UNIT -1

Meaning of management

Traditional definition

Traditionally management is defined **as an art of getting things done through others.** The person who directs the efforts of others is known as “**Manager”.**  He accomplishes the goals of the organisation through and with the help of operative employees.

*According to* ***Mary Parker Follett, “Management is the art of getting things done through people.”***

*According to* ***C. S. George,” Management consists of getting things done through others. A manager is one who accomplishes organisational objectives by directing the efforts of others.”***

It has been criticized on the following grounds:

1. It does not give the functions which a manager has to perform to get results from others.
2. It gives the impression of manipulative character of the practice of management.
3. The employees are merely treated as means of getting results.
4. The needs of the workers have been ignored. The workers are supposed work like machines.

Modern Definition

Modern management writers consider management much more than getting things done through others. Management involves creating a conducive environment in the organization whereby individuals are motivated to work efficiently for the achievement of organizational objectives.

*According to* ***Harold Koontz and Cyril O’Donnell***, “ ***Management is the creation and maintenance of internal environment in an enterprise where individuals, working in groups, can perform efficiently and Peffectively towards the attainment of group goals.”***

*Management is the process of getting things done with the aim of achieving organisational objectives efficiently and effectively.*

The basic elements on the basis of given definition are given below:

1. **Process-** The term process in the definition means the primary function or activities that management performs to get things done. These functions are Planning, Organising, Staffing, Directing and Controlling.
2. **Effectiveness-** Being effective or doing work effectively means finishing the given task. Effectiveness in management is concerned with the doing right things completing activities and achieving goals. In other words , it is concerned with the end result.
3. **Efficiency-** It means optimum utilisation of resources in performing the given task. It signifies the relationship between inputs and outputs. Efficiency would be greater if less inputs are used to produce the required amount of goods or if more goods are produced with the given input.
4. **Organisational objectives**- The modern concept of management insits that all the activities of managers must be directed towards the achievement of organisational goals.

Features of Management

1. **Management is goal oriented:**

Management always aims at achieving the organisational objectives. The functions and activities of manager lead to the achievement of organisational objectives; for example, if the objective of a company is to sell 1000 computers then manager will plan the course of action, motivate all the employees and organise all the resources keeping in mind the main target of selling 1000 computers.

#### Management is a continuous process:

Management is a continuous or never ending function. All the functions of management are performed continuously, for example planning, organising, staffing, directing and controlling are performed by all the managers all the time. Sometimes, they are doing planning, then staffing or organising etc. Managers perform ongoing series of functions continuously in the organisation.

#### Management is a group activity:

Management always refers to a group of people involved in managerial activities. The management functions cannot be performed in isolation. Each individual performs his/her role at his/her status and department, and then only management function can be executed. Even the result of management affects every individual and every department of the organisation so it always refers to a group effort and not the individual effort of one person.

#### Balancing effectiveness and efficiency:

Effectiveness means achieving targets and objectives on time. Efficiency refers to optimum or best utilisation of resources. Managements always try to balance both and get the work done successfully. Only effectiveness and only efficiency is not enough for an organisation: a balance must be created in both.

1. **Management is coordinative force:**

The essence of management is the coordination or integration of human and other resources for effective performance. All these resources are properly organised and divided into various work-units for the purpose of greater coordination.

1. **Management accomplishes results through the cooperation of others:**

The managers can not do everything themselves. They must have the necessary ability and skills to get work accomplished through the efforts of others. They must motivate the subordinates for the accomplishment of the task assigned to them. It is through motivation that managers can influence the behaviour of subordinates.

Functions of Management

A brief overview of managerial functions is given below:

1. **Planning:** To take decisions and to prepare plans, policies, procedures, rules etc.
2. **Organising:** To divide work among individuals and to create authority and responsibility.
3. **Staffing:** To employ people to various positions in the organisation and to provide them necessary training.
4. **Directing:** To give instruction to the subordinates, to motivate them and to provide them leadership.
5. **Controlling:** To compare actual performance with the predetermined standards and to take corrective actions.

