
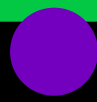



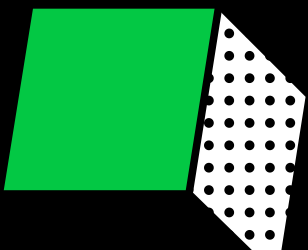


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As Per MSBTE's 'I' Scheme Syllabus

VIJAY D. NAVALE

M.E., M.B.A., B.E., M.A., B.J., L.M.I.S.T.E.

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who were once upon a time

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Preface ...

Management function is an essential part of the industry. Similarly the subject management is an essential input for diploma engineering students. It is applicable to all branches with no exception. The concept of management and its industrial application will definitely add managerial angle making students techno-commercial professionals. This book is intended for giving such input to all the final year diploma engineering students.

I always enjoy this subject with students. Management subject has a wide spectrum in every engineer's future life. So all efforts are taken to enrich the content of this book. Care is taken to make it interesting and informative so that knowledge can be gained and also marks can be earned. I expect that the students will not only like this book but they will also love this subject to learn, imbibe and apply management in their professional life.

I really enjoyed in writing this book. It's really a pleasure to come up with a new book and especially for my dear friends who are doing diploma engineering. I am sure that you will enjoy in reading this book .

So all the best to all of you. It is said that engineers are future managers. This book will definitely help in this regard. Of course suggestions and positive criticism will be politely accepted to make this book more and more perfect, if possible.

The author thanks Shri. Dineshbhai Furia and Shri. Jigneshbhai Furia, Publisher of Nirali Prakashan and Mr. Akbar Shaikh, Mrs. Manasi Pingle and Ms. Chaitali Takle of Nirali Prakashan.

Any suggestions for the improvement of this book are welcome and highly appreciated and will be incorporated in the next edition.

All the Best !

Prof. Vijay Navale
www.careerpathfinderchart.com



Syllabus ...

Unit I - Introduction to Management Concepts and Managerial Skills

[Marks 16; Hours 12]

- 1.1 Definitions of Management, Role and Importance of Management.
- 1.2 Management Characteristics and Principles, Levels of Management and their Functions, Management, Administration and Organization, Relation between Management and Administration.
- 1.3 Functions of Management: Planning, Organizing, Leading/Directing, Staffing and Controlling.
- 1.4 Types of Planning and Steps in Planning.
- 1.5 Types of Organization, Steps in Organizing.
- 1.6 Functional Areas of Management.
- 1.7 Managerial Skills.

Unit II - Planning and Organizing at Supervisory Level

[Marks 14; Hours 08]

Planning at Supervisory Level

- 2.1 Planning by Supervisor.
- 2.2 Planning Activities, Detailing and following of Each Step.
- 2.3 Prescribing Standard Forms for Various Activities.
- 2.4 Budgeting for Materials and Manpower.

Organizing at Supervisory Level

- 2.5 Organizing the Physical Resources.
- 2.6 Matching Human Need with Job Needs.
- 2.7 Allotment of Tasks to Individuals and Establishing Relationship among Persons Working in a Group.

Unit III - Directing and Controlling at Supervisory Level

[Marks 14; Hours 08]

Directing at Supervisory Level

- 3.1 Needs for Directions and Instructions to Subordinates; Completeness and Feasibilities of Instructions
- 3.2 Personal Counselling, Advanced Predictions of Possible Mistakes.
- 3.3 Elaborating Decisions, Laying Disciplinary Standards in Overall Working

Controlling at Supervisory Level

- 3.4 Managerial Control; Undertaking Team and Link between various Departments in Respect of Process and Quality Standards; Steps in Control Process
- 3.5 Controlling Methods; Control over the Performance in Respect of Quality, Quantity of Production, Time and Cost. Measuring performance, Comparing with Standards, Correcting Unfavorable Deviations.

Unit IV - Safety Management

[Marks 14; Hours 08]

- 4.1 Need for Safety Management Measures
- 4.2 General Safety Norms for an Industrial Unit; Preventive Measures
- 4.3 Definition of Accident, Types of Industrial Accident; Causes of Accidents
- 4.4 Fire Hazards; Fire Drill
- 4.5 Safety Procedure
- 4.6 Work Permits

Unit V - Legislative Acts

[Marks 12; Hours 12]

- 5.1 Necessity of Acts, Important Definition and Main Provisions of Acts
- 5.2 Industrial Acts: (a) Indian Factory Act, (b) Industrial Dispute Act, (c) Workman Compensation Act, (d) Minimum Wages Act

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Introduction to Management Concepts and Managerial Skills

Weightage of Marks = 16, Teaching Hours = 12

Syllabus

- 1.1 Definitions of Management, Role and Importance of Management.
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- 1.6 Functional Areas of Management.
- 1.7 Managerial Skills.

About This Chapter

After reading this chapter, the students will able to,

- Differentiate the Concept and Principles of Management for the given situation.
- Explain Functions of Management for given situation.
- Compare the Features of the given types of Planning.
- Suggest the Steps in Organizing in the given situation.
- Suggest suitable type of Organization for the given example.
- Identify the Functional Areas of Management for the given situation.
- Suggest suitable managerial skills for given situation with justification.

1.1 DEFINITIONS OF MANAGEMENT

The word management is derived from a Latin word '*manus*'. *Manus* means a driver controlling a team of horses pulling a cart. But later on many thinkers put up the definition of 'management' in different ways.

1. **Henry Fayol:** "To forecast and plan, to organize, to command, to co-ordinate and to control is called as management."
2. **Blanchard:** "Management is working through individuals and groups to accomplish organizational goals."
3. **Mescon:** "Management is the process of planning, organizing, leading and controlling the efforts of organization members and of using all organizational resources to achieve stated organization goals."
4. **Mary Parker:** "It is getting things done by others."
5. **Robinson:** "Management is the process of optimising human, material and financial contributions for the achievement of organizational goals."
6. **Drucker:** "The systematic organization of economic resources."

The simplest definition of management is the "achievement of objectives through the efforts of other people". See figure below:

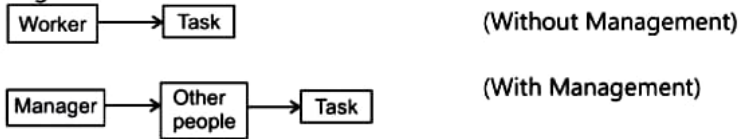


Fig. 1.1

1.2 ROLE AND IMPORTANCE OF MANAGEMENT

1. Management is the key function of any organization. It is nothing but getting the things done by the other people with the help of optimum resources to achieve the desired goals.
2. Management is a science with a systematic content of knowledge and its principles are based on the basis of observations.
3. Every job has some managerial elements in it.
4. Management is not necessarily a matter of seniority and salary but it is the need of the effective execution of an organization.
5. Success in any work requires application of management. Thus, management of the given task is the assurance of successful result.
6. **Management Inputs and Outputs:**

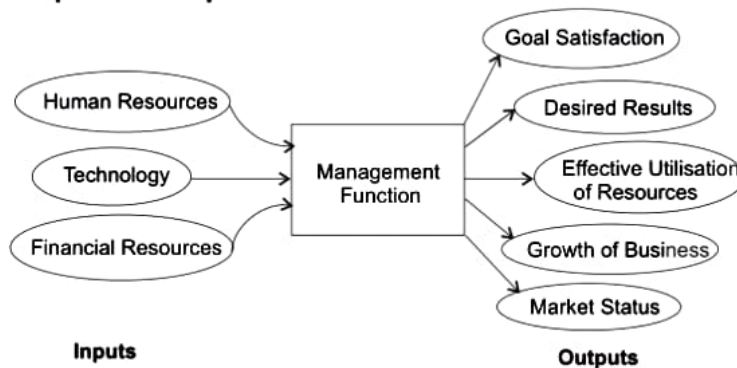


Fig. 1.2: Inputs and Outputs of Management

7. Management is an universally accepted principle for completing the given work.
8. Planning, organizing, staffing, motivation are some of the functions of management.
9. It is an excellent combination of thinking and execution.
10. Management is required before any process, during the process and after the process as well.
11. It works under the principles of authority, responsibility, discipline, equity etc. in the actual execution.
12. **Associates of Management:**
 - People / skills / knowledge
 - Machinery / equipment / logistics
 - Materials
 - Market
 - Time
 - Finance
 - Products and processes
 - Infrastructure
 - Buildings / sites / land
 - Location
 - Information / data
 - Reputation / image / goodwill

13. **Duties of Management:**

- To plan business development.
- To focus on organization growth.
- To keep stability.
- To maintain relationships in organization.
- To motivate staff.
- To improve productivity of work.
- To restrict corruption and bad practices.
- To plan assets of the organization.
- To follow legal aspects of Government.
- To avoid exploitation of workers.
- To keep safe working conditions.
- To motivate human resources.
- To reduce wastages.
- To maintain documentations.
- To care welfare of workforce.
- To keep healthy atmosphere in organization.



14. If there is no management, what will happen?

- Overlapping of duties.
- Underutilization of resources.
- Poor functioning of executives.
- No co-ordination among the members.
- Repetition of mistakes.
- Negligence in important activities.
- Disturbed work culture.
- Wastage of resources.
- Total fiasco.



- 15. More productivity, growth of industry, progress of organization, satisfaction of manpower, goal achievements etc. are the outcomes of management.
- 16. Thus, the success of any industry depends not only on technological achievements but also on the effective management.

1.3 CHARACTERISTICS OF MANAGEMENT

Harbison and Myers offered a threefold classical concept of management. They observe management as:

- (a) an economic resource,
- (b) a system of authority, and
- (c) a class or elite.





(a) Management as an Economic Resource:

- o Management is also factor of production like land, labour and capital.
- o As the industrialisation increases, the need for management becomes greater.
- o Management function determines productivity and profitability of the firm.
- o So economic progress of an organization is observed when management is used as an economic resource in its execution.

(b) Management as a System of Authority:

- o Small number of effective, higher position people control activities of many. This may be termed as an authority.
- o Definite and consistent policies and procedures are decided by management to operate their subordinates.
- o Thus, management in any organization is the authority of the system.

(c) Management is a Class and Status System:

- o It is the system of organization and society which demands that managers become an elite of brains and education.
- o Presence of management is itself based more and more on education and knowledge.
- o These managers get increasing amount of power and positions.
- o This creates distinct high profile class of management people. It may be termed as a "class".

Concept of management will be understood differently by the following figure:

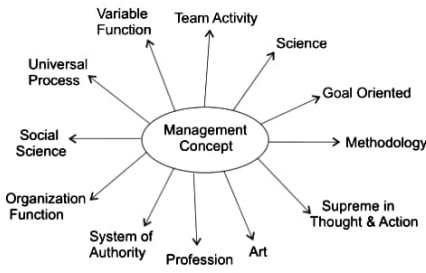


Fig. 1.3

Characteristics of Management:

1. **Goal oriented:** Management is a goal oriented. Achieving goals is the target of management.
2. **Catalyst:** Management plays role of catalyst. It helps to get output using inputs like man, machine, material and money.
3. **Process:** Management is a continuous process. It never stops.
4. **Authority:** Authority is the heart of management. System works according to authority.
5. **Unifying force:** Management works like an unifying force among all its resources and components. Without management such unity is not possible.
6. **Harmony effect:** Management shows harmony effect in achieving individual's goals with the organization's goals.
7. **Multidisciplinary subject:** Management is a multidisciplinary subject. Many disciplines (areas) like engineering, psychology, economics, sociology, operations management, research, public administration are all together in management.

1.4 PRINCIPLES OF MANAGEMENT



Fig. 1.4

Principles of Management (Fayol's 14 Principles of Management):



Henry Fayol

- | | |
|---------------------------------|---|
| 1. Authority and Responsibility | 2. Equity |
| 3. Discipline | 4. Centralization |
| 5. Division of work | 6. Subordination of individual interest to group interest |
| 7. Initiative | 8. Remuneration |
| 9. Teamwork | 10. Unity of direction |
| 11. Unity of command | 12. Stability |
| 13. Scalar chain | 14. Esprit De Corps |

1. Authority:

- Position, designation, seniority defines authority.
- Authority is reflected as a power in managing the work.
- If authority is used in good sense and in a positive manner, the system works smoothly.
- Meaning of authority is right to command.
- Authority is the power to act.
- Authority helps the seniors to get work done from the juniors.
- Higher the post, higher is the authority.
- There should be no confusion about the authority. It should be clearly known to everybody that who is authorized for what.



- To have controls on the work, authority plays an important role.
- Authority is also useful in directing efforts towards completing the task.
- Authority can be delegated.

Responsibility:

- Responsibility is the other side of coin.
- If there is authority, the same weightage of responsibility automatically comes with it.
- There is nobody with only authority and having no responsibility.
- Higher authorities have higher responsibilities.
- Top level managers have unlimited authorities, but at the same time they are responsible for all the happenings in the organization.
- At the same time, bottom level managers have limited authorities in organization but they have defined responsibilities only.
- It is a kind of accountability of a designated person.
- Status of responsibility must be clear and there should not be any confusion.
- Responsibility can not be delegated.
- A sense of responsibility helps to finish the task with all its expectations.



2. Equity:

- Management should not forget equity and humanity.
- Partialism, variation in treatments among the employees of the same organization creates disintegration and segmentation in them.
- Now-a-days, many organizations have maintained equity in canteen facilities, dress code, pickup facilities, medical facilities etc. for all the employees without any differentiation.
- This equity principle creates family like environment which definitely reflects in output of the organization.
- It gives dignity to each individual.
- Equity does not mean equal wages. But it means no discrimination in treatment.
- There is no bias nature of behaviour.
- Rules play important role in following equity.
- Kindness and justice is expected from seniors.
- Due to equity, employees feel like a family in the organization.
- Equity is a good characteristic feature of work culture.



3. Discipline:

- Any organization needs discipline for its smooth functioning.
- Discipline of time, behaviour, work quality, obedience are important in any management.
- Following the rules and regulations, being honest, trustworthy and following protocols of the system are expected as discipline requirements.
- Management will be successful if they have disciplined work culture with them.
- Discipline starts from top management.



- Discipline has no excuses.
- Discipline of time helps to finish the task in time with better perfection.
- Discipline of behaviour, creates good working culture.
- Discipline is the solution for many ills, e.g. accidents can be minimized by discipline, work losses can be avoided by disciplined team work etc.
- Lack in discipline leads to loss of control and vice versa.

Point	Negative Discipline	Positive Discipline
CONCEPT	It is adherence to established norms and regulations, out of fear of punishment.	It is the creation of a conducive climate in an organization so that employees willingly conform to the established rules.
CONFLICT	Employees do not perceive the corporate goals as their own.	There is no conflict between individual and organizational goals.
SUPERVISION	Requires intense supervisory control to prevent employees from going of the track.	Employees exercise self-control to meet organizational objectives.

4. Centralization:

- When many functions are controlled by a central authority, it is called as centralization.
- Unity in organization, importance of discipline, status in external market, brand development are the advantages of centralization function. e.g. In managing country like India, we have single constitution, single government at center (Delhi), unique flag and national anthem. This creates feeling of unified organization. Meaning of centralization is the authority in the hands of center.

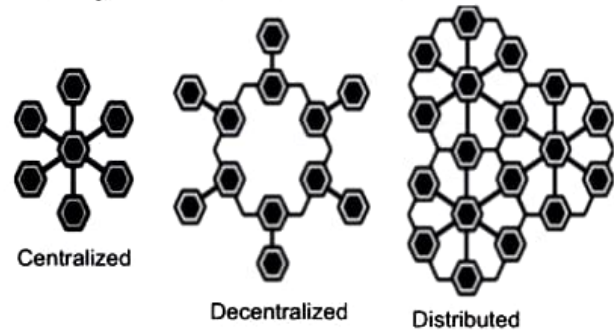


Fig. 1.5

- Uniformity in the way of functioning is possible by centralization.
- Centralization gives power in the hands of centre.
- Controls are concentrated at the centre.
- Centralization may not be successful if the span of work is more.
- Many times centralization do not take into consideration the local level issues.
- Centralization is the tendency of management to restrict delegation of decision making.
- A high degree of authority is held at the top level in the organization.

5. Division of Work: It is also called as delegation of work.

- When work is complicated, huge and difficult, it must be divided among the different teams.
- Due to division of work, people get less variation in work.
- Skilled people make effective concentration on their allotted work.
- Extra pressure of work on 'very few' is avoided and this divide the work.
- It gets completed in time with better quality.
- So for effective management, division of work is very essential principle.
- Big task completion can be effectively possible by dividing the work among the team members.
- Monopoly in skills by few is reduced.



- Many employees understand one or other aspects of the given work.
- Absenteeism of any one employee, will not affect the completion of work.
- Ultimate utilization of human resources is possible.

7. Initiative:

- To start with enthusiasm is called as 'initiative'.
- Difficult things are not possible if there is no initiative from anybody.
- For getting success in difficult or complicated work, someone should start at initial level.
- Good manager is always enthusiastic to initiate things whenever there is difficult situation in front of the organization.
- Good initiative is always followed by support and team work by the others.
- Initiative leads into new horizons of work.
- Initiative from subordinates helps the top management to proceed enthusiastically.
- Top level initiatives leads to progress of the organization.
- Nothing is possible, if there is no initiative from anybody.
- Employees having good initiative, need less motivating efforts from others.
- Initiative must be supported by the others, so that it will go ahead with success.
- Complicated problems and big tasks can be finished easily and in less time if there is quick initiative and support to that initiative by others.



8. Remuneration:

- People must be satisfied by paying them satisfactorily.
- Many people work for better remuneration.
- Few work for mental, psychological and work related satisfaction.
- But it is the need that all of them must be paid as per their inputs.
- Qualification, designation, responsibility, dedication, performance, experience should be counted while giving remuneration.
- Good remuneration keep employees satisfied.
- It should be in time.
- Remuneration is the reward to the employees.
- Higher the post, higher is the remuneration.
- There should not be any discrimination based on remuneration.



9. Teamwork:

- Good teamwork is always better than the best individual performance! Organization is busy in many types of work.
- Completion of these work in time, with quality, with minimum wastages are the expectations from the employer.
- Single individual has limitations on many fronts.



- But if many individuals with different skills come together, co-ordinate each other effectively, then great achievements are possible through this teamwork.
- Industries always believe in teamwork rather than isolated efforts of individuals.
- Team work reduces work load on an individual person.
- There is contribution from many.
- It creates good work culture.
- Talent of each team member is utilized in team work.
- Big task is impossible without teamwork.
- Co-ordination is expected to have success in team.

10. Unity of Direction:

- In giving direction to the subordinates, there must be uniqueness of direction.
- There should not be any confusion due to different directions every time.
- If directions of work are fixed, then efforts can be taken effectively which will definitely give desired results.
- It is the responsibility of the management.
- It will save time and help to get good results.
- Experience always leads to unity of direction.
- There is no necessity of trial and error.
- Everybody is crystal clear about the goals.
- Deviation from the defined path is prevented due to unity of direction.



11. Unity of Command:

- It may be called as 'one boss' principle.
- When higher authorities are more than one, then there is possibility of different guidelines to the subordinates.
- This may create misunderstanding and fiasco at work. Unity of command gives better results in work.
- It leads into fixed way of working.
- In case of change in command in future, there is no cross questioning by others.
- It avoids unnecessary discussions and brainstorming.
- Subordinates have to be loyal with the command.

12. Stability:

- Management must provide stability of tenure to employees.
- This creates secure feelings among them which allows them to work with more concentration.
- Stability helps growth of organization also.
- Concentration in work is possible by stability.
- Insecurity is less in stability.
- Stability gives uniform growth.
- Stability improves maturity in the organization.
- Stability is concerned with economic stability, work load stability, work area stability, team stability, work place stability, policy stability etc.



13. Scalar Chain:

- Fayol thinks of the scalar chain as a line of authority.
- It is a chain as a line of authority.

- It is a chain of superiors from the highest to the lowest ranks.
- This chain should be short-circuited.
- This chain should be continuous line of authority.
- This chain is thoughtout all the levels of organization.

14. Esprit de Corps:

- It is concerned with team work.
- Team with harmony and proper understanding is expected.
- Co-ordination and communication are necessary for success in team.

1.5 LEVELS OF MANAGEMENT AND THEIR FUNCTIONS

Levels of Management in any organization are described by the pyramid (i.e. upright triangle). Management function is divided into different levels. The art of management applies to all levels. Generally management function is divided into three levels.

- Top Management
- Middle Management
- Lower Management

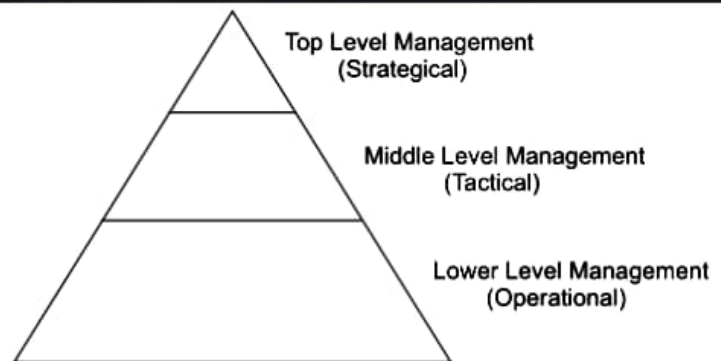


Fig. 1.6: Levels of Management

(a) Top Management:

- Also called as Strategical level of Managers.
- It is represented by
 - Board Of Directors (BOD)
 - Chief Executive Officer (CEO)
 - Chairman / President
 - Managing Director (MD)
 - General Manager (GM) etc.
- They are handling company wide overall functions.
- Functions of Top Level Management:**
 - To do overall strategic work.
 - To determine and finalize aims / goals / objectives of the organization.
 - To define vision of work.
 - To workout long term plans.
 - To initiate large scale work.
 - To decide long term policies.
 - To define structure of the organization.
- Responsible for overall developments in the organization.
- Top management is the highest authority of the organization.
- Cares outside demands also.
- Strength of organization, growth of business, overall progress of industry and market status mainly depend on the effectiveness of the top management.

(b) Middle Management:

- (i) Middle management is called as Tactical level of Managers.
- (ii) This is a comparatively larger group of managers.
- (iii) It is represented by
 - Factory Manager
 - Plant Manager
 - Heads of Departments
 - Senior Managers.
- (iv) **Functions of Middle Management:**
 - To plan the execution strategies.
 - To decide medium scale policies.
 - To play role as "Buffer group" between Top level and Lower level management.
 - To transmit ideas of Top Level Management to Lower level Management.
 - To send the reports of work to higher authorities.
 - To help Top management in strategic decisions.
 - To guide Lower management in operational work.
- (v) They are accountable for the work done by their juniors.
- (vi) They are working on wider areas compared to Lower management.
- (vii) They inform ground reality of the system to higher authorities and also assist in finding solutions to problems at execution level.

**Fig. 1.7****(c) Lower Management:**

- (i) Lower management is called as Operational level Managers.
- (ii) They occupy bottom of the pyramid.
- (iii) Lower management is represented by:
 - Shift incharges
 - Trainee Engineers
 - Senior supervisors
 - Foreman
 - Junior managers
 - Line incharges etc.
- (iv) They have direct responsibility of machinery and materials.
- (v) Skilled workers, operators, workforce is working immediately below them.
- (vi) They are skilled in both doing supervision and doing the work.
- (vii) **Functions of Lower Management:**
 - To supervise the operations / activities.
 - To plan and execute daily work schedules.
 - To ensure smooth operations.
 - To solve bottleneck problems and difficult situations of workers related to technical and safety issues.
 - To guide workforce about their work.
 - To assign tasks to subordinates.
 - To execute plans given by middle management.
 - To report higher authorities about the production function and related matter.
 - To keep daily records.

- (viii) Lower level management is still larger group of officials compared to middle level management.
- (ix) Policy making is not their work but executing the policies of higher authorities is their main concern.
- (x) Lower management may be called as "actual face" of management or "fighting chaps" as they are directly related to operational activities. Also they are working in close association with working operators.

1.6 MANGEMENT, ADMINISTRATION AND ORGANIZATION

1.6.1 Administration

(A) Administration

Definition: "It is the overall execution of the given task."

Duties of Administration:

1. To keep and maintain documentation.
2. To conduct meetings.
3. To execute policies made by higher authorities.
4. To keep disciplined work environment.
5. To perform the work in the scheduled time period.
6. To work in guideline with the legal terms and rules.
7. It is also called as getting work done.
8. They achieve goals using all resources.
9. Administration use documentation alongwith actual performance of work.
10. Administrators are servants of management.
11. Administrations look into daily activities.
12. Administration make teams to complete the work.
13. Administrators get salary from the management.



1.6.2 Management

Definition: "Management is the process of planning, organizing, leading and controlling the efforts of organization members and of using all organizational resources to achieve stated organization goals."

1. Management is art and science.
2. Management is at the top of the organization.
3. Management makes long term plans.
4. Management gets work done from administrators.
5. Management co-ordinates finance and legal aspects.
6. They does not need technical ability.
7. Management frames organization structure.
8. Management is the key position in the organization for all important decisions.

1.6.3 Organization

Definition:

An organization is a group of persons united to achieve any constructive task.

Organization may also be defined as, "a group of activities and resources to facilitate efforts to achieve the common aims and objectives".

e.g. Any company, any Government department, business unit, any institute, NGO, students organization etc.

The Aims of Forming Organization are:

1. Combined efforts.
2. Ordered way of working.
3. Responsibility on all.
4. Teamwork.
5. Optimum use of resources.
6. Effective work completion.

Characteristic Features of Organization are :

1. It is a group of working people.
2. It has a well defined structure.
3. It has a set of authorities and responsibilities.
4. It is a function of management.
5. It has aims and objectives.
6. It mentions rules and regulations.
7. It is a system.
8. It has boundaries of work.



Fig. 1.8: Any industrial organization

1.6.4 Relation between Management and Organization

Management	Organization
1. It is the subset of organization.	1. Organization consists of management.
2. It is a group of few members.	2. It is a group of all the members.
3. Management is running the organization.	3. Organization is run by the management.
4. Functions of management are important and vital.	4. Functions of organization are inclusive all the functions.
5. Management gets dignity from members of organization.	5. Organization has its everlong dignity. But individual members of organization offer dignity to management.
6. Management has authority and power.	6. Organization respects management's power.
7. Decisions are taken by management.	7. Decisions are executed by organization.

1.6.5 Relation between Management and Administration

1. Normally, common people assume management and administration are similar terms. But as a student of management science, we must know the exact difference between these two terms.
2. Before going into details, we must note that the same terms are used exactly in opposite way in Indian management system. It means, in India, we must understand the terms in our context.
3. Unlike in European nations, in India, Management is considered at the higher authority position of an organization than the administration.

Examples:

- (a) In schools, colleges, institutes - Principal, Registrar, Office authorities of that institute are called as Administrators. And the head office of that organization i.e. parent office authorities are termed as Management.
- (b) In Indian system of administration, department heads are IAS officers. i.e. Indian Administration Services Officers. Who are their bosses? Concerned minister of that department is the boss of that IAS officer. Minister in the constitution of India is termed as manager or executive of the governance.

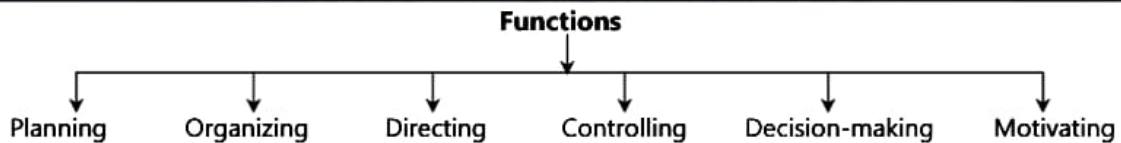
These examples prove that, both the terms i.e. Administration and Management are higher profiles, but management is above administration in Indian context.

4. Management relates to the long term decisions, policies, plans etc. They may relate to the plant set up, market strategy decisions, financial long term plans, decisions about new technology, recruitment policy etc.; whereas administration works on short term decisions or activities like daily production, materials procurement, production planning and control, meetings, salary, discipline etc.
5. Management decides policies and administrators execute those policies.
6. Management group has unlimited powers whereas Administration people are just binding to their higher authorities.
7. Management is concerned with directions and control whereas Administration is concerned with operations and execution.
8. Board of Directors, MD, GM are categorised under Management. Managers, Officers, Project leaders are counted under Administration.



- **Difference between Management and Administration is not precise. It may change from organization to organization.** Both are higher authorities. The basic difference is between policy making and execution function or long term planning and short term planning. **Please note that in foreign nations, the terms are exactly reverse what we mentioned above.**

1.7 FUNCTIONS OF MANAGEMENT



Major Functions of Management are:

1. Planning, 2. Organizing, 3. Directing, 4. Controlling, 5. Decision Making, 6. Motivating.

1.7.1 Planning

1. **Definition:** Planning can be defined as, "deciding in advance what to do, how to do, when to do and who will do it".
2. **Why Planning is Required?**
 - (a) To reduce effects of uncertainty.
 - (b) To find out the risks involved.
 - (c) To focus real objectives of work.
 - (d) To make the process more economical.
3. Planning is essential not just for successful management but for the success of almost every activity under consideration.



