Major Managerial Functions

1) <u>Planning</u> :- "Planning is deciding in advance what to do, how to do it, & who is to do it."
   - Planning bridges the gap between where we are & where we want to go.

* <u>Factors that Influence Planning</u> :- Planning is a key component of managers job functions.
   - They design & devise way to improve their companies & departments.
   - Planning enables managers to adjust the environment in which their companies operate instead of only reacting to changes.
     ↓

ⓐ Competition :-
ⓑ Economy :-
ⓒ Managers :-
ⓓ Information :-

↳ <u>Nature of planning</u> :-

1) <u>Planning is purposeful</u> - Planning is a means towards the accomplishment of objectives.
   - planning has no meaning unless it contributes to the achievment of desired goals. Planning is goal- oriented. It is directed towards effciency

2) <u>Planning is a primary function</u> :- Planning is the basis of the management process.
   - All other functions of management are

designed to attain the goal set under planning.
- Planning provides the basis for efficient organising, staffing, directing & controlling.

3) Planning is All pervasive :- Planning is the function of each & every manager irrespective of the level & area of his/her operation.
- Planning is an essential made ingredient of management at all executive levels & in all areas of business.
- Higher level managers generally spend more time on planning than lower level managers.

4) Planning is an Intellectual Process :-
- According to koontz and O'Donnell - "Planning is an intellectually demanding process; it requires the consious determination of courses of action & the basing of decisions on purpose, knowledge, facts & considered estimates.

5) Planning is a Continuous process :- Planning is an on-going & dynamic exercise
- "Effective planning requires continual cheking on events & forecasts and the redrawing of plans to maintain a course toward a desired goal".
- Planning is a never ending process.

6) Planning is Forward looking :- All planning is done with an eye on the future.
- Planning involves looking ahead & preparing for the future.

- planning is not only looking ahead but preparing for it.

7) <u>Planning Involves Choice :</u> Planning is basically a problem of decision - making or choosing among alternative courses of action.
- There is no need for planning if there is only one way of doing something.

8) <u>Planning is an Integrated Process :-</u> Planning does not just happen, it has to be initiated.
- Planning is a structured process & different plans constitute a hierarchy.

↳ <u>Need & Importance of Planning.</u>

1) Minimises risk
2) Effective control
3) Forecasting
4) Economic Operation
5) choosing from Alternatives
6) Identification of opportunities
7) Team Work
8) Development of Buisiness Strategy
9) Simplifying Goals.

↳ <u>Types of planning :-</u>

Classification	Types of planning	Description	Examples
1) Based on Application or use :-	Single use or one time plan	1. Used for unique decisions. 2. Non-programmed decision which managers make in some critical conditions. 3. For unorganised areas which are discrete in nature.	Sudden slow down in market directly affects the market demand & that time, managers have to take concrete action/make a contigency plan for supply.
	Standing Plans	1. Ongoing plans that provides guidance to day-to-day activities. 2. It is well organised & programmed decision that manager makes.	Just in Time (JIT) technique is an appropriate example. Each & every activity/document is organised & overviewed by manager.
2) Based on Management Functions / Branches / Departments :-	Subject Plans	1. Differs with activity to activity based on organisation levels. 2. Name itself derives the function of this plan.	1. Marketing 2. Production 3. Recruitment 4. Financial 5. Manpower
3) Based on Time Frame :-	Long-term Plans	Plans that are formulated to extend beyond five years.	1. New product establishment plans. 2. Revenue generation plans. 3. Industrial development plans.
	Middle-term plans	1. Plans made to study an impact of particular process/ thought/assignment/task for	Advertisement campaign for expansion of business in new market.

Classification	Type of Planning	Description	Examples
		2. It is also called feasibility study on product / service before launch	
	Short - term plans	1. plans are made to cover a period of less than a one year. 2. To attract the viewers / readers interest.	1. Best offers on cellular phones. 2. High speed internet broadband plans. 3. Gift hampers, launching plans on cloths, bikes, etc
4) Based on Managerial Levels in the organisation :-	Strategic plans	1. These are organisation-wide. 2. To set organisations objectives in terms of its environment.	Apple strategy is to produce innovative product & service for specific audience.
	Operational plans	1. Execution method. 2. Specify Check list, milestones. 3. How to achieve overall Objectives of an organisation.	1. Flower distributions from dealer to retailers. 2. Stock taking methods in small scale industry & large Scale industry.
	Tactical plans	1. These are department wise. 2. Restricted with specific area of the organisation. 3. Intend to achieve tactical goals of an organisation.	1. Credit card on single document. 2. Buy two cloths & get one free. 3. SIM card free of cost

↳ Steps in the Planning Process :

1) **Step One - Classifying the problems :**
- The planning process starts with clear understanding & classifying business problems faced by a business unit.
- planners have to understand the problems of the organisation first & then prepare a plan to deal with the problems in the light of the prevailing business environment.