Nature of Management

1. **Multidisciplinary:**

Management is multidisciplinary because it includes knowledge/information from various disciplines- economics, statistics, maths, psychology, sociology, ecology, operations research, history, etc. Management integrates the ideas and concepts taken from these disciplines and presents newer concepts which can be put into practice for managing the organizations.

1. **Management as Profession:**

Management has been regarded as a profession by many while many have suggested that it has not achieved the status of a profession. Schein concluded that by some criteria management is indeed a profession, but by other criteria it is not. Today we can see many signs that management is working towards increased professionalism.

1. **Management is all Pervasive:**

Management is required in all types of organizations whether it is political, social, cultural or business because it helps and directs various efforts towards a definite purpose. Thus clubs, hospitals, political parties, colleges, hospitals, business firms all require management. Whenever more than one person is engaged in working for a common goal, management is necessary.

1. **Management is science as well as an art:**

Management is both an art and a science. Management combines features of both science as well as art. It is considered as a science because it has an organized body of knowledge which contains certain universal truth. It is called an art because managing requires certain skills which are personal possessions of managers. Science provides the knowledge & art deals with the application of knowledge and skills.

**Concetpt of Industrial Management**

Industrial management connotes two terms, namely “industry” and “management”. **Industry implies those economic activities which are concerned with extraction, production, conversion, processing or fabrication of products.**

Industrial activities may be classified into primary industries and secondary industries.

**Primary industries** include extractive units ( mining, farming, fishing etc.) and husbandry, dairy farming etc. and

**Secondary industries** include manufacturing (engineering, cement, sugar, textiles etc.) and construction (buildings, dams, flyovers, bridges etc.). Thus industry covers a broad spectrum of activities which need to be managed efficiently.

**Management** is the science and art of achieving the goals of enterprise by providing a conducive environment to people through planning, organising, direction, co-ordination and control of human efforts.

**Definition of Industrial Management**

**Industrial management can be considered as the management of men, material and machines in an industrial organisation.** Men, material and machines constitute the most important inputs of any production system and the need to managed efficiently to produce the desired goods and services.

Broadly speaking, **industrial management refers to the systematic management of an industrial organisation.** It includes planning and organising of various resources or factors of production like money, machines, materials, methods etc., and their effective utilisation with the help of men or human resources by providing them necessary guidance and motivation.

In short,  **Industrial management is a specialised management function which is concerned with the design of production system and planning, organising, coordinating, and controlling the resources or inputs required by the production system to produce desired goods and services.**

**Scope of Industrial Management**

Industrial management integrate various aspects of management of an industrial enterprise. In particular, it covers the following activities:

1. **Design of production system:-**

Production system is the frame work within which the conversion of inputs into outputs accurs. There are many production systems, the choice of production system will depend upon the type of product to be produced and the scale of production carried out by the firm.

1. **Production planning and control:-**

It deals with the determination and regulation of production processes.After the production system has been designed and activated ,the production manager is concerned with production planning. He establishes the exact sequence of operation of each individual items, part or assembly and lays down the schedule of its completion. Production planning is followed by the production control. Production control is process by which actual performance is compared with the predetermined standards.

1. **Control over volume of production:-**

It is the prime responsibility of industrial manager to control the quantity of goods produced. Industrial manager should avoid the situation of over production and under production. Both the situations will adversely influence the profitability of the enterprise.

1. **Inventory management:-**

It always necessary to maintain some inventory of raw-materials, work-in-progress and finished goods for the smooth functioning of enterprise. Inventory control requires the maintenance of inventory at an ideal level where the cost of carrying the inventories and the cost of not carrying the inventories is neutralised. To attain this objective, inventory control must perform the following functions:

1. Determine items to be stocked
2. Determine when and how much to stock
3. Keep suitable records
4. Weed out obsolete items
5. **Quality control:-**

Firstly, it is important to determine quality standards before the operation actually start. Quality standards should be set up for production equipment, raw material, and other inputs and also for outputs. After the goods have been produced, quality control would ensure that they are as per required quality standards.

