in the first attempt, the desire to achieve success or to become rich immediately, in which they lose interest. They give up during the initial loss

Inability to dream: Sometimes entrepreneurs are short of vision or satisfied with what they have achieved till now and lose interest in further expansion of their business enterprise.

4) **Society barrier:**

1. [Socio-cultural](#) norms and values.
2. The degree of approval or disapproval of entrepreneurial behaviour.
3. Financial stability and family background
4. Caste and religious affiliation

5) **Political barrier:**

1. Government incentives and concessions.
2. Facilitating socio-economic settings
3. Interest in the economic development of society.

Entrepreneur Vs Manager

Entrepreneur	Manager
Owner - An entrepreneur is the owner of his own business.	Servant - A manager is a servant of his employer.
Profits - An entrepreneur earns profits from his business which is uncertain and unlimited.	Salary - A manager earns salary which is generally certain and limited.
Full Risk Bearing - An entrepreneur is a person who has to take high risks for starting and running venture.	Less or No Risk Bearing - A manager takes less or no risk while performing his job.
All Functions - An entrepreneur has to look after all the functions of his organization.	Selective Functions - A manager looks after selective functions of an organization.
Innovator - An entrepreneur is always an innovator, in the lookout for new products and services.	Executor - A manager is simply an executor who is responsible for executing the decisions of the owner and entrepreneur.

DIFFERENT FORMS OF BUSINESS OWNERSHIP:-

Depending on how they have been started and managed .There are 5 types of business organizations:-

1. Sole-Proprietorship / Single Ownership Business.
2. Partnership Firm
3. Joint Hindu Family Business
4. Co-operative Society
5. Joint Stock Company.

It is divided into 3 types :-

Private Limited Company

Public Limited Company

Public sector Company

1. **Sole-Proprietorship Business** :-

When a business is started by a single person it is known as **Sole-Proprietorship / Single Ownership Business**.

Sole-Proprietorship is a form of business organization in which an individual introduces his own resource , skills ,knowledge and manage the business alone.He may take the help of employees by managing the affairs of business. All the profit earn and if there is any loss by the business is belongs to the Sole-Proprietorship.

Features and Characteristics :-

There is individual ownership called the **Sole-Proprietor** is the owner of all assets and resource of business.Such a business is controlled by a single person.

The Sole-Proprietor bears all the risk to which the business is exposed (belong to). No legal formalities are necessary to start such business.

Advantages	Disadvantages
Easy to start	Limited Financial Resource
Profit	Uncertain future
Flexibility	Unlimited liability
Strong decision making	Small business

2. **Partnership Firm**:-

When a group of persons combining together start a business Then it is called **Partnership Business**.

Partnership is defined as a relation between persons who have agreed to share the profits of a business carried on by all or anyone acting for all.

Persons entering to the agreement are individually called **Partners** & collectively a firm and the name under which business is carried out is called **Firm Name**.

Features :-

- 1) **More Persons** – There should be at least two persons subject to a maximum limit is currently, than 10 persons for banking business & 12 for non-banking business to form a partnership firm.
- 2) **Profit & Loss Sharing** – There is an agreement among the partners to share the profits earned & losses incurred in partnership business.
- 3) **Contractual Relationship**- Partnership is formed by an agreement oral or written among the partners.
- 4) **Existence of Lawful Business** – Partnership is formed to carry on some lawful business & share its profits or losses.
- 5) **Almost Good Faith & Honesty** – They should be at most good faith & honesty among the partners.
- 6) **Unlimited Liability** – Like proprietorship, each partner has unlimited liability in the firm. This means that if the assets of the partnership firm fall short to meet the firm's obligations, the partners' private assets will also be used for the purpose.
- 7) **Restrictions On Transfer of Share** – No partner can transfer his share to any outside person without seeking the consent of all other partners.

Partnership Deed:-

Deed means agreement. So partnership deed means partnership agreement. This agreement can be oral or in written form then it is known as partnership deed. It contains rules & regulations, terms & conditions for the internal management of the partnership. All the partners have to sign on the partnership deed. It also contains the details of the name of the company, its address, nature of business, capital contribution by each and every partner, the profit sharing ratio, power & duties & responsibilities of partners, its functioning and dissolution etc.

3. Joint Hindu Family Business:-

It operates under the Hindu Succession Law/Act (1956) if a business is set up by a person and is carried on by the male members of his family after his death it is a case of joint Hindu family business. The joint Hindu family business is divided into 2-parts according to the Hindu Succession Act.

1) **Dayabhaga Law(only applicable in Bengal):-**

According to this law only male member will inherit the property of the family or business only after death of the father.

2) **Mitakshyara Law (applicable in all other states)**

According to this law it is applicable to all the states of the India except Bengal in this successive male generation can inherit the properties of the family from the moment of their birth.

It is managed by the head of the male member of the family known as **karta**. The karta is the manager of the business has soul control over the income and expenditures of the business as well as the family.

4. Co-operative Society Business:-

When a group of persons belonging to a particular class or group, associate themselves and start a business for their mutual benefits it may be a co-operative society business. The main aim of this business is next to the earn profit but to rendent the box possible service to its members.

The main moto of co-operative society is all for each and each for all which can be achieved only by self help through mutual help.

5. Joint Stock Companies:-

When many persons start a business it may be a **Joint Stock Company**.

This company in India that govern and regulate by an act in the parliament known as the Indian Companies act (1956).

According to this act it is defined as the company limited by shares and having a permanent paid of nominal share capitals of fixed w.r,t commonly divided into shares also of fixed w.r.t held and transferrable in stock exchange as stocks and formed on the principle and having in its members only the holder of those shares and no other person

It is treated as an independent and separate body apart from its members and it enjoys separate legal status.It is treated as a individual body in the eye of law.

Joint Stock Company is divided into 3 categories:

Private Limited Company :-

The minimum number of members in the **private limited company** is 2 & maximum number is 50.

The shares in the private limited company are not easily transferrable because the shares are not purchased or sold in the stock exchange. In the private limited company there are no legal formalities.

Public Limited Company:-

The minimum members in **public limited company** is 7 and maximum is unlimited.

The shares in public limited company are freely transferrable that is it can be purchased and sold freely at a place or designated place known as **stock exchange**.

A public limited company has to observe a large number of legal formalities i.e. they hold stationary meeting and file stationary reports with the registration of company.

Public Sector Company:-

Public Sector Companies are those companies which are also governed by the Indian company act(1956) but the only major difference is that it is started, owned, managed, land, controlled by the government. The government holds more than 50% of the shares of such companies in some cases the government holds entire shares of this company.

INDUSTRY:-

Industry refers to those economic activity which are responsible for the production of goods or services. Industry is a place where goods and services are produced.

Depending on the nature of industrial activities they are classified into 5 categories:-

TYPES OF INDUSTRIES:-

1) Manufacturing Industry :- Manufacturing Industries are understood to be the factories and mills where raw materials are introduced and finished products are obtained.

Manufacturing industry are further classified into 4 categories:-

- iv. Assembling Industry – This type of industry purchases different components, parts, accessories & assemble them into usable products.
Example – bicycle industries, tv industries, automobile industries
- v. Processing Industry - This type of industry purchase raw materials & are put into the process. Under the arrangement some type of processing modify, grinding, polishing, sharpening, & heating, shaping etc are done at different stages at different process with the help of plant and machinery. Manufacturing industry are the factories and mills where raw materials are introduced & finished products etc.
Example – Paper making, Furniture making, Textiles Industry
- vi. Analytical Industry – Under this type of industry raw materials is introduced at one point and several products come out at the end of different process by the help of separation, analysis etc.
Example – Sugar Industry, Milk Product Industry etc.
- vii. Mixed /Synthetic Type Industry – In this type of industry different raw materials are combined at different process and after further processing is finished product come out at the end of the process.
Example – Food Processing Industry, Pharmaceutical Industry.

2) Extractive Industry – This type of industries are engaged in the process of extraction of different materials from nature like mining of ores and minerals , collection of forest products etc.

Example- mining, fishing, hunting, agriculture etc.

3) Genetic Industry – This type of industries are engaged in the process of reproduction of the products which involves certain life. **Example – Pollutary , Fisheries etc.**

4) Construction Industry – This type of industries are engaged in the construction of various infra-structure like road , dam , bridge, building etc. Such type of industry carry on their activities at the sites where the structure is required.

5) Service Industry- This type of industry provide services of various type to the people , to the industries and other organization.

Example- Consultancy Organization, Hospitals, Cable Operator, Internet services , Telephone service etc.

Role Of Commercial Banks In Context Of MSME:-

- 1. DIC – District Industries Centre**
- 2. OSIC – Odisha State Industrial Corporation**
- 3. OSFC – Odisha State Financial Corporation**
- 4. IDCO – Industrial Development Corporation Of Odisha / Odisha Industrial Infrastructure Development Corporation**
- 5. SIDBI – Small Industries Development Bank of India**
- 6. IPICOL – Industrial Promotion & Investment Corporation Of Odisha Limited**
- 7. ICICI – Industrial Credit & Investment Corporation Of India**
- 8. IDBI – Industrial Development Bank Of India**

CHAPTER 2

MARKET SURVEY AND OPPORTUNITY IDENTIFICATION

Business Planning

SSI, Ancillary Units, Tiny Units, Service Sector Units

Time schedule Plan, Agencies to be contacted For Project Implementation

Assessment of Demand and Supply and Potential areas of Growth

Identifying Business Opportunity

Final Product selection

Business Planning

A business plan is a written document that describes in detail how a business usually a start-up .defines its objectives and how it is to go about achieving its goals. A business plan lays out a written roadmap for the firm from each of a marketing, financial, and operational standpoint.

Business plans are important documents used to attract investment before a company has established a proven track record. They are also a good way for companies to keep themselves on target going forward.

Although they're especially useful for new businesses, every company should have a business plan. Ideally, the plan is reviewed and updated periodically to see if goals have been met or have changed and evolved. Sometimes, a new business plan is created for an established business that has decided to move in a new direction.

A business plan is a written document describing a company's core business activities, objectives, and how they plan to achieve their goals.

Good business plans should include an executive summary, products and services, marketing strategy and analysis, financial planning, and a budget.

Understanding Business Plan

A business plan is a fundamental document that any start-up business needs to have in place prior to beginning operations.

Banks and [venture capital firms](#) indeed often make writing a viable business plan a prerequisite before considering providing capital to new businesses.

Operating without a business plan is not usually a good idea. In fact, very few companies are able to last very long without one.

There are definitely more benefits to creating and sticking to a good business plan including being able to think through ideas without putting too much money into them and, ultimately, losing in the end.

A good business plan should outline all the projected costs and possible pitfalls of each decision a company makes.

Business plans, even among competitors in the same industry, are rarely identical. But they all tend to have the same basic elements, including an executive summary of the business and a detailed description of the business, its services or products.

It also states how the business intends to achieve its goals.

The plan should include at least an overview of the industry of which the business will be a part, and how it will distinguish itself from its potential competitors.

Elements of a Business Plan

The length of the business plan varies greatly from business-to-business. All of the information should fit into a 15- to 20 page document. If there are crucial elements of the business plan that take up a lot of space such as applications for patents.

MAIN ELEMENT OF BUSSINESS PLAN ARE

Executive summary: This section outlines the company and includes the [mission statement](#) along with any information about the company's leadership, employees, operations, and location.

Products and services: Here, the company can outline the products and services it will offer, and may also include pricing, product lifespan, and benefits to the consumer. Other factors that may go into this section include production and manufacturing processes, any [patents](#) the company may have, as well as [proprietary technology](#). Any information about research and development (R&D) can also be included here.

Market analysis: A [firm](#) needs a good handle of the industry as well as its target market. It will outline who the competition is and how it factors in the industry, along with its strengths and weaknesses. It will also describe the expected consumer demand for what the businesses is selling and how easy or difficult it may be to grab market share from incumbents.

Marketing strategy: This area describes how the company will attract and keep its customer base and how it intends to reach the consumer. This means a clear distribution channel must be outlined. It will also spell out advertising and marketing campaign plans and through what types of media those campaigns will exist on.

Financial planning: In order to attract the party reading the business plan, the company should include its [financial planning](#) and future projections. Financial statements, balance sheets, and other financial information may be included for already-established businesses. New businesses will instead include targets and estimates for the first few years of the business and any potential investors.

Budget: Any good company needs to have a [budget](#) in place. This includes costs related to staffing, development, manufacturing, marketing, and any other expenses related to the business.

SSI, Ancillary Units, Tiny Units, Service Sector Units

Small scale industries (SSI)

Those industries in which [manufacturing](#), providing services, [productions](#) are done on a small scale or micro scale.

Small scale industries play an important role in [social and economic development of India](#). These industries do a one-time investment in machinery, plants, and industries which could be on an [ownership](#) basis, hire [purchase](#) or lease basis. But it does not exceed Rs. 1 Crore.

Essentially the small-scale industries are generally comprised of those industries which manufacture, produce and render services with the help of small machines and less manpower.

These enterprises must fall under the guidelines, set by the Government of India.

The SSI's are the lifeline of the economy, especially in developing countries like India.

These industries are generally labour-intensive, and hence they play an important role in the creation of employment.

SSI's are a crucial sector of the economy both from a financial and social point of view, as they help with the per capita income and resource utilization in the economy. For example, these are the ideas of Small-scale industries: Napkins, tissues, chocolates, toothpick, water bottles, small toys, papers, pens.

AN ANCILLARY UNIT

An industrial unit which is engaged or is proposed to be engaged in the manufacture or production of parts, components, sub- assemblies, tooling, intermediaries, or the rendering of services.

The undertaking supplies or renders or proposes to supply or render not less than 50 percent of its production or services, as the case may be, to one or more other industrial takings and whose investment in fixed assets in plant and machinery whether held on ownership terms or on lease or on hire purchase, does not exceed Rs 75 lacs.

A tiny unit is the business enterprise whose investment in plant and machinery is not more than 25 lakhs. Investment limit is 25 lakhs in this type of unit .

4. While an ancillary unit is the unit which supplies not less than 50% of its production to the parent unit. Investment limit in such unit is Rs 1 crore. Parent unit assist the ancillary unit by providing financial help:

Ambulance services

Cardiac monitoring

Dialysis services

Home health care services

Laboratory services

Medical day care (adult and paediatric)

Mobile diagnostic services

Private duty nursing

Speech services

DIFFERENCE BETWEEN ANCILLARY AND TINY UNIT

Basis of difference	Ancillary industrial units	Tiny units
Definition	Industrial units that have to supply a minimum of 50% of their production to their parent industries are termed ancillary industrial units.	Industries that have a maximum investment of Rs. 25 lakh in their plant and machinery are regarded as tiny industrial units.
Investment limit	The maximum level of investment is Rs. 1 crore.	The maximum level of investment is Rs. 25 lakh.
Obligation	Such units have to supply at least 50% of their production to their parent industries.	No such obligations.
Examples	Industries engaged in the production of machine parts, tools and other intermediate products.	Business units such as small shops, boutiques, STD (subscriber trunk dialling) booths and photocopy centres.

Tiny Unit:

1. It is that type in which machinery and investment of plant is not more than 25 lac.
2. Its investment limit is almost 25 lac.
3. There is no assistance required.
4. It cannot do its business by itself.
5. It is of large scale.