4. Types of Plans:

- (a) Corporate plans
- (b) Strategic plans
- (c) Management plans
- (d) Operational plans



Fig. 1.9

5. Planning Loop System:

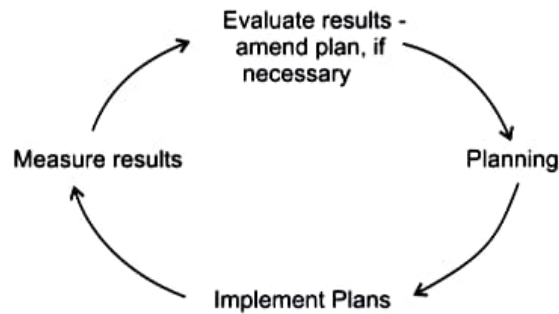


Fig. 1.10

So, planning is the continuous function.

6. Why Plan Fails?

Any plan fails due to the following reasons:

- | | |
|--|--|
| (a) Wrong information for planning. | (b) Incorrect person to do plan. |
| (c) Lack of knowledge. | (d) Less devotion to execute plan. |
| (e) Faulty system of work. | (f) Insufficient data. |
| (g) No feed back system. | (h) Overconfidence. |
| (i) Absence of winning attitude. | (j) Plan with no practical considerations. |
| (k) Plan without flexibility i.e. tight plans. | (l) Unknown about available resources. |

One must be careful about the above mentioned reasons so to get success in the plans.



7. Five Point Check Charts of Planning / Planning Cycle:

- Establishing the goals and objectives of the organization.
- Formulating policies and strategies to carry out the objectives.
- Developing intermediate and short range plans to implement the policies.
- Defining detailed procedure.
- Comparing actual plan with standard plan. Adjusting it to reduce deviations from the original standard plan.

8. Objectives of a Good Plan:

- To use available resources effectively.
- To avoid unnecessary delays.
- To complete the work within expected time.
- To achieve all levels of desired output.
- To increase the productivity.
- To reduce uncertainty.
- To improve standard of process and product.
- To avoid shortcomings during the work.
- To reduce heavy mental pressures before and during the process.
- To avoid mismanagement and fiasco at work.

9. Importance of Planning:

- (a) Planning is essential in modern business.
- (b) Planning affects performance.
- (c) Planning puts focus on objectives.
- (d) Planning anticipates problems and uncertainties.
- (e) Planning is necessary to facilitate control.
- (f) Planning helps in the process of decision making.

10. Advantages of Planning:

- (a) Planning gives managers some purpose and direction.
- (b) Proper planning helps in the process of motivation.
- (c) Planning provides a framework for decision making.
- (d) Neat planning results in effective utilization of organizational resources.
- (e) It reduces the elements of risk and uncertainty.
- (f) It improves the competitive strength of the company.
- (g) Effective planning helps managers to examine all areas of the organization from all the angles.

11. Disadvantages of Planning:

- (a) Planning may be expensive and time consuming.
- (b) Planning itself can be a hindrance of innovation.
- (c) Planning can some times be very frustrating because it requires an extremely detailed, careful and analytical thought process.

12. Principles of Effective Planning:**(a) Contribution to Objectives:**

- Plan should be made in such a way that the ultimate objectives are satisfied.
- Plan and organizations objectives should not be different.
- Short term objectives are satisfied through short term plans.
- Long term objectives are satisfied through long term plans.

(b) Efficiency of Plans:

- There should be maximum utilization of efforts done by all resources.
- Wastages should be less.

(c) Planning Premises:

- There should be perfect plan for utilizing premises by all the concerned departments.

(d) Policy Framework:

- Plans should be matching the policy framework of the organization.

(e) Timing:

- Time constraint must be kept in mind while planning.
- Possible time should be considered at the planning level itself.

(f) Limitations:

- Plan makers should be aware about the limitations of the organizational set up.
- The consideration will avoid unnecessary wastages of all kinds.
- Plan becomes realistic.

(g) Commitment:

- Plan should consider commitment of 'funds'.
- Cost of planning must be recovered in the given time frame.
- Plan should consider commitment of 'reputation' of organization.
- If these issues are not considered, the plan will lead to losses and failures.

(h) Flexibility:

- Sometimes there is need to make changes in plan.
- Such changes must be possible without any harm.
- This flexibility must be kept in the plan right from start.

(i) Navigational Change:

- Total time of planned activity is considered in steps.
- At each step, actual happening and planned part is checked.
- If there is some slack in actual and plan, as such stage, then few changes are expected.
- Because of this, the actions are again continued as per the plan and goal is achieved.

1.7.2 Organizing

1. **Definition:** Organizing is the activity of co-ordinating and directing the company's resources in such a way that the company can carry out its objectives.
2. **The Meaning of Organizing:**
 - (a) The identification and classification of required activities.
 - (b) The grouping of activities necessary to attain objectives.
 - (c) The assignment of each grouping to a manager with the authority necessary to supervise it.
 - (d) The provision for co-ordination horizontally and vertically.
3. In organizing, roles of people in the given work must be structured properly.



4. **Organizing Involves:**
 - (a) Identifying the activities.
 - (b) Grouping these activities.
 - (c) Assigning the activities to managers.
 - (d) Delegation of authority to managers.
 - (e) Setting up structure for co-ordination of these activities.

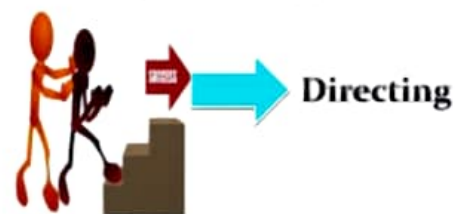
These are the steps in organizing activity.
5. **Assumptions in Organizing:**
 - (a) Guidance and planning are always necessary for members in an organization.
 - (b) If there are no boundaries of work, people may interfere in other's work.
 - (c) Members will try to avoid responsibilities unless and until they are given definite work.
 - (d) Members generally prefer security of a definite task than freedom of undefined task.
 - (e) There is possibility of conflict.

These are the assumptions, which management must remember while organizing.
6. **Basic meaningful terms in Organizing function:**
 - (a) Authority
 - (b) Influence
 - (c) Power

- (d) Identification
 - (e) Loyalties
 - (f) Responsibility
7. This function of management is always following 'Planning' function.
 8. There is synchronism and combination of human, physical and financial resources.
 9. To be successful in management, a manager must be perfect in 'organizing' function.
 10. There is good co-ordination between authority and responsibility while organizing a work.
- 11. Importance of Organizing:**
- (a) Possibility of getting benefit of specialization.
 - (b) Provides optimum utilization of resources.
 - (c) Helps in effective administration.
 - (d) It channels expansion and growth.
 - (e) It achieves co-ordination among different departments.
 - (f) Organizing creates scope for new change.

1.7.3 Leading/Directing

1. This function assists in providing correct way of working i.e. giving direction.
2. Employees with correct direction work efficiently.
3. Directing needs good vision in leadership.
4. Experience of work also helps in getting correct direction.
5. Directing involves giving instructions and orders to subordinates.
6. Suggestions and guidance are also important in directing the work.
7. Directing function needs good communication and motivation as a supportive functions.
8. Directing activity should not be autocratic and single sided.
9. Directing people is a continuous function. But its importance is more in the starting.
10. All resources and efforts will be useless if directing function is not properly executed.



11. Aspects of Direction:

- (a) **Supervision:** Direction is most effective when workers are under supervision of manager. Immediate direction is always possible on the spot.
- (b) **Leadership:** Leader can better direct the team under him/her. Leader can effectively do this function.
- (c) **Motivation:** Direction requires additional energy of motivation. After motivation by management workers will definitely show actions in correct direction.
- (d) **Communication:** For effective directing, there is necessity of clear and complete communication.
- (e) **Co-ordination:** There should be co-ordination while directing the subordinates.

12. Techniques of Direction:

- (a) **Consultative Direction:** This is possible by consulting dialogue between manager and workers. Experience speaks in such direction.

- (b) **Autocratic Direction:** Here seniors without any consulting, or any feedback give orders to subordinates.
- (c) **Free-rein Direction:** Here, subordinate is allowed to express his/her views. The senior gives general guidelines. The subordinate has freedom to have certain flexibility of actions. It is democratic way of direction.

13. **Importance of Direction:**

- (a) It joins the gap between management and subordinates.
- (b) It is nothing but guidelines to juniors from seniors.
- (c) Experience is always better in doing direction.
- (d) Success rate is more due to valid and correct direction.
- (e) It removes confusion among team members.



14. **Principles of Directing Function:**

- (a) **Integrated objectives:** Effective directing requires that the goals of the organization and the individuals in the organization should be integrated so that all subordinates develop a sense of belonging to the organization.
- (b) **Direct supervision:** The superiors should maintain direct contact with subordinates; informal relationships facilitate the function of directing.
- (c) **Participative managerial style:** The subordinates' morale will be higher when their views are seriously incorporated into the managerial decision making.
- (d) **Unity of direction:** The direction must be clear and unambiguous and from a single chain of command, otherwise the authority will be undermined resulting in disorder and confusion.
- (e) **Follothrough:** Effective direction demands achievement of results. The results can only be achieved by being constantly in touch with the development. This requires continuous supervision, guidance, advice and coaching of subordinates in their activities to attain the desired goals.

1.7.4 Staffing

1. Staffing means everything about people working in the organization.
2. Staffing includes:
 - (a) Selection of staff
 - (b) Training of new staff
 - (c) Promotions
 - (d) Retirement/Exit of the staff.
3. Staffing deals with manpower.
4. Good quality staff if joins the organization, it helps in the next activities.
5. Staff has to be trained as per the work allotted.
6. Care must be taken of motivation, award, reward, punishment, action, appreciation, promotion, transfers etc. to handle staff effectively.
7. Prior or in time retirement or exit is the last step in staffing function.
8. Staffing is a continuous process.
9. Effective staffing achieves following:
 - (a) Happy environment.
 - (b) Quality output.
 - (c) Less time on follow-up.
 - (d) Right person at right place.
 - (e) Optimum results.
 - (f) No scope for quarrel, disputes and legal actions.

- (g) Brand development.
- (h) Satisfied employees and employer.
- (i) Justice to qualities of employees.
- (j) Career growth to people in the organization.

So staffing is an important function.

Elements of Staffing:

The major elements of staffing are given below:

1. Effective recruitment and selection.
2. Proper classification of personnel and pay fixed for them.
3. Proper placement.
4. Adequate and appropriate training.
5. Satisfactory and proper transfer and promotion.
6. Good relationship between management and workers.
7. Adequate provision for retirement.

Advantages of Proper Staffing:

1. It helps in the recruitment of efficient staff members.
2. Proper placement of staff members according to their abilities.
3. Maximum production and productivity due to correct person at correct place with correct training.
4. Also increases earning capacity of the workers.

Functions of Staffing:

1. **Manpower Planning:** Due to staffing we can plan the manpower requirement for short term and long term.
2. **Development:** Training is provided to the employees for their development.
3. **Fixing the employment standards:** It involves job specification and job description. Job description is a systematic and organized written statement of the duties and responsibilities in a specific job. Job specification is a statement of personal qualities that an individual must possess.
4. **Sources:** It is concerned with the method by which the employees are selected. The sources may be internal and external.
5. **Selection and placement:** Out of many eligible candidates suitable candidates are selected and placed as per their capabilities.
6. **Training:** New selected employees are trained for their development as per the need of the job.
7. **Other functions:** They include promotion, transfer, documentation, motivation, retirement etc.

1.7.5 Controlling

1. It is like a brake system in automobiles. But the main purpose is to avoid deviation in work. It helps to control extra efforts, wastages of resources by various methods of checking and correcting.
2. Controlling function primarily needs standards, objectives and goals.
3. It decides criteria of performance.
4. It defines and designs system of reporting. So it is easier to understand what is actually going on.
5. Whenever it finds deviations from the standard performance, then immediate corrective actions are taken and control on unnecessary part of work is possible.
6. As brakes avoids accidents and damage in vehicles, controlling function takes care of loss of time, loss of manpower, resource wastages etc.



7. Due to controlling, the systems of organization work for the desired goals only.
8. Work on correct track with correct speed is possible by controlling function only.

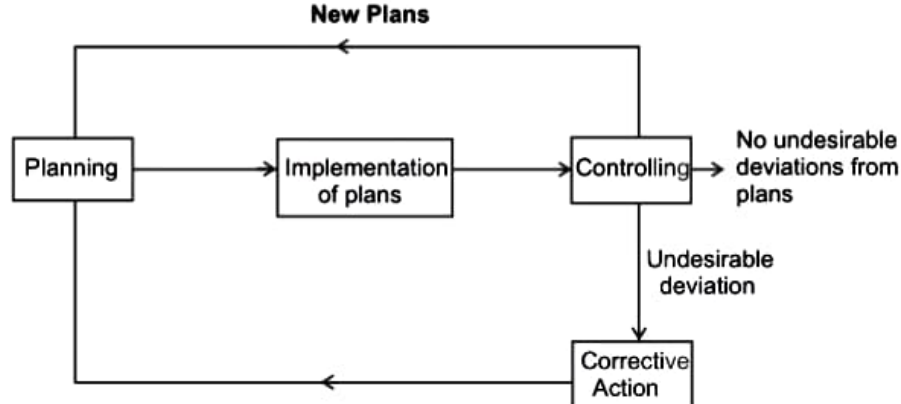


Fig. 1.11: Relationship between Planning and Controlling

9. Characteristics of Control:

- (a) It is vital action for avoiding losses.
- (b) It is dynamic in nature.
- (c) It needs at any time.
- (d) It is an end function.
- (e) It is a flexible activity.
- (f) It is a continuous process.

10. Essentials of an Effective Control System:

- (a) Controlling system should be suitable for the planned objectives.
- (b) There should be someone who will take the responsibility of controls.
- (c) Control system should be objective in nature.
- (d) Control system should not be influenced by any other subjective criteria.
- (e) Reporting in control system should be immediate and prompt.
- (f) Its focus should be on important and strategic points.
- (g) The system should be clear and understandable.
- (h) The control system should be economical.

11. Techniques used for Control Function:

- (a) Statistical reports.
- (b) Audit.
- (c) Personal observation.
- (d) Budgetary control.
- (e) CPM.
- (f) PERT.
- (g) Breakeven Analysis.

12. Work on correct track with correct speed is possible by controlling function only.

13. Steps in Controlling Function:

- (a) Establishment of standards
- (b) Measurement of performance
- (c) Comparing the activity
- (d) Remedial action.



14. **Open Loop Control System:** Systems with no feedback arrangement are called as open loop systems. Here control on the system is possible by controlling inputs.
15. **Closed Loop Control System:** System having feedback is closed loop control system.
16. **Advantages of Controlling:**
 - (a) Systems run as per plans.
 - (b) Losses in feature are avoided.
 - (c) Wastage is minimized.
 - (d) Deviation in process execution is reduced.
 - (e) Effective work out of the plans.
 - (f) Proper utilization of resources.

1.8 PLANNING

1.8.1 Types of Planning

The process of planning may be classified into different categories on the following basis:

(i) Nature of Planning:

- (a) Formal planning.
- (b) Informal planning.

(ii) Duration of Planning:

- (a) Short term planning.
- (b) Long term planning.

(iii) Levels of Management:

- (a) Strategic planning.
- (b) Intermediate planning.
- (c) Operational planning.

(iv) Use:

- (a) Standing plans.
- (b) Single-use plans.

(i) Nature of Planning:

- (a) Formal Planning:** Planning is formal when it is reduced to writing. When the numbers of actions are large it is good to have a formal plan since it will help adequate control.

The term formal means official and recognized. Any planning can be done officially to be followed or implemented. Formal planning aims to determine objectives of planning. It is the action that determine in advance what should be done.

Advantages:

1. Proper Cooperation among employees,
2. Unity of Action,
3. Economy,
4. Proper co-ordination and control,
5. Choosing the right objectives, and
6. Future plan.

- (b) Informal Planning:** An informal plan is one, which is not in writing, but it is conceived in the mind of the manager. Informal planning will be effective when the number of actions is less and actions have to be taken in short period.

(ii) Duration of Planning:

- (a) Short-Term Planning:** Short term planning is the planning which covers less than two years. It must be formulated in a manner consistent with long-term plans. It is considered as tactical planning. Short-term plans are concerned with immediate future; it takes into account the available resources only and is concerned with the current operations of the business.

These may include plans concerning inventory planning and control, employee training, work methods etc.

Advantages:

1. It can be easily adjustable.
2. Changes can be made and incorporated.
3. Easy to gauge.
4. Only little resources required.

Disadvantages:

1. Very short period-left over things will be more.
2. Difficult to mobile the resources.
3. Communication cycle will not be completed.

- (b) Long-Term Planning:** Long-term planning usually converse a period of more than five years, mostly between five and fifteen years. It deals with broader technological and competitive aspects of the organization as well as allocation of resources over a relatively long time period. Long-term planning is considered as strategic planning.

Short-term planning covers the period of one year while long term planning covers 5-15 years. In between, there may be medium-term plans. Usually, medium term plans are focusing on between two and five years. These may include plan for purchase of materials, production, labour, overhead expenses and so on.

Advantages:

1. Sufficient time to plan and implement.
2. Effective control.
3. Adjustment and changes may be made gradually.
4. Periodic evaluation is possible.
5. Thrust areas can be identified easily.
6. Weakness can be spotted and rectified then and there.

Disadvantages:

1. Prediction is difficult.
2. Full of uncertainties.
3. Objectives and targets may not be achieved in full.
4. More resources required.

(iii) Levels of Management:

- (a) Strategic Planning:** The strategic planning is the process of determining overall objectives of the organization and the policies and strategies adopted to achieve those objective. It is conducted by the top management, which include chief executive officer, president, vice-presidents, general manager etc. It is a long range planning and may cover a time period of up to 10 years.

It basically deals with the total assessment of the organization's capabilities, its strengths and its weaknesses and an objective evaluation of the dynamic environment. The planning also determines the direction the company will be taking in achieving these goals.

- (b) Intermediate Planning:** Intermediate planning cover time frames of about 6 months to 2 years and is contemplated by middle management, which includes functional managers, department heads and product line mangers. They also have the task of polishing the top managements strategic plans.



The middle management will have a critical look at the resources available and they will determine the most effective and efficient mix of human, financial and material factors. They refine the broad strategic plans into more workable and realistic plans.

- (c) **Operational Planning:** Operational planning deals with only current activities. It keeps the business running. These plans are the responsibility of the lower management and are conducted by unit supervisors, foremen etc. These are short-range plans covering a time span from one week to one year.

These are more specific and they determine how a specific job is to be completed in the best possible way. Most operational plans are divided into functional areas such as production, finance, marketing, personnel etc.

Thus, even though planning at all levels is important, since all levels are integrated into one, the strategic planning requires closer observation since it establishes the direction of the organization.

(iv) Use:

- (a) **Standing Plan:** Standing plan is one, which is designed to be used over and over again. Objectives, policies procedures, methods, rules and strategies are included in standing plans. Its nature is mechanical. It helps executives to reduce their workload. Standing plan is also called routine plan. Standing or routine plan is generally long range.
- (b) **Single Use Plan:** Single use plan is one, which sets a course of action for a particular set of circumstances and is used up once the particular goal is achieved. They may include programme, budgets, projects and schedules. It is also called specific planning. Single use plan is short range.

Difference between Strategic Planning and Tactical Planning:

Sr. No.	Strategic Planning	Tactical Planning
1.	It decides the major goals and policies of allocation of resources to achieve these goals.	It decides the detailed use of resources for achieving each goal.
2.	It is done at higher levels of management.	It is done at lower level of management.
3.	It is long term.	It is short term.
4.	It is more uncertain.	It is less uncertain.
5.	It is less detailed.	It is more detailed.

1.8.2 Steps in Planning

- 1. Establish Goals:** The first step of the management planning process is to identify specific company goals. This portion of the planning process should include a detailed overview of each goal, including the reason for its selection and the anticipated outcomes of goal-related projects. Where possible, objectives should be described in quantitative or qualitative terms.
- 2. Identify Resources:** Each goal should have financial and human resources projections associated with its completion.
- 3. Establish Goal-Related Tasks:** Each goal should have tasks or projects associated with its achievement.
- 4. Prioritize Goals and Tasks:** Prioritizing goals and tasks is about ordering objectives in terms of their importance. The tasks deemed most important will theoretically be approached and completed first. The prioritizing process may also reflect steps necessary in completing a task or achieving a goal.
- 5. Create Assignments and Timelines:** As the company prioritizes projects, it must establish timelines for completing associated tasks and assign individuals to complete them. This portion of the management planning process should consider the abilities of staff members and the time necessary to realistically complete assignments.
- 6. Establish Evaluation Methods:** A management planning process should include a strategy for evaluating the progress toward goal completion throughout an established time period. One way to do this is through requesting a monthly progress report from department heads.

7. **Identify Alternative Courses of Action:** Even the best-laid plans can sometimes be thrown off track by unanticipated events. A management plan should include a contingency plan if certain aspects of the master plan prove to be unattainable. Alternative courses of action can be incorporated into each segment of the planning process, or for the plan in its entirety.

1.9 ORGANIZATION

1.9.1 Organization Structure

Introduction:

- Every organization has a definite structure.
- Structure of organization is a formal pattern of groups and relationship among them.
- Structure of organization is represented by organization chart.
- It indicates relationships among people in organization.
- Normally, organization structure is stable, but it can be modified if required.
- The structure of organization depends on:
 - Goals and objectives.
 - Resources available.
 - Scope of functions.
 - Relationship among activities.
 - Type of product and production.
 - Span of control.
 - Communication expected.
 - Number of employees etc.



Essentials of Organization:

Various essential elements of an organization are:

1. **Organizational Chart:** It is the network of formal relationships.
2. **Predefined Objectives:** An organization should have predefined goals to achieve. With predefined structure of objectives its functioning becomes easy.
3. **Differentiation of Activities:** Various tasks and activities should be assigned to various people and departments.
4. **Communication:** The information should flow continuously and in a specific path way. The channels of communication should be pre-defined.
5. **Delegation:** There should be delegation of authority. The authority should have specific position of power and status.
6. **Integration:** An organization should have specific system in which the various activities and tasks are co-ordinated and integrated.
7. **Administration:** An organization should have planned and formalised policies, procedures and controls that guide the activities and relationships.

Important Factors in deciding Structure of Organization:

1. **Functions:** i.e. Finance, Marketing, Production etc.
2. **Technologies:** i.e. Semi-automatic, computerised, labour intensive, automatics etc.



- 3. **Outputs:** i.e. Type of product.
- 4. **Customers:** i.e. Younger, older, group, family, rural, urban etc.
- 5. **Core Competence:** i.e. Specialisation.
- 6. **Location:** i.e. Geographical place.

These factors affect the decision of how the structure of organization should be.

- The structure has two dimensions i.e. horizontal and vertical. Horizontal dimension tells about departmentation. Vertical dimension defines hierarchy of seniors and subordinates.
- Thus, organization structure is the systematic arrangement of the people working in the organization.

1.9.2 Types of Organization

- (a) Line organization
- (b) Functional organization
- (c) Line and Staff organization.
- (d) Project organization

1.9.2.1 Line Organization

- It is also called as scalar organization.
- It is the vertical type of organization structure.
- Also called as Military type because similar form of organization is in the military.
- Line organization is the oldest and simplest type of organization form.
- It has a chain of authorities, one above the other.
- The authority gives orders to immediate subordinate.
- Each one is accountable to immediate senior authority.

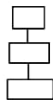


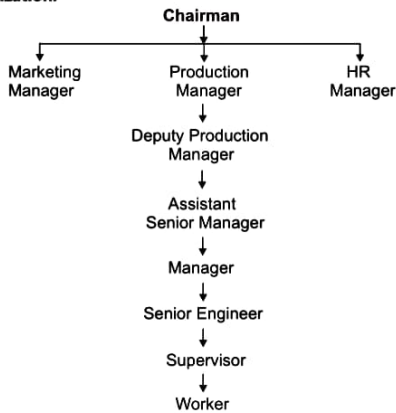
Fig. 1.12

Advantages:

- 1. It is simple.
- 2. Easy to understand.
- 3. Decisions are quick.
- 4. Confusion is less.
- 5. High level of discipline.
- 6. Variety of responsibilities leads into all round development.

Disadvantages:

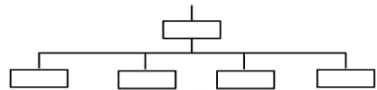
- 1. Authorities at top become dictators.
- 2. Lack of specialisation.
- 3. Quick decision may be wrong.
- 4. Overlapping of activities.
- 5. Some people are overloaded.
- 6. Poor quality of performance.
- 7. Nature of senior, affects work of subordinate.
- 8. Project with complex and interdependent activities may not possible under such organization.

Illustration of Line Organization:**Applications:**

1. Military Departments.
2. Small firms.
3. Process industries with automation.
4. Workshops.

1.9.2.2 Functional Organization (Staff Organization)

- It is also called as Horizontal organization.
- There is grouping of activities as per functions.
- Specialization of function is the characteristic of this type of organization.
- Each group is performing a specific task.
- e.g. Milling department is only performing milling operation, may be on different products. Function is the same and so the people are specialized in that.
- Also called as "Staff Organization".

**Fig. 1.13****Advantages:**

1. Performance is better.
2. Correct decisions are possible.
3. Knowledge sharing helps to improve enrichment of expertise.
4. Efficient utilization of staff.
5. Load of work is evenly distributed.
6. Standardization in processes.
7. More productivity as compared to Line organization.
8. Heavy work load can be handled easily.

Disadvantages:

1. Discipline is lacking.
2. Everybody is smart ; difficult to handle experts.
3. Confusion among staff, as there is no single authority.
4. Decisions are slow.
5. Ego of specialists is sensitive issue!

6. Total cost of carrying such staff is high.
7. Many staffs are expert in avoiding responsibilities.
8. Less co-ordination in teams.
9. Normally such structures are rigid and tight.

Illustration of Functional Organization (Staff Organization):

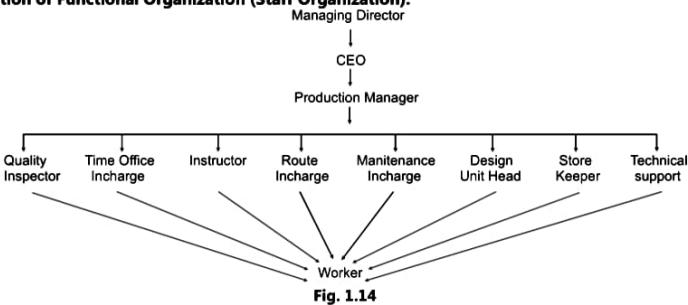


Fig. 1.14

Applications:

1. The functional organization is very rare in Industrial sector.
2. R and D departments, some educational institutes, few specialised departments have functional organization structure.

Differentiate Between Line Organization and Functional Organization

Sr. No.	Line Organization	Functional Organization
1.	Vertical structure.	Horizontal type of structure.
2.	It is the oldest version.	It is developed version.
3.	Simplest type of organization.	Complex type of organization compared to line organization.
4.	Lack of specialization.	Specialization of function is the characteristic.
5.	Also called as Scalar Organization.	Also called as Staff Organization.
6.	High level of discipline.	Discipline is lacking.
7.	Decisions are quick.	Slow decision.
8.	Confusion is less.	Confusion is more.
9.	No knowledge sharing.	Knowledge sharing is there.
10.	Problem of dictatorship.	Problem of ego.

1.9.2.3 Line and Staff Organization

- It is combination of Line and Functional organization.
- It is horizontal and vertical, both, in structure.
- Organizations will be successful only when there is joint work of 'Managers' and 'Executives'.
- Similarly when specialised experts are in discipline and responsible and have less ego problems, then better work performance is sure. This is happening in Line and Staff organization.
- This form of organization, shows characteristics of Line type at certain places and it is also functional one wherever it is desired.

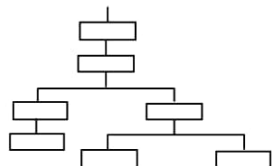


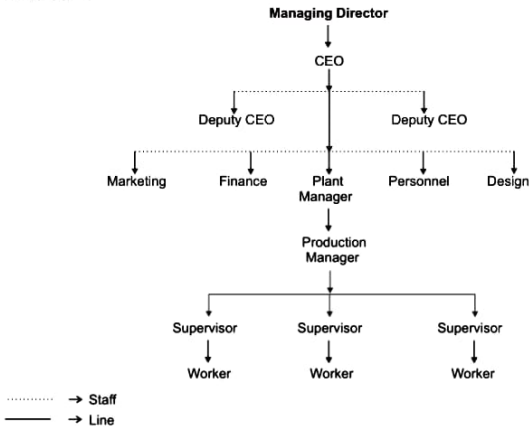
Fig. 1.15

Advantages:

1. It is disciplined and specialised system.
2. Structure of organization is customised as per requirement.
3. Productivity is better compared to both other forms.
4. Decisions are quick and correct.
5. Team work is effective and systematic.
6. Less wastage of resources.
7. Confusion is less.
8. Overlapping and overloading of work is avoided.
9. System of working is smooth.

Disadvantages:

1. Cost of production is more due to good packages to staff.
2. System of work may be disturbed if confusions are more.
3. Sometimes injustice to line people.
4. Discipline is poor as compared to Line organization.
5. Inefficiency of one section may affect performance of the others.
6. Conflicts and negative competitions may trouble working pace and morale of the others.