1. **Supply chain management:-**

Industrial management is also concerned with the management of supply chain which is indispensible for unrestricted flow of raw materials into production system. The supply chain links manufacturing plants, distribution centres, people, retail outlets, transportation and information through the processes such as procurement. If the supply chains are managed properly and skilfully then the companies get the right amount of their product from their source to their point of consumption with least cost and time.

1. **Productivity improvement:-**

Productivity improvement is also the concern of industrial management. Productivity measurement through various indices and analysis of the factors that affect productivity come under the scope of industrial management. Industrial management seeks to maximise output of the available resources such as labour, capital, material etc. through their efficient utilisation.

**Application of industrial management**

Industrial management has wide spread applications in the following areas:

1. **Planning and designing product:-**

The process of planning products and services involves three basic steps: (a) generating product /service ideas; (b) selecting the ideas that seem technologically feasible; (c) producing a final design of the product or service. Although various functional head provide important input, the industrial manager has the basic role in deciding whether a product or service is actually feasible or not.

1. **Determining the volume of output or service:-**

The second decision in designing the production/operation system is how many units of product will be produced. This called capacity planning. It is a process of forecasting demand and then deciding what quantity of output will be needed to meet that demand.

1. **Size of plant:-**

In general, the size of plant to be acquired at the outset is determined by the volume of output based on the immediate sales estimate with additional capacity to accommodate the expected increase in sales in the years immediately ahead. Careful study is needed to avoid excess capacity or too large a plant.

1. **Selection of the manufacturing process and equipment:-**

Selection of process involves determination of how product or service will be produced out of many production systems.

The selection of the manufacturing process, machinery and equipment is based largely on the design specification of the product, parts to be fabricated by the firm and the volume of output to be attained.

1. **Selection of plant location:-**

Location is primarily influenced by the nature of the product manufactured. The most favourable location is one that attains the lowest unit cost in producing and distributing the product or service to the consumer.

1. **Design of plant layout:-**

Design of plant layout involves decision about how to arrange the physical facilities spatially. In other words, in layout planning, process and equipment decisions are translated into physical arrangement for production.

A good layout is one that minimises materials handling, maximises the worker and equipment efficiency and satisfies a host of other factors such as minimising the workers exposure to hazardous fumes.

1. **Job design:-**

The decision about job designing is concerned with the structure of individual jobs i.e. how the work will be done and who will do it. The mechanistic approach to job design seeks to make all jobs as efficient and simple as possible ; but jobs so designed tend to be dull. Routine and monotonous jobs usually do not provide opportunities for advancement and hence may result in low morale which may be evidenced by excessive absenteeism.

**Plant Location and Factors Affecting Plant Location**

Plant location refers to the choice of the region where men, materials, money, machinery and equipment are brought together for setting up a business or factory. A plant is a place where the cost of the product is kept to low in order to maximize gains. Identifying an ideal location is very crucial, it should always maximize the net advantage, must minimize the unit cost of production and distribution. Plant location decisions are very important because once the plant is located at a particular site then the organization has to face the pros and cons of that initial decision.

While taking plant location decision organizations need to consider various factors such as availability of men, materials, money, machinery and equipment. At the same time plant, location decisions should also focus on expanding and developing facilities, the nearness of the market, transport facilities, availability of fuel and power, availability of water and disposal of water etc. There is no exact method of analysis or assurance for the selection of an optimal location. But an extent of analysis and study can help in maximizing the probability of finding the right locations.

If an organization is placed in a potentially satisfactory location then it can fulfil the objectives smoothly in the long run, on the other hand, opt for a poor location does not give the expected results due to the non-availability of raw materials, problems from local people, problems associated with availability and disposal of water, power supply problems, etc. However following a systematic method in order to evaluate the better location can give maximum results in generating profits.

### ****Factors affecting the plant location****

Decisions regarding selecting a location need a balance of several factors. These are divided into primary factors and secondary factors; here both the factors can influence the business in the long run.