Ancillary Unit:

1. It is that type in which it supplies its 50 % production to the parent unit.
2. Its investment limit is almost one crore.
3. There is assistance required from parents by providing technical and financial support.
4. It can do its business by itself.
5. It is of small scale.

SERVICE SECTOR UNIT

The Service Sector, also called tertiary sector, is the third of the three traditional economic sectors. The other two are the primary sector, which covers areas

such as farming, mining and fishing and the secondary sector which covers manufacturing and making things. The service sector provides services, rather than producing material commodities.

The service sector consists of the soft parts of the economy such as insurance, government, tourism, banking, retail, education, and social services. Currently service sector is contributing near about 60 % of Indian GDP. Service sector is also known as tertiary sector.

Time schedule Plan, Agencies to be contacted For Project Implementation

Time schedule Plan

Time scheduling is a collection of techniques used to develop and present schedules that show when work will be performed. The results of all these techniques are usually presented as activities or bars on a timeline.

A simple and easy way to keep a schedule is to use a pen and paper, organizing your time using a weekly planner. Scheduling is the process by which you plan how you'll use your time. Doing it well can maximize your effectiveness and reduce your stress levels.

We can also use apps and software such as Google Calendar and Business Calendar. Choose a scheduling tool that suits your situation, the current structure of your job, your personal taste, and your budget.

The most important thing when choosing your planner is that it lets you enter data easily, and allows you to view an appropriate span of time (day/week/month) in the level of detail that you need. Once you have decided which tool you want to use, prepare your schedule in the following way:

Step 1: Identify Available Time

Start by establishing the time you want to make available for your work. How much time you spend at work should reflect the design of your job and your personal goals in life.

For example, if you're pushing for promotion, it might be prudent to work beyond normal hours each day to show your dedication. If, on the other hand, you want to have plenty of time for out-of-work activities, you might decide to do your allocated hours and no more.

Step 2: Schedule Essential Actions

Next, block in the actions you absolutely must take to do a good job. These will often be the things you are assessed against. For example, if you manage people, make sure that you have enough time available to deal with team members' personal issues, coaching, and supervision needs. Also, allow time to communicate with your boss and key people around you.

Step 3: Schedule High-Priority Activities

Review your To-Do List , and schedule in high-priority and urgent activities, as well as essential maintenance tasks that cannot be avoided.

Try to arrange these for the times of day when you are most productive. For example, some people are at their most energized and efficient in the morning, while others focus more effectively in the afternoon or evening.

Step 4: Schedule Contingency(unpredictable) Time

schedule some extra time to cope with contingencies and emergencies. Experience will tell you how much to allow. In general, the more unpredictable your job, the more contingency time you'll need.

Frequent interruptions can eat into your time. Learning how to [manage them](#) can reduce the amount of contingency time you need to set aside.

Step 5: Schedule Discretionary Time

The space you have left in your planner is "discretionary time": time that is available to deliver your priorities and achieve your goals. Review your prioritized To-Do List and [personal goals](#) , evaluate the time you need to achieve them, and schedule them in.

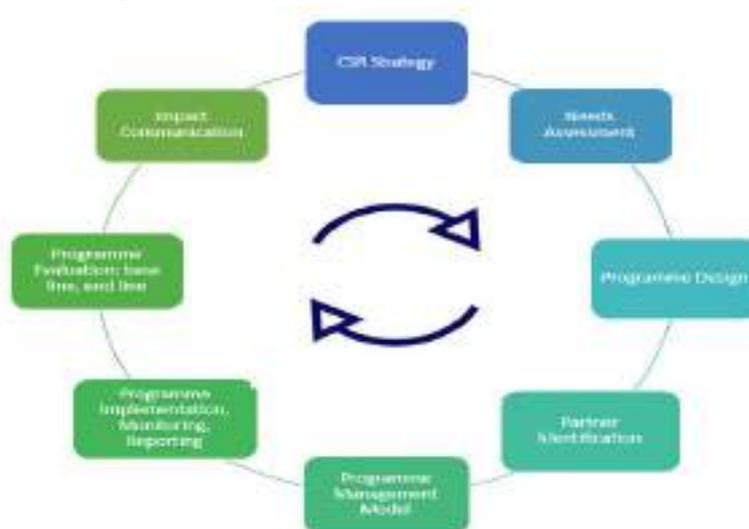
Step 6: Analyse Your Activities

If, by the time you reach step five, you find that you have little or no discretionary time available, you need to go back through steps two, three and four, and question whether all of the tasks you've entered are absolutely necessary. It may be that some things can be tackled in a more time-efficient way. If you find that your discretionary time is still limited, then you may need to check your workload or [ask for help](#) . Use your newly prepared schedule as evidence of your heavy commitments.

Agencies to be contacted For Project Implementation

The Implementing Agency is that entity charged with the successful completion of each project component. it is defined as:

- (1) Completion of all permits and environmental studies.
- (2) Preparation of plans, specifications, and estimates.
- (3) The acquisition of rights-of-way.



Projects should create a high-capacity project team in the implementing agency, with clearly defined roles and responsibilities for project staff. As much as possible, use local staff in the project team who can build project ownership and sustainability. Sometimes existing ministry staff can be seconded to serve these roles or local nationals can be hired as consultants for the project duration

Assessment of Demand and Supply and Potential areas of Growth

Assessment of Demand and Supply

Understanding the relationship between demand and supply

Consumption is the amount of goods used and is determined by the price which in turn is determined by the demand and supply factors.

Demand refers to the amount of goods that will be used at any given price level and along with supply determines the price.

Supply is the willingness and ability of producers to create goods and services to take them to market.

Supply is positively related to price given that at higher prices there is an incentive to supply more as higher prices may generate increased revenue and profits.

Demand, Supply, Consumption Pattern and the price level are all inter-related to each other. One major problem attached to projecting prices using the relationship between demand and supply pattern is the difficulty in quantifying demand.

Common determinants of demand are:



Price of the commodity: We know that demand and price, hold an inverse relationship, so whenever, the price of the commodity shoots up, the quantity demanded experiences a drop.

Price of related goods: Related goods can be of two types:

Complementary goods: Goods which are consumed together are called complementary goods, such as shoes and socks, wire and plug, ink pad and stamp. A rise in the price of one will result in the demand of the other to fall.

Competing goods or substitutes: Goods which are consumed to satisfy the same want are counted as substitutes for one another, such as bulb and tube light, soap and body wash, shoes and slipper, etc. In the case of substitute products, a rise in the prices of a product leads to the rise in demand for its substitutes.

Income of Consumers: The purchasing power of a consumer depends primarily on his income. Therefore, the higher the income of the consumer, the higher will be the quantity demanded.

Tastes and Preferences: Consumer tastes and preferences change over time and it has been observed that trending items often fetch high demand, as compared to the outdated one.

For example: During the lockdown period, a rise in the demand for laptops has been recorded, because work from home is given by many companies.

Consumer Expectations: When there is an expectation of rise or fall in prices or any sudden change in the economy, it affects the current demand for the product.

example: You might have noticed that the demand for the groceries and essential items increased prior to the lockdown became effective countrywide.

Common determinants of supply are:



Price of the Commodity: The higher the price of the commodity, the higher will be its quantity supplied. This is due to the fact that the firm produces goods and services with an aim of earning profits and when the price increases, the profit margin of the firm also tends to rise.

Prices of Related Goods: When there is a hike in prices of the related goods, then obviously, it is a profitable option for the firm to produce and sell the related goods, then the good in question, and this will lead to the fall in in the quantity supplied of that

commodity.

For example: If there is a rise in the price of pulses, the farmers will use their resources to grow pulses, rather than other cereals, as it is a more profitable option to them.

Prices of factors of production: The cost of production depends on the factors of production, which influences the supply of the product. A hike in the price of input will automatically increase the cost of production and affects its profitability.

For example: Suppose the prices of petrol shoot up, which leads to an increase in the cost of production as well as transportation of the goods.

Technology: Technology has a great impact on production, as new and improved methods are developed, which are better in terms of productivity and quality of the goods while using the same amount of resources. So, this results in the increase in quantity supplied of some products, while decreasing the quantity supplied of another which are displaced.

Producers: If there are many firms in the market producing the same product, then obviously the supply will be more.

Taxes and Subsidies: Government imposes taxes on the production of goods and a rise in the rate of taxes will lead to a rise in the cost of production. Therefore, only when there is a rise in its prices, the quantity supplied will be increased. Contrary to this, Government subsidies often bring down the cost of production, so the firms can easily increase supply.

Potential areas of Growth

The demand-supply gap is corrected by accounting for potential growth of existing enterprises in the Block.

It is assumed that existing small enterprises may grow into medium scale enterprises in 3-4 years. Therefore, the potential demand-supply gap may reduce by factor of growth potential of existing enterprises.

An addressable demand-supply gap is estimated based on local context and market dynamics in the Block. The number of recommended enterprises is then arrived at using regional benchmarks of particular business segments in a block.

Identifying Business Opportunity

The term opportunity implies a good chance or a favorable situation to do something offered by circumstances. In the same vein, business opportunity means a good or favorable change available to run a specific business in a given environment at a given point of time.

The term 'opportunity' also covers a product or project. Hence, the identification of an opportunity or a product or project is identical and all these three terms are used as synonyms. The Government of India's "Look East Policy" through North East is an example of 'opportunity' to do business in items like tea, handicrafts, herbals, turmeric, etc.

Thus, the following are the objectives of the Identification of business opportunities:

Identification of opportunities by an entrepreneur, in the context of probable industries and to decide his own role, the scope of work, and relationships, in accordance with the opportunities.

To keep watch over the possible market of the commodity or service to be produced.

To decide a high-level group of managers, so that entrepreneurial ventures may be started.

To assess financial resources by making financial forecasts, in the context of the process of industrial development.

To explore the opportunities for possible entry in other areas.

To assess the requirements of labour, capital, and materials for the industries.

To find out the possibilities of short term and long-term development in various areas of the economy.

To have the desire for technical knowledge, awareness towards new opportunities, and acceptance of the changes.

To see the possibilities of diverting the available resources towards achieving the business objectives.

To identify those industries, which are not based on local sources, but which may be economically considered, in view of future requirements.

Final Product selection

Product Selection and Development Process are very complex process, which begins with idea generation and continues till commercialization. The process requires coordination between various departments. The process can be broken up into the following stages:

1. Exploration:

New ideas are sought from the sales force, since that is the department which is in constant direct contact with customers.

The analysis of customer needs also considers competitors' products and services. New ideas are also generated from the consultants, shareholders, management employees, report on foreign markets and products, trade journals, R&D laboratories, other research, etc. However, technical feasibilities and market potential have to be kept in mind while examining new ideas.

2. Screening:

While choosing the most effective ideas, guesswork or hunches are not reliable. To ensure a more scientific and less risky selection process, it is necessary to keep in mind all possible quantitative, as well as, qualitative information. Keeping in mind the organizational objectives and available facilities, the following must points be considered while selecting an idea

Market potentiality

Technical feasibility of the idea

Does the idea fall under any intellectual property rights or patent regulations?

Raw material supply positionat present and in the future

Do existing production facilities and resource availability remain suitable for commercialization of the new idea?

The level of investment required

3. Business Analysis:

At this stage, technical and economic factors, like man-hours, cash flow, inventory holding, etc., are analysed to evaluate commercial feasibility. This will ultimately facilitate the budgeting process.

4. Development:

A working model is developed at this stage to evaluate the practicability of the new idea, by studying the acceptability of customers to the working model. Most companies use product life cycle model at this stage.

5. Testing:

Redesigning of the working model into a production prototype and testing the market before bulk production.

6. Commercialization:

At the final stage of a new product planning, decisions have to be made whether to make or buy components; production methods have to be developed; distribution networks activated and the new product has to integrate with the organization's normal activity, and satisfactory sales volume and profitability have to be achieved.

CHAPTER-3

PRELIMINARY PROJECT REPORT :-

1.Introduction :-

Information about the entrepreneur:

Name:

Address:

DOB:

Gender:

Educational Qualification:

Special Training (if any):

Work Experience:

Monthly Income presently in rupees:

Category(SC/ST /General):

2.Information About the Product or Project:-

Name of the Product:

Location of the Project:

Type of Organization:

Name of the Organization:

3.Market Potential :-

In this section the entrepreneur has to mention about the area in which the product has to be sold.He has to mention the present demand of the product in the area with the details of quantity & value in a table. He also has to mention the value of supply in quantity & the source of supply into the market area.

4.Basis of Presumption:-

In this section the entrepreneur has to mention the following details:-

- a. Average working hour per day , per month & per year
- b. When the plant will operate at its full capacity .
- c. What will be the payback period of the loan taken from financial institution.
- d. The rate of interest of the long term loan.
- e. The cost of land & building should be mentioned as per the current rate. If the factory is to be placed in a rented place then that should also be mentioned.

5.Implementation Schedule:-

In this section the entrepreneur has to mention the time taken for the completion of the project for example :-

Preparation of project report , Selection of site & registration	->1 month
Sanction of loans	-> 2 months
Construction building , purchase of machinery , equipments & installation	-> 6 months
Arrangement of utilities like , electricity , water	-> 3 months
Procurement of raw material , recruitment of labour & staff	-> 1.5 months
Commission of the plant & trial production	-> 1.2 months
-----Therefore , Total Time	
->14 Months	

6.Production Target:-

Here the entrepreneur has to mention the plan of the unit per year for example :-

Items	Total Quantity per year	Sales Volume per year	Capacity Utilization
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A	45Tonnes	9,00,000	100%
B	60Tonnes	10,000	80%
C	10,000 Tonnes	50,000	85%
D	2500 Tonnes	1,20,000	95%

7. Technical Details:-

Here the entrepreneur has to mention all the technical details of the project like manufacturing process , quality & standard , power requirement , pollution control measures , energy conservation system etc .

8. Financial Details:-

It includes the details like amount of in various items in the project .

Fixed Capital:-

Land & Building:-

Land → Its Area and Cost

Building → Its Area and Cost

Machinery & Equipment:-

Serial No.	Description of machinery	Number of quantity	Price	Total value	Name & address of supplier

Total Value (in Rs. __)

Miscellaneous includes assets like furniture, office equipments, tools etc .

Working Capital:-

In this the details of raw materials are kept.

Serial no.	Item	Monthly requirement quantity	Value (in Rs)	Sources

Salaries & wages of staff / employees & labourers

Serial No.	Post	No. of People	Salary	Total Expense
	Director	2		
	Manager	5		
	CEO	1		
	Dept. Manager	6		
	Supervisor	1		
	Contractor	3		
	Labourer	500		

Utilities

Serial no.	Description	Monthly requirement quantity	Monthly expenses (in Rs)
1.	Electricity		

2.	Water		
3.	Coal		
4.	LPG		

Other expenses may include telephone, insurance, transportation and rent charges.

Total Cost of the project:

It is the sum of working capital per month + fixed capital per month + other expenses added together.

Cost of Production per year-

12 X Working capital per month

Depreciation (loss in value of an asset) ex. Buildings value depreciating @ 5% , machinery @10% etc

9. Turnover Per Annum-

SL. NO	Items	Qty	Value
1.	A	50 Tonnes	
2	b	100000 units	
3.	c	200 litres	

Total In Rs. -----

10.Profits Before Tax- This is equal to turnover per annum – cost of production per annum.