2) **Step Two - Determining the objectives :** In this second stage in the planning process, the planners decide the overall objectives to be achieved.
- Objectives act as pillars of the entire planning process.
- Objectives may be defined in quantitative or qualitative terms.

3) **Step three - Collecting complete information & Data :** The planners have to collect information relating to problems facing the business unit.
- Such information is necessary & useful for analysing the problems in depth & also for accuracy in planning.
- Reliable, updated & adequate data make planning process result - oriented.

4) Step 4 : Analysing & classifying the information :-
At this stage, the information collected is
analysed & interpreted systematically. for
drawing specific conclusions.
   - Irrelevant information can be discarded
   through such analysis.

5) Step five - Establishing planning premises :-
-planning premises are various assumptions
& predictions about the future business
situation.
   - Such premises act as background for planni-
   ng activities.
   - planning premises are 3 in number viz,
   ⓐ Controllable premises
   ⓑ Semi - Controllable premises
   ⓒ Uncontrollable premises.

6) Step 6 - Determining alternative plans :- Here,
the planners prepare & keep ready alternative
plans suitable for use under different situations.
   - The best among the available alternative plans
   is used for actual execution.

7) Step 7 - Selecting operating plan & preparing
derivative plans :- After study of the business
environment & the alternative plans available,
the planners select the best plan for actual
execution.
   - After the selection of operating plans, the
   planners have to prepare derivative plans.

8) **Step Eight = Arranging timing & Sequence of operations :-** Timing involves fixation of Starting & finishing time for each job or piece of work.
- Sequence of operations ensures proper flow of work.
- This step in the planning process is important as it brings coordination in the activities of different departments.

9) **Step-9 = Securing Participation of employees :-**
- planning needs willing participation of all employees & departments.
- For this, information regarding the operative plan should be given to employees well in advance.

10) **Step Ten. = Follow-up of the proposed plan:-**
- The purpose of follow-up is to make periodical review of the execution process.
- It is useful for understanding actual progress & deficiencies in the process of execution of the plan.

↳ **Advantages of planning :-**

1) **Planning Facilitates quick achievement of Objectives :-** Planning facilitates quick achievement of business objectives.
- In the planning process, the objectives to be achieved are clearly decided /finalised & plans are prepared & executed for achieving Such well-defined objectives.

- planning ensures achievement of objectives in an orderly & quick manner.

2) **Brings unity of purpose & direction** - planning brings unity of purpose & direction before the entire organisation as it is for achieving certain well defined goals.
- Planning diverts all resources in one direction for achieving well defined objectives.

3) **Ensures full utilisation of resources** - Planning ensures effective/maximum utilisation of available human & material resources.
- It eliminates wastage of all kinds of resources & human efforts & this ensure full utilisation of available resources.

4) **Avoid inconsistency in efforts** - Planning avoids Inconsistency in efforts & also avoids possible frictions & duplications.
- It ensures economy in business operations.

5) **Raises competitive capacity/strength** - Planning raises competitive potentialities of business unit.
- It enables a business unit to stand with confidence in a competitive market.

6) **Promotes managerial efficiency** - planning covers all managerial functions & helps management to execute future programmes in a systematic manner.

7) **Ensures effective control on the organisation -**
   - Planning ensures effective control on the whole organisation.
   - It fixes targets in clear terms & draws plans & programmes for achieving them.

8) **Improves motivation -** planning facilitates participation of managers & workers in the normal functioning of enterprise.
   - It develops team spirit & raises morale & motivation of employees.

↳ **Limitations of Planning :-**

1) **Time-Consuming & costly -** It is argued that planning is a lengthy process as it involves collection of data, forecast, research & analysis.
   - Similarly, planning is essentially the job of highly paid experts. As a result, planning is a time-consuming & costly activity.

2) **Ineffective due to environmental changes -** Business environment changes frequently & plans are required to be adjusted as per the changes in the situation through suitable modifications.

3) **Dangers of unreliable data -** Planning needs accurate data from internal & external sources.
   - The quality of planning depends on such accurate feedback.
   - If the information supplied by various

departments is unreliable, the planning process will be adversely affected.

4) <u>Delays actions</u> — planning is lengthy process. As a result, the actions to be taken for execution are delayed.
- Planning is not useful when quick decisions & actions are required.