### ****Primary factors****

#### ****Availability of raw materials****

Availability of raw materials is the most important factor in plant location decisions. Usually, manufacturing units where there is the conversion of raw materials into finished goods is the main task then such organizations should be located in a place where the raw materials availability is maximum and cheap.

#### ****Nearness to the market****

Nearness of market for the finished goods not only reduces the transportation costs, but it can render quick services to the customers. If the plant is located far away from the markets then the chances of spoiling and breakage become high during transport. If the industry is nearer to the market then it can grasp the market share by offering quick services.

#### ****Availability of labor****

Another most important factor which influences the plant location decisions is the availability of labor. The combination of the adequate number of labor with suitable skills and reasonable labor wages can highly benefit the firm. However, labor-intensive firms should select the plant location which is nearer to the source of manpower.

#### ****Transport facilities****

In order to bring the raw materials to the firm or to carrying the finished goods to the market, transport facilities are very important. Depending on the size of the finished goods or raw materials a suitable transportation is necessary such as roads, water, rail, and air. Here the transportation costs highly increase the cost of production, such organizations can not complete with the rival firms. Here the point considered is transportation costs must be kept low.

#### ****Availability of fuel and power****

Unavailability of fuel and power is the major drawback in selecting a location for firms. Fuel and power are necessary for all most all the manufacturing units, so locating firms nearer to the coal beds and power industries can highly reduce the wastage of efforts, money and time due to the unavailability of fuel and power.

#### ****Availability of water****

Depending on the nature of the plant firms should give importance to the locations where water is available.

For example, power plants where use water to produce power should be located near the water bodies.

### ****Secondary factors****

#### ****Suitability of climate****

Climate is really an influencing factor for industries such as agriculture, leather, and textile, etc. For such industries extreme humid or dry conditions are not suitable for plant location. Climate can affect the labor efficiency and productivity.

#### ****Government policies****

While selecting a location for the plant, it is very important to know the local existed Government policies such as licensing policies, institutional finance, Government subsidies, Government benefits associated with establishing a unit in the urban areas or rural areas, etc.

#### ****Availability of finance****

Finance is the most important factor for the smooth running of any business; it should not be far away from the plant location. However, in the case of decisions regarding plant location, it is the secondary important factor because financial needs can be fulfilled easily if the firm is running smoothly. But it should be located nearer to the areas to get the working capital and other financial needs easily.

#### ****Competition between states****

In order to attract the investment and large scale industries various states offer subsidies, benefits, and sales tax exemptions to the new units. However, the incentives may not be big but it can help the firms during its start-up stages.

#### ****Availability of facilities****

Availability of basic facilities such as schools, hospitals, housing and recreation clubs, etc can motivate the workers to stick to the jobs. On the other hand, these facilities must be provided by the organization, but here most of the employees give preference to work in the locations where all these benefits/facilities are available outside also. So while selecting plant location, organizations must give preference to the location where it is suitable for providing other facilities also.

#### ****Disposal of waste****

Disposal of waste is a major problem particularly for industries such as chemical, sugar, and leather, etc. So that the selected plant location should have provision for the disposal of waste.

## Plant Layout

Plant layout is a plan for effective utilization of facilities for the manufacture of products; involving a most efficient and economical arrangement of machines, materials, personnel, storage space and all supporting services, within available floor space.

Plant layout refers to the physical arrangement of production facilities. It is the configuration of departments, work centres and equipment in the conversion process. It is a floor plan of the physical facilities, which are used in production.

According to Moore “Plant layout is a plan of an optimum arrangement of facilities including personnel, operating equipment, storage space, material handling equipment and all other supporting services along with the design of best structure to contain all these facilities”.