Break – even point calculation

11.**Break-even point** -The break-even point can be defined as a point where total costs (expenses) and total sales (revenue) are equal. Break-even point can be described as a point where there is no net profit or loss

12. **Rate of Return on Investment** - Profit /Total Investment X 100

DPR (Detailed Project Report) :-

DPR is report on nothing but a detailed elaborate information of each & every information & estimates mentioned in PPR.

BY preparing a DPR the entrepreneur may pay the help of subject experts to do the job .

Detailed analysis of each & every item is necessary.

For example –

Furniture is 1 item in PPR but in DPR all details related to furniture has to be mentioned like item , size , specification , date of supply , date of payment , Transportation charges , etc. Similarly finance required should be made in detail like date of requirement, person to whom the payment has to made source of the fund to make the payment etc.

DPR are also available with the consultant & can be purchase by the entrepreneur.

DPR of different product are also available in the form of book which

may be helpful for the

CHAPTER-4 MANAGEMENT

Management means manage-men-tactfully.

It is defined as managing men tactfully to get the things done through others.

Management process involves all functions which transform resources into products and service to satisfy customer needs,(Which can be achieved by the use of 7M's).7M – men ,money, material , machinery , method , management , market.

IMPORTANCE OF MANAGEMENT:

Management is a dynamic life giving element in an organization in absence of resource and cannot become product.

- 1) Achievement of Group Goal.
- 2) Optimum Utilization of Resource.
- 3) Minimization of Cost.
- 4) Change in Growth.
- 5) Higher Profit
- 6) Provide Innovation
- 7) Sound Organization Structure.
- 8) Efficient and Smooth Running Of Business.

PRINCIPLES OF MANAGEMENT

-“**Principles of management**” implies a list of current management practices.

- **Herni Fayol** listed 14 principles, that grew out of his experience ,they are briefed as under:-

1. Division of work: Work is divided in small tasks/job and each work is done by a trained specialist which leads to greater efficiency, specialization, increased productivity and reduction of unnecessary wastage and movements.

2. Authority and Responsibility: Authority means power to take decisions and responsibility means obligation to complete the job assigned on time. Authority and responsibility should go hand in hand. Mere responsibility without authority, makes an executive less interested in discharging his duties. Similarly giving authority without assigning responsibility makes him arrogant and there is fear of misuse of power.

3. Discipline: It is the obedience to organizational rules by the subordinates. Discipline requires good supervisors at all levels, clear and fair agreements and judicious application of penalties.

4. Unity of Command: It implies that every worker should receive orders and instructions from one superior only, otherwise it will create confusion, conflict, disturbance and overlapping of activities.

5. Unity of Direction: Each group of activities having the same objective must have one head (i.e. manager) and one plan. This ensures unity of action and coordination.

6. Subordination of Individual Interest to General Interest: The interest of an organization should take priority over the interest of any one individual employee.

7. Remuneration of Employees: The overall pay and compensation should be, fair to both employees and the organization. The wages should encourage the workers to work more and better.

8. Centralization and Decentralization: Centralization means concentration of decisions making authority in few hands at top level. Decentralization means evenly distribution of power at every level of management. Both should be balanced as no organization can be completely centralized or completely decentralized.

9. Scalar Chain: The formal lines of authority between superiors and subordinates from the highest to the lowest ranks are known as scalar chain. This chain should not be violated. Communication should follow from top management to the lower ranks of the employees.

10. Order: This promotes the idea that everything (i.e. material) & everyone (i.e. human being) has his place in the organisation. Material & human beings should be arranged such that right material/person is in the right place at appropriate time for maximum efficiency.

11. Equity: The working environment of any organization should be free from all forms of discrimination (religion, language, caste, sex, belief etc). Manager should have fairness in treatment for all his subordinates. Manager should deal with his subordinates with kindness & justices. No worker should be unduly favoured or punished. This will make employees more loyal & devoted towards the enterprise.

12. Stability of Personnel: Stable & secure work force is an asset to the enterprise, because unnecessary labour turnover is costly. An average employee who stays with the concern is much better than outstanding employees who merely come & go. Instability is the result of bad management.

13. Initiative: Workers should be encouraged to develop and carry out their plan for improvements. Initiative means taking the first step with self-motivation. It is thinking out and executing the plan.

14. Espirit De Corps: Management should promote team spirit, unity and harmony among employees. Management should promote a team work.

FUNCTIONS & MANAGEMENT:-

Management is also defined as the process of planning, organization, staffing, directing , co-ordinating and controlling.

- 1) Planning – It is a basic managerial function planning has its determining the course of action to be followed for achieving various organizational objectives, It is a decision in advance about what / when / how / who to do a particular task.
- 2) Organizing – It is the process of dividing the work into sections and departments, it involves the allocation of authority and responsibilities the employees of the organization. The function of organizing is to arrange, co-ordinate , guide , direct and control the activities of the other factors of production via 7Ms , so as to accomplish the objective of the organization.
- 3) Staffing – It is the process of hiring the man resource of an organization staffing is filling up the position created in the organization structure through manpower planning, development, promotion, transfer & appraised for determination of employees.
- 4) Directing – It is concerned with carrying out the desired plan, directing is the continuous function and it performs at all the events of management. The main activity involves in directing are leadership communication, motivation and supervision.

Leadership – It is the process by which a manager imaginatively directs, guides, influences the works of others in choosing and achieving specified goals by mediating between the individuals and organization in such manner that both will get maximum satisfaction.

Communication – It is the means by which the behaviour of subordinates is modified through sharing the ideas and that change is affected in their action.

Motivation – It is the psychological process of creating internal desire among the subordinates to perform the job.

Supervision – It refer to the job of accessing subordinates at work to ensure maximum utilization of resources to get required and directed work done to correct whenever they do any wrong.

- 5) Co-ordinating - It is a process where a manager who coordinate the activity of all the individuals to provide unity of action for the achievement of organizational goals.
- 6) Controlling – It can be defined as determining that is being accomplished i.e. calculating the performance it is necessary to apply corrective measures so that performance takes place according to plan , controlling is essential for achieving objective of the organization.

LEVELS OF MANAGEMENT

- Levels of management refer to the hierarchy of job positions of organizations representing authority and responsibility relationship.
- Generally, there are three levels of management which are:

(A) Top Level Management

- This level of management consists of the senior most executive level of an organisation.
- Their chief task is to lay down overall goals, policies and strategies for the organisation and to communicate with the middle level of management.

Following are the main designations assigned to individuals working at this level:

- Managing Director.
- Board of Directors.
- Chairperson.
- Chief Executive Officers.
- Chief Product Officers.
- Chief Technology officers.

Functions performed at Top Level of Management are:

- Making strategies and goals of the organisation.
- Taking decisions regarding activities to be performed.
- Framing policies for the organisation.
- Responsible for Welfare and survival of the organisation.

(b) Middle Level Management

- This level of management consists of executives working between top-level and supervisory level.

- They interpret and implement the policies, coordinate all activities, ensure availability of resources and implementation of policies framed by top-level management.

They consist of:

- Divisional Heads and Sub-divisional Heads.
- Departmental Heads like Purchase Manager, Sales Manager, Finance Manager, Personnel Manager etc.
- Plant Superintendent.

Functions performed at Middle Level of Management are:-

- Interpret the policies to lower management.
- Taking decisions regarding a number of personnel in the department.
- Assigning duties and responsibilities to employees in their department.
- Convey suggestions and grievances of the supervisory level to the top level for the overall smooth functioning of the organisation.
- Responsible for the ultimate production of respective departments.
- To act as a link between lower and top management.

(c) Lower Level Management:-

(Supervisory / Lower / Operational Level Management)

- This level of management operates between middle-level management and operative workforce.

This level consists of:-

- Supervisors.
- Foremen.
- Inspectors.

Functions performed at Lower Level of Management are:-

- Provide on the job training to the workers.
- Ensure the performance of the workers.
- Giving feedback to the workers.
- Influence others to work more by setting an example.
- Responsible for group unity.
- Act as a link between the management and the workers.

CHAPTER-5

PRODUCTION MANAGEMENT

Production Management refers to the application of management principles to the production function in a factory. In other words, production management involves application of planning, organizing, directing and controlling the production process. It is observed that one cannot demarcate the beginning and end points of Production Management in an establishment. The reason is that it is interrelated with many other functional areas of business, viz., marketing, finance, industrial relation policies etc. alternately, Production Management is not independent of marketing, financial and personnel management due to which it is very difficult to formulate some single appropriate definition of Production Management.

FUNCTIONS OF PRODUCTION MANAGEMENT

The functions of production management are as follows:

1. Selection of Product and Design,
2. Selection of Production Process,
3. Selecting Right Production Capacity,
4. Production Planning,
5. Production Control,
6. Quality and Cost Control,
7. Inventory Control, and
8. Maintenance and Replacement of Machines



1. Selection of Product and Design

Production management first selects the right product for production. Then it selects the right design for the product. Care must be taken while selecting the product and design because the survival and success of the company depend on it. The product must be

selected only after detailed evaluation of all the other alternative products. After selecting the right product, the right design must be selected. The design must be according to the customers' requirements. It must give the customers maximum value at the lowest cost. So, production management must use techniques such as value engineering and value analysis.

2. Selection of Production Process

Production management must select the right production process. They must decide about the type of technology, machines, material handling system, etc.

3. Selecting Right Production Capacity

Production management must select the right production capacity to match the demand for the product. This is because more or less capacity will create problems. The production manager must plan the capacity for both short and long term's production. He must use break-even analysis for capacity planning.

4. Production Planning

Production management includes production planning. Here, the production manager decides about the routing and scheduling. **Routing** means deciding the path of work and the sequence of operations. The main objective of routing is to find out the best and most economical sequence of operations to be followed in the manufacturing process. Routing ensures a smooth flow of work. **Scheduling** means to decide when to start and when to complete a particular production activity.

5. Production Control

Production management also includes production control. The manager has to monitor and control the production. He has to find out whether the actual production is done as per plans or not. He has to compare actual production with the plans and finds out the deviations. He then takes necessary steps to correct these deviations.

6. Quality and Cost Control

Production management also includes quality and cost control. Quality and Cost Control are given a lot of importance in today's competitive world. Customers all over the world want good-quality products at cheapest prices. To satisfy this demand of consumers, the production manager must continuously improve the quality of his products. Along with this, he must also take essential steps to reduce the cost of his products.

7. Inventory Control

Production management also includes inventory control. The production manager must monitor the level of inventories. There must be neither over stocking nor under stocking of inventories.

If there is an **overstocking**, then the working capital will be blocked, and the materials may be spoiled, wasted or misused.

If there is an **under stocking**, then production will not take place as per schedule, and deliveries will be affected.

8. Maintenance and Replacement of Machines

Production management ensures proper maintenance and replacement of machines and equipments. The production manager must have an efficient system for continuous inspection (routine checks), cleaning, oiling, maintenance and replacement of machines, equipments, spare parts, etc. This prevents breakdown of machines and avoids production halts.

ACTIVITIES OF PRODUCTION MANAGEMENT

The main activities of production management can be listed as:

- (i) Specification and procurement of input resources namely management, material, and land, labour, equipment and capital.
- (ii) Product design and development to determine the production process for transforming the input factors into output of goods and services.
- (iii) Supervision and control of transformation process for efficient production of goods and services.

PRODUCTIVITY:

Productivity is a relationship between the output (product/service) and input (resources consumed in providing them) of a business system. The ratio of aggregate output to the aggregate input is called productivity.

Productivity = output/Input

For survival of any organization, this productivity ratio must be at least 1. If it is more than 1, the organization is in a comfortable position. The ratio of output produced to the input resources utilized in the production.

Importance:

Benefits derived from higher productivity are as follows:

- It helps to cut down cost per unit and thereby improve the profits
- Gains from productivity can be transferred to the consumers in form of lower priced Products or better quality products.
- These gains can also be shared with workers or employees by paying them at higher rate.
- A more productive entrepreneur can have better chances to exploit expert opportunities.
- It would generate more employment opportunity.
- Overall productivity reflects the efficiency of production system.
- More output is produced with same or less input.
- The same output is produced with lesser input.
- More output is produced with more input.
- The proportional increase in output being more than the proportional increase in input.

Productivity Measurement:

Productivity may be measured either on aggregate basis or on individual basis, which are called total and partial measure.

Total productivity Index/measure = **Total output/ Total input**

= **Total production of goods and services/ Labour+material+capital+Energy+management**

Partial productivity indices, depending upon factors used, it measures the efficiency of individual factor of production.

Labour productivity Index/Measure = **Output in unit /Man hours worked**

Management productivity Index/Measure= **Output/ Total cost of management**

Machine productivity Index/Measure = **Total output /Machine hours worked** Land

productivity Index/Measure = **Total output/ Area of Land used** Partial

Measure = **Output/ Labour** or **Output/ Capital** or **Output/ Materials** or **Output/**

Energy.

ways to improve productivity

1. Product development
2. Specialisation and standardisation
3. Market, consumer and product research
4. Value analysis
5. Process planning and research
6. Method study
7. Safety
8. Operator training
9. Production planning and control
10. Material control

Quality Control in Production Management

Quality Control (QC) may be defined as a system that is used to maintain a desired level of quality in a product or service. It is a systematic control of various factors that affect the quality of the product. It depends on materials, tools, machines, type of labour, working conditions etc. Quality control aims at prevention of defects at the source, relies on effective feedback system and corrective action procedure. Quality control uses inspection as a valuable tool.

Alford and Beatty define QC as “In the broad sense, quality control is the mechanism by which products are made to measure upto specifications determined from customers, demands and transformed into sales engineering and manufacturing requirements, it is concerned with making things right rather than discovering and rejecting those made wrong”.

Types of Quality Control

QC is not a function of any single department or a person. It is the primary responsibility of any supervisor to turn out work of acceptable quality. Quality control can be divided into three main sub-areas, those are:

1. Off-line quality control,
2. Statistical process control and
3. Acceptance sampling plans.

Steps in Quality Control

Following are the steps in quality control process:

1. Formulate quality policy.
2. Set the standards or specifications on the basis of customer's preference, cost and profit.
3. Select inspection plan and set up procedure for checking.
4. Detect deviations from set standards of specifications.
5. Take corrective actions or necessary changes to achieve standards.
6. Decide on salvage method *i.e.*, to decide how the defective parts are disposed of, entire scrap or rework.
7. Coordination of quality problems.
8. Developing quality consciousness both within and outside the organization.
9. Developing procedures for good vendor-vendee relations.

Objectives of Quality Control

Following are the objectives of quality control:

1. To improve the companies income by making the production more acceptable to the customers, *i.e.*, by providing long life, greater usefulness, maintainability etc.
2. To reduce companies cost through reduction of losses due to defects.
3. To achieve interchange ability of manufacture in large scale production.
4. To produce optimal quality at reduced price.
5. To ensure satisfaction of customers with productions or services or high quality level, to build customer goodwill, confidence and reputation of manufacturer.
6. To make inspection prompt to ensure quality control.
7. To check the variation during manufacturing.

The broad areas of application of quality control are incoming material control, process control and product control.