Illustration of Line and Staff:**Fig. 1.16****Applications:**

1. Medium Scale Industries.
2. Large Scale Industries.
3. Manufacturing and Automobile Sector.

Suitability of Line and Staff Organization for Manufacturing:

1. Manufacturing needs specialized/experts employees. Also they need routine work observing followers. Both kind of employees are available in Line and Staff organization.



2. Manufacturing activity is itself a disciplined one. Irregularities are not tolerable. Line and staff organization has such environment of particularness.
3. In manufacturing, decisions must be quick and correct. In Line and Staff organization decisions are taken in such a way only.
4. Horizontal and vertical, both levels must be there in organization. Such combination of authority is there in Line and Staff organization.
5. Ego problems are not expected in manufacturing function. Line and Staff organization keeps no space for ego.
6. Manufacturing activity needs good kind of team work. It is there in Line and Staff organization.
7. Highly specialized employees helps in rapid growth of organization.
8. Every department has its own value and status. But all are connected together. For example, finance, production, maintenance, marketing etc. Same is seen in Line and Staff organization.

Hence Line and Staff organization is suitable for manufacturing concern.

Difference between Line organization and Line and Staff organization:

Line Organization	Line and Staff Organization
1. It is a scalar organization and simple in structure.	1. Structure of organization is customised as per requirement.
2. It is highly disciplined.	2. Discipline and productivity both are taken care.
3. Variety of responsibilities are on employees.	3. Some employees are specialised and some can do repetitive work.
4. Decisions are very fast but may be wrong sometimes.	4. Decisions are not very slow, but they are more correct.
5. Problem of dictatorship.	5. Professional atmosphere in the work culture.
6. No knowledge sharing.	6. Knowledge sharing is there wherever it is required.
7. Structure of organization is easy to understand.	7. It is complex to understand.
8. Vertical structure.	8. Combination of vertical and horizontal structure.
9. Oldest in nature.	9. Advanced version of organization type.
10. Person is overloaded.	10. Person is utilized properly and effectively with moderate work load.
11. Overlapping of activities.	11. Activities are properly planned.

1.9.2.4 Project Organization

1. The project organization is an inter-organizational team pulled together for a specific purpose.
2. Team members are drawn from the organization's functional units to perform a specific task i.e. project.
3. The organization is temporary in nature.
4. It is formed for the project purpose only.
5. When such a team is organized, then in an original organization 'matrix' type structure is formed.
6. Various forms of project organization:
 - (a) Functional organization
 - (b) Functional matrix
 - (c) Balanced matrix
 - (d) Project matrix
 - (e) Project team

- (a) **Functional Organization:** The project is divided into and assigned to relevant functional areas with co-ordination being carried out by functional and upper levels of management.
- (b) **Functional Matrix:** A person is designated to oversee the project across different functional areas.
- (c) **Balanced Matrix:** A person is assigned to oversee the project and interacts on an equal basis with functional managers.
- (d) **Project Matrix:** A manager is put in charge of a core group of people from several functional areas. All are full time members.

7. **Project oriented organization is one which:**

- Defines management by projects as an organizational strategy.
- Adopts temporary organizations for the performance of complex processes.
- Has an special project management culture.
- Moulds itself for project oriented work.



Fig. 1.17

8. **Objectives:**

- (a) Decentralisation of responsibility.
- (b) Quality assurance by project team work.
- (c) Goal orientation.
- (d) Planning of organizational learning by projects.

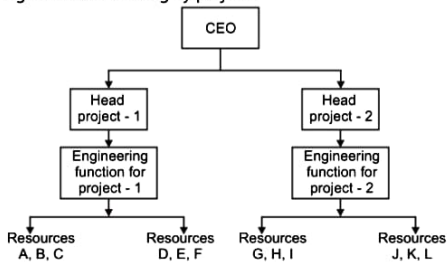


Fig. 1.18

Advantages:

1. No interference to parent organization.
2. Specialised activities with result oriented approach are carried out.
2. Culture of team work is created.
4. Work spectrum expands.



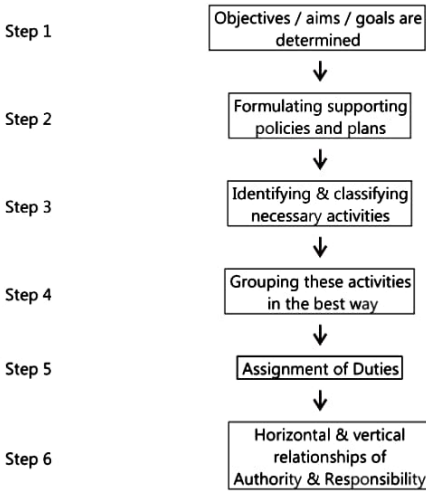
Limitations:

1. Complications of functions are more.
2. Experience of one project may not be useful to other project.
3. Consultation is difficult as you are working on new concepts.
4. Difference of opinions are possible.
5. Heavy pressures on project teams.

CEO: Chief Executive Officer is the head of the company or business unit directly responsible for profit and loss.

CEO is appointed by Board of Directors and has to retain their trust by showing performance on balance sheet as well as companies enhanced goodwill.

1.9.3 Steps in Organization



**1. Objectives / Aims / Goals are determined:**

- Before we start must know our goals.
- This step in any organization defines path of actions.
- Due to this initial step, we get guidelines.
- Activities can be streamlined throughout the work.

2. Formulating Supporting Policies and Plans:

- Skeleton of policies is necessary for satisfying goals.
- Plans initiate actions in an organization.
- Support of policies and plans strengthens focus towards defined objectives.

3. Identifying and Classifying Necessary Activities:

- Numerous activities are listed down.
- To avoid variation and differentiation, their classification is necessary.
- Activities can be considered as per their nature and scope.

4. Grouping these Activities in the Best Way:

- Identified and classified activities are sequentially arranged.
- Grouping is done as per the resource availabilities, priority in work and importance as well.
- Grouping helps to assign people on them.

5. Assignment of Duties:

- Activities / duties are assigned to people.
- Care is taken to satisfy both i.e. requirement of work and human needs.
- Overlapping, underutilization and overloading is avoided while assigning duties.

6. Horizontal and Vertical Relationships of Authority and Responsibility:

- Organization will never work without clear-cut identification of authority and responsibility.
- For performing duty, authority is important.
- To complete the function, responsibility is must.
- When vertical and horizontal structure of authority and responsibility is final then assigned duties will be completed effectively.
- Giving orders, receiving instructions, getting guidance will be effective when such relationships are precisely defined while in organizing.

So, with this any organization can be formed.

1.10 FUNCTIONAL AREAS OF MANAGEMENT**1. Production Management:**

The term 'production' was closely associated with manufacturing physical goods and, therefore, production management was also known as manufacturing management. Today, goods are not only physical goods but also services.

Production is related to both goods and services and, therefore, production management is known as operations management. It deals with conversion of inputs into outputs. It is a "set of components whose function is to transform a set of inputs into some desired output."

"It is the management of productive processes that convert inputs into goods and services." The inputs are the men, material, equipment, technical knowledge etc. The conversion process that transforms the inputs can be physical transformation in manufacturing operations, locational transformation in transportation, exchange transformation in retailing, storage transformation in warehousing, informational transformation in legal firms, physiological transformation in medicine, and gratification transformation in entertainment.



Outputs are the goods and services produced through the conversion process. Outputs also include by-products of goods, whether in the form of pollutants or wastes. This input-output conversion process is also affected by the environmental forces like Government regulations, economic-political-legal framework of the country, policies of competitors, international policies etc. The feedback mechanism helps to know effectiveness of the conversion process and whether or not it requires changes in its components.

Objectives of Production Management:

The objective of the production management is stated as: To produce goods services of right quality and quantity at the predetermined time and pre established cost.

Thus, the objectives of production management are reflected in:

- (a) Right Quality
- (b) Right Quantity
- (c) Predetermined time
- (d) Pre established cost (Manufacturing cost)

(a) Right Quality: The quality of the product is established based upon the customers' needs. Customer's needs are translated into product specifications by the design or engineering department. The manufacturing department then translates these specifications into measurable objectives.

Thus, the cost quality trade off decides the final quality of the product. Thus, a proper balance must be obtained such that the product quality offered to the customer should be within the pre-established manufacturing cost.

(b) Right Quantity: The manufacturing organization should produce the products at the right number. If the products are produced in quantity excess of demand, the capital will block up in the form of inventory and if it is produced in quantity short of demand, there will be shortages of products. Thus, a decision is to be taken regarding how much to produce. (Right quantity)

(c) Manufacturing Costs: Manufacturing costs are established before the product is actually manufactured. The manufacturing department has to manufacture the products at the pre-established cost. In any case, any variation between the actual costs and the standard (pre established) should be kept at minimum.

(d) Manufacturing Schedule: Timeliness of delivery (schedule) is one of the important parameter to judge the effectiveness of production department. There are many reasons like non-availability of materials at right time, absenteeism, machine break down etc. Which affect the timely completion of the products. So the manufacturing department should organize its activities in such a way that the products will be manufactured as per schedule.

To achieve the above objective, the manufacturing/production department has to make the optimum utilization of various inputs like men, material and machine. So to have a better utilization of resources, the production department has to achieve the other objectives, which are lower in the hierarchy. These objectives are called intermediate objectives and are going to optimize the utilization of resources.

Intermediate Objectives:

The intermediate objectives can be stated in terms of:

(a) Machinery and Equipments: The objective concerned to these areas is that the machine and equipment should be such that they should be able to produce the products as per the specifications and accuracy required. The total cost of procurement and running cost should be minimum. Once the machines are procured and put to productive use, then the next objective is to utilize these resources to the maximum extent.

(b) Materials: The materials should be made available when required as per the specifications (shape, size, quality etc.) and at the most economical price. The production department should aim at maximum utilization of the material with minimum wastage and scrap.



- (c) **Manpower:** Manpower is an important resource or input to production and the success of production depends to a greater degree upon the type of manpower an organization possesses. Thus, there should be a perfect matching between the workers and jobs and the manufacturing department climate should be such that the potential skills and energies of the workers should be channelized into constructive outputs. The objectives are set with respect to productivity per worker labour turnover rate, safety and industrial relations etc.
- (d) **Supporting Services:** This helps indirectly to achieve the other objectives and adequate provision of the services helps to utilize other inputs effectively. The objectives should be set for each of the services like water steam, power, material handling etc. Thus, intermediate objectives are supporting to the primary objectives. The achievement of these objectives helps the company to satisfy the customer needs and increase the market share resulting in increased profitability.

2. Financial Management:

All activities (production, marketing or personnel) require constant flow of funds. Finance department takes care of financial requirements of the enterprise. It makes arrangements for acquisition and effective utilization of funds.

With increase in the size of business, its relationship with the internal and external environment, product diversification and differentiation, Government regulations and technological developments, finance manager assumes important role in management of finance. Financial management deals with management of finance. It is "the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations."

Aims of Financial Management:

The aims of financial management should be useful to the firm's proprietors, managers, employees and consumers. For this purpose the only way is maximization of firm's value.

The following aspects have place in maximizing firm's value:

- (a) **Rise in profits:** If the firm wants to maximize its value, it should increase its profits and revenues. For this purpose increase of sales volume or other activities can be taken up. It is the general feature of any firm to increase profits by proper utilization of all opportunities and plans. Theoretically, firm gets maximum profits if it is under equilibrium. At that stage, the average cost is minimal and the marginal cost and the marginal revenues are equal. Here, we can't say the sales because there must be suitable market for the increased sales. Further, the above costs must also be controlled.
- (b) **Reduction in cost:** Capital and equity funds are utilized for production. So all types of steps should be taken to reduce firm's cost of capital.
- (c) **Sources of funds:** It should be decided by keeping in view the value of the firm to collect funds through issue of shares or debentures.
- (d) **Reduce risks:** There would not be profits without risk. But for this reason if more risk is taken, it may become danger to the existence of the firm. Hence, risk should be reduced to minimum level.
- (e) **Long run value:** It should be the feature of financial management to increase the long-run value of the firm. To earn more profits in short time, some firms may do the activities like releasing of low quality goods, neglecting the interests of consumers and employees.

These trials may give good results in the short run. But for increasing the value of the firm in the long run, avoiding; such activities are more essential.

Scope and Functions of Financial Management:

The scope of financial management includes three groups. First – relating to finance and cash, Second – rising of fund and their administration, Third – along with the activities of rising funds, these are part and parcel of total management, Isra Salomon felt that in view of funds utilization third group has wider scope.

It can be said that all activities done by a finance officer are under the purview of financial management. But the activities of these officers change from firm to firm, it become difficult to say the scope of finance.



Financial management plays two main roles, one – participating in funds utilization and controlling productivity, two – Identifying the requirements of funds and selecting the sources for those funds. Liquidity, profitability and management are the functions of financial management. Let us know very briefly about them.

1. **Liquidity:** Liquidity can be ascertained through the three important considerations.
 - (i) **Forecasting of cash flow:** Cash inflows and outflows should be equalized for the purpose of liquidity.
 - (ii) **Rising of funds:** Finance manager should try to identify the requirements and increase of funds.
 - (iii) **Managing the flow of internal funds:** Liquidity at higher degree can be maintained by keeping accounts in many banks. Then there will be no need to depend on external loans.
2. **Profitability:** While ascertaining the profitability, the following aspects should be taken into consideration:
 - (i) **Cost of control:** For the purpose of controlling costs, various activities of the firm should be analyzed through proper cost accounting system,
 - (ii) **Pricing:** Pricing policy has great importance in deciding sales level in company's marketing. Pricing policy should be evolved in such a way that the image of the firm should not be affected.
 - (iii) **Forecasting of future profits:** Often estimated profits should be ascertained and assessed to strengthen the firm and to ascertain the profit levels.
 - (iv) **Measuring the cost of capital:** Each fund source has different cost of capital. As the profit of the firm is directly related to cost of capital, each cost of capital should be measured.
3. **Management:** It is the duty of the financial manager to keep the sources of the assets in maintaining the business. Asset management plays an important role in financial management. Besides, the financial manager should see that the required sources are available for smooth running of the firm without any interruptions.

A business may fail without financial failures. Financial failures also lead to business failure. Because of this peculiar condition, the responsibility of financial management increased. It can be divided into the management of long run funds and short run funds.

Long run management of funds relates to the development and extensive plans. Short run management of funds relates to the total business cycle activities. It is also the responsibility of financial management to co-ordinate different activities in the business. Thus, for the success of any firm or organization financial management is said to be a must.

3. Personnel/Human Resource Management:

Traditionally what was known as personnel management is now replaced with human resource management (HRM) today. Initially, in small organizations all the managerial functions of planning, organizing, staffing, directing, and controlling (for all the functional areas of management) were performed by the managers but with increase in size of the organizations, managers could not look after all the functional areas. Personnel specialists or senior managers were appointed to look into matters related to personnel policies and separate departments called personnel departments were created.

Human Resource Department Performs the Following Functions:

- (a) Human resource planning or manpower planning balances the demand for employees in qualitative and quantitative terms and its supply from various internal and external resources. Internal sources fill organizational posts from within the organization and external sources provide labour from outside sources such as labour market.
- (b) Recruitment analyses requirements of the job, prepares job description and invites applications from those whose qualifications match the job description.



- (c) Selection selects the most suitable person out of those who have applied for the job. Written tests and interviews are conducted to select the suitable candidates.
- (d) Performance appraisal assesses the performance with the targeted performance to check deviations and provide training to improve the performance.
- (e) Training enhances the knowledge and skills of employees. It enables them to effectively manage the organizational positions and promotes their growth. Training programmes can be conducted on-the-job or external agencies can provide training to the employees.
- (f) Rewards deal with the pay structure for each job. Rewards vary with the skill, knowledge and competence for each job position.
- (g) Industrial relations maintain harmonious relations between the management and employees. Grievances or disputes are settled by the personnel manager by following legal provisions and rules.
- (h) Employee communication and participation communicates managerial decisions to employees and allows them to participate in the decision-making processes.
- (i) Personnel records maintain record of employees regarding their qualification, experience and achievements. It is maintained by the personnel department. This serves as the basis for internal recruitment where employees can be placed at jobs within the organization. These records help in matching job description with job specification, that is, matching the requirement of the job with qualifications of the person.

The focus of HRM is growth and development of the organization along with its work force.

Features of HRM:

Following are the Features of HRM:

- (a) It views employees as important organizational resource that is committed to organizational needs and works towards its goals.
- (b) It aims to satisfy individual needs by providing challenging, lucrative and meaningful jobs to employees.
- (c) It follows the concept of 'mutuality' where managers focus on mutual goals, mutual respect, mutual rewards etc.
- (d) It allows employees to participate in the decision-making processes.
- (e) It caters to the interests of people internal (labour force) and external to the organization (customers, suppliers, shareholders etc.)

Objectives of HRM:

HRM aims at the following:

- (a) Effective utilization of human resource.
- (b) Motivate people to make them committed to organizational goals.
- (c) Frame policies and procedures that fulfill the needs of employees.
- (d) Aim at growth and development of employees through teamwork, co-operation, creativity and innovation.
- (e) Maintain human flexibility in the jobs they are placed at and the number of hours they spend on each job to achieve quality management.

4. Marketing Management:

Traditionally, markets were a place for exchange of goods and services between sellers and buyers to the mutual benefit of both. Today, marketing is exchange of values between the seller and the buyer. Value implies worth related to the goods and services being exchanged. The buyer will pay for the goods if they have value for him.

Marketing management is "planning, organizing, controlling and implementing of marketing programmes, policies, strategies and tactics designed to create and satisfy the demand for the firms' product offerings or services as a means of generating an acceptable profit." It deals with creating and regulating the demand and providing goods for which customers are willing to pay a price worth their value.

**Elements of Marketing Management:**

The basic elements of marketing management are:

- (a) **Customer orientation:** The focus of marketing function is to sell goods desired by consumers; the goods that satisfy their needs.
- (b) **Integrated effort:** Marketing function should be co-ordinated with other functional areas of production, finance and personnel management.
- (c) **Profitability:** While the consumer wants a product that satisfies his needs, seller sells a product which provides profit. A successful marketing strategy should provide profits to the marketer along with customer satisfaction.
- (d) **Viability:** The goods should not only earn profits, they should also build reputation of the firm in terms of quantity, quality and the price at which goods are sold.

Marketing Mix:

Marketing plans are made within the constraints of controllable and non-controllable variables. The non-controllable variables are social, technological, political, cultural and legal factors which affect the marketing strategies. Controllable factors are the product, price, promotion and channels of distribution. Marketing mix is the combination of controllable variables that make a successful marketing programme.

- (a) **Product mix:** It deals with physical attributes and benefits of the product. Ownership gives a sense of pride and satisfaction to the consumer and, therefore, the product should be properly designed, coloured and packed.
- (b) **Pricing mix:** Pricing is an important marketing decision. Pricing is affected by factors such as costs, legal framework, prices charged by competitors and the prices that consumers are ready to pay. Price should recover the costs and earn a reasonable return on capital. This ensures long-run survival and growth of the enterprise.
- (c) **Promotion mix:** It refers to communication with the consumers regarding the product. It motivates them to buy the goods.

Sales can be promoted in three ways:

- (a) **Advertisement:** It presents the product details to consumers through media. It is a non-personal means of communication.
- (b) **Personal selling:** The seller directly contacts the buyer and convinces him to buy the goods.
- (c) **Sales promotion:** It supplements advertisement and personal selling as a means of promoting sales. It increases sales by holding contests, lotteries etc. Different combinations of sales promotion techniques can be used at a point of time.

Channel Mix:

After the product is designed, priced and advertised, it arouses consumers' interest to buy. The channel mix identifies the path through which goods are transferred from sellers to buyers. The seller may sell directly to the buyer or through intermediation of wholesalers and retailers.

More than one channel of distribution can be adopted at the same time; for example, a wholesaler can sell through retailers and also directly to consumers. The channel mix selects and maintains the channel to ensure consistency in selling practices followed by the sales people.

1.11 MANAGERIAL SKILLS

Following are the managerial skills:

- (a) Technical skills
- (b) Conceptual skills
 - (i) Decision-making skills
 - (ii) Organizational skills
- (c) Human relation skills
 - (i) Motivating skills
 - (ii) Leadership skills
 - (iii) Communication skills



(a) Technical Skills:

- Manager must know technical things.
- His excellence in technical skills make him perfect in decisions and policies.
- Technically fit manager can handle technicians effectively.
- Knowledge of machines, methods, processes, mechanisms, materials, tools is necessary.

(b) Conceptual Skills:

- These are important skills required in managers.
- To acquire such skills thought process and thinking of the person must be broad and mature.
- It needs application of your intelligence, information and data.
- Conceptual skills can be developed after quality experience.
- These skills cannot be effectively acquired by reading books. It needs exposure to variety of work related to organization, business development, economy, people management etc.

(i) Decision-making Skills:

- Skill of taking quick, correct decision.
- Clarity of work is must.
- Risk taking ability is required.
- Person must have knowledge, logic and experience.

(ii) Organizational skills:

- This skill make you perfect person in team of people in the organization.
- Perfect balance of authority and responsibility is needed.
- You have to be expert in handling both seniors and subordinates.
- Knowledge of organization is must.

(c) Human Relation Skills:

- Manager deals with people. Hence people skills and human relation skills are necessary in day to day activities.
- These skills are necessary to deal with people effectively for getting work done smoothly.

(i) Motivating skills:

- Few subordinates always need motivation from manager.
- Due to motivation, people give more productivity.

(ii) Leadership skills:

- Leading team is not easy. But manager has to do this for the progress of the organization.
- Initiative, team work, handling problems, solutions to difficulties, use of skills of others, aer some of the characteristics that help to develop leadership skills.

(iii) Communication Skills:

- Communication skills accelerates growth of manager.
- Manager cannot be perfect without communication skills.
- Expertise in speaking, listening, writing, body language, meetings, drafting, gestures always help to make you successful manager.

**Summary**

Management is the art and science working for the functioning of organizations. It is nothing but getting things done by others. Many scientists defined management by different ways. Management has key role in the organization. There are various inputs and outputs to management. One should understand duties of management. Management is an economic resource. It is goal oriented. Henry Fayol described 14 principles of management. There are three levels of management like top level, middle level and bottom level. Management and administration are the terms concerned with top management. Planning, organizing, staffing, etc. are the functions of management. Planning is nothing but deciding in advance what to do, how to do and when to do. Organizing is the activity of co-ordinating and directing the company's resources to achieve goals. Directing function assists in providing correct ways of working. Staffing means everything about people working in the organization. Controlling function primarily needs standards, objectives and goals. Line, Staff, Line and Staff, Project are the types of organization. Production, Marketing, Human Resource, Finance are the functional areas of management.

Multiple Choice Questions

- Following are mentioned few duties which is not the duty of management?
 - To keep stability
 - To motivate staff
 - To reduce wastages
 - To do manufacturing
- Out of mentioned below, which is not the output of management?
 - Desired results
 - Goal achievement
 - Technology
 - Status in market
- Getting the things done from others is called as ____
 - Management
 - Adjustment
 - Organization
 - Direction
- What is management?
 - It is a science
 - It is an art
 - both (a) and (b) are wrong
 - both (a) and (b) are correct
- Out of mentioned below, which is not the input of management?
 - Human resources
 - Financial resources
 - Growth
 - Technology
- When there is no management, then what will not happen?
 - Overlapping of duties
 - Wastages of resources
 - Poor functioning of executives
 - Mature work culture
- Management is there from ____
 - After 1700
 - After 1800
 - After 1900
 - Historical period
- Match the pairs:
 - Adam Smith
 - F.W. Taylor
 - Maslow
 - Henry Fayol
 - Need Hierarchy
 - Economics
 - Principles of Management
 - Scientific Management
 - 1 - (ii), 2 - (iv), 3 - (i), 4 - (iii)
 - 1 - (ii), 2 - (iii), 3 - (iv), 4 - (i)
 - 1 - (iv), 2 - (iii), 3 - (i), 4 - (ii)
 - 1 - (iv), 2 - (i), 3 - (ii), 4 - (iii)



9. Mc Gregor has given his contribution in _____.
(a) Concept of bureaucracy (b) Motion study
(c) Theory X and Theory Y (d) Time study
10. F.W. Taylor has given his highest contribution in _____.
(a) Economics and management (b) Principles of management
(c) Functions of management (d) Scientific management
11. Principles of management is the contribution of _____.
(a) Adam Smith (b) Henry Fayol
(c) Mary Parker (d) F.W. Taylor
12. Below are mentioned 'stages' of evolution in management - which is not correct?
(a) The beginning of management thought (b) The war management concept
(c) The pre war management concept (d) Management theory in post war era
13. "Management is getting the things done by others" - is said by _____.
(a) Henry Fayol (b) Drucker
(c) Mery Parker (d) Fayol
14. Management is not _____.
(a) An economic resource (b) A system of authority
(c) A class or elite (d) All are wrong
15. Management is _____.
(a) Methodology (b) Social science
(c) Team activity (d) All are correct
16. Henry Fayol has given _____ principles of management.
(a) 14 (b) 12
(c) 16 (d) 13
17. Following is not the principle of management.
(a) Initiative (b) Scalar chain
(c) Staffing (d) Responsibility
18. Following is not the principle of management.
(a) Team work (b) Organizing
(c) Division of work (d) Remuneration
19. Following is not the principle of management.
(a) Centralization (b) Authority
(c) Decentralization (d) Esprit de corps
20. Following is not the principle of management.
(a) Authority (b) Discipline
(c) Equity (d) Planning
21. Position, designation, seniority defines _____.
(a) Centralization (b) Initiative
(c) Authority (d) Scalar chain
22. Meaning of _____ is right to command.
(a) Stability (b) Authority
(c) Scalar chain (d) Initiative



23. Which statement is wrong?
(a) Authority can not be delegated (b) Authority is the power to act
(c) Higher the post, higher is the authority (d) Authority is right to command
24. What is the second side of coin of authority?
(a) Position (b) Power
(c) Responsibility (d) Remuneration
25. Discipline starts from _____
(a) Top to Bottom (b) Bottom to top
(c) From middle (d) All are wrong
26. Which statement is wrong?
(a) Discipline has no excuses (b) Organization needs discipline
(c) Discipline starts from bottom to top (d) Lack in discipline leads to loss of control
27. When many functions are controlled by a central authority, it is called as _____
(a) Authority (b) Management
(c) Discipline (d) Centralization
28. _____ gives power in the hands of center.
(a) Discipline (b) Centralization
(c) Authority (d) Responsibility
29. Which statement is wrong?
(a) Controls are concentrated at the centre
(b) Many functions are controlled by a central authority
(c) Centralization gives power in the hands of centre
(d) Centralization considers local level issues always
30. Out of following which is not the correct advantage of 'Division of Work'?
(a) Extra pressure of work on very few is reduced (b) Monopoly in skills by few is reduced
(c) Quality of work gets reduced (d) Work gets completed in less time.
31. To start with enthusiasm is called as _____
(a) Initiative (b) Dynamism
(c) Leadership (d) Management
32. Which statement is wrong?
(a) Initiative leads into new horizons of work
(b) Support by others is not expected after anybody's initiative
(c) Initiative may solve difficult problems
(d) Someone should take initiative
33. Remuneration is not based on _____
(a) Performance (b) Responsibility
(c) Emotions (d) Designation
34. Requirement of remuneration is not _____
(a) It must be in time (b) Employee satisfaction
(c) Higher performance - higher remuneration (d) Based on reference and contacts



35. Which statement is wrong?
- (a) In team work, there is more contribution from many
 - (b) Talent of each member cannot be used
 - (c) Teamwork creates good work culture
 - (d) Big task is easier due to teamwork
36. Due to unity of direction _____
- (a) Deviation from the defined path is prevented
 - (b) Work is dividend
 - (c) Authority is delegated
 - (d) Teams are formed
37. Concentration in work is possible by _____
- (a) Authority
 - (b) Responsibility
 - (c) Stability
 - (d) Unity of command
38. Equity is seen by few ways. Which is not the correct from following?
- (a) Pickup facility
 - (b) Dress code
 - (c) Canteen facility
 - (d) Chair and Cabin
39. Which statement is wrong?
- (a) Equity means equal wages
 - (b) Equity gives dignity
 - (c) Equity means no bias
 - (d) Equity gives good work culture
40. What is Esprit de Corps?
- (a) It is function of management
 - (b) It is principle of management
 - (c) It is management concept in Russia
 - (d) It is name of company
41. Out of following which is not the function of management?
- (a) Planning
 - (b) Controlling
 - (c) Discipline
 - (d) Directing
42. Out of following which is not the function of management?
- (a) Decision making
 - (b) Remuneration
 - (c) Organizing
 - (d) Staffing
43. Deciding in advance what to do, how to do and when to do is _____
- (a) Planning
 - (b) Organizing
 - (c) Decision-making
 - (d) Motivating
44. Which is not the correct type of plan?
- (a) Corporate plan
 - (b) Action plan
 - (c) Operational plan
 - (d) Management plan
45. Why plan fails?
- (a) Lack of knowledge
 - (b) Insufficient data
 - (c) Over confidence
 - (d) All are correct
46. Which statement is wrong?
- Plan fails due to _____
- (a) No feedback system
 - (b) Less devotion to work
 - (c) Conspiracy from enemy and bad luck
 - (d) Incorrect person to do plan