**Objectives of Plant Layout**:- The primary goal of the plant layout is to maximize the profit by arrangement of all the plant facilities to the best advantage of total manufacturing of the product. The objectives of plant layout are:

1. Streamline the flow of materials through the plant.
2. Facilitate the manufacturing process.
3. Maintain high turnover of in-process inventory.
4. Minimize materials handling and cost.
5. Effective utilization of men, equipment and space.
6. Make effective utilization of cubic space.
7. Flexibility of manufacturing operations and arrangements.
8. Provide for employee convenience, safety and comfort.
9. Minimize investment in equipment.
10. Minimize overall production time.
11. Maintain flexibility of arrangement and operation.
12. Facilitate the organizational structure.

### Types of Plant Layout:

Two basic plans of the arrangement of manufacturing facilities are – product layout and process layout. The only other alternative is a combination of product and process layouts, in the same plant.

**Following is an account of the various types of plant layout:**

#### (a) Product Layout (or Line Layout):

In this type of layout, all the machines are arranged in the sequence, as required to produce a specific product. It is called line layout because machines are arrange in a straight line. The raw materials are fed at one end and taken out as finished product to the other end.

Special purpose machines are used which perform the required jobs (i.e. functions) quickly and reliably.

**Product layout is depicted below:**

**[Product Layout](https://cdn.yourarticlelibrary.com/wp-content/uploads/2015/11/clip_image00430.jpg)**

**Advantages:**

1. Reduced material handling cost due to mechanized handling systems and straight flow

2. Perfect line balancing which eliminates bottlenecks and idle capacity.

3. Short manufacturing cycle due to uninterrupted flow of materials

4. Simplified production planning and control; and simple and effective inspection of work.

5. Small amount of work-in-progress inventory

6. Lesser wage cost, as unskilled workers can learn and manage production.

**Disadvantages:**

1. Lack of flexibility of operations, as layout cannot be adapted to the manufacture of any other type of product.

2. Large capital investment, because of special purpose machines.

3. Dependence of whole activity on each part; any breakdown of one machine in the sequence may result in stoppage of production.

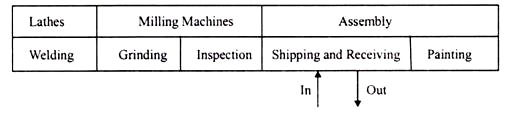
4. Same machines duplicated for manufacture of different products; leading to high overall operational costs.

5. Delicate special purpose machines require costly maintenance / repairs.

#### (b) Process Layout (or Functional Layout):

In this type of layout, all machines performing similar type of operations are grouped at one location i.e. all lathes, milling machines etc. are grouped in the shop and they will be clustered in like groups.

**A typical process layout is depicted below:**

**[](https://cdn.yourarticlelibrary.com/wp-content/uploads/2015/11/clip_image00612.jpg)**

**Advantages:**

1. Greater flexibility with regard to work distribution to machinery and personnel. Adapted to frequent changes in sequence of operations.

2. Lower investment due to general purpose machines; which usually are less costly than special purpose machines.

3. Higher utilisation of production facilities; which can be adapted to a variety of products.

4. Variety of jobs makes the work challenging and interesting.

5. Breakdown of one machine does not result in complete stoppage of work.

**Disadvantages:**

1. Backtracking and long movements occur in handling of materials. As such, material handling costs are higher.

2. Mechanisation of material handling is not possible.

3. Production planning and control is difficult

4. More space requirement; as work-in-progress inventory is high-requiring greater storage space.

5. As the work has to pass through different departments; it is quite difficult to trace the responsibility for the finished product.

#### (c) Combination Layout:

In practice, plants are rarely laid out either in product or process layout form. Generally a combination of the two basic layouts is employed; to derive the advantages of both systems of layout. For example, refrigerator manufacturing uses a combination layout.

Process layout is used to produce various operations like stamping, welding, heat treatment being carried out in different work centres as per requirement. The final assembly of the product is done in a product type layout.

#### (d) Fixed Position Layout:

It is also called stationary layout. In this type of layout men, materials and machines are brought to a product that remains in one place owing to its size. Ship-building, air-craft manufacturing, wagon building, heavy construction of dams, bridges, buildings etc. are typical examples of such layout.