Benefits of Quality Control

- Improving the quality of products and services.
- Increasing the productivity of manufacturing processes, commercial business, and corporations.
- Reducing manufacturing and corporate costs.
- Determining and improving the marketability of products and services.
- Reducing consumer prices of products and services.

- Improving and/or assuring on time deliveries and availability.
- Assisting in the management of an enterprise.

Seven Tools for Quality Control

To make rational decisions using data obtained on the product, or process, or from the consumer, organizations use certain graphical tools. These methods help us learn about the characteristics of a process, its operating state of affairs and the kind of output we may expect from it. Graphical methods are easy to understand and provide comprehensive information; they are a viable tool for the analysis of product and process data. These tools are effect on quality improvement. The seven quality control tools are:

1. Pareto charts
2. Check sheets
3. Cause and effect diagram
4. Scatter diagrams
5. Histogram
6. Graphs or flow charts
7. Control charts

Production Planning & Control –

Production planning and control (PPC) is a predetermined process that plans, manages and controls the allocation of human resource, raw material, and machinery to achieve maximum efficiency and to ensure the production process is executed smoothly.

PPC is the technique to plan each and every step in a long series of separate operation. It helps to take the right decision at the right time and at the right place to achieve maximum efficiency.

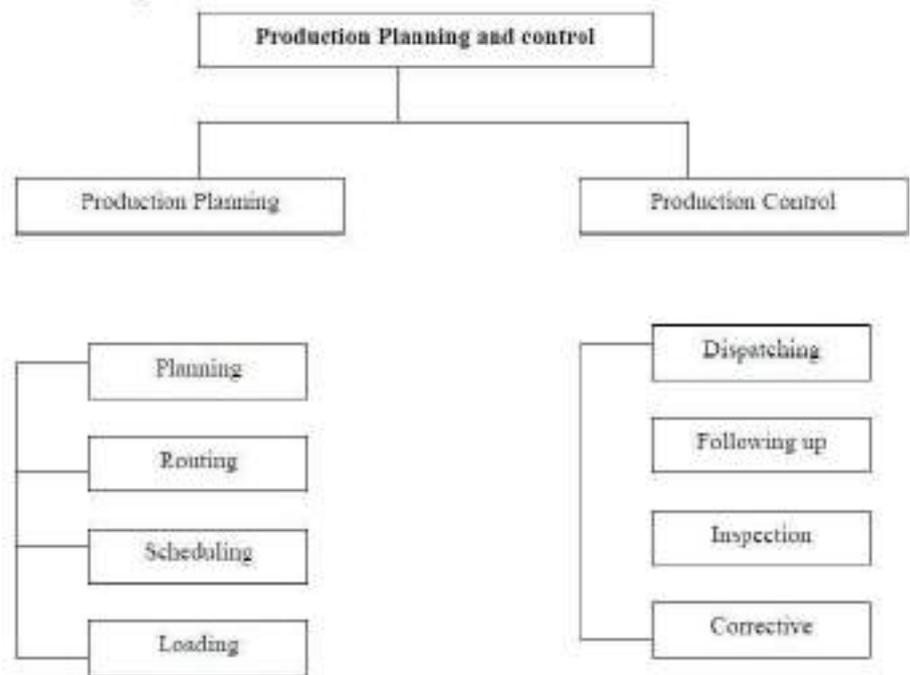
Objectives of Production Planning and Control (PPC)

- To determine the requirements of men, material and equipment.
- To coordinate the different plant activities.
- To ensure cost-efficient production process.
- To minimize production time.
- To ensure timely delivery of goods.
- To effectively utilize plant to maximize productivity.
- To improve customer satisfaction.
- To Ensure the right person is assigned the right work ,at right time for right wages

Steps/Phases of Production Planning & Control-

The various steps in PPC are –

1. Planning
2. Routing
3. Scheduling
4. Loading
5. Dispatching
6. Follow Up
7. Inspection
8. Correction



PLANNING-

It is the first step of PPC.

The management prepares a plan for production activities in the organisation.

The management decides about the products that has to be produced, the raw materials, specification, size, quality, quantity and the cost of production.

The management also decides the men, material, machines, resources , infrastructure requirements.

ROUTING

Once the planning has been done, next step in PPC is routing.

Routing may be defined as the selection of path which each part of the product will follow while being transformed from raw materials to finished products.

Routing decides the path and sequence of operations to be performed from one department to another department, from one machine to another.

It is essential to find all the possible routes, and then select the best possible route.

Routing also includes selection of men, machines and processes to carry out different processes.

SCHEDULING

Scheduling is the determining of time and date when each operation is to be started and completed. It is like a timetable of production activities.

It includes the determination of total time required for completion of each operation/process and also the entire production.

scheduling is important for having smooth production and completing each tasks on time and within budget, so that final products can be delivered to the customer by due date.

LOADING

A load means the quantity of work, and assigning the quantity of work to the processes (machine/worker/dept.) for a certain period of time is called loading.

So proper planning should be done to ensure that a process is not overloaded or under loaded.

More load than the capacity of process is called overload while less load is called under load.

DISPATCHING

It is the action, doing or implementation stage

This is the stage when the real work starts and the actual implementation of the plans are done as per the route sheets and schedule charts.

It includes issuing orders & instructions to start and carry on work as per plans.

It also includes maintaining records of all processes.

FOLLOW-UP

It involves checking the progress of the work and to check whether the work is being carried out as per the plans.

Finding faults or defects, deviations and loopholes in the entire production process is done, and necessary corrective actions are taken.

In this step, the actual performance and efficiency of men, machines, and materials is evaluated.

It maintains proper records of all the work carried out and also, delays and bottlenecks during the entire production. Such records are used as reference in future to control production.

Production may be disturbed due to break-downs of machinery, failure of power, shortage of materials, strikes, absenteeism, etc.

Follow-up removes these difficulties and allows a smooth production.

INSPECTION

Inspection is to check the quality of goods produced and ensure they are of the correct standard. This is done by checking and testing of samples periodically.

Inspectors are appointed at various points where there is a high chance of deviation in the production process.

CORRECTION

Once the steps above are done, the results will be seen, and you can take action to correct any issues. This is crucial to make the process more efficient in the future.

INVENTORY MANAGEMENT

Inventory:-

Inventory is an essential part of any organisation. It is stock of any type of item which has to be used in present or future needs in organisation, and which is kept in the warehouses of an industry.

Ex – Raw Material, Work in Process or Sub Assemblies, Component Parts, Finished goods

Inventory is typically broken down into three categories, which are:

- *Raw materials*:-Includes materials meant to be used in the production of finished goods.
- *Work-in-process*:-Includes items that are in the need of the production process, and which are not yet in a state of ready for sale to customers.
- *Finished goods*:-Includes goods ready for selling to customers.

Inventory Control:-

Inventory control is the processes to control the stock or inventory of an organisation so as to maximize a company's use of inventory in efficient, effective and economical manner.

The goal of inventory control is to generate the maximum profit from the least amount of investment on inventory.

Inventory Control is the process by which the size of inventory is measured and regulated and maintained at desired level according to predetermined factors such as size for order or production, safety stock, minimum level, maximum level, order level etc.

Need For Inventory Management:-

1. Tracking Inventory

A good system will help you keep track of your inventory and offer a centralized view of stock across sales channels – how much is in stock, and where. It will also allow allocating inventory to specific sales channels, which is important if you have warehouses and distribution centres at multiple locations, thus, enabling warehouse management.

2. Control Your Costs

keeping reports about your inventory helps you understand what stocks are doing well, versus which are just taking up shelf space. Lack of the right inventory at the right time can mean back orders, excess inventory, etc. These drive up costs.

3. Improve Your Delivery

Late delivery due to stock-outs is bound to give you a bad reputation. For tracking, it is important for you to know when the vendor is shipping inventory and when it will arrive. This helps you manage customer expectations by delivery as, when and where they want.

4. Manage Planning & Forecasting

The software can help you improve demand forecasting by analyzing data trends from well-performing stocks. This minimizes your holding and handling costs, improves revenues and frees up cash flows. Also, by planning and forecasting – you deliver on customer expectations better.

5. Reduce the Time for Managing Inventory

With a good inventory management solution, you can reduce the time taken to keep track of all the products you have on hand and on order. Additionally, you save the time taken up in inventory recounts if your records are in place.

Importance /Objective of Inventory Management:-

- To ensure a continuous supply of materials and stock so that production should not suffer at the time of unforeseen customers demand.
- To meet customers demand timely, efficiently, and fulfil customer satisfaction.
- It protects the firm against variations in raw materials delivery time due to delay in transportation of goods.
- To carry out production activities without any interruptions.

- The main aim of an inventory control is to keep the stock in such a way that it is neither overstock (this will occupy lot of floor space) nor under stock (production loss and more financial cost because of emergency transportation charges).
- To face any technological problems of production/process.
- To minimize as much as possible capital investment and cost of storage
It helps in optimum utilization of men, money, material, equipments, time and thereby reduce the total cost of the production.
- To meet the customer requirement timely, effectively, efficiently, smoothly and satisfactorily.
- To reduce loss due to changes in prices of inventory items due to avail discounts on bulk purchases.
- To minimize loss through deterioration, degradation in quality, wastages, and damages.

Techniques of Inventory Management:-

The following are the common techniques of inventory management:-

1. Determination of various levels of materials
2. Economic Order Quantity
3. ABC Analysis
4. Perpetual Inventory Control
5. LIFO –FIFO
6. Inventory turnover Ratio

1. Determination of Various Levels of Materials

The store-keeper plays an important role in deciding upon the various levels materials. In order to ensure that the optimum quantity of materials is purchased stocked neither less nor more, the store keeper applies scientific techniques of material management. Fixing of certain levels for each item of materials in one of techniques.

These levels are not permanent but require revision according to the change in the factors which determine these levels. The following levels are generally fixed – minimum level, maximum level, average level, re-order level, danger level.

2. Economic Order Quantity (EOQ)

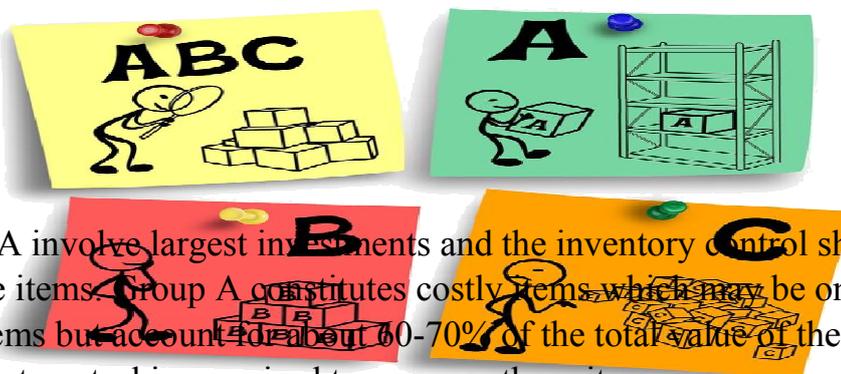
The economic order quantity, known as EOQ, represents the most suitable quantity to be ordered each time fresh orders are placed.

The quantity to be ordered is called economic order quantity because the purchase of this size of material is most economical. It is helpful to determine in advance as to how much should one buy when the stock level reaches the re-order level. If large quantities are purchased, the carrying costs and buying cost would be large.

3. ABC Analysis

This technique of inventory control is also known as Always Better Control technique. ABC analysis is an analytical method of control which aims at concentrating efforts on those areas where attention is needed most.

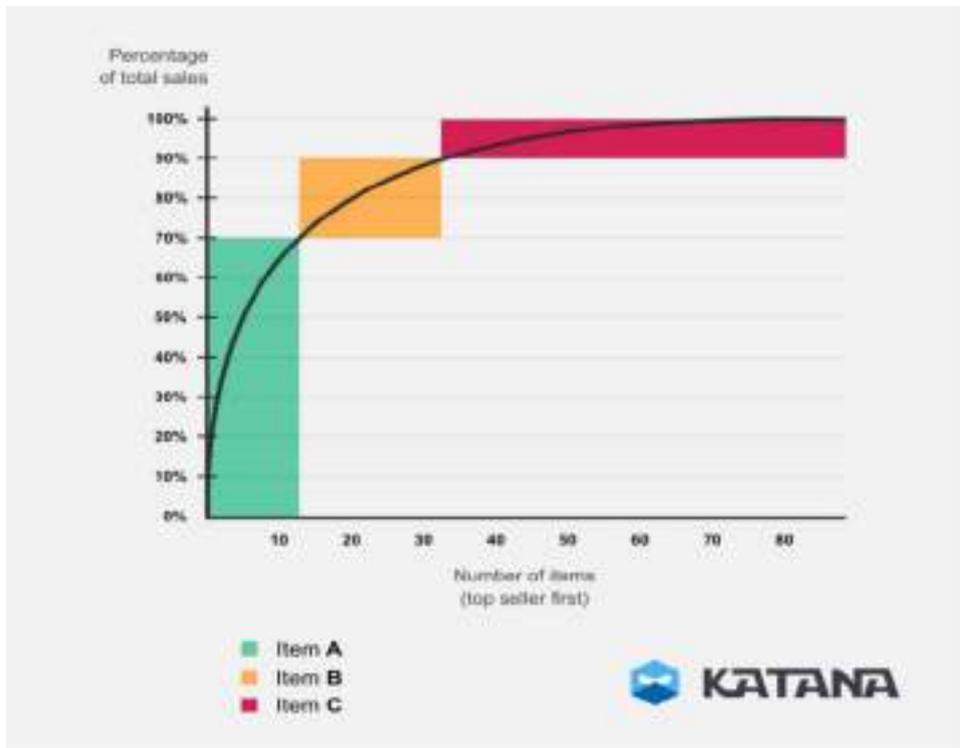
This is a principle of selective control / 'selective value approach'. The emphasis of ABC analysis technique is that the management should concentrate its energy in controlling those items that mostly affect the organizational objectives. Manufacturing concerns find it useful to group the materials into three classes on the basis of investment involved.



Group A involve largest investments and the inventory control should be most severe to these items. Group A constitutes costly items which may be only 10 to 20% of the total items but account for about 60-70% of the total value of the stores. A very high and strict control is exercised to preserve these items.

Group C consists of inventory items which involve relatively small investments although the number of items remains large. These items deserve minimum attention of control.

In Group B that items are included which are neither of A nor C. Group 'B' consists of items which constitutes 20 to 30% of the store items and represent about 30% of the total value of stores.



ABC analysis of Inventory



- Be a Supply Chain Leader

Criteria	Class		
	A	B	C
Number of Items	10%	20%	70%
Value, \$	70%	20%	10%
Stock Control	Strict	Moderate	Loose



4. Perpetual inventory

system

A perpetual inventory system keeps the track of inventory balances continuously. Updates are automatically made when you receive or sell inventory. Purchases and returns are immediately recorded in the inventory accounts. For example, a grocery store may use a perpetual inventory system. It is generally considered a more efficient method than a periodic inventory system.

Perpetual Inventory System

Perpetual

- Inventory quantities are updated after each transaction
- We know exactly how many items were sold
- We know exactly how many items are left



5. LIFO – FIFO

"FIFO" stands for *first-in, first-out*, meaning that the oldest inventory items are recorded as sold first but do not necessarily mean that the exact oldest physical object has been tracked and sold. Because if it is kept for long time the product may be outdated/out of fashion/damaged etc.