47. Out of following which is not the objective of good plan?
(a) To reduce uncertainty (b) To increase productivity
(c) To avoid heavy mental pressures (d) To get money
48. Which statement is wrong?
(a) Planning affects performance (b) Planning is sometimes essential
(c) Planning puts focus on objectives (d) Planning is necessary to facilitate control
49. Which statement is wrong?
(a) Proper planning helps in motivating (b) Planning reduces risk
(c) Planning is thinking after failures (d) Planning improves the processes
50. First step in planning is:
(a) Establish goals (b) Identify resources
(c) Prioritize goals (d) Establish tasks
51. Which is the next function after planning?
(a) Scheduling (b) Organizing
(c) Staffing (d) Decision-making
52. 'The assignment of each grouping to a manager with the authority necessary to supervise it', is called as ____
(a) Planning (b) Organizing
(c) Staffing (d) Controlling
53. Out of following, which is the first activity in organizing?
(a) Assigning the activities to managers (b) Grouping the activities
(c) Delegation of authority to managers (d) Identifying the activities
54. Providing correct way of working is ____
(a) Planning (b) Organizing
(c) Directing (d) Controlling
55. Which statement is wrong?
(a) Directing is one time activity
(b) Directing should not be autocratic
(c) Directing needs good vision in leadership
(d) Directing needs communication and motivation as supportive functions
56. ____ is like a brake system in automobiles
(a) Directing (b) Planning
(c) Controlling (d) Management
57. Work on correct track with correct speed is possible by ____
(a) Planning (b) Organizing
(c) Directing (d) Controlling
58. Out of following which is not the characteristic of controlling?
(a) It is a starting function (b) It needs at any time
(c) It is flexible (d) It is dynamic in nature
59. Techniques not used for control function are ____
(a) CPM (b) PERT
(c) Audit (d) Budget



60. Control system having feedback is _____
- (a) Reverse system
 - (b) Feedback control
 - (c) Open loop system
 - (d) Closed loop system
61. First step in decision-making is _____
- (a) Recognize the problem
 - (b) Evaluation
 - (c) Analysis
 - (d) Finding out alternatives
62. Which of the following is the advantage of effective decision-making?
- (a) No delays
 - (b) Quick actions
 - (c) No confusion
 - (d) All are correct
63. Which is not the technique for effective decision-making in core company?
- (a) Linear programming
 - (b) Simulation
 - (c) Outsourcing
 - (d) Dynamic programming
64. Employees get energized due to _____
- (a) Controlling
 - (b) Planning
 - (c) Motivation
 - (d) Decision-making
65. Scientific management theory started from _____.
- (a) 1900
 - (b) 1920
 - (c) 1870
 - (d) 1890
66. Motion study is associated with _____.
- (a) Adam Smith
 - (b) Frank
 - (c) Gilberth
 - (d) Maslow
67. Behavioural Management Theory is put up by _____
- (a) Maslow
 - (b) Mary Parker
 - (c) Max Weber
 - (d) Gilberth
68. Extra pressure of work on 'very few' is avoided in _____
- (a) Authority
 - (b) Centralization
 - (c) Division of work
 - (d) None
69. _____ anticipates problems and uncertainties.
- (a) Planning
 - (b) Controlling
 - (c) Motivation
 - (d) Directing
70. Directing needs good _____ in _____.
- (a) Coordination, Control
 - (b) Vision, Leadership
 - (c) Control, Vision
 - (d) None
71. Control is _____ in nature and it needs at _____ time.
- (a) Static, any
 - (b) Static, starting
 - (c) Dynamic, any
 - (d) Dynamic, starting
72. What is the next step after finding the alternatives?
- (a) Critically evaluation of the alternatives
 - (b) Analysis
 - (c) Recognizing the problem
 - (d) Implementing the alternative
73. Which is the important factor in deciding structure of organization?
- (a) Type of product
 - (b) Specialization
 - (c) Functions
 - (d) All



74. Vertical dimension of organization structure defines
- (a) Departmentation
 - (b) Hierarchy
 - (c) Both hierarchy and departmentation
 - (d) None of the above
75. Scalar organization is also known as
- (a) Line organization
 - (b) Project organization
 - (c) Staff organization
 - (d) Functional organization
76. Line organization is of _____ type.
- (a) Horizontal
 - (b) Vertical
 - (c) Both
 - (d) None
77. Decisions are very quick in _____
- (a) Line organization
 - (b) Functional organization
 - (c) Line and staff organization
 - (d) Project organization
78. Which is not the correct advantage of 'Line organization'?
- (a) It is simple
 - (b) Confusion is less
 - (c) Specialised
 - (d) Easy to understand
79. The structure of organization depends on _____
- (a) Scope of functions
 - (b) Span of control
 - (c) Number of employees
 - (d) All the above
80. The structure of organization is not dependent on _____
- (a) Span of control
 - (b) Communication
 - (c) Profit margin
 - (d) Resources available
81. Which are the essentials of organization?
- (a) Organizational chart
 - (b) Delegation
 - (c) Integration
 - (d) all
82. Which is unimportant word in the definition of organization?
- (a) Group of persons
 - (b) Profit
 - (c) Common aim
 - (d) United together
83. Following group is not an organization.
- (a) Group of 15 people on bus stop
 - (b) Employees doing discussions in work area
 - (c) Meeting members in a company
 - (d) Labour working on a site
84. Which are the aims of forming organization?
- (a) Teamwork
 - (b) Combined efforts
 - (c) Responsibility on all
 - (d) All are correct
85. Which statement is wrong?
- (a) Organization is a group of working people
 - (b) It has aims and objectives
 - (c) Organization has no boundaries
 - (d) Organization is a system
86. Military type organization is seen in _____
- (a) Line
 - (b) Staff
 - (c) Line and Staff
 - (d) Project



- 87. Which is the first step in organization forming?
 - (a) Assignment of duties
 - (b) Aims are determined
 - (c) Identifying activities
 - (d) Formulating plans
- 88. Structure of organization is represented by _____.
 - (a) Organization chart
 - (b) Organization brochure
 - (c) Organization draft
 - (d) None of the above
- 89. Project organization has few forms. Which is correct one?
 - (a) Balanced matrix
 - (b) Project matrix
 - (c) Functional matrix
 - (d) All
- 90. Which is the correct limitation of project organization?
 - (a) Heavy pressures of work
 - (b) Complication of functions
 - (c) Differences of opinions
 - (d) All
- 91. Where line organization is applicable?
 - (a) Workshops
 - (b) Small firms
 - (c) Small process industries with automation
 - (d) All
- 92. Functional organization is also called as _____.
 - (a) Line organization
 - (b) Staff organization
 - (c) Project organization
 - (d) None of the above
- 93. Functional organization is _____.
 - (a) Horizontal
 - (b) Vertical
 - (c) Both (a) and (b)
 - (d) None
- 94. Which is the correct advantage of staff organization?
 - (a) Performance better than line
 - (b) Standardization in process
 - (c) More productivity than line
 - (d) All
- 95. Which is not the correct disadvantage of staff organization?
 - (a) Discipline is lacking
 - (b) Lack of specializations
 - (c) Ego of specialty
 - (d) Difficult to handle experts
- 96. Line and Staff organization is _____.
 - (a) Horizontal
 - (b) Vertical
 - (c) Both Horizontal and Vertical
 - (d) None
- 97. Which organization is temporary in nature?
 - (a) Line
 - (b) Staff
 - (c) Line and Staff
 - (d) Project
- 98. Which is not the correct disadvantage of "Line organization"?
 - (a) Poor performance
 - (b) Lack of specialization
 - (c) Overlapping of activities
 - (d) Nobody is overloaded
- 99. At which place line organization is not possible?
 - (a) Small workshops
 - (b) Tiny firms
 - (c) Military department
 - (d) Government company
- 100. _____ is a process of dividing large organization into small and flexible administrative units
 - (a) Departmentation
 - (b) Defragmentation
 - (c) Divisions formation
 - (d) None



101. 'Car division' in Tata Motors is example of _____
- (a) Departmentation by product (b) Departmentation by function
(c) Departmentation by process (d) None
102. Which statement is wrong?
In product type departmentation:
- (a) Attention is given to the product
(b) Product may become brand name
(c) People become expert in the work allotted to them
(d) No duplication of work
103. 'Sales Department' in Nokia is the example of _____
- (a) Departmentation by product (b) Departmentation by process
(c) Departmentation by function (d) None
104. 'Heat treatment' shop in Kirloskar, is the example of _____
- (a) Departmentation by product (b) Departmentation by process
(c) Departmentation by function (d) None
105. Which is the principle of organization?
- (a) Authority and responsibility (b) Span of control
(c) Delegation (d) all
106. 'Number of subordinates handled by one manager effectively' is called as _____
- (a) Delegation (b) Responsibility
(c) Span of control (d) None
107. _____ check the result, _____ shows the result
- (a) Authority, responsibility (b) Responsibility, Authority
(c) Authority, Authority (d) Responsibility, Responsibility
108. Which is not the advantage of delegation?
- (a) Work load is reduced (b) Stress level on manager reduces
(c) Work can be finished in time (d) Controls from centre increases
109. Ability to adjust, change, bend is _____
- (a) Flexibility (b) Balance
(c) Stability (d) Ability
110. Following is not the type of communication.
- (a) Oral (b) Written
(c) Horizontal (d) Clear
111. 'Instructions' is the _____ communication.
- (a) Upward (b) Downward
(c) Informal (d) Horizontal
112. 'Meeting' is the _____ communication.
- (a) Formal (b) Non-verbal
(c) Written (d) both (b) and (c)
113. 'Request' is the _____ communication.
- (a) Upward (b) Downward
(c) Both (a) and (b) (d) None



- 114. Which is barrier in communication?
 - (a) Language problem
 - (b) Poor knowledge
 - (c) Confused information
 - (d) all
- 115. People, structure, departments, functions form into _____.
 - (a) Management
 - (b) Organization
 - (c) Team
 - (d) None
- 116. While assigning duties following must be avoided.
 - (a) Overlapping
 - (b) Under utilization
 - (c) Overloading
 - (d) All
- 117. Organization will never work without clear cut identification of _____ and _____.
 - (a) Payment, bonus
 - (b) Authority, Responsibility
 - (c) Duty, Responsibility
 - (d) Authority, Order
- 118. Network of formal relationships is _____.
 - (a) Organizational structure
 - (b) Essentials for organization
 - (c) Organizational chart
 - (d) None
- 119. Each one is accountable to immediate senior authority in _____ organization.
 - (a) Line
 - (b) Staff
 - (c) Project
 - (d) None
- 120. "Everybody is smart; difficult to handle experts" is observed in _____ organization.
 - (a) Line
 - (b) Line and Staff
 - (c) Staff
 - (d) None
- 121. A person is assigned to oversee the project and interacts on an equal basis with functional managers in _____.
 - (a) Functional matrix
 - (b) Balanced matrix
 - (c) Project matrix
 - (d) None
- 122. Due to departmentation _____.
 - (a) People become specialised
 - (d) Accountability of work is not easier
 - (c) More overlapping of work
 - (d) Control in work is difficult
- 123. _____ gives weightage to information.
 - (a) Departmentation
 - (b) Authority
 - (c) Responsibility
 - (d) Delegation
- 124. Authority enjoys _____ and _____.
 - (a) Duty, responsibility
 - (b) Designation, responsibility
 - (c) Status, dignity
 - (d) None
- 125. Referent Authority has _____.
 - (a) Use of punishment
 - (b) Use of award
 - (c) Use of skill
 - (d) Use of influence
- 126. Some of my repetitive and easier work is allotted to my junior and now I am busy in some important work. What is this?
 - (a) Division of work
 - (b) Delegation
 - (c) Use of power
 - (d) Exploitation
- 127. "What's App" is _____ communication.
 - (a) Formal
 - (b) Informal
 - (c) Oral
 - (d) All
- 128. Staff includes _____.
 - (a) Selection
 - (b) Training
 - (c) Promotions
 - (d) All the above



129. Staffing deals with _____
(a) Manpower (b) Materials
(c) Travelling arrangement (d) Production Planning
130. Staffing is associated with
(a) Marketing (b) OR
(c) HR (d) Finance
131. Training activity is more concerned with
(a) Process planning (b) Finance
(c) Staffing (d) None of the above
132. Specify the correct flow: (1) Selection, (2) Interview, (3) Advertisement, (4) Vacancy created, (5) Offer letter, (6) Training, (7) Joining
(a) 1-2-3-4-5-6-7 (b) 2-4-3-1-5-7-6
(c) 4-3-2-1-5-7-6 (d) 4-2-3-1-5-6-7
133. Following is not the characteristic of management.
(a) Catalyst (b) Goal oriented
(c) Authority (d) Acceptance
134. Management is _____
1. continuous process
2. goal oriented
(a) only 1 correct (b) only 2 correct
(c) both correct (d) both incorrect
135. Management
1. Works like unifying force
2. Shows harmony effect
(a) only 1 correct (b) only 2 correct
(c) both correct (d) both incorrect
136. Management is _____ subject.
(a) Multidisciplinary (b) Disciplinary
(c) Converging (d) None of the above
137. Following subject is part of the management.
(a) Sociology (b) Public administration
(c) Psychology (d) All
138. Following is the conceptual managerial skill.
(a) Decision-making (b) Motivating
(c) Communication (d) Leadership
139. Following is not the human relations managerial skill.
(a) Communicating (b) Leadership
(c) Organizational (d) Motivating
140. Skill of motivation comes under _____
(a) Technical (b) Conceptual
(c) Human Relation (d) None of the above
141. Decision-making skill comes under _____
(a) Technical skills (b) Conceptual skills
(c) Human Relations skills (d) None of the above
142. Organization skill comes under _____
(a) Technical (b) Conceptual
(c) Human Relations (d) None



- 143. Leadership skill comes under _____.
 - (a) Technical
 - (b) Conceptual
 - (c) Human Relations
 - (d) None
- 144. Strategic planning decides ____ goals.
 - (a) Major
 - (b) Minor
 - (c) All
 - (d) All Incorrect
- 145. Tactical planning decides the ____ use of resource for achieving ____ goals.
 - (a) Summarized, Few
 - (b) Detailed, Each
 - (c) Detailed, Main
 - (d) Summarized, Each
- 146. Strategic planning is ____.
 - 1. done at higher level of management
 - 2. more uncertain
 - (a) 1 correct
 - (b) 2 correct
 - (c) Both correct
 - (d) Both wrong
- 147. Strategic planning is ____.
 - 1. Short term
 - 2. More uncertain
 - (a) Only 1 correct
 - (b) Only 2 correct
 - (c) Both correct
 - (d) Both wrong
- 148. Strategic planning is ____.
 - 1. More detailed
 - 2. Less uncertain
 - (a) Only 1 correct
 - (b) Only 2 correct
 - (c) Both correct
 - (d) Both wrong
- 149. Tactical planning is ____.
 - 1. Long term
 - 2. More detailed
 - (a) Only 1 correct
 - (b) Only 2 correct
 - (c) Both correct
 - (d) Both wrong
- 150. Production management is also known as _____.
 - (a) Operations management
 - (b) Finance management
 - (c) HR management
 - (d) None of the above
- 151. Objectives of production management are _____.
 - (a) Right Quality and Quantity
 - (b) Predetermined Time
 - (c) Pre-established Cost
 - (d) All the above
- 152. While ascertaining profitability, the following aspects must be considered
 - 1. Cost of control
 - 2. Pricing
 - 3. Forecasting of future profits
 - 4. Measuring the cost of capital
 - (a) All the above
 - (b) 1 & 2
 - (c) 3 & 4
 - (d) 1 & 3
- 153. Effective utilization of human resource is object of _____.
 - (a) Finance
 - (b) HRM
 - (c) Operations
 - (d) Marketing
- 154. Marketing is exchange of values between the _____ and the _____.
 - (a) Production & Purchasing
 - (b) Seller & Buyer
 - (c) Input & Output
 - (d) None of the above
- 155. Customer orientation, integrated effort, viability are the basic elements of _____.
 - (a) Production management
 - (b) Finance
 - (c) Marketing management
 - (d) HRM



156. Sales cannot be promoted by _____
 (a) Advertisement (b) Personal Selling
 (c) Design (d) Sales promotion
157. Marketing mix is not the combination of _____
 (a) Product Mix (b) Pricing Mix
 (c) Promotion Mix (d) Advertisement
158. Reputation build is concerned with _____
 (a) Profitability (b) Customer orientation
 (c) Viability (d) None of the above

Answers

1. (c)	2. (c)	3. (d)	4. (d)	5. (a)	6. (d)	7. (d)	8. (a)	9. (c)	10.(d)
11.(b)	12.(b)	13.(c)	14.(d)	15.(d)	16.(a)	17.(c)	18.(b)	19.(c)	20.(d)
21.(c)	22.(b)	23.(a)	24.(c)	25.(a)	26.(c)	27.(d)	28.(b)	29.(d)	30.(c)
31.(a)	32.(b)	33.(c)	34.(d)	35.(b)	36.(a)	37.(c)	38.(d)	39.(a)	40.(b)
41.(c)	42.(b)	43.(a)	44.(c)	45.(d)	46.(c)	47.(d)	48.(b)	49.(c)	50.(a)
51.(b)	52.(b)	53.(d)	54.(c)	55.(a)	56.(c)	57.(d)	58.(a)	59.(d)	60.(d)
61.(a)	62.(d)	63.(c)	64.(c)	65.(d)	66.(c)	67.(b)	68.(c)	69.(a)	70.(b)
71.(c)	72.(a)	73.(d)	74.(b)	75.(a)	76.(b)	77.(a)	78.(c)	79.(d)	80.(c)
81.(d)	82.(b)	83.(a)	84.(d)	85.(c)	86.(a)	87.(b)	88.(a)	89.(d)	90.(d)
91.(d)	92.(b)	93.(a)	94.(d)	95.(b)	96.(c)	97.(d)	98.(d)	99.(d)	100.(a)
101.(a)	102.(d)	103.(c)	104.(b)	105.(d)	106.(c)	107.(a)	108.(d)	109.(a)	110.(d)
111.(b)	112.(a)	113.(a)	114.(d)	115.(b)	116.(d)	117.(b)	118.(c)	119.(a)	120.(c)
121.(b)	122.(a)	123.(b)	124.(c)	125.(d)	126.(b)	127.(b)	128.(d)	129.(a)	130.(c)
131.(c)	132.(c)	133.(d)	134.(c)	135.(c)	136.(a)	137.(d)	138.(a)	139.(c)	140.(c)
141.(b)	142.(b)	143.(c)	144.(a)	145.(b)	146.(c)	147.(b)	148.(d)	149.(b)	150.(a)
151.(d)	152.(a)	153.(b)	154.(b)	155.(c)	156.(c)	157.(d)	158.(c)		



Planning and Organizing at Supervisory Level

Weightage of Marks = 14, Teaching Hours = 08

Syllabus

Planning at Supervisory Level

- 2.1 Planning by Supervisor.
- 2.2 Planning Activities, Detailing and following of Each Step.
- 2.3 Prescribing Standard Forms for Various Activities.
- 2.4 Budgeting for Materials and Manpower.

Organizing at Supervisory Level

- 2.5 Organizing the Physical Resources.
- 2.6 Matching Human Need with Job Needs.
- 2.7 Allotment of tasks to individuals and Establishing Relationship among persons Working in a Group.

About This Chapter

After reading this chapter, the students will able to,

- Differentiate the nature of planning and planning activities for the given situation.
- Suggest the stepwise procedure to complete the given activity in the shop floor.
- Prepare materials and manpower budget for the given production activity.
- Describe with block diagrams the organization of the physical resources required for the given situation.
- Describe the human needs to satisfy the job needs for the specified situation.
- List the tasks tasks to be done by the concerned individuals for completing the given activity.

PLANNING AT SUPERVISORY LEVEL

2.1 PLANNING BY SUPERVISOR

When an organization creates a strategic plan, it defines its long-term goals and mission. To achieve these goals, it must next define the necessary daily operations and participating groups that will make it come to fruition. This is operational planning and supervisors play a key role in the function, and success, of such planning.

Manpower:

Operational planning requires an analysis of manpower needs. A supervisor will determine how many players he needs, as well as what skills each player will bring to the project. If there are not enough in-house employees to fulfill the tasks at hand, the supervisor will need to recruit additional staff. This may translate into hiring full-time personnel, or utilizing a temporary agency if the project is not long-term. He will create a job description, propose compensation and interview prospective workers. The supervisor will assemble a team, apprise team members of the goals and ensure all team members can work cohesively toward the common goal.

Scheduling:

Once the manpower needs have been addressed, the supervisor will set a schedule based on the production needs. Scheduling is an integral component of a successful project. Different teams are co-dependent on the completed work of others, so timing can be critical. If production falls behind, the supervisor must react quickly and make scheduling adjustments to stay on course. Scheduling is also a critical factor in tracking a project budget. If the team falls behind in production, overtime may need to be approved to catch up. A supervisor must weigh the pros and cons of going into overtime vs. hiring additional staff to work.

Communication:

Communication may be the most key role of the supervisor in operational planning. To function effectively, a team needs a comprehensive understanding of the long- and short-term goals and the processes by which it will fulfill those goals. Team members need clear, concise instructions on expectations and duties, as well as timely feedback once production begins. The supervisor must answer questions as well as relay adjustments that need to be made. He also needs to report progress to upper management on a regular basis, as well as interact with other supervisors to ensure project continuity.

Oversight:

A good supervisor always knows where his project stands at any time. Though he performs an oversight role, he needs to become hands-on if a situation arises. It is the responsibility of the supervisor to ensure quality standards are met and project deadlines are realized. The supervisor must monitor the performance of each team member to ensure the employee stays focused on the end results and works in tandem with other team members. If an employee lapses in his duties, the supervisor must address and rectify the situation quickly before it affects production.

2.1.1 Supervisory Planning for Resource Use

The main parameters are mentioned below:

1. Full use of human resources.
2. Efficient use of space.
3. Employee work schedules.
4. Use of other major physical resources.
5. Safe working environment.
6. Improvement in work procedures and methods.
7. Use and security of materials, supplies and data.

Full Use of Human Resources:

- Find out plans for employees recruitment, selection, training, promotion etc.
- Use correct person at correct place.
- Train to those who are lacking skills.
- Assist employees as per their SWOT (Strength – Weakness – Opportunity – Threat) analysis.
- Support weak employees.
- Motivate subordinates for better output.
- Use skills of employees effectively.

Efficient Use of Space:

- Use space of material movement, storage, safe working, open space etc.

Employees Work Schedules:

- Allot proper work to every employee.
- Use their time effectively.
- Consider absenteeism and use alternative employee.
- Plan overtime if work increases.
- Do shift time management.

Use of Other Major Physical Resources:

- Material planning is important to improve productivity.
- Machine utilization also needs proper planning by supervisor.

Safe Working Environment:

- Plan for safe working practices.
- Plan for training of employees for their safety.
- Plan to make precautions at the shop floor.

Improvement in Work Procedures and Methods:

- Method study should be planned.
- Also plan work study techniques.
- Plan work methods in such a systematic way that there will be saving of time.

Use and Security of Materials, Supplies and Data:

- Careful planning of security of materials.
- Supervisor is responsible for data security.
- Supervisor should plan every item of material regarding its use and security.

2.1.2 Advantages of Planning by Supervisor

1. It gives direction to workers.
2. Planning can reduce the impact of change.
3. It reduces waste.
4. Planning establishes objectives of standards that facilitate control.
5. Due to planning there is better utilization of resources.
6. Planning by supervisor gives economy in operations. Because he avoids unnecessary activities on shop floor.
7. Planning minimizes future uncertainties.
8. Planning promotes growth and improvement.
9. Planning by supervisor prevents hasty judgements.
10. Planning by supervisor encourages innovative thoughts.
11. Planning creates forward looking attitude in team members.
12. Once supervisor plans the operations, the efficient methods can be developed.
13. Problematic situations can be handled properly if rest of the things are planned properly.

2.1.3 Limitations of Planning by Supervisor

1. When there is change in technology, the complete planning fails.
2. Due to planned route of work, there can be problem when emergency situation arises.
3. Supervisor may lose more time to do precise planning.
4. A systematic plan using scientific methods is costly.
5. Supervisor may remain in the false sense of security. Because things in future cannot be predicted perfectly.
6. Due to tight planning, the operations are decided in prior and hence there is no flexibility in the work.
7. At many places, planning is not suitable.

2.1.4 Characteristics of Planning by Supervisor

1. It is an interdependent process.
2. Growth and prosperity of the department depends upon quality of planning.
3. Planning is nothing but looking into the future.
4. Planning is a continuous process.
5. Planning by supervisor is done for a specific period.
6. Planning involves predetermined line of action.
7. Planning integrates various activities of the department.

2.1.5 Difference between Supervisory Planning and Managerial Planning

Sr. No.	Supervisory Planning	Managerial Planning
1.	Supervisors make short-term planning.	Managers make long-term planning.
2.	Example: Scheduling daily activities, securing raw material, completing production targets etc.	Example: Policy decisions, employee hiring, purchasing etc.
3.	Supervisors looks into work of his subordinates. He takes care of work flow. Subordinates report him about their work.	Managers may or may not have employees reporting directly to him. He looks after department.
4.	Supervisors are internally focused in planning.	Managers are externally focused in planning.
5.	Supervisors manage groups of employees.	Managers deals with projects.
6.	Supervisors' duties are focused on internal operations.	Managers' focuses on strategic plans.
7.	Supervisors plans budget related to manpower, overhead, raw material and other small expenses.	Manager plans large budgets for capital projects.

2.2 PLANNING ACTIVITIES, DETAILING AND FOLLOWING OF EACH STEP

Information Needed for Planning Activities:

1. Number of jobs to be done.
2. Quality of work expected.
3. Available resources like workers, staff, machines, equipments, tools etc.
4. The systematic procedure/sequence of operations.
5. Time expectation.
6. Dependency of operation for smooth flow of work.

Detailing or Steps in Planning Activities:

When we go for detail planning, following steps are involved:

1. Study of requirements.
2. Understand the targets.
3. Study of drawings and designs.
4. Deciding action plan.
5. Selection of machines.
6. Decision about equipments, tools etc.

7. Selection of raw materials and supporting materials.
8. Finding out suitable persons to work.
9. Allocate time for each operation.
10. Make arrangements for assisting other dependent operations.
11. Make alternative plans.
12. Assigning work to people.
13. Deciding reporting authority for each activity.
14. Rescheduling if required.
15. Confirming authorities and responsibilities.
16. Planning documentation and preparing formats for that.
17. Readiness for any uncertain happening.
18. Plan of communication method.
19. Arrangement for measuring work performance and quality of work.

The Steps to be Followed After Planning:

1. Supervisor must study the work order. He may take help of experts if he is not clear or may ask seniors regarding the requirements.
2. Targets are in terms of quantity, date of completions, quality to be achieved, cost to be saved etc. Supervisor has to be keen on following all these targets. Continuous follow-up will help to follow this task.
3. Action plan must happen as per the plan. Alert supervisor get success in following his plans perfectly.
4. Record of inventory of machines, tools, equipments and actual state of condition of these is the basic information in allocating machines.
5. For effective use of such machinery, supervisor should be dynamic on shop floor. Otherwise all superb plans can be fail.
6. Supervisor will be successful while allotting work to people, if he has updated knowledge regarding abilities and skills of people under him.
7. Schedule must not neglect time element of each operation. Proper feedback and reporting helps to work things in time.
8. Reporting authority should be responsive and co-operating so that subordinates will be attended properly.
9. On time issues must be handled smartly.
10. Healthy atmosphere of communication and relations is the foundation of making plans successful.
11. Plans are perfect when executed properly. Hence supervisor should follow each step of total plan considering quantity produced, quality achieved and time of completion.

2.3 PRESCRIBING STANDARD FORMS FOR VARIOUS ACTIVITIES

Supervisor or shop floor manager is the key person for planning on the production floor. Supervisor has to plan for the year. Also he has to plan for the shift. Before shift, during the shift and at the end of the shift are the important concerns of the supervisor to run the production smoothly.

Supervisor while planning deals with resources on one side and customers expectations on the other side.

Supervisor is doing 5 M planning: (Man, Machine, Material, Method and Measurement).

For various activities planning, the machinewise planning, manpower planning, material flow, methods management are important aspects.

For doing the things systematically, documentation in the prescribed forms is the need of time.

Prescribed standard forms always help the production team in following ways:

1. Standardization of system.
2. No human error of recording.
3. Factual information on paper.
4. Data for decision-making.
5. Systematic plan.
6. Effective utilization of resources.
7. Authentication of the process.
8. Easy to trace the interdependency in the activities.
9. Clarity of work.
10. Exact specification of authority and responsibility.
11. Delay and mistakes can be traced on paper easily.
12. Correct inputs to management.
13. Perfect guidelines to operators.
14. Easy to refer previous activities through such documentation.