5) <u>Unsuitable to Small firms</u> = Small firms prefer to function without long term comprehensive planning as they find planning rather costly & time-consuming.

6) <u>No guarantee of expected results</u> - planning is for achieving certain well defined objectives.
- However, there is no guarantee that the objectives will be achieved within the specific time limit by using planning as a tool.
- Actual performance may not be as per the expectation due to various reasons.

7) <u>Involves huge paper work</u> - planning involves huge paper work in the preparation of master plan & departmental plans.

2) <u>Forecasting :-</u> "forecasting is a process of predicting or estimating the future based on past & present data.

- forecasting is the process of predicting changing conditions & future events that may significantly

affect the business of an Organisation.

* Characteristics or Features of forecasting

1. Forecasting is concerned with future events.
2. It shows the probability of happening of future events.
3. It analysis past & present data
4. It uses statistical tools & techniques.
5. It uses personal observations.

* Need & Advantages of forecasting :-

1) Forecasting provides relevant & reliable information about the past & present data & the future events. This is neccessary for sound planning.
2) It gives confidence to the managers for making important decisions.
3) It is the basis for making planning premises.
4) It keeps managers active & alert to face the challenges of future events & the changes in the environment.

* Steps for forecasting

1) Analysing & understanding the problem - The manager must first identify the real problem for which the forecast is to be made. This will help the manager to fix the scope of forecasting.

2) **Developing Sound foundation** - The management can develope a Sound foundation, for the future after considering available information, experience, type of business & the rate of development.

3) **Collecting & analysing data** - Data collection is time consuming.
- Only relevant data must be kept

4) **Estimating future events** - The future events are estimated by using trend analysis. Trend analysis make provision for some errors.

5) **Comparing results** - The actual results are compared with the estimated results.

6) **Follow up action** - The forecasting process can be continuously improved & refined on the basis of past experience.

* **forecasting methods & Techniques** -

1) Delphi Technique
2) Scenario Writing
3) Subjective Approach
4) Time -Series forecasting
5) Brainstorming technique
6) Goal oriented forecast technique
7) Graphic Charting technique
8) Matrix technique
9) Nominal group technique (NGT)
10) Simple average technique

(E) Forecasting Methods and Techniques

Primary forecasting techniques help organisations plan for the future. Some are based on subjective criteria and often amount to little more than wild guesses or wishful thinking. Others are based on measurable, historical quantitative data and are given more credence by outside parties, such as analysts and potential investors. While no forecasting tool can predict the future with complete certainty, they remain essential in estimating an organisation's forward prospects.

1. **Delphi Technique:** The RAND Corporation developed the Delphi Technique in the late 1960s. In the Delphi Technique, a group of experts responds to a series of questionnaires. The experts are kept apart and unaware of each other. The

results of the first questionnaire are compiled, and a second questionnaire based on the results of the first is presented to the experts, who are asked to reevaluate their responses to the first questionnaire. This questioning, compilation and requisitioning continue until the researchers have a narrow range of opinions.

2. **Scenario Writing:** In Scenario Writing, the forecaster generates different outcomes based on different starting criteria. The decision-maker then decides on the most likely outcome from the numerous scenarios presented. Scenario writing typically yields best, worst and middle options.

3. **Subjective Approach:** Subjective forecasting allows forecasters to predict outcomes based on their subjective thoughts and feelings. Subjective forecasting uses brainstorming sessions to generate ideas and to solve problems casually, free from criticism and peer pressure. They are often used when time constraints prohibit objective forecasts. Subjective forecasts are subject to biases and should be viewed skeptically by decision-makers.

4. **Time-Series Forecasting:** Time-series forecasting is a quantitative forecasting technique. It measures data gathered over time to identify trends. The data may be taken over any interval: hourly; daily; weekly; monthly; yearly; or longer. Trend, cyclical, seasonal and irregular components make up the time series. The trend component refers to the data's gradual shifting over time. It is often shown as an upward- or downward-sloping line to represent increasing or decreasing trends, respectively. Cyclical components lie above or below the trend line and repeat for a year or longer. The business cycle illustrates a cyclical component. Seasonal components are similar to cyclical in their repetitive nature, but they occur in one-year periods. The annual increase in gas prices during the summer driving season and the corresponding decrease during the winter months is an example of a seasonal event. Irregular components happen randomly and cannot be predicted.

5. **Brainstorming technique:** Brainstorming technique is used to forecast demand, especially for new products. In this method, many experts sit together and each expert gives his own idea (forecast) and reason for it. One idea leads to many more ideas. The group of experts will develop much more ideas than one person. Based on these ideas, demand can be forecasted.