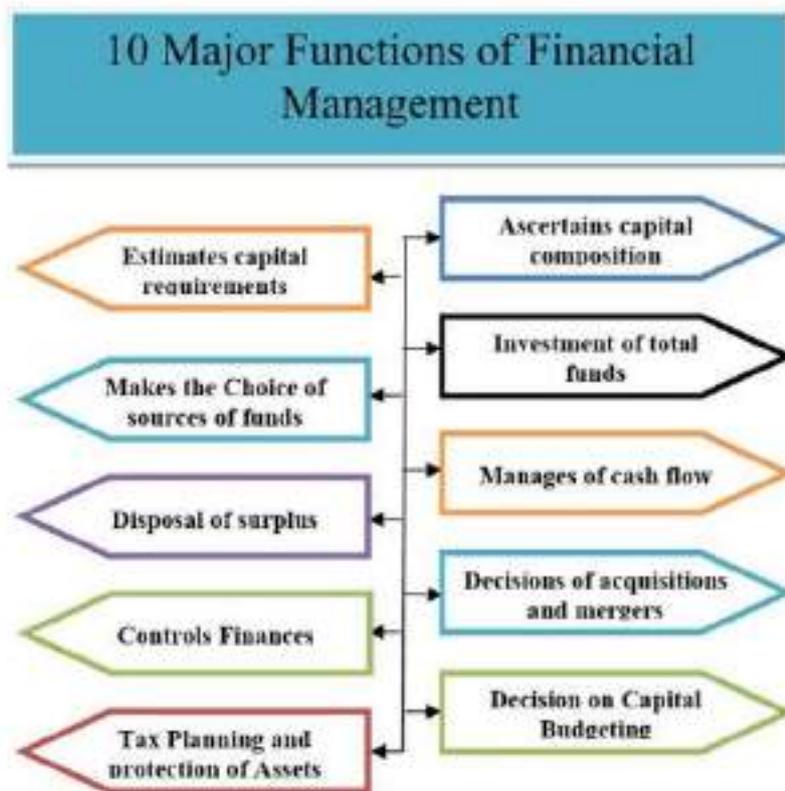
LIFO" stands for *last-in, first-out*, meaning that the most recently produced items are recorded as sold first. LIFO is a newer inventory cost valuation technique. This is used where the demand of a new product is very high, so that higher profits are earned.

6. Inventory turnover ratio

The inventory turnover ratio is calculated by dividing the cost of goods sold for a period by the average inventory/stock for that period (per month or per year). The higher the ratio, the shorter the shelf life.

FINANCIAL MANAGEMENT

10 major functions of financial management for utilizing financial resources



supplier for raw materials in time.

Functions of Financial Management

1. Estimation of capital requirements: A finance manager has to make estimation with regards to capital requirements of the company. This will depend upon expected costs and profits and future programmes and policies of a concern. Estimations have to be made in an adequate manner which increases earning capacity of enterprise.

2. Determination of capital composition: Once the estimation have been made, the capital structure have to be decided. This involves short- term and long- term debt equity analysis. This will depend upon the proportion of equity capital a company is possessing and additional funds which have to be raised from outside parties.

3. Choice of sources of funds: For additional funds to be procured, a company has many choices like-

- a. Issue of shares and debentures
- b. Loans to be taken from banks and financial institutions
- c. Public deposits to be drawn like in form of bonds.

Choice of factor will depend on relative merits and demerits of each source and period of financing.

4. Investment of funds: The finance manager has to decide to allocate funds into profitable ventures so that there is safety on investment and regular returns is possible.

5. Disposal of surplus: The net profits decision have to be made by the finance manager. This can be done in two ways:

d. Dividend declaration - It includes identifying the rate of dividends and other benefits like bonus.

e. Retained profits - The volume has to be decided which will depend upon expansional , innovational, diversification plans of the company.

6. Manages of cash flow:: Finance manager has to make decisions with regards to cash management. Cash is required for many purposes like payment of wages and salaries, payment of electricity and water bills, payment to creditors, meeting current liabilities, maintenance of enough stock, purchase of raw materials, etc.

7. Controls Finances: The finance manager has not only to plan, procure and utilize the funds but he also has to exercise control over finances. This can be done through many techniques like ratio analysis, financial forecasting, cost and profit control, etc.

8. Decisions regarding acquisitions and mergers:

A business organization can either be expanded through acquiring other business or by entering into the business by mergers with other firms. While acquisition decision denotes a process of purchasing new or existing companies, the merger is a process where two or more companies join together in the formation of a new business. During such decision, a financial manager has to deal with many complex valuations of securities of each company.

9. Tax Planning and protection of Assets:

It is the duty of a financial manager to lessen the tax liability of the business. This task should be performed wisely. It is very important that a finance executive properly examines various schemes and invest accordingly. He should also protect the assets engaged in the business to ensure the best use of the resources.

10. Decision on Capital Budgeting:

Long-term decisions involve investing in share or bond, purchasing new equipment, building new plant etc. These decisions are called capital budgeting. In this decision making of the company financial managers faces many complicated situations. As the process requires a huge amount of capital, it is necessary that a financial manager identifies the investment opportunities and involved challenges.

The efficient use of financial management functions helps a company to maximize wealth. Financial management is a continuous and interrelated process which involves identifying the required amount of capital that is needed for running the business promptly, evaluating and selecting best alternative sources of funds, allocating the funds according to the need of business area and distributing earned profits.

Types of Capital : (IMP)

1. Fixed Capital
2. Working Capital

Fixed Capital :

1. **Fixed capital** is capital or money that we invest in **fixed assets**. In other words, money that we invest in assets of a durable nature. These are assets that we repeatedly use over a long period of time. Example: investment in tools & equipment, plants & machines, buildings, land, and vehicles.
2. The fixed assets can be grouped under two main categories, i.e.
 - i), Tangible fixed assets ---- includes land, building, plant, machinery, etc. ii) Intangible fixed assets----- includes patents, copyrights, goodwill

3. Fixed Capital is used to meet the permanent and long term need of a business.

B WORKING CAPITAL (also known as REVOLVING or CIRCULATING CAPITAL)

Working capital is the money available to fund a company's day-to-day operations and requirements for running a business smoothly. Its is required for purchasing raw materials, paying wages & salaries of labourers and employees, paying rent, taxes, electricity bills, transportation costs etc.

Components of working Capital:

Current assets and Current liabilities are called the components of working capital.

Current assets are those assets which are convertible into cash within a period of one year and are those which are required to meet the day to day operations of the business. The current assets are cash or near cash resources. Current assets is the money you have in the bank as well as any assets you can quickly convert to cash if you needed it.

Ex. Cash and bank balances, Temporary investments, Short-term advances, Prepaid expenses

Current liabilities are debts that you will repay within the year.

Ex. Short-term borrowings, Taxes and dividends payable

Working capital = current assets - current liabilities

Working Capital Ratio = Current Assets/Current Liabilities (divided by)

Management of Working Capital

1. Manage Procurement and Inventory

Prudent inventory management is an important factor in making the most of your working capital. Excessive stocks can place a heavy burden on the cash resources of any business. On the other hand, insufficient stock can result in lost sales and damage to customer relations. When looking at inventory, it is important to monitor what you buy, just as much as what you sell. The key challenge for companies is to establish optimum stock levels and avoid driving up costs for physical storage and insurance as well as wasting stock if it is time-sensitive. This can be done by promoting better communication and forecasting between departments.

If stock levels are unknown, then it is difficult to manage the optimum level and the company risks experiencing a loss in sales, as a result of a shortfall in materials. Periodic inventory checks are useful in monitoring levels of different types of stock and alerting finance to any recurring overstock or understock issues.

It is extremely important to control what is purchased. Investment in **procurement automation** can greatly boost working capital. A centralized procurement process where each purchase requires authorization helps to prevent maverick spend by ensuring that procurement staff are only permitted to order approved products/services from preferred vendors.

2. Pay vendors on time

Enforcing payment discipline should be a key part of your payables process. Analysis of working capital levels shows that the biggest improvement comes from improved payables performance and reduced days payable outstanding (DPO). Extending DPO should no longer be considered a viable option, particularly with many vendors having been affected by the pandemic and therefore unlikely to offer the option.

Companies that pay on time develop better relationships with their vendors and are in a stronger position to negotiate better deals, payment terms and discounts. It seems like a counter-intuitive way of maintaining a steady level of working capital, but if you keep your vendors happy, it could save you money in the long run when it comes to getting larger discounts for bulk buying, recurring orders and maximizing the credit period.

3. Improve the receivables process

In order to shorten the receivables period, organizations need to have a good collections system in place. One important aspect of working capital is to send out invoices as soon as possible. Companies should reassess invoicing processes in order to eliminate inefficiencies that may be causing delays in sending invoices to your debtors. Such inefficiencies may include manual processing, lost invoices, and high volume of invoices to manage. Professional services firm, **Deloitte recommends** using **accounts receivable technology** to deliver invoices electronically in order to speed up billing and collection, and ultimately shorten the cash conversion cycle. It is also vital to ensure that invoices are accurate before they are sent to your debtors to avoid delays in payments. Maintaining an accurate debtor's ledger ensures that you are on top of debtor collection dates and can send timely reminders to your customers regarding payment.

4. Manage debtors effectively

The best way to ensure you have enough working capital available is to make sure money is coming in on time. Reassessing your contracts and credit terms with debtors may be necessary to make sure you are not giving debtors too big a window to pay for goods and services, as this may be impacting negatively on your own company's cash flow. CFOs should review credit terms with company management to ensure that the level of credit being offered to debtors is appropriate for your company's cash flow needs. To reduce bad debts, you should implement more rigorous credit checks and ensure that effective credit control procedures are in place for chasing late-paying customers.

Costing

“Costing is the classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or services, and for presentation of suitably arranged data for the purposes of control, and guidance of management.”

Main aims of costing are:

1. To determine the exact cost of each article.
2. To determine the cost incurred during each operation to keep control over workers' wages.
3. To provide information to ascertain the selling price of the product.
4. To supply information for detection of wastage.
5. It helps in reducing the total cost of manufacture.
6. It suggests changes in design when the cost is higher.
7. To help in formulating the policies for charging the prices of the product.
8. To facilitate preparation of estimate for submitting the rates in tenders or quotations.
9. To compare the actual cost with the estimated cost of the component.

Costing method to be followed in a particular enterprise depends upon:

- (i) Nature of Industry,
- (ii) Class of products manufactured,
- (iii) Quantity of goods produced, and
- (iv) The way the workers are employed and paid.

Break-Even Analysis

A break-even analysis is a financial tool which helps you to determine at what stage your company, or a new service or a product, will be profitable. In other words, it's a financial calculation for determining the number of products or services a company should sell to cover its costs (particularly fixed costs). Break-even is a situation where you are neither making money nor losing money, but all your costs have been covered.

Break-even analysis is useful in studying the relation between the variable cost, fixed cost and revenue. Generally, a company with low fixed costs will have a low break-even point of sale. For an example, a company has a fixed cost of Rs.0 (zero) will automatically have broken even upon the first sale of its product.



Contribution Per Unit

$\text{Contribution per unit} = \text{Selling price per unit} - \text{Variable cost per unit}$



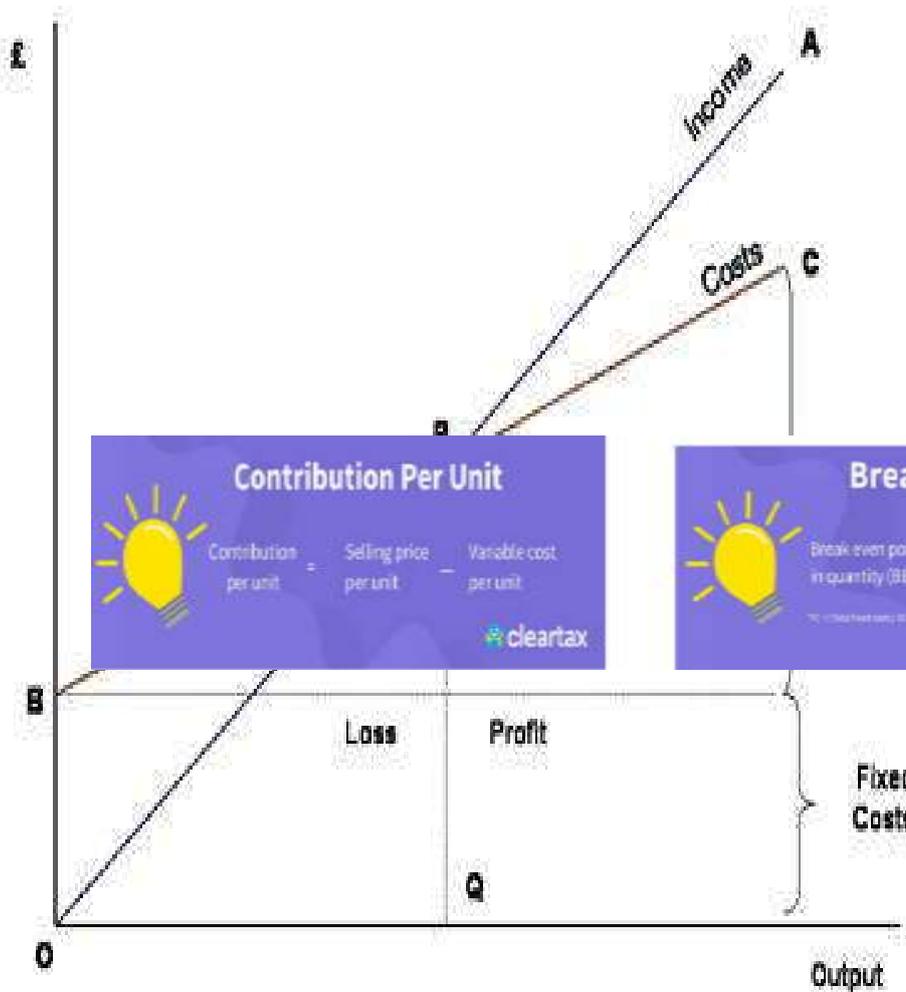


Break-even point

$\text{Break even point in quantity (BEP)} = \frac{FC}{\text{Contribution Per Unit}} \text{ or } \frac{FC}{(P-VC)}$

FC = Total fixed cost, P = Selling price per unit, VC = Variable cost per unit





Book Keeping:

An art of recording business transaction is known as keeping .

Book – Record

Keeping – Maintaining

So book keeping means recording a book of day to day business transaction in proper manner.

Double Entry System Of Book Keeping

Almost all the business organization maintains double entry system of book keeping.

Under this type of book keeping different types of accounts are maintain and every account is divided into two sides i.e. left side is the debit side and the right side is the credit side Broadly all the accounts are coming under following three categories:

1. Personel
2. Real
3. Nominal

1. Personnel Account:

Accounts of different persons and organizations are coming under this category. E.g. XY Account, LIC Account, Bank Account etc.

Rules

Debit the Receiver
Credit the Giver

2. Real Account:

This type of account includes the accounts which are visible and tangible. E.g. Machinery Account, Material Account, Cash Account etc.