Few Examples of Standard Forms for Various Activities:

1. Raw material acceptance:

Raw Material Acceptance	
Date	: _____
Time	: _____
Name of Material	: _____
Quantity	: _____
Specifications	: _____
Batch No.	: _____
Batch Size	: _____
Inspected by	: _____
Received by	: _____
Signatures	: _____

Here while receiving the raw material, a systematic prescribed standard form helps to get correct idea of the activity. Here there will be exact information about material which is accepted. Also responsibilities are defined property.

2. Job Description:

Raw Material Acceptance	
Job Name	: _____
Operation Name	: _____
Processes	: _____
Cycle Time	: _____
Name of Operator	: _____
Inspections required	: _____
Date of Job	: _____
Time Allotted	: _____
Signature	

3. Machine Planning:

Name of Department : _____			
Machine No. : _____			
Machine Name : _____			
Process Type : _____			
Operator Name : _____			
Schedule of Timing : _____			
Date	Time	Job Name	Duration of Operator
Remark by Supervisor:			
Signature			

In planning activities on machine, all factual details like date, time, cycle time, process, job name-number, operator etc. helps to get clarity about how the machine is busy in next few days.

4. Issue of Tools:

Tool Orderslip		
Tool Order No. : _____		
Department : _____		
Bin No. : _____		
Clock No. : _____		
Date : _____		
Quantity	Size	Kind of Tool
Authorised Signature		

5. Material Flow:

Name of Material : _____				
Code No. : _____				
Sequence	Machine	Operation	Time	Remark
1.	Lathe	Turning	12 min.	
2.	Milling	Facing	10 min.	
3.	Drilling	Hole	3 min.	
4.	Grinding	Surface finish	11 min.	

Here planning as well as execution becomes easy to see the prescribed form.

Few other Formats are:

Machine	Daily machine capacity (Hours)	Assigned Orders (Hours)					
		1	2	3	4	5	6
Lathe	70	35	64	60	32	40	
Milling	80	64	12	20	25	60	
Drilling	90	80	61	55	37	88	

This is called as machine load chart.

This will help to check the feasibility of production programmes. Also it helps to assist in the efficient planning of new activities. This form will assist in balancing the plant to the existing load of activities. Finally, it also helps to fix the reliable delivery promises.

So these formats are helpful in production planning activities.

2.4 BUDGETING FOR MATERILAS AND MANPOWER

Budget:

A budget is an instrument of management used as aid in the planning, programming and control of a business activity.

- It is a financial statement, prepared and approved prior to a defined period of time.
- It is a written plan of action.
- Budget is used for cost control purposes.

Budgeting:

Budgeting is an art of budget making.

Budgeting means forecasting and preplanning for the budget period.

Such budgeting is based upon past experience and present condition.

Budgetary Control:

- Budgetary control makes use of budgets for planning and controlling all aspects of producing and or selling products or services.
- Budgetary control attempts to show the plans in financial terms.

Budgeting for Materials:

1. As per the requirement of final production supervisor can find out the quantities of raw materials needed.
2. This requirement is calculated for a specific period.
3. References are taken from manufacturing budget.
4. Requirements can be calculated from past records.
5. Sometimes test runs also help to find out raw material requirements.
6. Scientific method of technical estimation is also excellent to calculate total requirement.

Example of Materials Budget:

..... Company Materials Budget					
Period: From _____ To _____					
	Total Units	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
Material X					
• Product Z ₁	430	100	100	110	120
• Product Z ₂	830	200	200	210	220
Total	1260	300	300	320	340
Material Y					
• Product Z ₁	340	80	90	80	90
• Product Z ₂	340	90	80	90	80
Total	680	170	170	170	170

Budgeting for Manpower:

- From the production goals in a specific period, calculation for the labour/manpower can be done.
- This is an estimate of direct labour required.
- References can be taken from production budget.
- Manpower requirements are calculated as follows:
 1. Divide the production activity into operations.
 2. Calculate the standard time for each operation using work study techniques.
 3. Find the total number of working hours required for production.
 4. From number of hours, supervisor can calculate manpower requirements.

Direct Manpower Budget is prepared as follows:

1. Find out total manpower required.
2. Classify this manpower into grades.
3. Decide standard wage rates for the manpower.
4. Find budget i.e. total manpower (labour) cost.

Example:

..... Company Direct Labour Cost					
Department: _____			Period: From _____ To _____		
Production Output = 1000 Units			Total standard hours = 2000		
Workers	Number	Hours	Standard Rate	Direct Labour Cost	Total
Skilled					
Semiskilled					
Unskilled					
Male					
Female					

ORGANIZING AT SUPERVISORY LEVEL

2.5 ORGANIZING THE PHYSICAL RESOURCES

Supervisor has a responsibility of completing the output targets. Naturally, the physical resources are inputs in the production.

Following are the Physical Resources:

1. Man, 2. Machine, 3. Material, 4. Money

Man as a Resource:

Supervisor takes the help of manpower for executing his output targets. Operators, machinists, labours, helpers and all junior subordinates work under supervisor. Organizing their efforts is the skill of supervisor.

How to Organize Manpower?

- Study of task.
- Getting idea about the kind of manpower available.
- Matching human needs with job needs.
- Allotment of work.
- Utilising manpower in such a way to avoid overutilization or underutilization. (Topic discussed in detail in Section 2.6).

Machine as a Resource:

It includes all types of machines, equipments, apparatuses, devices etc. Systematic utilization of machine is not an easy task.

Guidelines to Organize Machines:

1. Find out total available machinery.
2. Check condition of machines available.
3. Care must be taken to understand any breakdown or under repair status of machines.
4. Find out requirement of machines for the given task.
5. Get the idea of cycle time and productivity parameters of machines.
6. Do discuss with the workers, experts, setters and maintenance crews about working performance of machines.
7. Do the planning of equipment's arrangement according to the material flow.
8. Additional machinery requirement or attachments must be organized.
9. As per machine capacity, plan the production activity.

Material as a Resource:

All raw materials, supportive production materials, accessory material form useful component of production inputs. Hence, organizing such materials is an important task of a supervisor.

Guidelines in Organizing Material:

1. Find out the requirement of material to be used.
2. Get finalize the specifications of all types of materials useful in production.
3. Get the permission for the procurement.
4. Documentation for such procurement or purchase is a crucial work.
5. Plan inventory of the material.
6. Organize checking methodology of quality and quantity of material.
7. Define flow of material in production activity.
8. Arrange material handling devices for the material movements.
9. Special care and custody facility must be provided to the costly, fragile, important items.

Money as a Resource:

Many times there is no direct connection with supervisor of handling money in routine production activities. But if it is the part of his duty, then all care must be taken regarding approvals, budgets, permissions and audit of the money that is concerned.

2.6 MATCHING HUMAN NEED WITH JOB NEEDS

As a supervisor or manager it is necessary to think the aspect of matching needs. Matching human needs with job needs plays important role in the output and smooth production work.

What are human needs?

1. Liking areas in work.
2. Scope of performance.
3. Work justice as per capability.
4. Involvement in concerned work.
5. Authority in doing work.
6. Authority to take decisions.
7. Freehand in creative work.
8. Physical and mental work below stress level.

9. Rest allowances.
10. Humane treatment.
11. Respect in front of subordinate.
12. Facilities regarding work.
13. Good salary.
14. Benefits, bonus and rewards.
15. Appreciation for good work.
16. Promotion with proper intervals.
17. Status and value in the organization.
18. Support from organization in difficult situations.

These are some of the needs of human/staff:

Let's see job needs.

Job needs are:

1. Work must be completed in time.
 2. Quality of work.
 3. Quantity of work.
 4. Utility of all resources in optimum way.
 5. Safety at job.
 6. No wastages.
 7. Control on errors, mistakes and failures.
 8. Less supervision.
 9. Foolproof nature of work.
 10. Skilled manpower.
 11. Teamwork.
 12. Smooth production.
 13. No stoppages of work.
 14. Distribution of work.
 15. Sufficient resources as input.
- So, when both the ends are matched, there is more possibility of success.

Effect of Successful Matching of Job Needs and Human Needs:

1. Customer satisfaction.
2. Improved productivity.
3. Effective utilization of resources.
4. Achievement of goals.

2.7 ALLOTMENT OF TASKS OF INDIVIDUALS AND ESTABLISHING RELATIONSHIP AMONG PERSONS WORKING IN A GROUP

Meaning of Allotment of Tasks:

It means:

1. Distribution of work to individuals.
2. Giving responsibility of the task (work).
3. Offering authority concerned with work.
4. Resources handover to them.

5. Explaining job details.
6. Communicating parameters like work specification, time deadline, quality standards etc.
7. Offering training, guidance regarding the task.

Technique of Task Allotment:

Supervisor must know following facts:

1. Qualities of workers.
2. Expected work in the task.
3. Skills and capabilities of workers.
4. Team work status.
5. Relations between team members.
6. Who is weak in what?
7. Who is strong in what?
8. Who can lead?
9. Seriousness of work, etc.

How to Allot the Task?

1. Study the task.
2. Study the detailed work content.
3. Find out manpower required.
4. Decide leader or head.
5. Subdivide task to individuals as per their skills and capabilities.
6. Official orders to workers.
7. Corrections based on their queries.
8. Finalization of the allotment.
9. Necessary authorities and resources to the individuals.

Establishing Relationship Among Persons Working in a Group:

1. Formation of a group.
2. Familiarity among group members.
3. Informal relations should be developed.
4. Communication improvement.
5. Solving or avoiding conflicts among group members.
6. Training of interpersonal relationship.
7. Appreciating each other.
8. Establishing common goals.
9. Grooming them for effective work.

2.8 IMPORTANCE OF ORGANIZING SKILLS OF SUPERVISOR

1. If supervisor is organized in the workplace, he can save time and money of company.
2. Organizational skills are essential for multitasking.
3. Organizing skill of supervisor keep the production flow smooth and successful.
4. Because of this skill, supervisor can structure schedules of all workers.
5. Productivity is boosted due to good organizing skills.
6. Organized supervisors are calm and prepared with systematic planning and scheduling.
7. Completing the complicated and difficult projects is possible due to organizing skill of supervisor.
8. Maintaining strong organizational skills can reduce the chance of developing poor work habits like inefficiency, miscommunication, rework etc.

2.9 HOW SUPERVISOR CAN BE EFFECTIVE IN ORGANIZING SKILLS

1. Be clear about what you need to do.
2. Decide when you are going to do it.
3. Give yourself time and space.
4. Decide what is important and what is urgent.
5. Breakdown and delegate tasks.
6. Do not get frustrated by extra tasks.
7. Stay on top of the things.

2.10 ADVANTAGES OF GOOD RELATIONS IN A GROUP

1. Employees feel good due to familiar group members.
2. Comfort level of subordinates increases.
3. People can enjoy work in team.
4. Co-ordination becomes easier.
5. Team member co-operate each other.
6. Stress level of work reduces.
7. Mutual guidance is available in team if relations are good.
8. Difficult challenges can be accepted and success is easy.

Summary

Supervisor is the key person on shop floor. Supervisor do planning and organizing activity to achieve the goals prescribed by higher management. Supervisor do manpower planning, scheduling, communication and oversight. Supervisor need some relevant information for doing planning. Supervisor do detail planning. His study, experience and dynamism is important in planning. For various activities supervisor do prescribed standards forms. Budgeting for material and manpower is also role of supervisor.

While organizing, supervisor do think material and money. In assigning work, supervisor must do matching of human needs with job needs.

Allotting the tasks to individuals is also skill of supervisor. The good relationship in the group under the leadership of supervisor helps to achieve more productivity.

Planning skills and organizing skills of supervisor decide success on the shop floor.

Multiple Choice Questions

1. Following are the physical resources.
 - (a) Man
 - (b) Machine
 - (c) Material
 - (d) All
2. This is concept in manpower planning.
 - (a) Matching needs of customer with business
 - (b) Matching quality with quantity
 - (c) Matching human needs with job needs
 - (d) All are wrong
3. Supervisor is _____.
 - (a) Engineer
 - (b) Manager
 - (c) Team leader
 - (d) All the above
4. Who plan capacity of machine?
 - (a) Operator
 - (b) Supervisor
 - (c) CEO
 - (d) Quality Inspector
5. Cycle time is concerned with _____.
 - (a) Automobile
 - (b) Operator's work
 - (c) Machine and Process
 - (d) Time office

6. What are the advantages of prescribing standard forms in planning?
 - (a) Systematic planning
 - (b) Standardization
 - (c) Factual information
 - (d) All the above
7. Which information is not necessary in Raw material acceptance form?
 - (a) Quantity
 - (b) None of material
 - (c) Cycle time
 - (d) Inspected by
8. Which information is not necessary in job description?
 - (a) Job name
 - (b) Operations
 - (c) Cycle time
 - (d) All
9. Machine load chart is not doing this.
 - (a) Check the feasibility of production programmes
 - (b) Assist the efficient planning
 - (c) Training of operators
 - (d) Fixing of reliable delivery promises
10. _____ is an instrument of management used in planning, programming and control of business financial activity.
 - (a) Inspection
 - (b) Budget
 - (c) Quality
 - (d) Audit
11. _____ is a financial statement prepared and approved prior to a defined period of time
 - (a) Audit
 - (b) Control charts
 - (c) Budget
 - (d) Order of payment
12. _____ means forecasting and preplanning with reference to finance.
 - (a) Budget
 - (b) Audit
 - (c) Control
 - (d) Inspection
13. Following is not the information needed for planning at supervisory level.
 - (a) Number of jobs to be done
 - (b) Time expectation
 - (c) Profile margin
 - (d) Sequence of operations
14. Following is not done planning by supervisor.
 - (a) Selection of machines
 - (b) Assigning workers
 - (c) Allocate time for operations
 - (d) Marketing of products
15. What are the important informations to supervisor while planning?
 - (a) Quantity of jobs
 - (b) Delivery time
 - (c) Quality standards
 - (d) All
16. While selecting machines, what kind of information is not necessary to supervisor?
 - (a) Total machines
 - (b) Cycle time
 - (c) Operations required
 - (d) Maintenance standards
17. While allotting work to workers what information is not important?
 - (a) Qualification
 - (b) Skills
 - (c) Abilities
 - (d) Specialities
18. In planning _____
 1. Rescheduling must not be avoided
 2. If needed, do rescheduling
 - (a) Only 1 correct
 - (b) Only 2 correct
 - (c) Both correct
 - (d) Both wrong

19. While planning which parameters does supervisor observe.
- (a) Manpower (b) Schedule
(c) Oversight (d) All
20. (i) Supervisor makes short-term planning.
(ii) Managers make long-term planning.
(iii) Supervisor do scheduling of daily activities.
- (a) Only 1 is correct (b) Only 2 is correct
(c) Only 1 and 2 correct (d) All correct
21. Securing raw material from stores is the responsibility of _____
- (a) Supervisor (b) Line manager
(c) Purchase manager (d) Materials manager
22. Supervisor is _____ focussed in planning.
- (a) Completely (b) Internally
(c) Externally (d) None of the above
23. Supervisor plans budget on _____ expenses and manager plans budget on _____ expenses.
- (a) Small, Large (b) Large, Small
(c) External, Internal (d) None of the above
24. What is the upward correct chronology?
1. Worker, 2. Foreman, 3. Supervisor, 4. Manager, 5. Shift incharge, 6. Helper
- (a) 1 - 6 - 3 - 5 - 2 - 4 (b) 6 - 1 - 3 - 2 - 5 - 4
(c) 6 - 1 - 2 - 3 - 5 - 4 (d) 1 - 6 - 3 - 2 - 4 - 5
25. Safe working condition is the responsibility of _____
1. Worker, 2. Supplier, 3. Supervisor, 4. Manager, 5. Factory Head, Customer
- (a) 2, 3, 4, 6 (b) 1, 3, 5, 6
(c) 1, 2, 3, 4 (d) 1, 3, 4, 5
26. (i) Planning of material is responsibility of supervisor.
(ii) Planning of manpower is the responsibility of HR manager and not of supervisor.
- (a) Only 1 is correct (b) Only 2 is correct
(c) Both are correct (d) Both are wrong
27. Following qualities are not required in organizing skills of supervisor.
- (a) Planning (b) Decision making
(c) Financial knowledge (d) Time management
28. When there is change in technology _____
- (a) Plan fails (b) Plan has to be modified
(c) Plan must be rescheduled (d) All of the above
29. When emergency situation comes _____
- (a) Continue previous Planning (b) Change the situation
(c) Change the plan (d) None of the above
30. Planning by supervisor is _____
1. Interdependent process 2. A continuous process
3. Integration of various activities 4. Looking into past
- (a) 1 and 2 correct (b) 2 and 3 correct
(c) 1, 2 and 3 correct (d) 2, 3 and 4 correct

Directing and Controlling at Supervisory Level

Weightage of Marks = 14, Teaching Hours = 08

Syllabus

Directing at Supervisory Level

- 3.1 Needs for Directions and Instructions to Subordinates; Completeness and Feasibilities of Instructions
- 3.2 Personal Counselling, Advanced Predictions of Possible Mistakes.
- 3.3 Elaborating Decisions, Laying Disciplinary Standards in Overall Working

Controlling at Supervisory Level

- 3.4 Managerial Control; Undertaking Team and Link between various Departments in Respect of Process and Quality Standards; Steps in Control Process
- 3.5 Controlling Methods; Control over the Performance in Respect of Quality, Quantity of Production, Time and Cost. Measuring performance, Comparing with Standards, Correcting Unfavorable Deviations.

About This Chapter

After reading this chapter, the students will able to,

- Justify the chosen need of directions and instructions to the subordinates to complete the specified task.
- Select the feasible set of instructions to complete the given simple task, with justification.
- Predict the possible mistakes for completing the given simple activity.
- Describe the managerial control actions and remedial measures required to be taken for completing the given task successfully.

DIRECTING AT SUPERVISORY LEVEL

3.1 NEEDS FOR DIRECTIONS AND INSTRUCTIONS TO SUBORDINATES, COMPLETENESS AND FEASIBILITIES OF INSTRUCTIONS

3.1.1 Needs of Directions and Instructions to Subordinates

There cannot be perfection in work and improvement in performance without directions and instructions to subordinates.

Why They are Needed?

1. There is chance of mistakes.
2. People become directionless.
3. Prior instructions assist in smooth functioning.
4. Work cannot happen as per the plan.

5. Subordinates may get frustration due to mistakes they are making.
6. Loss of resources.
7. Wastage of time.
8. Possibility of repetitive work.
9. Chaos will be possible among the team members.
10. New staff, juniors cannot work without proper directions and instructions.
11. Single mistake may cause heavy losses.
12. Every time job challenges are different. So instructions helps the workers to understand the situations.
13. Deviation in work is possible if there are no directions.
14. System of working will be collapsed.
15. Loss of discipline is possible.
16. Goals cannot be achieved due to disrupted work by workers due to lack of instructions.

3.1.2 Completeness and Feasibilities of Instructions

Following are the features of complete and feasible instructions:

1. Instructions are given at proper time.
2. Instructions are given to proper persons.
3. Instructions are not confusing.
4. They must be clear and simple.
5. Instructions must be given by proper authorities.
6. Instructions are in written or in oral form as per their requirement.
7. There is closed loop system i.e. instructions have feedback mechanism.
8. Language is familiar to the users.
9. Instructions are readable or hereable.
10. Instructions are specific.
11. Instructions have meanings.
12. Foolproof system of instructions.
13. No requirement of additional instructions.
14. Instructions are based on logic, scientific base and experience.
15. Instructions follow rules and achieve goals.

3.1.3 Needs / Requirements of Effective Direction by Supervisor

- Direction by supervisor is complex function.
- Direction can be learned and perfected only through long experience.

Following are Requirements/Principles of Direction by Supervisor:

- 1. Harmony of objectives:** Supervisor should direct the subordinates in such a way that they feel that their personal goals are in the harmony with the objectives of the organization.
- 2. Unity of Command:** The subordinates should receive orders and instructions from one superior only.
- 3. Direct supervision:** Every supervisor must maintain face-to-face direct contact with his subordinates.
- 4. Efficient Communication:** Communication is an instrument of direction. Supervisor gives orders through communication only.
- 5. Follow through:** The supervisor should follow through the whole performance of his subordinates not only by keeping a check but by helping them in their difficulties also.

3.1.4 Giving Orders/ Instructions by Supervisor

Following principles must be followed in giving instructions:

1. The attitude necessary for the carrying out of an order (instruction) should be prepared in advance.
2. Subordinates will obey the order only if it appeals to their habit patterns.
3. Face to face suggestions are more effective.
4. Orders should not be, of 'personal' nature.

3.1.5 Conditions Which Make Instructions/Order Acceptable

1. Order should be clear and complete.
2. Order should be compatible with the purpose of the organization.
3. Order should be compatible with the employee's personal interest.
4. Order should be operationally feasible.

Conditions for Written Instructions:

1. The subject is important.
2. Several individuals are affected.
3. Many details are involved.
4. Considerable time will pass before the work is completed.
5. There is geographical distance between the supervisor and the subordinate.

3.1.6 Methods to Ensure Compliance to the Instructions / Orders

1. Force
2. Paternalism
3. Bargain
4. Harmony of objectives
1. **Force:** "Do what I say or otherwise ..." (means you will be punished if you do not follow supervisor).
2. **Paternalism:** "Do what I say because I am good to you ..."
3. **Bargain:** "You do as I say in certain respects and I do as you say in certain other respects."
4. **Harmony of objectives:** "If we perform together each will achieve his goal."

3.1.7 Characteristics of a Good Instruction

1. It should be reasonable.
2. It should be enforceable.
3. It should be clearly defined.
4. It should be understandable easily.
5. It should be complete in all respects.
6. It should have acceptance from the subordinates.
7. It should be preferably written.
8. Supervisor should use appropriate tone while issuing it.
9. It should specify the time.

3.1.8 Importance of Direction

1. It starts action.
2. It ensures maximum contribution of individuals.
3. It coordinates group efforts.
4. It provides stability.
5. It provides balance in the organization.
6. It helps to achieve the objectives of the organization.

3.1.9 Characteristics of Direction

1. It is a managerial function.
2. Supervisor initiates action through direction.
3. Direction is a continuous process.
4. Direction is starting from top and going towards bottom of the organization.
5. Subordinates follow supervisor because of his directions.
6. Direction is the link between planning and control.

3.2 PERSONAL COUNSELLING

Supervisor is counsellor, advisor and mentor of the workers. Unless and until he gets connected with the workers by above roles, it is difficult to achieve excellence. Giving orders and instructions for getting work done is not only sufficient for smooth running of production and healthy environment among the workers is an important feature of the success of supervisor.

One of the role is counselling the subordinates (workers).

Why Personal Counseling is needed?

1. People loose confidence in work.
2. They need guidance.
3. Sometimes they need support from seniors.
4. Stress in work is affecting mental condition.
5. Few workers make repetitive mistakes.
6. Performance of an individual or of team is seriously affected.
7. Behaviour and interpersonal relations are on serious note.
8. There is impact on the productivity.
9. Some workers are nervous due to reasons at work.
10. Motivation is needed to their output.

In such cases, personal counselling is required.

Qualities of Supervisor as a Counsellor:

Effective counselling needs following qualities in supervisor:

1. Stable mind.
2. Positive thinking.
3. Listening ability.
4. Understanding body language.
5. Sensitive mind.
6. Problem solving nature.
7. Good communication skill.
8. Motivational approach.

3.2.1 Advanced Predictions of Possible Mistakes

This is a skill which is logical also. If you want to become successful as a supervisor, then you must think in such a way that you can predict what mistakes are possible in future.

How to do Such Predictions?

1. Understand present scenario.
2. Find out deviations in work from the planned standard work.
3. Project the future as per the present status of the work.
4. Predict what bad/poor/improper/mistake/shortcoming that can occur.

What is Use of Such Predictions?

1. We can be prepared for the losses.
2. Losses can be minimized.
3. Actions can be taken to avoid or reduce such future mistakes.
4. Corrections in the present status can lead into achievement as per plans.

3.3 ELABORATING DECISIONS, LAYING DISCIPLINARY STANDARDS IN OVERALL WORKING

3.3.1 Elaborating Decisions

Many times subordinates are not aware of reasons of decisions taken by higher management. So, there can be confusion among them. Hence, decisions may be elaborated in certain cases. In every case you should not explain or elaborate the decision.

Need to Elaborate Decisions:

1. To create awareness about decisions.
2. To emphasis policies of management.
3. To avoid confusion.
4. To restrict gossiping in lower levels of organization.
5. To get clarity about their future work.
6. To understand duties and responsibilities regarding these decisions.

Ways to Elaborate Decision:

Higher managements can elaborate their decisions by following ways:

1. Written document.
2. By conducting meeting.
3. By counselling.

Which Kind of Decisions can be Elaborated?

1. Uniform
2. Extended time hours
3. Bonus and Benefits
4. Schedule changes
5. Transfers
6. Need of Training

3.3.2 Laying Disciplinary Standards in Overall Working

Importance of Disciplinary Standards:

1. Quality in work performance.
2. Time factor followed.
3. Work standardization gets improved
4. Losses are reduced.

Ways in Laying Disciplinary Standards:

1. Policy decisions in discipline.
2. Disciplinary actions.
3. Seriousness in following disciplines.
4. Training for discipline.
5. Awards to disciplined practices.
6. Punishments to non-disciplined employees.
7. Time - In time, Out time, On time, Before time.
8. Quality - Zero error.
9. Behaviour - Controlled emotions and sober nature.

3.4 MANAGERIAL CONTROL

3.4.1 Understanding Team and Link between Various Departments in Respect of Process and Quality Standards

This is the important concern of management control. Supervisor is the leader of the team. He/She is mentor of the whole group.

(A) Understanding Team:

Supervisor must know every aspect of his team.

1. What is meant by understanding team?

- How many team members?
- Expertise of team members.
- Speciality of team.
- Positive points of team members.
- Limitations of the team members.
- Key persons in team.
- Requirements of team.
- Challenges in front of a team.

2. Why understanding team is needed?

- To control activities of team.
- To assign team and work.
- To find where team members need support.
- To increase or decrease size of team.
- To impart training to team members.
- To utilize team members effectively.
- To motivate team.
- To satisfy need of team.
- To restrict team members to do the work which is not in their area of competency.

3. Benefit to supervisor:

- Supervisor can take perfect decisions.
- Controlling the work is possible.
- Deviations in the work can be located properly.
- Supervisor has clarity about his team.
- Chances of errors are less.

(B) Link between Various Departments in Respect of Process and Quality Standards:

A supervisor must be a link between various departments on the production shop floor. All the employees under him are working at their own work stations. So they are static. But supervisor/manager can have dynamic linking relation with the concerned other departments like maintenance, inventory, stores, purchase, quality control, design, HR, dispatch etc. This link with other functional departments help to achieve standards in process and quality.

1. Link with maintenance department:

- For intimation of breakdown.
- For prior communication regarding visit before any breakdown or repair.
- Smooth and systematic frequency of periodic routine maintenance.
- To avoid production stoppages, this linking proactively is necessary.

2. Link with stores and inventory:

- To get the material in time.
- To take off the material already done, in time.
- To get the tools, equipments, accessories without delay.
- To have smooth production.
- To avoid accumulation of material on the shop floor.

3. Link with Quality control:

- This will maintain standard quality as per specified.
- It avoids large scale mistakes due to in time estimations.
- To check material from raw to finished level.
- To rectify and correct the ongoing mistakes.
- To restrict errors.
- To find errors.

So such linking work by supervisor or manager helps to achieve quality standards and to control the operations.

Advantages:

1. No production stoppages.
2. Smooth operations.
3. Quality in production.
4. Controlled production.
5. No rework.
6. No misunderstanding.
7. Closed loop type communication.
8. Coordinated efforts among various departments.

3.4.2 Steps in Control Process

Some of the essential steps of controlling process as studied under Business Management are : 1. Setting Performance Standards, 2. Measurement of Actual Performance, 3. Comparing Actual Performance with Standards, 4. Analysing Deviations, 5. Taking Corrective Action.

Controlling Process Consists of Following Systematic Steps:**1. Setting Performance Standards:**

The first step in the process of controlling is concerned with setting performance standards. These standards are the basis for measuring the actual performance.

Thus, standards act as a lighthouse that warns and guides the ships at sea. Standards are the benchmarks towards which efforts of entire organization are directed. These standards can be expressed both in quantitative and qualitative terms.

Examples of Quantitative Standards:

- (a) Revenue to be earned.
- (b) Units to be produced and sold.
- (c) Cost to be incurred.
- (d) Time to be spent in performing a task.
- (e) Amount of inventories to be maintained etc.

Examples of Qualitative Standards:

- (a) Improving motivation level of employees.
- (b) Improving labour relations.
- (c) Improving quality of products.
- (d) Improving goodwill etc.

In order to facilitate easy comparison of actual performance with the standards, a manager should try to set these standards in quantitative terms as far as possible. However, in case of qualitative standards, effort should be made to define these standards in such a way that comparison becomes easily understandable.

For example, for improving customer satisfaction in a restaurant having self service, standard can be set in terms of time taken to get a table, place the order and collect the order. Moreover, the standards set should be flexible enough so that necessary changes can be made according to varying situations.

2. Measurement of Actual Performance:

Once the standards have been determined, the next step is to measure the actual performance. The various techniques for measuring are sample checking, performance reports, personal observation etc. However, in order to facilitate easy comparison, the performance should be measured on same basis that the standards have.