Rules

Debit what assets comes in
Credit what assets goes out

Ex. On 02.01.2020 goods worth Rs.2000 was purchased in cash from Mr.Shyam Entry in Purchaser's book:

S L	DATE	PARTICULARS	DEBIT (Rs.)	CREDIT (Rs.)
1	02.01.2020	Purchase A/c	2000	
		Cash		2000
			2000	2000

In Mr.Shyam's Book

S L	DATE	PARTICULARS	DEBIT (Rs.)	CREDIT (Rs.)
1	02.01.2020	Purchase A/c		2000
		Cash	2000	
			2000	2000

3. Nominal Account:

This type of includes all expenses and losses and incomes and gains. E.g. Rent, Salary, Advertisement accounts

Rules

Debit - all expenses and losses

Credit – all incomes and gains

Ex. Paid salary of Rs.1000/- in cash for last month

S L	DATE	PARTICULARS	DEBIT (Rs.)	CREDIT (Rs.)
1	31.01.2020	Salaries	1000	
		Cash		1000
			1000	1000

Journals:

It is a book of account in which all day to day business transactions are created in chronological order. Transactions which are recorded in a journal are known as entries.

It is a book in which transactions are recorded for the first time. It is also known as book of original entry or book of primary entry.

Entries are debited or credited according to the rule of debit and credit, applicable to the specific account.

Every business transaction has minimum two accounts applying the principle of double entry book keeping. One account is debited and another is credited.

Every transaction can be recorded in a journal. This process of recording transaction in account is known as Journalizing.

Prepare necessary entries of the following transaction:

1. Sold goods to Mr.Mahesh of Rs.35000
2. Received Rs315000 from Mr.Mahesh
3. Sold goods to Mr.Mahes of 29300
4. ReceivedRs.30500from Mr Mahesh.

S L	PARTICULARS	L.F. No.	DEBIT (Rs.)	CREDIT (Rs.)
1	Mr. Mahesh		35000	
	Sales			35000
2	Cash		31500	
	Mr.Mahesh			31500
3	Mr.Mahesh		29300	
	Sales			29300
4	Cash		30500	
	Mr. Mahesh			30500
			126300	126300

COMPONENTS OF FINAL ACCOUNT

Trading A/c

From the information provided by the trial balance one can prepare trading profit and loss account.

Trading, profit and loss account is divided into two parts

1st part is called as trading account and part is called as profit and loss account

Trading account has two sides

Left side – debit side

Right side – credit side

One the debit side all expenses relating to trading/manufacturing are recorded and on the credit side all the incomes from operations are recorded.

The items recorded on the debit side are raw material consume, manufacturing wages, power and fuel and any other manufacturing expenses etc.

On the credit side the items recorded are sales, closing stock and any other incomes from sales

When the trading a/c is balanced the total of both the sides i.e. debit side and credit side may not be equal. If the total of credit side is more than the debit side the difference is a **Gross Profit** which is recorded on the debit side.

If the total of credit side is less than the debit side the difference is called **Gross Loss** which is written on the credit side.

The gross profit or gross loss of the trading A/C is transferred to the profit and loss A/c and trading A/c is the 1st stamen of the final A/c.

Profit and loss A/c

It is prepared only after the preparation of the trading and manufacturing A/c Like

the trading A/c the profit and loss A/c also has 2 sides Left side – debit side

Right side – credit side

The gross profit / gross loss of the trading A/c is transferred to the profit and loss account.

If there is a gross profit it is written on the credit side of the profit and loss A/c, where as if there is a gross loss it is written on the debit side of the profit and loss A/c.

All other expenses (except those already written on the debit side of the trading A/c) are written on the debit side and all other incomes are recorded on the credit side of the profit and loss A/c.

Items recorded in the debit side of the profit and loss A/c are gross loss, salaries, rent, advertisement, interest payable, commission etc.

Items recorded in the credit side are gross profit, interest received, commission received and any other income.

If the total of the credit side is more than the debit the difference is a net profit which is written on the debit side. On the other hand if the total debit side is more than the total of credit side the difference is a net loss.

Prepare a trading and profit and loss account and balance sheet of XYZ traders as on 31.03 from the following:

Capital	Machinery	Sales	Purchase	Sales return	Opening stock	Drawings	Wages	Carriage inward	Salaries
3600	700	8200	4000	100	1000	400	1000	50	600
General expenses	House rent	Purchase return	Sundry debtors	Cash	Carriage outward	Advertisement	Sundry creditors		
200	500	50	3000	400	200	200	500		

Trading & Profit and loss account for the year ending

Trading A/c

Dr.

Cr.

Particulars	Amount(Rs.)	Particulars	Amount(Rs.)
To Opening balance	1000	By Sales 8200 (-) sales return 100	8100
To Purchase 4000 (-) Purchase return 50	3950		
To Carriage inwards	50		
To Wages	1000		
Total	6000		
To Gross Profit	2100		
Grand total	8100		8100

Here Cr is > Dr. So Gross Profit = 8100 – 6000 = 2100

Profit and Loss A/c

Dr.		Cr.	
Particulars	Amount(Rs.)	Particulars	Amount(Rs.)
To salaries	600	By gross profit	2100
To general expenses	200		
To house rent	500		
To carriage outwards	200		
To advertisement	200		
Total	1700		
To net profit	400		
	2100		2100

Here Cr.>Dr so net profit i.e. 2100-1700 = 400 (to be entered in debit side to make both the sides equal)

Balance Sheet

A balance sheet is the statement of financial position of a business organization on a given date. It shows the financial position of a business which helps stakeholders in analysing its future prospects.

A balance sheet is a financial statement which summarizes the assets, liabilities, and shareholders' equity of a business organization at a given date . It provides a base on which rate of return can be computed and its capital structure can be evaluated. It is also known as the statement of financial position.

XYZ TRADERS AS ON 31.03

Liabilities	Amount(Rs.)	Assets	Amount(Rs.)
Capital	3600	Machinery	700
(-) drawing	400	Sundry Debtors	3000
	-----	Cash	400
	3200		
(+) net profit	400		
	3600		
Sundry Creditor	500		
	4100		4100

Petty Cash Book

Petty Cash Book is an accounting book used for recording expenses which are small and of little value, for example, **stamps, postage and handling, stationery, carriage, daily wages, etc.**

These are expenses which are incurred day after day; usually, petty expenses are large in quantity but insignificant in value. To record such expenses, a different book known as a petty cash book is maintained. It may be maintained by ordinary or by the imprest system.

Simple Petty Cash Book

This type of book is maintained just like a **cash book**. Any cash, which the petty cashier receives, will be recorded on the debit side (left) cash column of the book and any cash which he pays out will be recorded on the credit side (right) cash column of the book.

Amount Received	C.B.Folio	Date	Particulars	Voucher No.	Amount Paid

Sample Format of Analytical Petty Cash Book

Considered as the most beneficial method of recording petty cash payments. In the analytical version, a separate column is used for each commonly occurring item of expenditure such as stamps, postage & handling, stationery, wages etc.

A column for “sundries” is usually added for miscellaneous payments. **When a petty expense is recorded on the right hand side of the book, same amount is also recorded in the proper expense column.**

Receipts	Date	Voucher No.	Particulars	Total Payment	Transport	Postage	Stationery	Cartage	Sundries

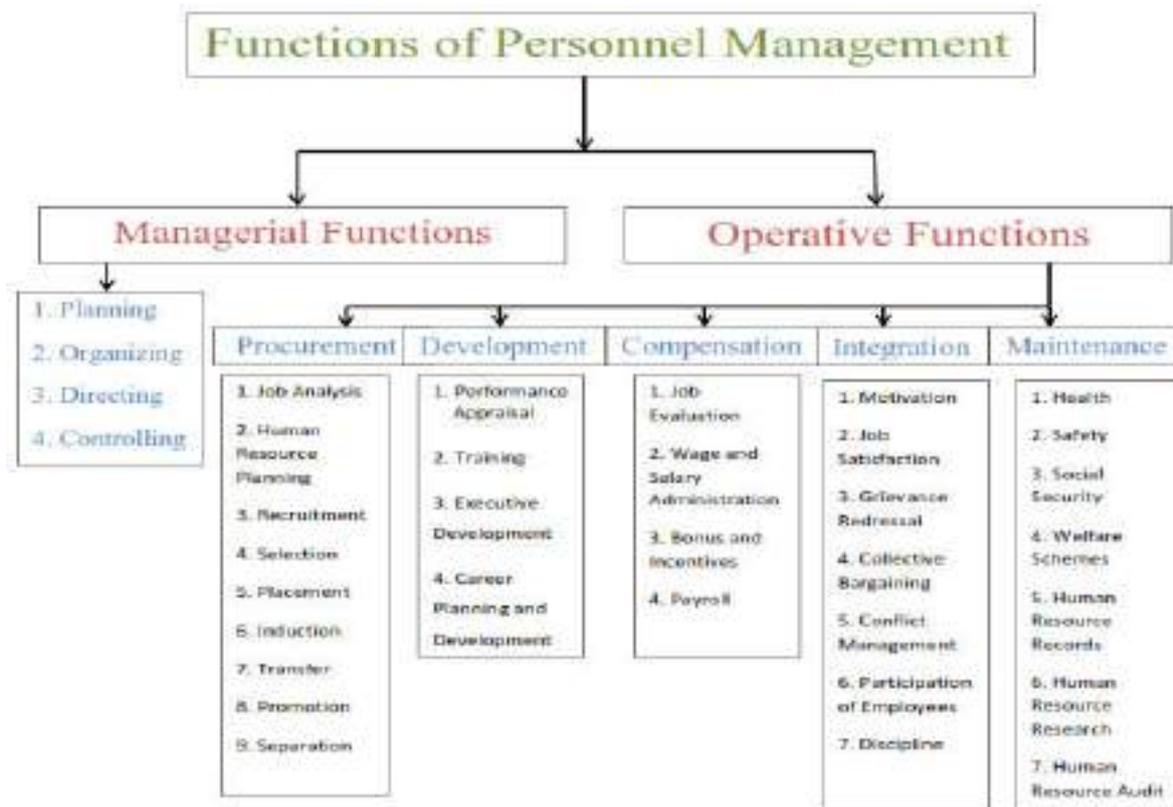
HUMAN RESOURCE MANAGEMENT

DEFINITION:-

Human resource management is defined as the art of procuring, developing & maintaining the competent work force in an organization in an effective and a efficient manner.

The role of human resource management is to eliminate the gap between employee’s exception and organizational need by adapting appropriate human resource strategy and practices.

Personnel management can be defined as obtaining, using and maintaining a satisfied workforce.



Functions of Personnel Management

The functions of personnel management are very wide. An agreement over them is rare. Broadly, the personnel functions can be divided into two parts — Managerial functions and Operative functions.

The functions of the personnel manager are very comprehensive and varied and are determined and influenced by such factors as the size, nature and location of the organization, its short-term and long-term objectives, nature of industry and product, market conditions, degree of competitiveness among rivals, economic, cultural, political and legal environment, the structure of the administrative officers, the mental make-up of the personnel managers and overall organizational philosophy of business.

1. Managerial Function:

These functions are explained below in detail:

(a) Planning – Planning is the main function of management. In the context of personnel management, it is concerned with manpower planning, studying labour turnover rate, forecasting the future requirement of personnel and planning for selection and training procedures, etc.

(b) Organising – organising involves the establishment of inter-relationships within organisation. It provides a structure for the company by identifying the various sub-groups created by individuals in managerial jobs as well as operative jobs.

(c) Directing – Personnel management is directly concerned with direction function also. It includes issuing instructions to the workers, developing communication network, interpreting various industrial laws and integrating workers.

(d) Controlling – Personnel department helps in controlling also. It provides basic data for establishing standards, making job analysis and performance appraisal, etc. These all techniques assist in effective control of the quality, time and efforts of workers.

2. Operative Functions:

These are services or routine functions of personnel management.

They are as under:

(a) Procurement of Personnel:

The first operative function of personnel management is concerned with the obtaining of the proper kind and number of personnel necessary to accomplish organisational goals. It deals specifically with such subjects as the determination of manpower requirements, their recruitment, selection, placement and orientation, etc.

(b) Development of Personnel:

After personnel have been obtained, they must, to some degree, be developed before going to work. Development has to do with the increase of skill through training. Different training methods are used in this process in order to develop the employees. Framing a sound promotion policy determination of the basis of promotion and making performance appraisal are the basis of personnel development functions.

(c) Compensation to Personnel:

Compensation means, determination of adequate and equitable remuneration of personnel for their contribution to organisational objectives. It is one of the most difficult and important functions of the personnel management to determine the monetary compensation for various jobs.

For choosing a suitable compensation policy a number of decisions are taken into the function, i.e., job evaluation, remuneration policy, incentive and premium plans, bonus policy and co-partnership, etc. In addition to this, it also assists the organisation for adopting the suitable wage and salary policy and payment of wages and salaries at right time.

(d) Maintaining Good Industrial Relations:

It is one of the most essential functions of the personnel manager to create the harmonious relations between management and labour. It covers a wide field and is intended to reduce strikes, promote industrial peace, provide fair deal to workers and establish industrial democracy. If the personnel manager is unable to make harmonious relation between the two, it will be very harmful to the organisation.

The industrial unrest will take place and millions of man-days will be lost. The moral and physical condition of the employee will suffer if labour management relations are not good. It is the duty of personnel manager to make harmonious relation with the help of efficient communication system and co-partnership.

(e) Record-Keeping:

Record-keeping is also an important function of personnel manager. In this system, personnel manager collects and maintains information, which is concerned with the staff

of the organisation. Recording is essential for every organisation because it assist the management in decision making, e.g., for promotions.

(f) Personnel Planning and Evaluation:

Under this system different types of activities are evaluated such as – evaluation of performance, personnel policy of an organisation and its practices, personnel audit, moral survey and performance appraisal, etc.

(g) Personnel Research and Audit:

It is also an important function of personnel management. This function is concerned with the research in newer motivational techniques and auditing its effect on the workers of the organisation, etc. Research is helpful in getting the information relating to employees to deal with the issues arising time-to-time. It contributes in taking decision timely. Further the audit is to be carried out to see whether the work is done as per personnel policies or not if there is any irregularity then it can be corrected.

(h) Discipline and Grievance Handling:

It is the function of personnel management to maintain the discipline in the organisation. Discipline is very necessary for smooth working otherwise there would be irregularity in all activities. At workplace there are chances of taking place of differences in thinking, ideas, methods of working, etc. These may lead to grievances if not listened timely. It is the function of personnel management to deal with it in time and properly to avoid problems.

Manpower Planning

Manpower planning is the process of estimating the optimum number of people required for completing a project, task or a goal within time. Manpower planning includes parameters like number of personnel, different types of skills, time period etc. It is a never ending continuous process to make sure that the business has the optimized resources available when required taking into consideration the upcoming future projects and also the replacement of the outgoing employees. It is also called as Human Resource Planning.

Manpower planning also includes the details like how and when will new employees be acquired. This whole process is done keeping in view the goals of the organization, the future predictions for business and changing technology trends. This helps the organization be prepared for the future with the correct manpower at their disposal for business prosperity.

Manpower Planning Process

HR department of every company has to constantly keep an eye on the human resources that the company has. With every possible event like change industry dynamics, increase in business requirements, skills required for a particular technology etc, the need for having better resources increases. The process and steps for having manpower planning are as below:

1. Understanding the existing workforce: The HR department has to thoroughly understand the manpower available with the company. They should examine the background, skill set, qualification, location etc of the entire work force so that they have a good idea regarding the pool of talent which the company has.

2. Forecasting for the future: With constant changes in business requirements, companies must understand the future trend and which type of employees would be best suited for their organization. Hence, companies must examine, evaluate and forecast the type of employee workforce they want in the future years

3. Recruitment and selection: Depending upon the business requirements, manpower planning leads to a much more well thought out recruitment and selection pattern. This totally depends upon the forecasts made and the business requirements. Hence, candidates with better qualification, skill set, experience etc are shortlisted as employees to best suit the future needs.

4. Training the employees: Employees who are a part of the organization are trained to have the best skills, knowledge and understanding about the current job as well as the future requirements.

All these above mentioned manpower planning steps help organizations become better prepared to adapt to new technology, future industry developments and even to face off with competitors.

Importance of Manpower Planning

Manpower planning is an essential requirement for any business. It helps the company to be prepared well in advance for the type of employees they would be requiring in their organization in the future. With constantly changing business requirements, technological advancements etc the skills and knowledge of employees tend to become obsolete over a period of time. Also, if a business is growing, then the workforce needs to be expanded if the company wants to have its business at different locations, different business domains etc. If a company fails to prepare before hand, it can create issues in the future and can collapse the business model for a company. Hence, timely preparation of manpower planning would always help a business grow.

RECRUITMENT /SOURCES OF MANPOWER IN AN ORGANIZATION:-

Recruitment is the process of searching for prospective employee & simulating them to apply for the job in the organization.

Before an organization activity begins recruiting applicants, it should consider the most likely source of the type of employee it needs. Some companies they to develop new sources while most only they to tackle the existing sources they have-these sources, accordingly, may be termed as;

SOURCES OF RECRUITMENTS:-

1. Finding out where suitable candidates are available and informing them about the openings in the organization is the most important aspects of the recruitment process.

The candidates may be available inside as well as outside the organization.

Recruitment source can be described as :-

Internal Source

External Source

1. Internal Source:-

Internal source is one of the important source of recruitment because the employees already working in the organization may be suitable for higher jobs than those recruit from outside.

Transfer:-

Transfer involves shifting of persons from present job to other similar jobs. This does not involve any change in rank, responsibility & prestige.

Promotion:-

Promotion refers to shifting of person to position carry better prestige, higher responsibilities & more salary. A person going to get higher position with vacant his present position. Promotion, motivates employees to improve their performance so that they get promotion to higher position.

Present Employees:-

Present employees of an organization may be informed about likely vacant positions. The employees recommend their relation or persons intimately known to them. Management going to select prospective candidates among them. The existing employees take full responsibility for those recommend by them, & try to ensure their proper behaviour & performance requirement of the job and that position.

2. External Source:-

Every organization has to use external source for recruitment to higher positions when existing employees are not suitable or more persons are need and expand are under taken in the organization.

Advertisement:-

Advertisement is the best method of recruiting person for higher & experienced. The advertisement are given in the local or national news paper or professional journals. The candidate involve themselves against

the requirement of job before sending their application, the management also gets a wide range of candidates for selection.

Employment Exchange:-

Unemployed got themselves registered with this exchanged the vacancy may be notified with this exchanged the vacancy may be notified with exchanged supplies a list of candidates fulfilling the required qualification.

Educational Institutions :-

Certain jobs in the industry requires certain amount of educational & technical qualification. The organization maintain a close contact with universities & technical institutes. The students are selected during the course of their studies & recruit in their junior level executive & management trainees.

Professional Organizations:-

It maintain complete bio-data of their members & supply it to the companies under demand. This organization acts as an exchange between members and recruiting firms can clarify & clear doubts about the person they want to recruit.

Unsolicited Applicant:-

Person in search of employment may contact employees through telephone or by post, or in person. These records of an unsolicited applicant are maintained by personal department. When jobs suitable for these person are available , these considered for employment.

Selection :-

Selection is the process of picking individual who have relevant qualification to fill jobs in an organization.

There are 8 steps in the selection process :-

- 1) Reception
- 2) Screening
- 3) Application Bank
- 4) Selection Test
- 5) Selection Interview
- 6) Medical Examination
- 7) Reference Check
- 8) Hiring Decision

1. **Reception** :-

In order to attract people with talent skills & experience a company has to favourable impression on the applicants right from the stage of reception.

2. **Screening**:-

A preliminary interview is generally planned by large organizations to cut the cost of selection by allowing only eligible candidates to go through the further stages in selection.

3. **Application Bank:-**

Application bank is one of the most common method used to collect information on various aspects of the applicants such as academic , social work related background & reference.It is a brief history sheet of an employees background.

4. **Selection Test:-**

A test is a standardize objective measure of a person behaviour, performance on attitude. Some of the common used method are intelligence test (these are mental ability test) aptitude test (It measures individual potential to learn certain skills).Graphologytest etc.

5. **Selection Interview:-**

Interview is the oral examination of candidates for employment. In this interviewer tries to obtain & synthesize information about the abilities of interviewer &the requirements of the job. There are different types of interview are there:-1)Non-directive Interview 2)Directive or Structured Interview 3)Stress Interview 4)Panel Interview

6. **Medical Examination:-**

Certain jobs required physical quantities like clear vision , aquate / acute hearing , high stamina , clear tone of voice etc.Here , the examiner reveals whether or not a candidate possesses these qualities.

7. **Reference Check:-**

Once the interview & medical examination of the candidates is over , the personal department will engaged in checking references which candidate have given in their application forms.

The two or three reference may be from individuals who are familiar with the candidates academic achievements or applicants previous employer is given.

8. **Hiring Decision:-**

They will decide whether they will assign the candidate or not & the salary structure.

Some of the commonly used employment tests may be stated thus:

1. ❖ **Intelligence tests:** These are mental ability tests.
2. ❖ **Aptitude tests:** It measure individual's potential to learn certain skills - clerical, mechanical, mathematical.
3. ❖ **Achievement tests:** These are designed to measure what the applicant can do on the job. Currently the testee actually knows what he or she claims to know.
4. ❖ **Personality tests:** These types of tests are conducted to judge different types of personality of different individuals.
- ❖ **Achievement tests:** These are designed to measure what the applicant can do on the job. Currently whether the testee actually knows what he or she claims to know.
- ❖ **Simulation tests:** Simulation exercise is a test which duplicates many of the activities and problems an employee faces while at work.
- ❖ **Assessment centre:** An assessment centre is an extended work sample. It uses procedures that incorporate group and individual exercise.
- ❖ **Graphology tests:** Graphology involves using a trained evaluator to examine the lines, loops, hooks, strokes, curves and flourishes in a person's handwriting to assess the person's personality and emotional makeup.
- ❖ **Polygraph (lie detector) tests:** The polygraph (the lie detector) consists of a rubber tube around the chest, a cuff around the arm and sensors attached to the fingers that record the physiological changes in the examinee as the examiner puts questions that call for an answer of yes/no records physical changes in the body as the test subject answers a series of questions.
- ❖ **Integrity tests:** These are designed to measure employee's honesty to predict those who are more likely to steal from an employer or otherwise act in a manner unacceptable to the organization.

TRAINING :-

Defination :-

Training is the act of increasing the knowledge & skills of an exchange for performing a particular job.

Training enables an employee to do his present job more efficiently & prepare himself for a higher level job.

Methods Of Training & Development:-

There are two types of training method :-

On The Job Training

Off The Job Training

1) Job Instruction Training:-

On the Job Training	Off the Job Training
Job instruction Training	Vestibule Training
Coaching	Role Playing
Mentoring	Lecture Method
Job Rotation	Conference / Discussion Approach
Apprenticeship	Programmed Instruction
Committee Assignments	

On the Job Training:-

It is 4 step instructional process involving preparation , presentation , performance tryout & follow up:-

It is used primarily to teach workers how to do their current jobs. A trainer, supervisor or co-worker acts as the coach.

2) Coaching :-

It involves a continuous process of learning by doing the job.

3) Mentoring:-

Mentoring is a relationship in which a senior manager in an organization assumes the responsibility for grooming a junior person.

Good mentors listen, understand , coach , build self-confidence teach by example.

4) Job Rotation:-

It involves the movement of trainee from one job to another. This helps to have a general understanding of how the organization functions & understanding of different functional areas related to organization.

5) Apprentice Training:-

Apprentices are trainees who spend a prescribed amount of time worked with an experienced guide, coach or trainer.

6) Committee Assignments :-

In this method, trainees are used to solve an actual organizational problem. The trainee have to work together and after solution to the problem.

Off the Job Training Method:-

Under this method of training the trainee is separated from the job situation & his attention is focused upon learning the material related to his future job performance.

1) Vestibule Training:-

In this method actual work conditions are simulated in a class room

Material files & equipment those that are used in actual job performance are also used in training. This type of training used for clerical & semi-killed jobs.

2) Role Playing:-

It is defined as a method of human interaction that involves realistic behaviour imaginary situation. This method of training involves action doing & practices. The participants play the role of certain characteristic.

3) Lecture Method:-

The lecture method is a traditional & direct method of instruction. The instructor organizes the material & gives it to a group of trainees in the form of task.

4) Conference /Discussion Approach:-

In this method the trainer delivers a lecture & involves the trainee in a discussion so that his doubts about the job get clarified.

5) Programmed Instruction:-

This method has become popular in recent years. The subject matter to be learned is presented in a series of carefully planned sequential units

CHAPTER 7

WORK CULTURE, TQM AND SAFETY

7.1 HUMAN RELATIONSHIPS AND PERFORMANCE IN ORGANIZATION

Human relations can be defined as the cordial atmosphere in an organization in which people practice the art of living in such a way that they communicate, act, interact and transact in a cordial manner, recognizing each other's needs, views, values and temperaments so that every interaction and transaction taking place in an organization would have concern for each other's interests and feelings, leading to better motivation and morale of people at all levels in the organization.

The main characteristics of human relations are as follows:

1. Human relations are an important process through which an individual's attitude and work are integrated with a view to achieving a willing cooperation on their part in the achievement of the interests of an organization as a whole.
2. Members of the organization contribute their bit to get individual and group satisfaction.
3. The satisfaction desired by employees may be economic, social and psychological.
4. Human relations in an organization are a process of improving motivation by proper working condition, training programmes, timely payment of wages and incentives etc.
5. Human relations are an integrated approach derived from different disciplines such as psychology, sociology, economics and management
6. Human relations are all pervasive; they are required in business and non-business organizations, small and large organizations, and at all levels.
7. Human relations are a continuous activity.
8. Human relations are a goal-oriented and focused approach.

Factors Affecting Human Relations:

- (i) Individual,
- (ii) Work group,
- (iii) leader, and
- (iv) work environment.

Individual,

The individual is an important part of the organization and each individual is unique. While motivating the employees, management should give due consideration to their economic, social and psychological needs.

Work Group:

The work group is the centre of focus of human relations approach. It has an important role in determining the attitudes and performance of individual workers.

Work Environment:

It is important to create a positive work environment where organizational goals are achieved through satisfaction of employees. In general, when employees' needs are satisfied, the work environment is termed positive.

Leader:

The leader must ensure complete and effective utilization of all organizational resources to achieve organizational goals. They must be able to adjust to various personalities and situations.

7.2 RELATIONSHIPS WITH PEERS TO PEER SUPERVISOR AND SUBORDINATES

Other than your subordinates and your boss (direct manager), having an effective and good working relationship with your peers is also crucial for you to succeed in your managerial role.

METHOD FOR MAKING RELATIONSHIP:

1. Search for common goals

Proactively reach out for a common denominator. Think of how you can add value. Extend a hand to support your peers in areas that you can influence.

If excellent customer service is critical to you and your peers, initiate a discussion with them on the best way to achieve it. Find out the relevant variables that will impact customer service. For instance, one of the variables is timely delivery, in full, of your products within 30 days from the date of an order.

You should proactively seek to understand the entire delivery process of such product and determine what you control directly as well as what you can influence indirectly.

2. Establish trust and respect

Create an environment of trust and respect with your peers. The effective way to establish that is to consistently demonstrate these behaviors:

- **Do not put your peers on the spot:** If there are any issues or problems related to your peers work systems, make sure that you engage and discuss with them directly first. The last thing that you would want to happen is for such issues to be brought up in the management or staff meeting or email correspondence without their prior knowledge.
- **Be a true professional:** Avoid talking about your peers behind their backs or being involved in office gossips.
- **Keep your commitments:** If you say you want to do something within a certain time, do it and deliver on time.
- **Resolve conflicts with urgency:** Work on addressing conflicts with your peers at the earliest possible time. Unresolved conflicts will hamper progress in relationship building, team building as well as ongoing projects.
- **Make yourself available:** Adopt an open door policy. Be available to listen, discuss, debate and strategize together with your peers. Occasionally, make time to have lunch together.

3. Pursue collaboration

Always ask yourself, “How best can I work jointly together with my peers for the benefit of my organization?”

You can consider the following approaches to collaborate with your peers:

- **Seek clarity on shared goals, roles and responsibilities:** You must start on the right path. Engage with your peers and discuss about projects that you mutually work together. Be clear about the project goals. Talk through details on who is supposed to do what and when. Capture your mutual agreements in terms of shared goals, roles and responsibilities to ease the process of monitoring progress later.
- **Negotiate fairly:** When negotiating for initiatives, budgets and resources, always remember that your organization needs come first, not wants. Take the high road. Focus on the mutual purpose. Identify respective needs. In the event that you end up with unfavourable outcomes, concede without being personal.
- **Be responsibly responsive:** Respond to emails and voicemails in a timely manner. Treat your peers’ issues and concerns just as much priority as yours. Avoid copying a huge list of people on a long email chain with an intention of exposing fault or winning mindshare from others.

4. No blame game

“When a man points a finger at someone else, he should remember that four of his fingers are pointing at himself

Treat everything as a learning experience. Every single day presents a new opportunity for you to learn to be a better person. The best way to learn the most is by focusing on these three aspects:

- Take stock of what really happened
- Capture what's working and what's not
- Agree on what should be done differently moving forward

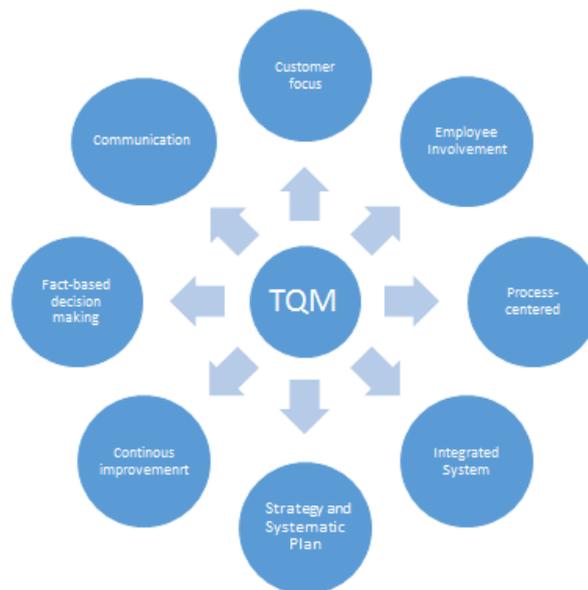
Make a choice. Choose not to label yourself as the 'victim'. Blaming others for everything that goes wrong around you will give them your power. You will end up at the losing end – feeling sorry for yourself, continuing to leech on the problem and unable to let go.