Following are some of the ways for measuring performance:

- (a) Superior prepares a report regarding the performance of an employee.
- (b) Various ratios like gross profit ratio, debtor turnover ratio, return on investment, current ratio etc. are calculated at periodic intervals to measure company's performance.
- (c) Progress made in areas like marketing can be measured by considering the number of units, increase in market share etc.
- (d) In small organizations, each unit produced can be checked personally to ensure the quality standards.
- (e) In large organizations, the technique of sample checking is used. Under this technique, some pieces are checked at random for quality specifications.

3. Comparing Actual Performance with Standards:

This step involves comparing the actual performance with standards laid down in order to find the deviations. For example, performance of a salesman in terms of unit sold in a week can be easily measured against the standard output for the week.

4. Analysing Deviations:

Some deviations are possible in all the activities. However, the deviation in the important areas of business needs to be corrected more urgently as compared to deviation in insignificant areas. Management should use critical point control and management by exception in such areas.

- (a) **Critical Point Control:** Since it is neither easy nor economical to check each and every activity in an organization, the control should focus on Key Result Areas (KRAs) which act as the critical points. The KRAs are very essential for the success of an organization. Therefore, the entire organization has to suffer if anything goes wrong at these points. For example, in a manufacturing organization, an increase of 7% in labour cost is more troublesome than an 18% increase in stationary expenses.
- (b) **Management by Exception:** Management by exception or control by exception is an important principle of management control. According to this principle, an attempt to control everything results in controlling nothing. Thus, only the important deviations which exceed the prescribed limit should be brought to the notice of management. Thus, if plans provide for 3% increase in labour cost, deviations beyond 3% alone should be brought to the notice of the management.

Advantages of Critical Point Control and Management by Exception are as follows:

1. Since managers deal only with important deviations, it results in saving time and efforts.
2. It helps in identifying important deviations which need timely action to keep the organization at the correct path.
3. By handing over the routine problems to the subordinates, management by exception facilitates delegation of authority and helps in increasing morale of employees.
4. It ensures better utilization of managerial expertise by focusing managerial attention only on important areas.

After identifying the deviations, various causes for these deviations are analyzed. The main causes can be structural drawbacks, shortage of resources, environmental factors beyond organizational control, unrealistic standards, defective process etc. Exact cause or causes of deviation must be identified correctly in order to take effective corrective measures.

5. Taking Corrective Action:

The last step in the process of controlling involves taking corrective action. If the deviations are within acceptable limits, no corrective measure is required. However, if the deviations exceed acceptable limits, they should be immediately brought to the notice of the management for taking corrective measures, especially in the important areas.

Sr. No.	Causes of Deviation	Corrective action to be taken
1.	Obsolete machinery	Technological Upgradation of machinery.
2.	Defective process.	Change the specification standards for the manufacturing process.
3.	Defective material used.	Change the quality standards for material.
4.	Defective physical conditions of work.	Improvement in physical conditions of work.
5.	Defective machinery.	Repair the existing machine or purchase new machine if it cannot be repaired.

3.5 CONTROLLING

3.5.1 Controlling Methods

Type 1: Non-Quantitative Methods of Control: (Quality)

Non-quantitative methods of control are those which are used by managers in performing other managerial functions, viz., planning, organising, staffing and leading (directing). In general, these lead to control of overall performance of an organisation. Most of these techniques are directed towards controlling employees' attitudes and performance.

For controlling overall organisational performance, the following techniques are frequently and widely used:

1. Observation,
2. Periodic or 'spot' inspections,

3. Oral and written reports,
4. Performance evaluations, and
5. Discussion between the manager and employees involved in performing an activity.

The general purpose of these measures is to supervise or lead the work force.

A few other management systems and methods that are used for control purposes include management by objectives (MBO), management by exception (MBE), and management information systems (MIS).

Type 2: Quantitative Control Techniques: (Quantity)

These techniques are based on specific data and quantitative methods to measure and correct the quantity and quality of output.

1. Budgets such as:
 - (i) The regular operating, capital expenditure, sales and cash budgets; and
 - (ii) Specialized budgets such as planning-programming-budgeting systems (PPBS), zero-base budgeting (ZBB), and human resource accounting (HRA).
2. Control Centres.
3. Audits such as:
 - (i) Internal audits,
 - (ii) External audits, and
 - (iii) Management audits.
4. Ratio analysis (RA).
5. Break-even (BE) analysis.
6. Time-preference charts and techniques such as:
 - (i) The Gantt chart,
 - (ii) Programme Evaluation and Review Technique (PERT) and
 - (iii) The Critical Path Method (CPM).

Type 3: Using Budgets and Budgetary Control: (Cost)

The primary financial control for every organisation is the budget. The budget is the most widely used technique of control in both business and government. A budget is both a plan and a control inasmuch as the preparation of budgets is an integral part of the planning process and the budget itself is the end point of the planning process, that is, the statement of plans.

In fact, some managers even refer to their budgetary controls as profit plans.

A budget is an estimate of income or expenses for a specific time period (say, a year, a quarter, or a month); and the particular estimates it contains become the standards against which future performances will be measured and evaluated.

If revenues (income) drop, expenditures should probably be curtailed. On the contrary, if actual expenditures exceed the expected figures, either additional revenue must be generated or expenditures have to be reduced.

Budgets usually require input from those whose activities will be funded and they, in turn, will control the budgets. Grassroots budgeting asks each manager to project his(her) unit's need for funds in specific categories — such as wages, salaries; supplies etc. As these projections move up the management hierarchy, they are consolidated and become the budgets for even larger units within the organisation.

These budgets are representative of an organisation's comprehensive budgeting programme.

Capital expenditures budget programme has two broad components as shown below:

Operating budgets include expense and revenue budgets for an entire organisation or any of its parts for a fixed period of time.

Financial budgets are represented by the cash and capital expenditure budgets, which furnish detail about two things:

1. Where the organisation intends to spend its money; and
2. Where this money will come from.

3.5.2 Essentials of Effective Controlling by Supervisor

1. **Suitable:** The control system should be appropriate to the nature and needs of the activity.
2. **Timely and forward looking:** The feedback system should be as short and quick as possible.
3. **Objective and Comprehensive:** Objective controls specify the expected results in clear and definite terms. The meaning of the central data should be clear to the manager who should use it.
4. **Flexible:** It should be flexible so that it can be adjusted to suit the needs of any change in the basic nature of the inputs and varieties.
5. **Economical:** The benefit obtained from a control system should be more than the cost involved in implementing it.
6. **Acceptable to Organization members:** The system should be acceptable to organization members.
7. **Periodically reviewed:** The control system should be periodically reviewed and evaluated.

3.5.3 Worker's Resistance to Managerial Control

1. **Failure to accept objectives:** A worker may not care to reduce waste if he thinks that this is not going to make any difference to his employer who is very rich.
2. **Unreasonable standards:** A person may dislike control because he thinks the standard of performance set for him is too high.
3. **Too many controls:** Too many controls irritate workers.
4. **Incomplete measurements:** People dislike controls because they believe that the measurement of their performance is incomplete.
5. **Disclosure of unpleasant facts:** Employees do not like controls because they fear exposure of their weaknesses before supervisor, subordinates and colleagues.

3.5.4 Control Techniques

1. Past oriented
 2. Future oriented
 3. Market control
 4. Bureaucratic control
 5. Clan control
 6. Old control
 7. New control
1. **Past oriented control techniques:**
 - These are post action controls.
 - They measure the results after the work is completed.
e.g. Inspection of jobs
 2. **Future oriented control techniques:**
 - Also known as feed forward controls.
 - They measure results before the work is completed.
e.g. Funds flow analysis

3. **Market control techniques:** Here control is established by doing comparison of prices and profits of previous years or of other organizations. e.g. prices of products.
4. **Bureaucratic control techniques:** These are controls by governments rules.
5. **Clan control techniques:** Establish control by generating trust, tradition and shared belief.
6. **Old control techniques:** These are financial and accounting based directed towards the control of money.
7. **New control techniques:** They provide the kind of information that are not readily available with the old techniques.

3.5.5 Scope for Control by Supervisor

Supervisor has scope to control in following areas:

1. Control over short term policies.
2. Control over department.
3. Control over workers.
4. Control over production.
5. Control over cost of production.
6. Control over cycle time.
7. Control over material.
8. Control over machines.
9. Control over equipments and tools.
10. Overall control.

3.5.6 Types of Supervisory Control

1. **Standardizing control:**
 - Performance is standardized.
 - Use of time and work study.
2. **Persevering control:**
 - Responsibilities are allocated.
 - Strict supervision is done to control usages of assets.
3. **Delegation of authority control:**
 - Policy manual is decided.
 - Internal audits are done.
4. **Measurement control:**
 - Job performance is measured.
 - Measurement is done through special reports, budgets etc.
5. **Motivating control:**
 - Control by motivation.
 - Motivation by promotions, rewards etc.

3.5.7 Advantages of Control by Supervisor

1. Control by supervisor makes necessary adjustments in operations.
2. The management can verify the policy through the control process.
3. Control flows throughout the organization from top to bottom. Supervisor has control over the subordinates. Also the supervisor should not misuse the authority.
4. There is psychological pressure to get better performance through the control process.

5. Control creates an atmosphere of discipline in the department.
6. Supervisor co-ordinate the activities of his subordinates with the help of control.
7. Control by supervisor ensures progress in efficiency.

3.5.8 Limitations of Control by Supervisor

1. Supervisor can not fix standards in all the cases. If quantitative standards are not fixed, then performance can not be measured accurately.
2. External factors like Government policies, market trends etc can not be controlled by supervisor.
3. If supervisor tries to keep control on the subordinates, then the freedom of them is lost. So there is difficulty in applying responsibility if workers are not willing to accept controls on them.
4. A small organization can not afford expensive method of controlling.

Summary

Supervisor executes his function by directing and controlling. These functions come after planning function. Directions are needed so to make smooth functioning of on shop floor. Instructions must be clear and specific. Instructions follow rules and achieve goals. There should be harmony of objectives in giving directions. Face to face instructions and written instructions are important as per the situation. Methods to give instructions are force, paternalism, bargain and harmony of objectives. Direction starts action and flow from top to bottom.

Supervisor has scope to control department, production, material, manpower etc. Control by supervisor makes necessary adjustments in operations. Essentials of effective controlling are suitability, timely and forward looking, objective comprehensive, and flexible. Past oriented, future oriented, market control, clan control, old and new control are the techniques of controlling by supervisor. Supervisor must understand the team and should link between various departments. Setting performance standards, measurement of actual performance, comparing actual performance with standards and taking corrective action is the procedure of controlling.

Multiple Choice Questions

1. What is meant by understanding team?
 - (a) Speciality of team
 - (b) Number of team members
 - (c) Requirements of team
 - (d) All
2. Why understanding team is needed?
 - (a) To assign team work
 - (b) To control activities of team
 - (c) To satisfy needs of team
 - (d) All
3. What are benefits to supervisor of understanding team?
 - (a) To take perfect decisions
 - (b) Promotion
 - (c) Status
 - (d) Increments
4. Due to link with maintenance department, supervisor _____
 - (a) Can given intimation of breakdown
 - (b) Can avoid production stoppages
 - (c) Both are correct
 - (d) Both are incorrect
5. Due to link of supervisor with stores and inventory.
 1. Material can be received in time
 2. Accumulation of material is avoided
 - (a) 1 is correct
 - (b) Both correct
 - (c) 2 is correct
 - (d) Both wrong

6. Due to link of supervisor with quality control _____
1. Errors can be understood
 2. Errors can be rectified
- (a) 1 is correct (b) Both correct
(c) 2 is correct (d) Both wrong
7. Communication with all department is _____
- (a) Open loop (b) Closed loop
(c) Oral (d) Non-verbal
8. Why directions by supervisor are necessary?
- (a) To avoid mistakes (b) People get direction
(c) Time is saved (d) All
9. Directions by supervisor cannot avoid following problem.
- (a) Wastages of time (b) Rework
(c) Machine capacity (d) Repetitive mistakes
10. Deviation in work is possible if there is are no _____
- (a) Directions (b) Instructions
(c) Control (d) All
11. Following are the features of complete instructions _____
- (a) Instructions at proper time (b) By proper person
(c) Simple and clear (d) All
12. Instructions by supervisor should be _____
1. Clear
 2. Simple
 3. On time
 4. Specific
- (a) 1, 2 correct 3, 4 wrong (b) 1, 2 wrong 3,4 correct
(c) All correct (d) All wrong
13. Good supervisor is not the following.
- (a) Counsellor (b) Advisor
(c) Mentor (d) Teacher
14. Why counseling by supervisor is needed?
- (a) Loss of confidence (b) Dull working conditions
(c) Need support (d) All
15. Following is not the quality of supervisor as counsellor.
- (a) Emotional (b) Stable
(c) Motivator (d) Listener
16. To give future predictions _____
1. Understanding present is not important.
 2. Logical thinking is needed.
- (a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
17. Future losses can be minimized by _____
- (a) Future predictions (b) Planning
(c) Organizing (d) Staffing
18. To avoid confusion taken by higher management, decisions must be _____
- (a) Elaborated (b) Cancelled
(c) Forced (d) Reversed

19. How decisions can be elaborated?
(a) By written document (b) By conducting meeting
(c) By counselling (d) All
20. What are not ways to lay disciplinary standards?
(a) Disciplinary actions (b) Training for discipline
(c) Policy decisions in discipline (d) Forgiving for few times
21. Steps in controlling process are _____
(a) Setting performance standards (b) Measurement of actual performance
(c) Comparing actual performance with standards (d) All the above
22. What is chronology of steps in control process?
1. Setting performance 2. Comparing actual performance
3. Taking corrective actions 4. Measurement of actual performance
(a) 1 - 4 - 2 - 3 (b) 1 - 2 - 4 - 3
(c) 1 - 3 - 2 - 4 (d) 2 - 1 - 4 - 3
23. Out of following which is not the quantitative standards?
(a) Cost (b) Time
(c) Relations (d) Amount
24. Out of following which is not the qualitative standards?
(a) Relations (b) Goodwill
(c) Motivation (d) Time
25. Which is the method for measuring actual performance?
(a) Sample checking (b) Counting
(c) Personal observation (d) All the above
26. Critical point control method is concerned with _____
(a) Taking corrective action (b) Measurement of actual performance
(c) Analysing deviations (d) None of the above
27. After identifying the deviations _____
(a) Causes are analyzed (b) Actions are taken on workers
(c) Measurements are taken (d) Performance standards are calculated
28. If machinery is obsolete then what is corrective action?
(a) Do technological upgradation of machinery (b) Replace it
(c) Sell it (d) Destroy it
29. If the cause of deviation is defective process then corrective action is _____
(a) Replace the process by new one (b) Postpone the work
(c) Change the specification standards (d) None of the above
30. If material used is defective, then how to correct it?
(a) Change the material (b) Cancel the process
(c) Take action on supplier (d) Change the quality standards of the material
31. If the machinery is defective then how to take corrective action on this?
(a) Repair the existing machine (b) Sell out the machinery
(c) Upgrade the machinery (d) None of the above
32. If physical condition of work is defective then how to take corrective action?
(a) Improvement in physical condition (b) Change the operator
(c) Take action on architecture (d) None of the above

33. For controlling overall organizational performance, following techniques are used _____
- (a) Observation (b) Performance evaluation
(c) Spot inspections (d) All
34. Following is not the quantitative control technique _____
- (a) Ratio analysis (b) Breakeven analysis
(c) Observation (d) Audits
35. What are the types of audits?
- (a) Internal (b) External
(c) Management (d) All
36. For effective controlling by supervisor essential parameters are _____
- (a) Timely and forward looking (b) Flexible
(c) Comprehensive (d) Above all
37. 1. Controlling should never be flexible.
2. Objectives of control should be clear.
- (a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
38. The benefit obtained from a control system should be _____ than the cost involved in implementing it.
- (a) More (b) Less
(c) Equal (d) None of the above
39. 1. Control system should be periodically reviewed.
2. Control system should be flexible.
- (a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
40. Why workers do resistance to managerial control?
- (a) Too many controls (b) Incomplete measurements
(c) Unreasonable standards (d) All the above
41. Too many controls _____ workers.
- (a) Motivate (b) Assist
(c) Irritate (d) Benefit
42. Employees always dislike controls because _____
- (a) They don't want controls
(b) They want to control management
(c) Controls are too many, incomplete in nature, unreasonable, discloses unpleasant facts
(d) None of the above
43. Which is not the control technique?
- (a) Past oriented and future oriented (b) Market control
(c) Production control (d) Clan control
44. Inspection of jobs is _____
- (a) Past control (b) Future control
(c) Clan control (d) New control
45. Funds flow analysis is _____
- (a) Past control (b) Future control
(c) Clan control (d) Old control

46. Prices of products are due to which control?
(a) Past control (b) Future control
(c) Market control (d) Clan control
47. _____ is established by generating trust, tradition and shared belief.
(a) Past control (b) Future control
(c) Market control (d) Clan control
48. Controls due to government rules are _____
(a) Past (b) Future
(c) Market (d) Bureaucratic
49. Financial and accounting based control are _____
(a) Future (b) Old
(c) Market (d) Clan
50. _____ provide that information which is not available with old techniques.
(a) Old (b) New
(c) Clan (d) Market
51. Which are needs of Direction by supervisor?
(a) Harmony of objectives (b) Direct supervision
(c) Unity of command (d) All
52. In giving direction when supervisor says "goal of workers and organization are same".
Then such directions are called _____
(a) Unity of command (b) Harmony of objectives
(c) Direct supervision (d) Follow through
53. 1. Direction should not be face to face.
2. There should be unity of command in directions.
(a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
54. Supervisor gives directions, checks their performance and help the workers. This is called _____
(a) Unity of command (b) Follow through
(c) Harmony of objectives (d) Efficient communication
55. Face to face suggestions are _____
(a) More effective (b) Less effective
(c) Not necessary (d) Avoided
56. 1. Order should be clear and complete.
2. Order should be non-compatible.
(a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
57. When instructions are in written form _____
1. Subject is important.
2. Details are not involved.
3. No geographical distance with subordinate.
(a) 1 and 2 correct (b) 2 and 3 incorrect
(c) 1 and 3 correct (d) 1 and 3 incorrect

58. Match the pairs:

- | | |
|--------------------------------|---|
| 1. Harmony of objects | (A) Do What I say or otherwise |
| 2. Force | (B) Do What I say because I am good to you |
| 3. Paternalism | (C) You do as I say |
| 4. Bargain | (D) If we perform together, each will benefited |
| (a) 1 – D, 2 – A, 3 – B, 4 – C | (b) 1 – D, 2 – A, 3 – C, 4 – B |
| (c) 1 – A, 2 – D, 3 – B, 4 – C | (d) 1 – B, 2 – C, 3 – D, 4 – A |

59. "Do What I say or Otherwise" is _____ instruction.

- | | |
|-------------|-----------------|
| (a) Force | (b) Paternalism |
| (c) Bargain | (d) Harmony |

60. "Do What I say because I am good to you ..." is _____ instruction.

- | | |
|-------------|-----------------|
| (a) Force | (b) Paternalism |
| (c) Bargain | (d) Harmony |

61. "You do As I say" is _____ instruction.

- | | |
|-------------|-----------------|
| (a) Force | (b) Paternalism |
| (c) Bargain | (d) Harmony |

62. "If we perform together each will achieve his goal" is _____ instruction.

- | | |
|-------------|---------------------------|
| (a) Force | (b) Paternalism |
| (c) Bargain | (d) Harmony of objectives |

63. Good instruction is _____

- | | |
|----------------|-----------------|
| (a) Reasonable | (b) Enforceable |
| (c) Clear | (d) All |

64. Good instruction is _____

- | | |
|----------------------|--------------|
| (a) Understandable | (b) Complete |
| (c) Appropriate tone | (d) All |

65. Goof instruction is not _____

- | | |
|----------------|---------------------|
| (a) Reasonable | (b) Oral |
| (c) Complete | (d) Clearly defined |

66. 1. Direction starts from top and goes to bottom.

2. Direction is not continuous process.

- | | |
|--------------------|--------------------|
| (a) Only 1 correct | (b) Only 2 correct |
| (c) Both correct | (d) Both wrong |

Answers

1. (d)	2. (d)	3. (a)	4. (c)	5. (c)	6. (c)	7. (b)	8. (d)	9. (b)	10.(d)
11.(d)	12.(c)	13.(d)	14.(d)	15.(a)	16.(b)	17.(a)	18.(a)	19.(d)	20.(d)
21.(d)	22.(a)	23.(c)	24.(d)	25.(d)	26.(c)	27.(a)	28.(a)	29.(c)	30.(d)
31.(a)	32.(a)	33.(d)	34.(c)	35.(d)	36.(d)	37.(b)	38.(a)	39.(c)	40.(d)
41.(c)	42.(c)	43.(c)	44.(a)	45.(b)	46.(c)	47.(d)	48.(d)	49.(b)	50.(b)
51.(d)	52.(b)	53.(b)	54.(b)	55.(a)	56.(a)	57.(b)	58.(a)	59.(a)	60.(b)
61.(c)	62.(d)	63.(d)	64.(d)	65.(b)	66.(a)				

Safety Management

Weightage of Marks = 14, Teaching Hours = 08

Syllabus

- 4.1 Need for Safety Management Measures
- 4.2 General Safety Norms for an Industrial Unit; Preventive Measures
- 4.3 Definition of Accident, Types of Industrial Accident; Causes of Accidents
- 4.4 Fire Hazards; Fire Drill
- 4.5 Safety Procedure
- 4.6 Work Permits

About This Chapter

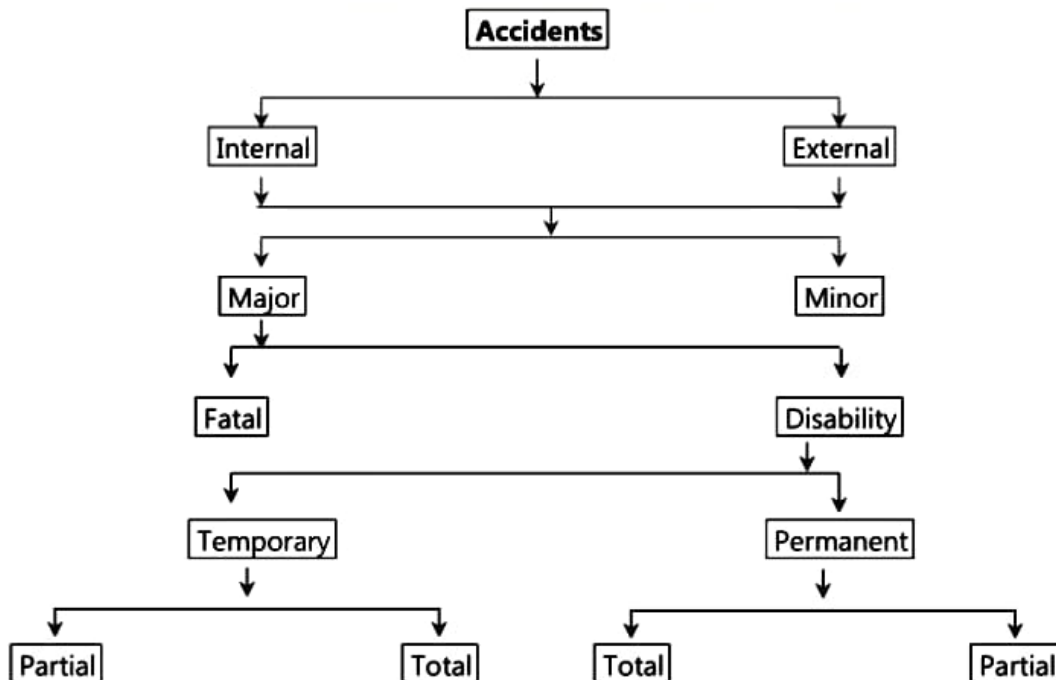
After reading this chapter, the students will able to,

- State the general norms required to be taken in the given case.
- Suggest preventive measures of plant activities in the given situation.
- Describe the safe procedural steps required to be taken to prevent the given the type of accident.
- Prepare a work permit to conduct the given maintenance activity.
- Explain the causes of the specified type of accident in the given situation.
- Prepare the specifications of firefighting equipment required for the given type of fire.

4.1 DEFINITION OF ACCIDENT

Accident is an unfortunate and sudden mishappening which causes damage or loss of property, material or human. Preventions of accidents are expected. Safety management is concentrating on avoiding accidents.

4.2 TYPES OF INDUSTRIAL ACCIDENTS



Chart

[4.1]

Types of Accidents are mentioned below:**(A) Based on Severity, Durability and Degree of Injury:****1. Minor Accidents:**

- Less harmful in nature to the worker.
- Preventing employees from working, for the period less than 48 hours from the time of accident.
- Not necessary to report to higher management.

2. Reportable Accidents:

- Injuries caused to the worker prevent him from working for the period of 48 hours or more.
- Supervisor should do reporting to the higher management.
- Accident is little complicated than the minor accident.

3. Fatal Accidents

- It results into death of the employee.
- Its reporting to the top management, legal bodies and police is must.

4. Accidents due to dangerous occurrences:

- Explosion, fire, leakage may be the reasons for such accidents.
- Man as well as property can be damaged.
- Extent, if more, it gives greater loss to the industry.

5. Internal Accidents:

- Injury without showing external signs (e.g. fractured bone) are called as internal accidents.

6. External Accidents:

- Injury with external signs of it, is called as external accident.

7. Major Accident:

- Accident causing death/permanent/prolonged disability to the injured employee is called major accident.

8. Temporary Accident:

- Injury after accident disables a worker for a short period/a day/a week.

9. Permanent Accident:

- Injury after accident disables the affected worker forever.

(B) Based on Place of Accident**1. Construction accident:**

- Accident occurs at construction site. These accidents are often happening and injuries are serious.

2. Chemical plant accidents:

- Exposure to chemicals is a real and everyday danger.

3. Industrial plant accidents:

- Industries busy in manufacturing have machineries and moving parts. Accidents occur may be due to mistakes by worker, management or situation.

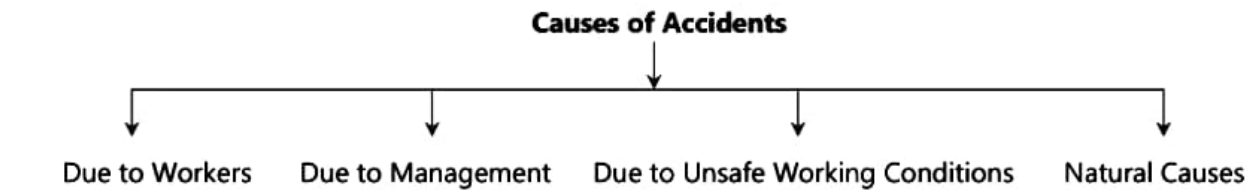
4. Mining accidents:

- Mines are seriously dangerous sites. Collapses of soil layers, suffocation, poisonous gases, etc. are the reasons.

4.3 CAUSES OF ACCIDENT

Accidents are unfortunate. They are sudden and not planned by anybody. But accidents definitely are caused by one or other reasons.

Lets see few causes of accidents.



(a) Causes of Accidents due to Workers:



- Poor knowledge of work.
 - Overconfident behaviour at the work place.
 - Mischievous behaviour.
 - Lack of concentration.
 - Stress in work.
 - Overtime work.
 - Unnecessary daring.
 - Less work experience.
 - Use of mobile while working.
 - Unstable mental conditions.
 - Fear of accident.
 - Physical problems like eyesight and hearing inabilities.
 - Working without authority.
 - Bad habits like alcoholism, smoking etc.
 - Reckless at work.
 - Lack of confidence.
 - Poor in handling pressure situations.
 - Not aware about rules and regulations of that specific work.
 - Not following rules and regulations.
 - Undisciplined nature.
 - Quarrels with colleagues.
- These are few of the reasons, any one of which may cause accident at work place.

(b) Causes of Accidents due to Management:

- Provision of unsafe workplace to workers.
- Bad construction of the plant.
- Untrained workers.
- Extra load of work to employees.
- Poor housekeeping.

- Arrangement of machines, equipments in accident prone manner.
- Heavy mental pressures on workforce.
- Lack of safe procedures.
- Poor discipline of work at workplace.
- Less control on habits of workers, employees' behaviour, their movements etc.
- No provision of safety equipments.
- No plans for plant protection.
- Bad electrification.
- Faulty equipments.
- Wrong assignments of work i.e. incorrect person working at sensitive jobs.
- Unguarded moving parts.
- Overcrowding of machines at shop floor.
- Overcrowding of persons near to the work places.
- No alternative arrangements of escape at the time of accidents.
- No arrangement for accident control and dampening.
- Lack of safety awareness.
- Careless management approaches.

(c) Causes of Accidents due to Unsafe Working Conditions:

- Poor workplace layout.
- Oily surfaces, slippery floor.
- Poor illumination.
- Suffocation at work.
- Bad house keeping.
- Unnecessary slopes and steps on shop floor.
- Unnoticeable turns and crossings.
- Weak machine foundations.
- Poor electrification.
- Exposure to moving parts.
- Chemical leakages.
- Storage of explosives without proper care.
- Humidity at workplace.
- No consideration of human factor while designing chairs, tables, operating systems of machines etc. So inconvenient working arrangements.
- Irregular floor heights, unscientific gangways, galleries and staircases.
- Psychological pressures due to bad work culture.
- No support at work by others.
- Negative competition, jealousy factor and groupism at work place. It causes mental imbalance of many, while working.
- Unavailability of basic facilities near to workplace.