5. Make time to bond with each other

This is so obvious that many tend to take it for granted.

It pays to get to know your peers well. Take a genuine interest in their lives. Spend time with them in a relaxed setting outside of the office such as going to lunch/dinner, playing golf, doing common hobbies etc.

7.3 TQM CONCEPT: QUALITY POLICY,QUALITY MANAGEMENT,QUALITY SYSTEM 3 TQM CONCEPT: QUALITY POLICY



1. Customer Focus

The purpose of quality management is to provide [customer satisfaction](#). With customer focus as an approach, the organization provides services or products meeting the customer expectations. From having several quality checks to friendly support centers, the ever-improving quality can be achieved. Organizations that are more customer focused are the one with larger customer share in the market.

2. Employee Involvement

As Total Quality Management Notes requires the involvement of every employee, it's the responsibility of the organization to foster the employee-friendly work culture. The work done by employees should be appreciated and their opinions and feedback are taken into consideration. A workplace that [encourages employees](#) to give their best achieves continuous improvement in quality.

3. Process-Centered

This process needs to be well defined and need to be monitored for any deviation during the execution. Best practices can be adopted in this approach.

4. Integrated System

Although the processes are divided vertically structured departments, it is horizontally that they interconnect cross-functionally. For example, manufacturing depends on the inventory of the procurement. These horizontal processes need to be modeled properly. Adopting standards ISO 9000 or any quality standard suitable to company requirements helps in integrating the systems.

5. A Strategic and Systematic Plan

A strategic and systematic approach is needed to achieve the organization's goals and visions. Incorporating quality as part of the strategic plan as the core

[element is based in TQM.](#)

6. Continuous Improvement

One of the popular approaches in quality management is continuous improvement. It implies to finding creative ways to implement existing processes. This, in turn, helps in being more competitive and meeting the expectations of stakeholders.

7. Fact-Based Decision Making

The performance of an organization can be found from the data collected and analyzed for various parameters. To improve the decision, this data needs to be considered. An accurate decision can be taken if a proper fact-based decision model is created.

8. Communication

This is the building block of a successful business. Communication plan and training employees on communication etiquettes goes a long way in fostering healthy work culture. Communication involves internal amongst the employees and external with the stakeholders. Effective communication makes opinions and feedbacks easier.

QUALITY POLICY-

Top Management is responsible for establishing, reviewing and maintaining the ISO quality policy and quality objectives. The quality policy should build on corporate objectives and values and be appropriate to the purpose and context of the organization. The policy should demonstrate a commitment to continual improvement. The quality policy must be communicated, understood and applied throughout the organization.

The quality policy is often known by other names such as:

- Mission statement
- Vision
- Strategic concept
- Charter
- Statement of principles

QUALITY MANAGEMENT SYSTEM-

A well written quality policy statement will ensure your employees understand their job affects product quality and quality control, and therefore the success of the company.

Implementing a quality management system affects every aspect of an organization's performance.

Benefits of a documented quality management system include:

- Meeting the customer's requirements, which helps to instill confidence in the organization, in turn leading to more customers, more sales, and more repeat business

- Meeting the organization's requirements, which ensures compliance with regulations and provision of products and services in the most cost- and resource-efficient manner, creating room for expansion, growth, and profit .These benefits offer additional advantages, including:
- Defining, improving, and controlling processes
- Reducing waste
- Preventing mistakes
- Lowering costs
- Facilitating and identifying training opportunities
- Engaging staff
- Setting organization-wide direction
- Communicating a readiness to produce consistent results

QUALITY SYSTEM

: A quality system is formally described as 'the organizational structure, responsibilities, procedures, processes and resources for implementing the management of quality'. Such standards lay down generic elements of good business practice that the enterprise must implement and follow in order to gain certification.

Types of Quality Management System Standards

- All industries: ISO 9001.
- Automotive: IATF 16949.
- Medical device: ISO 13485.
- Food: ISO 22000.
- Services: ISO 2000000.
- IT: ISO 27001.
- Aerospace: AS 9100D.

CHAPTER 9

SMART TECHNOLOGY

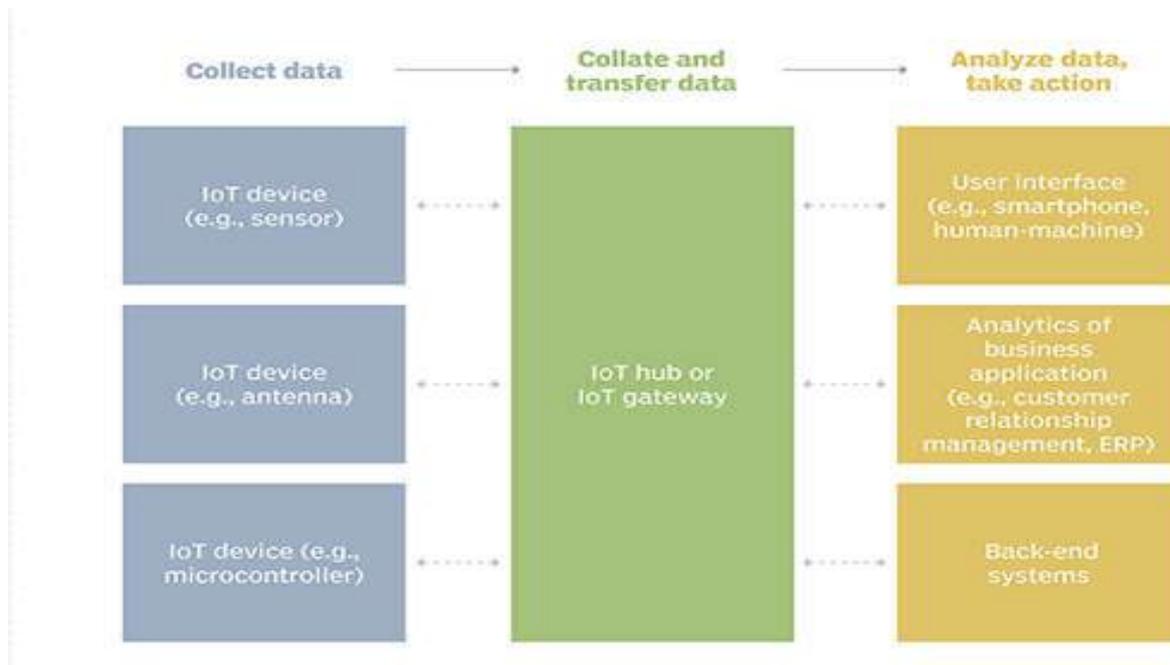
CONCEPT OF IOT

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

A *thing* in the internet of things can be a person with a heart monitor implant, a farm animal with a biochip transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low or any other natural or man-made object that can be assigned an Internet Protocol (IP) address and is able to transfer data over a network.

HOW DOES IOT WORK?

1. An IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors and communication hardware, to collect, send and act on data they acquire from their environments.
2. IoT devices share the sensor data they collect by connecting to an IoT gateway or other device where data is either sent to the cloud to be analyzed .
3. Sometimes, these devices communicate with other related devices and act on the information they get from one another.
4. The devices do most of the work without human intervention, although people can interact with the devices -- for instance, to set them up, give them instructions or access the data.
5. The connectivity, networking and communication protocols used with these web-enabled devices largely depend on the specific IoT applications deployed.
6. IoT can also make use of artificial intelligence (AI) and machine learning to aid in making data collecting processes easier and more dynamic.



COMPONENT OF IOT

There are 4 fundamental components of IoT system, which tells us how IoT works.

1.Sensors/Devices

First, sensors or devices help in collecting very minute data from the surrounding environment. All of this collected data can have various degrees of complexities ranging from a simple temperature monitoring sensor or a complex full video feed.

A device can have multiple sensors that can bundle together to do more than just sense things. For example, our phone is a device that has multiple sensors such as GPS, accelerometer, camera but our phone does not simply sense things.

2. Connectivity

That collected data is sent to a cloud infrastructure but it needs a medium for transport. The sensors can be connected to the cloud through various mediums of communication and transports such as cellular networks, satellite networks, Wi-Fi, Bluetooth, wide-area networks (WAN), low power wide area network and many more.

3,Data Processing

Once the data is collected and it gets to the cloud, the software performs processing on the acquired data.

This can range from something very simple, such as checking that the temperature reading on devices such as AC or heaters is within an acceptable range. It can sometimes also be very complex, such as identifying objects using computer vision on video.

4.User Interface

The information made available to the end-user in some way. This can be achieved by triggering alarms on their phones or notifying through texts or emails.

Also, a user sometimes might also have an interface through which they can actively check in on their IOT system. For example, a user has a camera installed in his house, he might want to check the video recordings and all the feeds through a web server.

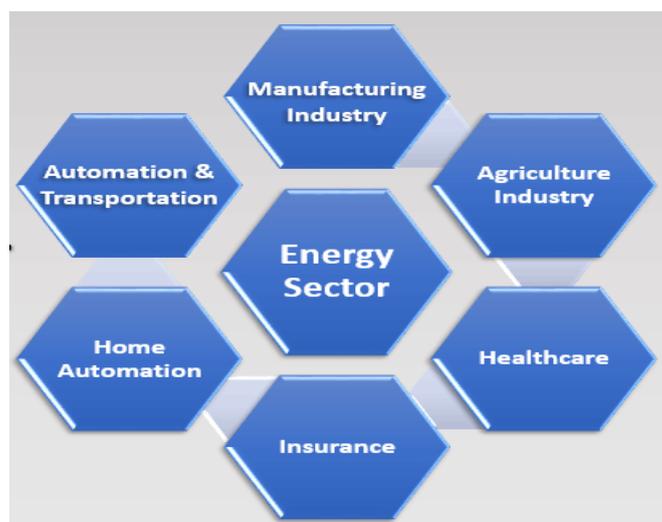
Characteristics of iot :

1. **Dynamic & Self Adapting:** IoT devices and systems may have the capability to dynamically adapt with the changing contexts and take actions based on their operating conditions, users context or sensed environment.

Eg: the surveillance system is adapting itself based on context and changing conditions.

2. **Self-Configuring:** allowing a large number of devices to work together to provide certain functionality.
3. **Inter Operable Communication Protocols:** support a number of interoperable communication protocols and can communicate with other devices and also with infrastructure.
4. **Unique Identity:** Each IoT device has a unique identity and a unique identifier(IP address).
5. **Integrated into Information Network:** that allow them to communicate and exchange data with other devices and systems

Application of iot



1) Home Automation:

- a) **Smart Lighting:** helps in saving energy by adapting the lighting to the ambient conditions and switching on/off or dimming the light when needed.

b) Smart Appliances: make the management easier and also provide status information to the users remotely.

c) Intrusion Detection: use security cameras and sensors(PIR sensors and door sensors) to detect intrusion and raise alerts. Alerts can be in the form of SMS or email sent to the user.

d) Smoke/Gas Detectors: Smoke detectors are installed in homes and buildings to detect smoke that is typically an early sign of fire. Alerts raised by smoke detectors can be in the form of signals to a fire alarm system. Gas detectors can detect the presence of harmful gases such as CO, LPGetc.,

2) Cities:

a) Smart Parking: make the search for parking space easier and convenient for drivers. Smart parking are powered by IoT systems that detect the no. of empty parking slots and send information over internet to smart application back ends.

b) Smart Lighting: for roads, parks and buildings can help in saving energy.

c) Smart Roads: Equipped with sensors can provide information on driving condition, travel time estimating and alert in case of poor driving conditions, traffic condition and accidents.

d) Structural Health Monitoring: uses a network of sensors to monitor the vibration levels in the structures such as bridges and buildings.

e) Surveillance: The video feeds from surveillance cameras can be aggregated in cloud based scalable storage solution.

f) Emergency Response: IoT systems for fire detection, gas and water leakage detection can help in generating alerts and minimizing their effects on the critical infrastructures.

3) Environment:

a) Weather Monitoring: Systems collect data from a no. of sensors attached and send the data to cloud based applications and storage back ends. The data collected in cloud can then be analyzed and visualized by cloud based applications.

b) Air Pollution Monitoring: System can monitor emission of harmful gases(CO₂, CO, NO, NO₂ etc.) by factories and automobiles using gaseous and meteorological sensors. The collected data can be analyzed to make informed decisions on pollutions control approaches.

c) Noise Pollution Monitoring: Due to growing urban development, noise levels in cities have increased and even become alarmingly high in some cities. IoT based noise pollution monitoring systems use a no. of noise monitoring systems that are deployed at different places in a city. The data on noise levels from the station is collected on servers or in the cloud. The collected data is then aggregated to generate noise maps.

d) Forest Fire Detection: Forest fire can cause damage to natural resources, property and human life. Early detection of forest fire can help in minimizing damage.

e) River Flood Detection: River floods can cause damage to natural and human resources and human life. Early warnings of floods can be given by monitoring the water level and flow rate. IoT based river flood monitoring system uses a no. of sensor nodes that monitor the water level and flow rate sensors. **4) Energy:**

a) Smart Grids: is a data communication network integrated with the electrical grids that collects and analyze data captured in near-real-time about power transmission, distribution and consumption. Smart grid technology provides predictive information and recommendations to utilities, their suppliers, and their customers on how best to manage power. By using IoT based sensing and measurement technologies, the health of equipment and integrity of the grid can be evaluated.

b) Renewable Energy Systems: IoT based systems integrated with the transformers at the point of interconnection measure the electrical variables and how much power is fed into the grid. For wind energy systems, closed-loop controls can be used to regulate the voltage at point of interconnection which coordinate wind turbine outputs and provides power support.

c) Prognostics: In systems such as power grids, real-time information is collected using specialized electrical sensors called Phasor Measurement Units(PMUs) at the substations. The information received from PMUs must be monitored in real-time for estimating the state of the system and for predicting failures.

5) Retail:

- a) Inventory Management: IoT systems enable remote monitoring of inventory using data collected by RFID readers.
- b) Smart Payments: Solutions such as contact-less payments powered by technologies such as Near Field Communication(NFC) and Bluetooth.
- c) Smart Vending Machines: Sensors in a smart vending machines monitors its operations and send the data to cloud which can be used for predictive maintenance.

6) Logistics:

- a) Route generation & scheduling: IoT based system backed by cloud can provide first response to the route generation queries and can be scaled upto serve a large transportation network.
- b) Fleet Tracking: Use GPS to track locations of vehicles in real-time.
- c) Shipment Monitoring: IoT based shipment monitoring systems use sensors such as temp, humidity, to monitor the conditions and send data to cloud, where it can be analyzed to detect food spoilage.
- d) Remote Vehicle Diagnostics: Systems use on-board IoT devices for collecting data on Vehicle operations(speed, RPMetc.,)and status of various vehicle subsystems.

7) Agriculture:

- a) Smart Irrigation: to determine moisture amount in soil.
- b) Green House Control: to improve productivity.

8) Industry: a) Machine diagnosis and prognosis

- b) Indoor Air Quality Monitoring

9) Health and Life Style:

- a) Health & Fitness Monitoring
- b) Wearable Electronics