**(d) Natural Causes of Accidents:**

- Earthquake
- Floods
- Cyclones
- Temperature strokes
- Snow falls
- Land slide collapse
- Heavy rains etc.

4.4 EFFECTS OF ACCIDENTS

Following are the effects of accidents on various elements of society:

1. Effect on worker.
2. Effect on industry.
3. Effect on family.
4. Effect on management.

**1. Effect on Worker:**

- (i) Injury to body.
- (ii) Loss of skills.
- (iii) Loss of job.
- (iv) Leave for recovery.
- (v) In case of fatal accident, loss of life.
- (vi) Confidence level gets hampered.
- (vii) Growth in career may get affected.
- (viii) Financial loss.



2. Effect on Industry:

- (i) Production stoppage.
- (ii) Bad message to other workers.
- (iii) Reputation is lowered.
- (iv) Financial loss for compensating the affected worker.
- (v) Extra cost on recovery of machine/place/building.

3. Effect on Management:

- (i) Time to solve the case.
- (ii) Issues related to court, police, hospital and compensation.
- (iii) Status among competitors is affected.
- (iv) Faith of workers gets disturbed.
- (v) More attentiveness becomes necessary in future.

4. Effect on Family:

- (i) Loss of earning member.
- (ii) Hospitalisation related time and money losses.
- (iii) Attention to patient needs.
- (iv) Stability of family is disturbed.
- (v) Other family members may lose working hours/study hours after accident of their family member.
- (vi) Feeling of insecurity.

These are effects of accidents on nearby society.

Example: Mr. Raju got an accident while working on drilling machine. He lost his right hand finger. Due to this he is hospitalised for 12 days. For him, it is difficult to work like before. Now he is feeling insecure. His confidence is collapsed. His wife was on leave for all the days. His daughter in SSC is feeling tensed while caring her father as well as study. Company name was there in newspapers on the next day of accident and management is trapped in police, court and compensation related routine work. On that day, the drilling machine on which Mr. Raju was working was stopped for all the shifts.

4.5 FIRE HAZARDS AND FIRE DRILLS

4.5.1 Fire Hazards

Examples of Fire Hazards:

1. Objects that can generate heat.
2. Overloading power sockets.
3. Smoking.
4. Human error and negligence.
5. Combustible material being stored on site.
6. Flammable liquids and vapours.
7. Dust build-up.
8. Faulty electrical equipment.

Harmful Nature of Fire:

1. Flames burn the things.
2. Heat and water vapour from combustion can cause severe damage.
3. Dangerous effects due to smoke and soot.
4. Serious effects due to toxic chemicals.

Types of Fire:

- (a) Fire involving solid materials (wood, paper, textiles etc.)
- (b) Fire involving flammable liquids such as petrol, diesel, oils etc.

- (c) Fires involving gases.
- (d) Fire involving metals.
- (e) Fires involving electrical apparatus.

How to Prevent Fire Hazards?

1. Avoid hot work if possible.
2. Train people.
3. Ensure that the area is clear of flammable or combustible materials.
4. Use of written permit system.
5. Supervise the work.
6. Avoid accumulation of dust to a dangerous level by following a regular housekeeping.
7. Keep display of safety information for every liquid that is stored.
8. Store flammable liquids properly.
9. Control all ignition sources.
10. Provide personal protective equipment.
11. Keep equipments and machinery clean. This cleaning including surrounding areas, avoid the risk due to grease or dirt particles.
12. Prevent overheating of machinery.
13. Follow maintenance procedures regularly.
14. Do not overload electrical equipment or circuits.
15. Don't leave temporary equipment plugged in when it is not in use.
16. Avoid using extension cords.
17. Use antistatic equipment where required.

Effects of Fire:

1. Fire impacts people, property and the environment.
2. Many human systems are affected by wildfire smoke.
3. Fire affects respiratory system.
4. Burning of skin, organs, fatal nature are dangerous impacts.

4.5.2 Fire Drill

Meaning: Fire drill is a method of practicing how a building would be evacuated in the event of a fire. Normally, the building's existing fire alarm system is activated and the building is evacuated as if the emergency had occurred.

Steps in Fire Drill:

1. Communicate with the local chief or Fire Marshall.
2. Create an in-house safety committee.
3. Communicate evacuation routes to people.
4. Suggest alternate routes in case of emergency.
5. Conduct fire drill regularly.

During the Fire Drill:

Supervisory staff are to monitor the fire drill process and note any of the following:

1. Are individuals closing the doors after exiting rooms.
2. Are individuals remaining calm and proceeding towards the nearest exit?
3. Are individuals assembling at the designated muster point?
4. Are fire wardens ensuring the safe evacuation of all individuals?

After the Fire Drill:

1. Record the total evacuation time in the evacuation checklist report.
2. Silence the alarms, reset the fire alarm system.
3. Ensure the fire alarm system is back to normal operating condition.
4. Inform individuals that they can re-enter the building.
5. Keep record of the fire drill.

Advantages of Fire Drill:

1. It ensures that, people exit the building in a timely fashion and know the designated area.
2. People know the evacuation routes.
3. Fire drills are an opportunity to practice evacuation procedures to make sure all involved are familiar with them.
4. Fire drills are also helpful for testing escape routes to evaluate their effectiveness.
5. Due to fire drills we can ensure that alarm systems and fire safety equipment are in working condition.
6. Everyone is aware of how to get out of the working place in the quickest and safest way.
7. After mock drill, improvements can be suggested to have effectiveness in the evacuation process.

Fire Drill Objectives:

1. Giving employees an opportunity to practice emergency procedures in a simulated but safe environment.
2. Determining if employees understand and can carry out emergency duties.
3. Evaluating effectiveness of evacuation procedures.
4. Complying with requirements of the local fire code.

Fire of Fire Drill:

1. Fire prone places - Once in 3 months.
2. Other work places - Once in 6 months.

4.6 NEED FOR SAFETY MANAGEMENT

Safety Management is needed because:

1. Managing workplace safely is an important goal of an organization.
2. It ensures better working environment for employees.
3. The software system used in safety management always help to record, manage and analyze safety related data.
4. This system can see exactly where accidents and unsafe situations are occurring.
5. Safety management also ensures proactive steps to eliminate accidents.
6. Due to safety management system, day to day activities are observed through paper forms, excel sheets, software application to record the safety data. Also to investigate accidents. It also take follow-up and feedback mechanism.
7. Safety management ensures centralized compliances from all locations.
8. Safety management brings repeatability to safety operations, when processes are repeatable, they can be methodically improved.
9. Safety management make standardization so that all locations operate uniformly.
10. It automates the safety investigation process.
11. Safety management softwares enhance communication and sharing of appropriate data among supervisors, managers, safety professionals, medical staff etc.
12. Due to safety management corrective actions are taken.
13. It helps to place employees in jobs suitable to their work restrictions.
14. It ensures that when a task is carried out in your workplace, every precaution has been taken to avoid accidents.

4.7 GENERAL SAFETY NORMS FOR AN INDUSTRIAL UNIT

1. Use of Personal Protective Equipment (PPE).
2. Personal Protective Equipment is anything that is used to protect human body, eyes, face, ears, head, extremities, all other body parts.
3. Personal Protective Equipment must be available and in good working condition.
4. **Head protection:** There should be use of appropriate head protection when exposed to overhead hazards from electrical shock, burn hazards, impact hazards and penetration hazards. Head protection is required when exposed to object falling from above
5. **Eye and Face protection:** Each employee shall use eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or gas vapours.
6. **Hearing protection:** Each employee exposed to noise levels that exceed 85 decibels for an extended period must wear approved ear plugs.
7. **Hand and Foot protection:** Each employee should use appropriate hand and foot protection when exposed to injury from potential skin absorption hazards, chemical or thermal burns, electrical dangers, cuts, fractures etc.
8. **Protective clothing and personal hygiene:**
 - Protective clothing shall be worn by those persons who are exposed to hazards such as solid and liquid chemicals, high or low temperatures, open flames and large amount of ultraviolet light.
 - When persons are exposed to moving or rotating equipment, protective clothing must fit tightly.
 - Shirts shall be tucked in.
 - Long sleeves must be buttoned.
 - Jewellery should not be worn when operating industrial equipment.
9. **Lockout of energy sources:**
 - All employees should follow the strict procedure for lockout of energy sources.
 - All equipments/circuits should be locked out to protect against accidental operation.
 - Do not attempt to operate any switch, valve bearing a lock.
 - Any employee not following procedures should be subjected to strict disciplinary actions.
10. **Hand tool and portable power, tool safety:**
 - All persons should use personal protective equipment while using any tools.
 - Check for working safety guards, shields, warning labels etc.
 - Always use right tool for the job.
 - Dull tools are more dangerous than sharp ones. So use sharp tools.
 - While working an electrical equipments, ensure that all metal hand tools are insulated.
 - Never use compressed air to remove dust and debris from clothing.
11. **Compressed gas cylinders**
 - Use only those cylinders that are approved for interstate transportation.
 - Close the cylinder main valve and bleed the lines.
 - Remove any regulators.
 - Tighten the cylinder valve cap.
 - Cylinders may be rolled for moving purposes but not dragged.
 - When there is doubt about how to use the cylinder, the user shall contact the supplier of the cylinder for consultation.
 - Regulators and pressure gauges are to be used only with gases for which they are designed.
 - Cylinders should not be kept near elevators.

12. Welding and Cutting tools:

- Use fire resistant gloves.
- Use a leather cap to prevent hot sparks.
- Hard hats shall be used when there is a hazard of falling objects.
- Goggles, helmets and shields should be used for all types of welding.

13. Power movers and tractors are designed to seat only the driver.

14. Avoid lack of oxygen in a space that could cause immediate respiratory failure.

15. Serious care must be taken where toxic gases or vapours can poison the workers.

16. Avoid slipping, trapping surfaces.

4.8 PREVENTIVE MEASURES

- 1. Safe Working Methods:** Operations in the factory must be designed considering safety first. Possibility of accident should be eliminated. Prior care must be taken for that, while deciding the methods and operations.
- 2. Proper Selection of Workers:** Disciplined, mentally stable, emotionally balanced and alert people always work in safe manner. Workers with above qualities, with good motive of work must be selected for the work. The attitude and aptitude of workers must be tested through various psychological tests and interviews at the time of selection.
- 3. Training for Safe Working:** Training gives knowledge of work, which improves person's attitude and gives correct direction. Trained employees work safely. Proper workers with proper training is the better manpower to be employed. So training of workers is the assurance of safe working. Hence, training is one of the preventive measures to avoid accidents.



- 4. Accident Prone Areas:** Survey of industrial processes, plant layout, material transportation, sensitive operations help us to understand where the possibility of accident is more. Corrective actions and prevention can be taken at such places. Instructions regarding the same make awareness among the concerned authorities or employees and thus accidents can be avoided.
- 5. Safety Devices:** During the industrial operations prevention can be taken by using safety devices. Helmets, goggles, breath purifiers, pads, hand gloves, safety shoes, aprons, protection shields are some of the personal safety devices which can be used. It depends on the type of process and kind of body exposure. Unnecessary extra care which creates difficulties in work must be avoided. Persons must be trained to use the safety devices effectively.



6. Safety Programme: A systematic working with safety is possible through establishment of Safety Department. This department will be dedicated for safety related work only. A complete schedule for safety awareness will be carried out by the same. Workers can be educated by conducting various safety programmes and imparting trainings to make them conscious for safety.

7. Safety Provisions:

- Fencing of rotary and moving parts.
- Provision of fire extinguishing equipments.
- Employment of adolescents on dangerous machines must be restricted.
- Availability of first Aid facilities.
- Instructions for 'safety and related precautions', while working must be displayed wherever required.

(8) Promoting Safety Awareness in Employees:

Eventhough everybody knows miseries of accident, there are number of accidents everyday. So it is also important to create safety consciousness among the employees.

By the following ways management may promote safety awareness:

1. Safety training programmes.
2. Display of Banners, Posters which underlines importance of safety.
3. Organising Seminars, Conferences, Sessions by experts on industrial safety related issues.
4. Displaying safety related messages, instructions, guidelines near the work area.
5. Competition in industry related to safety and awards to those departments where minimum accident instances occur.
6. Celebrating safety awareness week for creating safety consciousness among employees.

7. Formation of safety committees.
8. Publication of articles related to industrial safety in the company periodicals / magazines.
9. Essay competition, picture competition, slogan competition related to industrial safety.

In these ways or other, management can create environment of safety awareness.

The above mentioned safety procedures, preventive measures and safety awareness plans may reduce accidents considerably. Accidents are undesirable and hence this safety approach is the vital one.

4.9 SAFETY PROCEDURES

Safety procedure includes following:

1. Develop, establish and maintain plans for safety.
2. Define policies for administration of a safety programme which will include safety training, industrial safety, safe working conditions etc.
3. Providing accident prevention guidance to staff.



4. Developing safety education, award programmes to create safety awareness.
5. Reviewing documents related to safety, and directions mentioned in handbooks.
6. Understanding legal systems related to accidents and deciding policies accordingly.
7. Providing Safety Engineering at workplace.
8. Short term and long term planning for safety factors related to technical developments and associated operational methods.
9. Formation of Safety Department with dedicated staff for the same function.
10. Establishing procedures of safe working.
11. Checking the ground reality and finding out accident prone areas. Actions must be taken to avoid accidents.
12. Handling workman's compensation claims and correspondences after unfortunate occasions.
13. Provision of safety aids, first aid services near the workplace.
14. Documentation related to accidents should be maintained.
15. Review of plans related to construction, facilities, equipment and other systems to ensure confirmation with acceptable safety standards.
16. Evaluating and approving safety practices in potentially hazardous areas / operations.
17. Ensure that, the health and safety of all employees are taken care.
18. Accident analysis to learn in future for no repetitions of the same.

4.10 WORK PERMITS

Work permit is a documented format that authorizes certain people to carry out specific work within a specified time frame/area. It sets out the precautions required to complete the work safely, based on a risk management.

Features of Permit-to-Work Systems:

1. A standard operating procedure.
2. The equipment and tools to be used.
3. A hazard and risk assessment.
4. Required precautions, mitigating actions and control measures.
5. The permit issue, extension and withdrawal details.
6. The names and signatures of those who are responsible for the job.
7. A tool box talk signed by all workmen.

A work permit system consists of standard procedure essential:

1. Details of the necessary preparatory work method statement.
2. Clear definition of responsibilities.
3. It is a formal recorded process.
4. It monitors and audits to ensure that the system works as intended.
5. It is for authorized persons.
6. Training of authorized persons.
7. Instructions in the issue, use and closure.
8. There is provision of safety equipment.

Where Work Permits Needed:

1. Works which may adversely affect the safety of personnel, the environment or the plant.
2. High risk or non-routine activities which will require some form of prior to work commencing.
3. Non-production work like maintenance, repair, cleaning, testing etc.
4. Jobs where two or more individuals or groups need to coordinate activities to complete the job safely.
5. Work on high voltage electrical equipment.
6. Work on electrical trouble shooting or repair on live circuits.
7. Work involving the use of hazardous or dangerous substances including radioactive materials and explosives.
8. Complex machinery.
9. Pressure testing.
10. Escape or rescue systems.
11. Critical lifting, use of mobile cranes.
12. Work at height.
13. Operational pipelines.
14. Work near energized lines.
15. Should not be used for all activities, if not necessary.

When PTW not required:

1. Emergency.
2. Routine activity.

Definitions in Work Permits:

Responsible person: is a person authorized by manager who will responsible for keeping his area and staff safe.

Issuer: is a person who is trained competent and authorized to issue a permit to work after ensuring that all the hazards, associated with the work being done in that area and all necessary safety precautions are being implemented to ensure that the work can be completed safely.

Executor: is a person who is trained, competent and authorized who is responsible for the work being completed as described in the permit to work.

Field operator: is a competent person and supports the isolator at site, checks the site compliance to permit conditions and signs the permit.

Types of work permits:

1. Cold work.
2. Hot work.
3. Confined space.
4. Excavation.
5. Radiography.

Cold work permit: A cold work permit shall be obtained for all general work that does not involve activities related to hot work.

Examples: Routine maintenance, inspection, hand tools.

Hot work permit: It is any work that could create a source of ignition, that could result in a fire or explosion.

Examples: Spark producing tools, Hammering in high risk gas areas, explosives, welding etc.

Elements of Work Permits System:

1. Issue, 2. Receipt, 3. Clearance, 4. Cancellation

1. Issue:

- It means prejob checks.
- Description of work to be carried out.
- Description of plant and location.
- Assessment of hazards.
- Identification of controls.

2. Receipt:

- It means handover of permit.
- Competent and authorized person issues permit to workers.
- Workers sign to say they accept controls.
- Work can now start.
- Plant is now under the control of the workers.

3. Clearance:

- It means hand back of permit.
- Workers sign to say they have left the job site and equipment can restart.

4. Cancellation:

- Authorised person accept plant back and can remove isolations etc.
- Plant is now returned to the control of the site.

Summary

Accident is an unfortunate and sudden mishappening. It damages property, material or human. As per various parameters there are many types of accidents like minor, major, industrial, permanent etc. Causes of accidents are due to workers, management, unsafe conditions and natural reasons also. Effects of accidents are on worker, industry, family and management. Fire is also main reason for industrial accidents. Fire drill is a method of emergency evacuation for practice of workers and employees. To avoid accidents, safety management is essential. Industry should follow safety norms and use preventive measures. Safety procedures ensure safe working. Also work permits help to restrict accidents.

Multiple Choice Questions

- Which is not the 'effect of accident on worker'?
 - Injury to body
 - Production stoppage
 - Loss of job
 - Financial loss
- If affected worker is recovered within 10 hours, then which type of accident is it?
 - Minor
 - Reportable
 - Major
 - Fatal
- What happens in fatal accident?
 - Hospitalisation
 - Fractures
 - Disablement
 - Death
- Who can be responsible for accident?
 - Worker
 - Management
 - Working conditions
 - All the above
- Who is responsible for "unguarded moving parts"?
 - Workers
 - Management
 - Government
 - None
- Which is not included in the causes of accidents due to 'Unsafe Working Conditions'?
 - Chemical leakages
 - Suffocation at work
 - Irregular floor heights
 - Quarrels of workers
- Which is not included in the 'causes of accidents' due to nature?
 - Floods
 - Gas leakage
 - Heavy rains
 - Temperature strokes
- Who gets affected directly or indirectly due to accidents?
 - Worker
 - Industry
 - Family of worker
 - All
- Accident is
 - Unfortunate
 - Mishappening
 - Sudden
 - All the above
- Which is not included in the cause of accident due to worker?
 - Lack of concentration
 - Poor housekeeping
 - Mischievous behaviour
 - Overconfidence
- Which is not included in the cause of accident due to management?
 - Bad habits of worker
 - Untrained workers
 - Bad construction of plant
 - Faulty equipments

12. Injury after accident disables the affected worker forever is _____ accident.
- (a) Fatal (b) Major
(c) Permanent (d) None
13. Internal accident means _____.
- (a) Accident in the premises of company
(b) Injury without showing external signs
(c) Both
(d) None
14. Which preventive measure industry should take to avoid accidents?
- (a) Safety provisions (b) Training for safe working
(c) Safety devices (d) All the above
15. Examples of fire hazards are _____.
- (a) Smoking (b) Overloading power sockets
(c) Faulty electrical equipment (d) All the above
16. Faulty electrical equipment may cause _____.
- (a) Fire hazards (b) Industrial accidents
(c) Loss of property (d) all the above
17. Fire involving solid materials is of type _____.
- (a) (A) (b) (B)
(c) (C) (d) (D)
18. Fire involving flammable liquids such as petrol, diesel etc. is of type _____.
- (a) (A) (b) (B)
(c) (C) (d) (D)
19. Fire involving gases is of type _____.
- (a) (A) (b) (B)
(c) (E) (d) (D)
20. Fire involving metals is of type _____.
- (a) (B) (b) (C)
(c) (D) (d) (E)
21. E type of fire is by _____.
- (a) Solid materials (b) Gases
(c) Electrical apparatus (d) Metals
22. Don't leave temporary equipment plugging _____ when its _____ use.
- (a) in, not in (b) off, in
(c) off, not in (d) in, in
23. Fire drill is _____.
- (a) Drilling in fire (b) Fire near drill
(c) Demo of fire evacuation training (d) None of the above
24. Whom to communicate before doing fire drill operation?
- (a) Fire Marshall (b) Fire Commander
(c) Fire Superintendent (d) Fire Inspector
25. During fire drill _____.
1. Communicate evacuation routes to people
2. Create an in house safety committee
- (a) only 1 is correct (b) only 2 is correct
(c) both are correct (d) both are wrong

26. _____ ensures the safe evacuation of all individuals during fire drill.
- (a) Fire Marshall (b) Supervisor
(c) Fire Warden (d) Fire Inspector
27. During fire drill _____.
1. Fire alarm system is not used
2. All individuals assembly at the master point
- (a) only 1 is true (b) only 2 is true
(c) both are true (d) both are false
28. To give practice of evacuation in emergency _____ is done.
- (a) Fire (b) Fire drill
(c) Fire fight (d) Fire awareness
29. Frequency of fire drill at fire prone places is _____.
- (a) Once in a year (b) Once in 6 months
(c) Once in 3 months (d) Once in 2 months
30. Frequency of fire drill at non-fire prone places is _____.
- (a) Once in a year (b) Once in 6 months
(c) Once in 3 months (d) Once in 2 months
31. _____ is a documented format that authorizes specified people to work under conditions.
- (a) Work license (b) Work permit
(c) Work authority (d) Work order
32. In work, following facts are important.
- (a) Specific work (b) Specified time
(c) Specific area (d) All the above
33. Work permit sets out the _____ required to do work safely under _____.
- (a) Risk, Permission (b) Function, Labour law
(c) Process, Higher authority (d) Precautions, Risk management
34. Work permits is _____.
1. Formal recorded process
2. It is for authorized persons
3. There is no clear definition of responsibilities
- (a) 1, 2 correct; 3 incorrect (b) 1,2 incorrect, 3 correct
(c) 1 correct, 2, 3 incorrect (d) 1 incorrect; 2, 3 correct
35. Work permit is done at _____.
1. High risk areas
2. Routine activities
- (a) only 1 correct (b) only 2 correct
(b) both correct (d) both incorrect
36. Work permit is done at _____.
- (a) High voltage work (b) Electrical trouble shooting
(c) Pressure testing (d) All
37. When work permit is not required?
- (a) Complex machinery (b) Emergency
(c) Work at height (d) Operational pipelines
38. _____ is a person authorized by manager who will be responsible for keeping area and staff safe.
- (a) Issuer (b) Field operator
(c) Responsible person (d) Executor

39. _____ is a person who is trained, competent and authorized to issue permit.
- (a) Responsible person (b) Issuer
(c) Executor (d) Field operator
40. _____ is a person who is trained, competent and authorized as per work permit.
- (a) Field operator (b) Executor
(c) Issuer (d) Responsible person
41. _____ is a person who is competent person and support the isolator at site and signs the work permit.
- (a) Executor (b) Field operator
(c) Issuer (d) Responsible person
42. Match the pairs:
- | | |
|-------------------|----------------|
| 1. Cold work | (A) Fire |
| 2. Hot work | (B) Hand tools |
| 3. Confined space | (C) Welding |
| 4. Excavation | (D) Pipeline |
- (a) 1. (B), 2. (C), 3. (D), 4. (A) (b) 1. (D), 2. (C), 3. (B), 4. (A)
(c) 1. (A), 2. (B), 3. (C), 4. (D) (d) 1. (C), 2. (B), 3. (A), 4. (D)
43. Match the pairs
- | | |
|-----------------|-------------------------|
| 1. Issue | (A) Hand back of permit |
| 2. Receipt | (B) Prejob checks |
| 3. Clearance | (C) Remove isolation |
| 4. Cancellation | (D) Handover of permit |
- (a) 1. (D), 2. (C), 3. (B), 4. (A) (b) 1. (D), 2. (B), 3. (C), 4. (A)
(c) 1. (A), 2. (B), 3. (C), 4. (D) (d) 1. (B), 2. (D), 3. (A), 4. (C)
44. Safety management does not ensure _____
- (a) Safe workplace (b) Time management
(c) Standardization of operation (d) Investigation of accident
45. Safety management brings _____ to safety operations.
- (a) Repeatability (b) Avoidance
(c) Control (d) None
46. Safety management does not apply _____
- (a) Standardization (b) Ensures centralized compliances
(c) Do not use software (d) Safety investigation process
47. Safety management softwares do not share data among _____
- (a) Medical staff (b) Safety Professionals
(c) Customers (d) Supervisors
48. 1. Safety management is not helpful in corrective actions.
2. Safety management brings repeatability to safety operation.
- (a) 1 is Correct (b) 2 is Correct
(c) Both Correct (d) Both Incorrect
49. Head protection does not help to safeguard _____
- (a) Burn hazards (b) Impact hazards
(c) Gas fumes (d) Penetration hazards
50. _____ is required when exposed to object falling from above.
- (a) Head protection (b) Eye protection
(c) Hearing protection (d) Foot protection

51. Face protection is not required in _____
- (a) Flying particles (b) Gas vapours
(c) Noise above 85 decibels (d) Molten metal
52. For extended period we should not be exposed to noise above _____ decibels.
- (a) 50 (b) 60
(c) 75 (d) 85
53. Protective clothings are not useful for _____
- (a) Open flames (b) Falling object
(c) Low temperature (d) Liquid chemicals
54. Protective clothing must be _____ when exposed to rotating equipment.
- (a) Loose (b) Tight
(c) Both (d) None
55. Safe clothing includes
1. Shirts tucked in
 2. Long sleeves buttoned
- (a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both incorrect
56. All equipments should be _____ to protect against accidental operation.
- (a) Locked in (b) Locked out
(c) Closed in (d) Closed out
57. Using hand tools one must care _____
- (a) Work with safety guards (b) Warning labels
(c) Shields (d) All the above
58. While working on electrical equipments ensure that all metal hand tools are _____
- (a) Insulated (b) Folded
(c) Protected (d) None of the above
59. Never use _____ to remove dust and debris from clothing.
- (a) hand tools (b) sticks
(c) clothes (d) compressed air
60. While using gas cylinders, use only those cylinders that are approved by _____
- (a) state transportation (b) interstate transportation
(c) district officials (d) gas agencies
61. When there is doubt about how to use the cylinder, the user shall contact _____
- (a) Police (b) Supplier
(c) Fire control (d) None of the above
62. Regarding cylinders _____
1. Cylinders should be kept near elevators for easy transportation
 2. Cylinders must be dragged, but not be rolled
- (a) Only 1 correct (b) Only 2 correct
(c) Both correct (d) Both wrong
63. Match the pairs:
1. Gloves (A) Falling objects
 2. Hard hats (B) Hot sparks
 3. Leather cap (C) Welding
 4. Face protection (D) Molten metal
- (a) 1. (A), 2. (B), 3. (C), 4. (D) (b) 1. (B), 2. (C), 3. (D), 4. (A)
(c) 1. (C), 2. (A), 3. (B), 4. (D) (d) 1. (D), 2. (B), 3. (C), 4. (A)

Answers

1. (b)	2. (a)	3. (d)	4. (d)	5. (b)	6. (d)	7. (b)	8. (d)	9. (d)	10.(b)
11.(a)	12.(c)	13.(b)	14.(d)	15.(d)	16.(a)	17.(a)	18.(b)	19.(c)	20.(c)
21.(b)	22.(a)	23.(c)	24.(a)	25.(c)	26.(c)	27.(b)	28.(b)	29.(c)	30.(b)
31.(b)	32.(d)	33.(d)	34.(a)	35.(a)	36.(d)	37.(b)	38.(c)	39.(b)	40.(b)
41.(b)	42.(a)	43.(d)	44.(b)	45.(a)	46.(c)	47.(c)	48.(b)	49.(c)	50.(a)
51.(b)	52.(d)	53.(b)	54.(b)	55.(c)	56.(b)	57.(d)	58.(a)	59.(d)	60.(b)
61.(b)	62.(d)	63.(c)							



Legislative Acts

Weightage of Marks = 12, Teaching Hours = 12

Syllabus

- 5.1 Necessity of Acts, Important Definition and Main Provisions of Acts
- 5.2 Industrial Acts: (a) Indian Factory Act, (b) Industrial Dispute Act, (c) Workman Compensation Act, (d) Minimum Wages Act

About This Chapter

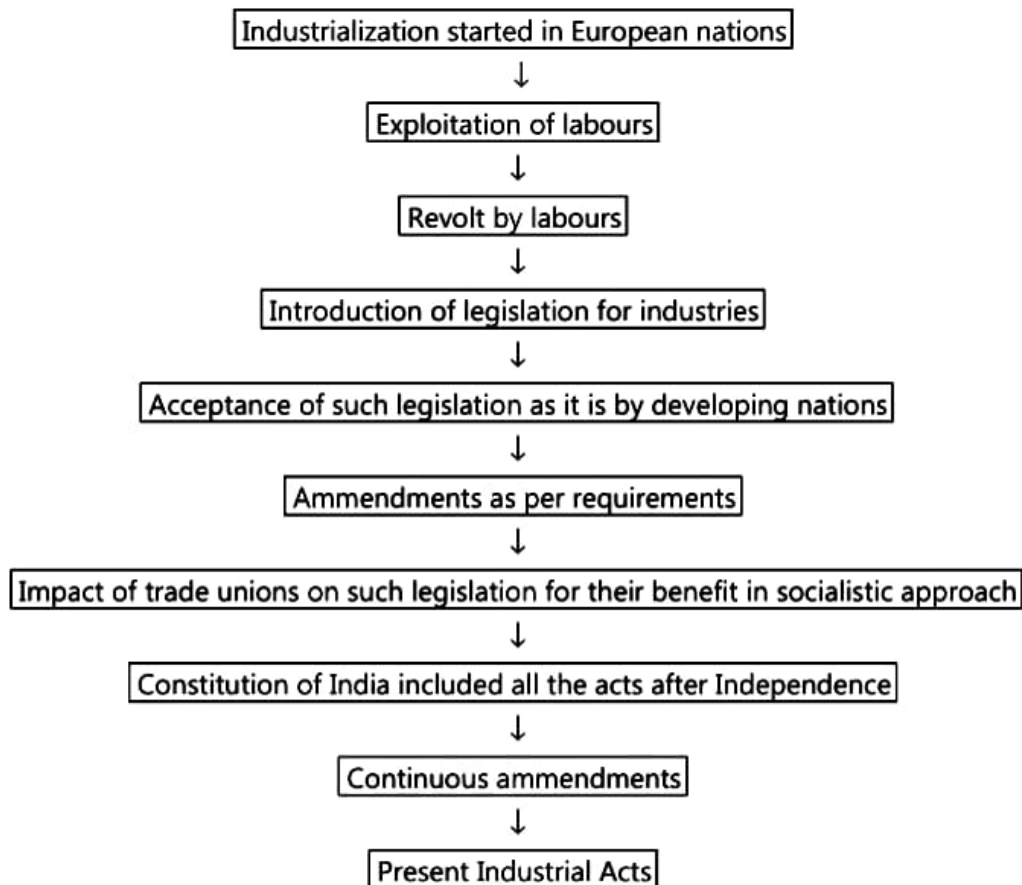
After reading this chapter, the students will able to,

- Explain the purpose of the act.
- Explain the main provisions of the various acts and important definitions.

5.1 INTRODUCTION TO INDUSTRIAL ACTS

Employer and employees are the two parties across the table. Relationship between these two is very important for the development and the survival of any organisation. Industrial acts, initially called as labour legislation had a protective function dealing with wages, working conditions, social interests, industrial peace etc. It thus gives legal framework to relationship between employer and employees.

The progress of such legislation is mentioned below:



5.2 NECESSITY OF ACTS

Industrial Acts are Helpful in the Following Ways:

1. It gives legal platform and support to employees.
2. It creates industrial peace and improves employer - employee and labour - management relationships.
3. It gives solutions to quarrels in industry.
4. It removes out autocracy of management and extortion of workers.
5. Employees get compensation in cases of accidents.
6. It reduces gap between employer and employee due to workers' participation in management.
7. It guarantees welfare of employees.



5.3 INDUSTRIAL ACTS

5.3.1 Indian Factory Act

(a) Facts:

1. Modifications in 1934 factory Act.
2. Passed in 1948.
3. Last major ammendment in 1976.

(b) Aims:

1. To ensure adequate safety measures.
2. To promote health and welfare of the workers employed in factories.
3. To prevent haphazard growth of factories.
4. To consolidate and amend the laws for regulating labour in the factories in India.
5. The licensing and registration of the factories.

(c) Terminology:

1. **Adult:** A person who has completed the age of 18 years.
2. **Adolescent:** A person of the age between 15 to 18 years.
3. **Child:** A person of the age less than 15 years.
4. **Calendar year:** A period between 1 January to 31 December (i.e. 12 months).
5. **Day:** A period between 2 mid-nights (i.e. 24 hours).
6. **Week:** A period between 2 Saturdays (i.e. 7 days).
7. **Factory:** A premises of 10 workers (If power is used).
OR A premises of 20 workers (If power is not used).
8. **Power:** Any form of energy other than animal or husbandary input.
e.g. of power - Electrical, Pneumatic etc.
9. **Prime Mover:** Any device which generates or provides power.
e.g. Motor, Engine etc.
10. **Machinery:** Any device which transforms given power.

(d) Main Provisions:

1. All provisions are related to:
 - (a) Health and safety
 - (b) Welfare and Development
 - (c) Duration of work
 - (d) Young workers and women workers
 - (e) Leave structure
 - (f) Administration and execution
2. Appointment of labour welfare officers in the factory consisting of minimum 500 workers.
3. Rights of labour welfare officer are given to State Government.
4. Working duration: Special facts:
 - (a) Adult: 48 hrs / week.
Child: 45 hrs / week.
 - (b) Women and children - Prohibited to work during night (7 p.m. to 6 a.m.). But amendment is possible in this last fact.

Child Labour:

- * It is Prohibition and Regulation Act, 1986.
- * No work between 7 p.m. to 6 a.m.
- * Not allowed for overtime to children.
- * Continuous work of more than 3 hours is not allowed.
- * Not allowed to work at dangerous places.

Women and Night Shifts:

As per the recent amendment in the factories Act, Women are now allowed to work:

- * In late night shifts in certain industries.
- * Only in day shifts in certain industries.
- * In night shifts in Telecom and Communication industry only.
- * Only in those industries where shifts are not permitted.

5. Administration:

- (i) Appointment of Labour Welfare Officers. (LWO).
- (ii) Appointment of factory inspectors.
- (iii) Enforcement of Law through Labour Institute and Director General (DG) of Factory Advice Service.
- (iv) Penalties are prescribed for each offence.

(e) Special Provisions:

1. Accidents and diseases
2. Dangerous operations
3. Penalty and procedures

(f) Conditions Stipulated in Factory Act Related to Hygiene of Workers:

These conditions are with respect to the following facts such as cleanliness, ventilation and temperature, artificial humidification, over-crowding, lighting, drinking water, bathrooms, latrines, spittoons etc.

1. Cleanliness:

- o Daily sweeping or cleaning of floors, benches, passages and staircases.
- o Cleaning of work room at least per week.

- Effective means of drainage.
 - Painting and varnishing once a year.
- 2. Ventilation and Temperature:**
- Circulation of fresh air.
 - Exhaust fans at proper places.
 - Use of devices to keep balance of temperature.



3. Artificial humidification:

- Use of prescribed methods to have an artificial humidification.
- Use of clean water for humidification process.

4. Over Crowding:

- Space required for a worker is 500 cu. feet.
- No passage, room, workplace shall be overcrowded.



5. Lighting:

- Sufficient and suitable.
- Natural or may be artificial.
- Glazed windows in clean condition.
- Formation of shadows should be avoided.

6. Drinking Water:

- Should be available to all workers during all working hours.
- Should be provided and maintained at suitable points.
- Drinking water place must be away from latrine by 6 metres.



7. Latrines:

- Separate enclosed for male and female.
- One latrine must be made available per 20 persons.
- Latrines must be of prescribed sanitary types.

8. Spittoons:

- Sufficient number of spittoons shall be kept at convenient places.
- These must be regularly kept clean.

(g) Safety Provisions under Factory Act:

1. Fencing of machinery:

Fencing of following should be done:

- (i) Moving part of prime mover,
- (ii) Every part of transmission machinery,
- (iii) Every part of electric generator and motor,
- (iv) All dangerous parts etc.



2. Untrained adult man, woman or young person should not be allowed to work near machinery in motion.
3. Employee with loose fitting clothes should not be allowed to work near machinery in motion.
4. Young persons should not be allowed to work at dangerous places.
5. Provide safe casing to machinery.
6. Every hoist and lift must be of rigid mechanical construction, proper material and sufficient strength. Their maintenance at periodic intervals is must.
7. Gates must be provided to enclose the hoistway and liftway.
8. Do not overload the lifts and cranes.
9. Materials of ropes, chains must be sound and with adequate strength.

10. Speed of revolving machinery should not cross limits.
 11. Covering of each pit as well as opening in the floor.
 12. No person should carry excessive weights.
 13. Care should be taken to protect the eyes.
 14. Precautions against dangerous fumes.
 15. Very serious and scientific care from explosives and inflammable dust.
 16. Provision of escape doors for all persons in case of fire.
 17. Provision of warning devices in case of fire.
 18. Arrangements to prevent outbreak of fire and spread of fire.
- These are the safety provisions under factory act.

(h) Welfare Measures Stipulated in Factory Act:

1. Washing Facilities:

- Must be adequate and suitable.
- Must be separately provided for male and female.

2. Sitting Facilities:

- Must be provided for all workers.
- Ergonomics considerations must be followed.

3. First Aid Appliances:



- Must be readily accessible during all working hours.
- One box should be provided per 150 workers.
- One ambulance room should be provided in a factory employing more than 300 workers.

4. Canteens:

- One canteen atleast per 250 workers in a factory.

5. Creches:

- Every factory employing more than 30 female workers, shall be provided and maintained a suitable room or rooms for the use of children under the age of six years of such women.
- Its incharge must be a woman trained in this aspect.



6. Welfare Facilities:

- One Welfare Officer should be appointed in a factory employing more than 500 workers.
- So, for considering all above provisions it is necessary to have Factory Act.

5.3.2 Industrial Disputes Act

1. Act introduced in 1947.
2. **Aim:** To settle the industrial disputes.
 - To make industrial peace through voluntary negotiations and compulsory adjudication.

3. **Provision:** The act makes provision for settlement of industrial disputes between employees (workers) and employer (owner).

4. **Important Definitions:**

(i) **Award:** An interim or a final decision of an industrial dispute.

(ii) **Average pay:** The average of wages payable to workman.

Average pay examples:

(a) Monthly paid worker = 3 months

(b) Weekly paid worker = 4 weeks

(c) Daily paid worker = 12 full work days

(iii) **Industry:** Any business for manufacturing, services, employment, handicraft etc.

(iv) **Industrial dispute:** Any dispute between employers and employees, employers and workers, workers and workers which are connected with employment or non-employment or conditions of labour or any person.

(v) **Lay-off:** Failure, inability or refusal of an employer to continue to employ workers.

Reasons of lay-off may be breakdown of machinery, shortage of raw material, funds, stock or any other reason.

Lay-off is a temporary phase.

It is not the end.

It is suspended period for few duration of emergency.

(vi) **Lockout:** It is the closing of a place of employment or suspension of work or the refusal by an employer to continue to employ any number of workers employed by him.

(vii) **Retrenchment:** It is the termination of the services of a worker by the employer for any reason whatsoever other than due to disciplinary action.

(viii) **Strike:** It is refusal to work by a body of workmen for enforcement of a demand against the employer during an industrial dispute.

(ix) **Settlement:** It means a written agreement between the workers and employer in the course of conciliation proceeding.

(x) **Workman:** Any person including apprentice employed in any industry for hire or award to do manual, technical, supervisory or clerical work.

Authorities under Industrial Dispute Act:

1. Works committee.
2. Conciliation officers.
3. Board of conciliation.
4. Courts of enquiry.
5. Labour court.
6. Industrial Tribunals.
7. National Tribunals.

1. Works Committee:

- Consists of representatives of workers and employer both.
- Representatives of workmen are not less than that of employer.
- The committee promotes goods relations between workers and employer.

2. Conciliation Officers:

- Conciliation officer is appointed by any Appropriate Government.
- Conciliation officer is key person to promote the settlement of industrial disputes.

3. Board of conciliation:

- It is appointed by government.
- Chairman is an independent person.
- Both parties (workers and employer) have equal number of representatives.

4. Courts of enquiry:

- Appointed by Government.
- One or more independent persons.
- Report submission within 6 months.

5. Labour Court:

- Presiding officer of one man labour court shall be:
 - (a) a judge or high court, or
 - (b) a district judge (experienced more than 3 years).
- Labour court works in following cases:
 1. Application and interpretation of standing orders.
 2. Strike.
 3. Lockout.
 4. Wrongly dismissed workers.
 5. Withdrawal of any concession.

6. Industrial Tribunals:

- It is constituted for:
 - (a) Wages.
 - (b) Hours of work.
 - (c) Holidays and leave with eyes.
 - (d) Bonus.
 - (e) Provident fund etc.
- Qualification of presiding officer of the Industrial Tribunal is same as that of Labour Court.

7. National Tribunals:

- It is for the industrial disputes which involve issues of national importance.
- Presiding officer is:
 - (a) An independent person.
 - (b) Less than 65 years of age.
 - (c) Judge of high court.

5.3.3 Workman's Compensation Act**1. Facts:**

- (a) Passed in 1924.
- (b) Few major amendments in 1962, 1976 and 1986.

2. Aim:

To compensate employees against accidents occurred in the industry premises.

3. Terminology:

- (a) **Accident:** Any mishappening that causes injury to a person.
- (b) **Dependent:** Dependent means any of the relatives of an affected worker.
e.g. Wife, widowed mother, minor son, unmarried daughter etc.

- (c) **Workman:** Any person, who is employed in an organisation working according to rules of section (II) of this act, except those who work on casual basis.
- (d) **Minor:** Any person of age not more than 18 years.
- (e) **Partial Disablement:** Disablement which reduces the earning capacity of a workman. It is of a temporary nature.
- (f) **Total Disablement:** Disablement which reduces capacity of workman for total work and then he/she can not earn at all.



4. Main Provisions:

(a) Provisions are related to entitlement, rates, coverage of dependents and distribution of compensation.

(b) **Compensation is not extending to:**

- Casual workers.
- Those employed in armed forces.
- Workers covered by ESI Act.
- Workers under the influence of drink or drugs.
- Wilful disobedience by the worker.
- Purposeful unsafe behaviour.
- Less than 3 days impact of injury.
- Accident due to negligence towards safety supports.

Still in case of death after such things, then employee must be compensated.

(c) The rates of compensation vary depending upon the injury results i.e. death, permanent disablement, partial disablement etc.

(d) **Amount of Compensation:**

Death After Injury:

Amount = (50% of monthly wages) × Relevant factor or ₹ 80,000.

Out of above, the amount which is more is compensated.

Plus to this ₹ 2,500 towards expenditure of funeral.

Permanent Total Disablement:

Amount = (60% of monthly wages) × Relevant factor or ₹ 90,000.

Permanent Partial Disablement:

Proportionate compensation is paid for the injuries are mentioned in the Part II of schedule I.

(e) **Few important rules:**

- Compensation should be paid as soon as it falls 'Due'.
- Medical treatment cost is not considered in compensation.

- In case of difficult financial condition of employer, advance partial payment can be given in the start.
 - If the compensation is not paid, then commissioner may direct to pay simple interest on the amount for delay.
 - Compensation should not be done directly to the concerned worker/family. It should be given through commissions.
- (f) Administration:**
- Act is administered by the State Government.
 - Special commissioners may be appointed to execute the act.
- (g) Employer has to do compensation under following cases:**
1. Injury has taken place during the course of employment.
 2. Injury has been caused by an accident.
 3. Either of following happens:
 - Temporary disablement or
 - Permanent disablement or
 - Partial disablement or
 - Total disablement or
 - Death
- (h) Industrial Health through Workmen's Compensation Act:**
1. Workmen are compensated against accidents.
 2. Injured employees are supported in all ways.
 3. Indirect awareness about accidents.
 4. Assistance after the accidents.
 5. Financial support to affected employees.
 6. Attitude of 'thanks for help' among workmen.
- All these outcomes help to improve industrial health of organisation.

5.3.4 Minimum Wages Act

1. Facts:

- (a) Passed in 1948.
- (b) Applicable to the entire country.
- (c) Recent amendments in 1988.



2. Aim:

To ensure that employed persons are not subjected to exploitative wages by the employers.

This act defines the minimum wage payment for certain employments. It aims to provide fair wages to employed persons.

3. Definitions:

- (i) **Cost of living index number:** The index number ascertained and declared by the competent authority to be the cost of living index number applicable to employees in employment.
- (ii) **Wages:** All remuneration capable of being expressed in terms of money, which would, if the terms of contract of employment, express, were fulfilled, be payable to a person employed in respect of his work done.

It does not include:

- (a) House accommodation
- (b) Light bill
- (c) Water charges
- (d) Medical expenses
- (e) PF or Pension contribution
- (f) Travelling allowance
- (g) Gratuity payable on discharge

4. Main provisions:**1. Fixation of minimum wages:**

- The minimum wages may consist of basic rate of wages and special allowance at a rate to be adjusted to keep with the cost of living index.
- The government fixes the minimum wages.
- This is revised at regular time intervals; but not exceeding five years.
- The government fixes the time rate, by day or month or by such other larger wage period as may be prescribed.

2. Procedure for fixing and revising minimum wages:

- Committees' formation by appropriate government for wage fixation.
- These committees provide necessary inputs and suggestions.
- Publishing of proposal (notification) by the government.
- Responses from people in two months time against the proposal.
- Consideration to valid responses.
- Fixation of minimum wages rate.
- Declaration by government through official gazette.

3. Advisory Board:

- Advisory board is appointed by the appropriate government.
- This board is responsible for co-ordination of the committees and subcommittees appointed for the purpose of wage fixation.
- Central Advisory Board is appointed by the Central Government for advising the central and state governments in the wage fixation and revision issues.

4. Composition of Committees:

- Nomination of members is done by the appropriate government.
- Members represent employers and employees in equal number.
- Independent persons do not exceed one third of the total committee members.
- The chairman of the committee is independent member.
- The chairman is appointed by the appropriate government.

5. Claims:

- Claims are possible under following cases:
 1. Payment less than minimum wages.
 2. Overtime rate issues.
 3. Payment of remuneration for days of rest.
- Period for application for claim is 6 months.
- Three possibilities in (claims) results:
 - (a) Employee's stand is correct about minimum wages → Extra Amount + Compensation is paid
 - (b) Other than minimum wages case of employee and his stand is correct → Due Amount + ₹ 10 is paid.
 - (c) Employees stand doubtful and wrong → Penalty to employee upto ₹ 50. To be paid to the employer.

6. Penalties: ₹ 500 and imprisonment.**Summary**

Industrial acts give legal framework to relationship between employer and employees. Acts give industrial peace. There are many industrial acts like Indian Factory Act, Industrial Disputes Act, Workman's Compensation act and Minimum Wages Act.

Indian Factory Act ensures adequate safety measures. It also describes child labour and women facilities. Welfare measures under Factory Act are very progressive. Industrial Disputes Act settles industrial disputes. Layoff, Lockout, Strikes are covered in this act. Workman's Compensation Act is there to compensate employees against accidents occurred in the industry premises.

Minimum Wages Act ensures that employed persons are not subjected to exploitative wages by the employers. There is provision of fixation of wages.

Multiple Choice Questions

1. Industrial Acts are useful for _____.
 - (a) Guarantee of employee welfare
 - (b) Provision of legal platform
 - (c) Removes extortion of workers
 - (d) All the above
2. Indian Factory Act is passed in _____.
 - (a) 1935
 - (b) 1947
 - (c) 1948
 - (d) 1976
3. Major amendments done in Factory Act in _____.
 - (a) 1948
 - (b) 1952
 - (c) 1976
 - (d) 1991
4. Adolescent is a person of the age between _____.
 - (a) 15 - 18 years
 - (b) 18 - 21 years
 - (c) 21 - 25 years
 - (d) 58 - 61 years
5. One canteen should be provided atleast per _____ workers in a factory.
 - (a) 100
 - (b) 150
 - (c) 200
 - (d) 250
6. Creches should be provided when there are more than _____ female workers of their kids of age below _____ years.
 - (a) 30, 6
 - (b) 25, 6
 - (c) 25, 9
 - (d) 100, 6
7. Day as per Factory Act is _____.
 - (a) 6 a.m. to 6 p.m.
 - (b) Period of 12 hours
 - (c) Period between 2 midnights
 - (d) None of the above

8. Week as per Factory Act is period between two _____.
 - (a) Mondays
 - (b) Thursdays
 - (c) Sundays
 - (d) Saturdays
9. Factory using power as per Factory Act is a premise of minimum _____.
 - (a) 10 workers
 - (b) 20 workers
 - (c) 30 workers
 - (d) 40 workers
10. A Labour Welfare Officer is appointed in the factory as per Factory Act when there are minimum _____ workers.
 - (a) 100
 - (b) 300
 - (c) 500
 - (d) 1000
11. Rights of Labour Welfare Officer are given to _____.
 - (a) Factory head
 - (b) Industry Minister
 - (c) State Government
 - (d) None
12. As per Factory Act painting should be done _____.
 - (a) Once a year
 - (b) Twice a year
 - (c) Once in 3 years
 - (d) Once in 5 years
13. As per Factory Act, space required for a water is _____ cu. feet.
 - (a) 1000
 - (b) 2000
 - (c) 500
 - (d) 750
14. Which is not included in "Wage" under Minimum Wages Act?
 - (a) Travelling allowance
 - (b) PF
 - (c) Gratuity
 - (d) All
15. As per Factory Act, one box of First Aid is provided for _____ workers.
 - (a) 100
 - (b) 200
 - (c) 150
 - (d) 250
16. One ambulance room should be provided in a factory employing more than _____ workers.
 - (a) 200
 - (b) 300
 - (c) 400
 - (d) 500
17. Child is a person of the age _____.
 - (a) less than 10 years
 - (b) less than 15 years
 - (c) less than 8 years
 - (d) none of the above
18. Calendar year as per Factory Act is _____.
 - (a) 1st April to 30th March
 - (b) 1st January to 31st December
 - (c) 1st July to 30th June
 - (d) None of the above
19. Workman's Compensation Act is passed in _____.
 - (a) 1924
 - (b) 1948
 - (c) 1950
 - (d) 1934
20. Who is incorrect person in the definition of Dependent?
 - (a) Wife
 - (b) Widowed mother
 - (c) Minor son
 - (d) Friend
21. Compensation is not extended to _____ under Workman's Compensation Act.
 - (a) Workers covered under ESI Act
 - (b) Casual workers
 - (c) Wilful disobedience
 - (d) all the above
22. Employer has to do compensation under which case?
 - (a) Injury caused during employment
 - (b) Injury caused by accident
 - (c) Any disablement/death after accident
 - (d) All the above

23. Minimum wages act is passed in _____.
(a) 1924 (b) 1935
(c) 1948 (d) 1952
24. Drinking water must be away from latrine by _____ metres.
(a) 3 (b) 6
(c) 9 (d) 12
25. "Advisory Board" concerned with 'Minimum Wages Act' is appointed by _____.
(a) Factory head (b) MIDC
(c) Appropriate Government (d) None
26. Minimum wages which are fixed are declared by Government through _____.
(a) Newspaper (b) Magazine
(c) Official gazette (d) All
27. What safety management can do?
(a) Accidents prevention (b) Avoiding damage
(c) Safe conditions at workplace (d) All
28. Accidents can be reduced to zero.
(a) Never possible (b) May be possible
(c) Accidents can not be reduced (d) None
29. Fatal accident means _____.
(a) Dangerous accident (b) Accident due to unknown
(c) Death in accident (d) None of the above
30. During welding _____.
(a) Gloves are must (b) Gum shoes are must
(c) Helmet is must (d) Goggle is must
31. _____ fitting clothes should not be allowed to work near machinery in motion.
(a) Tight (b) Loose
(c) Both (d) None
32. For sitting facilities, _____ considerations must be followed.
(a) Aesthetic (b) Economical
(c) Ergonomics (d) None
33. Incharge of Creches must be _____.
(a) Man (b) Child
(c) Woman (d) Any
34. _____ boxes of first aid should be provided per _____ workers.
(a) 1,250 (b) 1,150
(c) 2,250 (d) 2,150
35. Materials of ropes, chains must be _____ and with adequate _____.
(a) tight, strength (b) sound, tight
(c) sound, strength (d) strong, tight
36. Workman's compensation act is administered by _____.
(a) Local self government (b) State government
(c) Central government (d) None
37. 1. PF is included in minimum wages act.
2. Light bill is not included in minimum wages act.
(a) both 1 and 2 true (b) both 1 and 2 false
(c) 1 true, 2 false (d) 1 false, 2 true

38. Advisory board in minimum wages act is appointed by ____.
- (a) Company (b) Appropriate government
(c) RBI (d) None
39. Independent persons in committees of minimum wages act do not exceed ____ of the total members.
- (a) $\frac{1}{3}$ (b) $\frac{2}{3}$
(c) $\frac{1}{4}$ (d) None
40. When Industrial Disputes Act was introduced?
- (a) 1949 (b) 1977
(c) 1950 (d) 1947
41. The issues between employer and employee are covered in ____.
- (a) Factory Act (b) Workman Compensation Act
(c) Industrial Disputes Act (d) Minimum Wages Act
42. What is meant by "Award" in Industrial Disputes Act?
- (a) Prize (b) Amount
(c) Certificate (d) Decision
43. Average pay for monthly paid worker is payment of ____.
- (a) 2 months (b) 3 months
(c) 4 months (d) 6 months
44. Average pay for weekly paid worker is payment of ____.
- (a) 1 week (b) 2 weeks
(c) 3 weeks (d) 4 weeks
45. Average pay for daily paid worker is payment of ____.
- (a) 30 days (b) 15 days
(c) 12 days (d) 10 days
46. 1. Conflict between two workers
2. Conflict between employer and employees
- (a) Both come under industrial disputes (b) Only (1) is industrial dispute
(c) Only (2) is industrial dispute (d) Both cannot come under industrial disputes
47. Inability of employer to continue to employ workers is ____.
- (a) Layout (b) Lockout
(c) Layoff (d) Retrenchment
48. Reasons for layoff may be ____.
- (a) Shortage of funds (b) Breakdown of machinery
(c) Shortage of raw materials (d) All the above
49. 1. Layoff is a temporary phase
2. It is not the end
- (a) Both (1) & (2) correct (b) Only (1) is correct
(c) Only (2) is correct (d) Both are incorrect
50. Lock out is ____.
- (a) Refusal to work by employees
(b) Termination of services
(c) Closing of a place of employment by employer
(d) Inability of employer to continue to employ workers

51. Termination of the services of a worker by the employer for any reason other than due to disciplinary action is _____.
- (a) Strike (b) Layoff
(c) Retrenchment (d) Settlement
52. Match the pairs:
- | | |
|---------------|-----------------------------------|
| 1. Settlement | (A) Refusal to work by workers |
| 2. Strike | (B) Written agreement |
| 3. Layoff | (C) Closing factory by owner |
| 4. Lockout | (D) Temporary suspension by owner |
- (a) 1. (C), 2. (B), 3. (D), 4. (A) (b) 1. (B), 2. (A), 3. (D), 4. (A)
(c) 1. (A), 2. (B), 3. (C), 4. (D) (d) 1. (D), 2. (C), 3. (B), 4. (A)
53. [1] Clerical worker is called workman
[2] Supervisor is not called workman
- (a) [1] Correct only (b) [2] correct only
(c) Both correct (d) Both incorrect
54. Works committee, courts of enquiry, industrial tribunals are associated with ____ act.
- (a) Factory (b) Industrial disputes
(c) Minimum wages (d) None of the above
55. In works committee _____ are involved.
- (a) Only workers (b) Workers and employer both
(c) Only employer (d) Government officials only
56. In works committee _____.
- (a) Workers are not less than that of employer. (b) Employers are not less than that of workers
(c) Both are same (d) None of the above
57. Conciliation officer is appointed by _____.
- (a) Union of workers (b) Elected by employers
(c) an appropriate government (d) None of the above
58. Chairman of Board of conciliation is _____.
- (a) Independent person (b) Appointed by government
(c) Both correct (d) None of the above
59. Reports must be given by courts of enquiry within _____ months.
- (a) 3 (b) 6
(c) 9 (2) 2
60. A district judge who may become presiding officer of labour court must have experience more than _____ years.
- (a) 1 (b) 2
(c) 3 (d) 5
61. Industrial Tribunals are constituted for _____.
- (a) Wages (b) Hours of work
(c) Bonus (d) All the above
62. For solving issues of national importance there are _____.
- (a) Industrial Tribunals (b) National courts
(c) National Tribunals (d) Labour courts

Answers

1. (d)	2. (c)	3. (c)	4. (a)	5. (d)	6. (a)	7. (c)	8. (d)	9. (a)	10. (c)
11. (c)	12. (a)	13. (c)	14. (d)	15. (c)	16. (b)	17. (b)	18. (b)	19. (a)	20. (d)
21. (d)	22. (d)	23. (c)	24. (d)	25. (c)	26. (c)	27. (d)	28. (b)	29. (c)	30. (d)
31. (b)	32. (c)	33. (c)	34. (b)	35. (c)	36. (b)	37. (d)	38. (b)	39. (a)	40. (d)
41. (c)	42. (d)	43. (b)	44. (d)	45. (c)	46. (a)	47. (c)	48. (d)	49. (a)	50. (a)
51. (c)	52. (b)	53. (a)	54. (b)	55. (b)	56. (a)	57. (c)	58. (c)	59. (b)	60. (c)
61. (d)	62. (b)								