6. **Goal oriented forecast technique:** In this technique, a goal is first fixed. Then the technological developments which are required for achieving that goal is identified. Later, a forecast is made about when these technological developments would take place in the future. So, an estimate is made about the timing of these technological developments in an upcoming future. This method is used by large companies, which have their own research and development departments.

7. **Graphic charting technique:** Graphic charting technique is used to forecast future technological developments by plotting past technological developments on a logarithmic scale. This technique is based on the assumption that knowledge expands. This technique estimates when the next major (big) technological development is likely to take place.

8. **Matrix technique:** Matrix is a combination of two or more matters relating to the production process. A matrix is prepared with technological developments, product functions and time factor. Matrix technique is comprehensive. It is flexible and so it can adjust with the changing times. This technique is used only by large companies.

9. **Nominal group technique (NGT):** In nominal group technique (NGT), the group members think independently. Each group member contributes his own ideas. This technique does not allow interaction between the group members at an early stage. Interaction takes place only when the ideas are presented by every single member of the group.

10. **Simple average technique:** In simple average technique, forecasts are based on the average value for a given period of time. A simple average (SA) is the average of demand (sales) for all previous periods. The demands of all periods are equally weighted. SA equals 'Sum of Demands for all periods' divided by 'Number of periods.' Average calculations are made at different intervals in order to reduce error due to seasonal variations. Instead of taking the simple average of the full year's sales, quarterly averages or monthly averages are taken. This gives realistic trends. Averaging reduces the chances of being misled by gross fluctuations that may take place in any single period. However, if the underlying pattern changes over time, simple averaging will not detect the change.

(F) Disadvantages of Forecasting

1. Forecasting is based on certain assumptions. Thus, they may not always become true.
2. Forecasts are not always true, they merely indicate the trend of future happenings.
3. Forecasting is a costly and time consuming exercise.

3.3 DECISION MAKING : TYPES, PROCESS AND TECHNIQUES

(A) Meaning and Definitions of Decision-making

Decision-making is an essential aspect of modern management. It is a primary function of management. A manager's major job is sound/rational decision-making. He takes hundreds of decisions consciously and subconsciously. Decision-making is the key part of manager's activities. Decisions are important as they determine both managerial and organisational actions. A decision may be defined as "a course of action which is

3) Decision - making

- Decision-making is an essential aspect of modern management.
- "Decision - making involves the selection of a course of action from among two or more possible alternatives in order to arrive at a solution for a given problem"

OR

- " Decision - making is the action of carrying out or carrying into effect.

↳ Characteristics of Decision - making

1) Decision - making implies choice :- i) Decision - making is choosing from among two or more alternative courses of action. Thus, it is the process of selection of one solution out of many available.
ii) For many business problem, alternative solutions are available. Managers have to consider consider these alternatives & select the best one for actual execution.

2) Continuous activity / process :- i) Decision - making is a continuous & dynamic process. It pervades all organisational activity.
ii) Managers have to take decisions on various policy & administrative matters.
iii) It is never ending activity in business management.

3) **Based on reliable information / feedback :-**
i) Good decisions are always based on reliable information.
ii) The quality of decision-making at all levels of the organisation can be improved with the support by an effective & efficient management information System (MIS)

4) **Goal oriented process :-** i) Decision - making is a goal - oriented process & provides solution to problems faced by business unit.

5) **Means & not the end :-** Decision - making is a means for solving a problem or for achieving a target / objective & not the end in itself. निर्णय घेणे हे समस्या, सोडवण्याचं किंवा लक्ष्य साध्य करण्याचे, साधन आहे

6) **Relates to specific problem :-** Decision - making is not identical to problem solving but it has its roots in a problem itself. निर्णय घेणे हे समस्या सोडवण्यासारखे नसते परंतु त्याचे मूळ समस्येतच असते.

7) **Time - consuming activity :-** For decision makers, various steps are required to be completed. This makes decision - making a time consuming activity.

8) **Pervasive process :-** Decision - making process is all pervasive. This means managers working at all levels have to take decision on matters within their jurisdiction.
Similarity / Authority

⤷ Steps / process of Decision - making

1) Step 1 - Identifying the Managerial Problem :-
i) Identification of the real problem before a business enterprise is the first step in the process of decision-making.
ii) It is rightly said that a problem well-defined is a problem half - solved.
iii) Information relevant to the problem should be gathered so that critical analysis of a problem is possible. permanent

2) Step 2 - Analysing the problem :- i) After defining the problem, the next step in the decision-making process is to analyse the problem in depth.
ii) This is necessary to classify the problem in order to know who must take the decision & who must be informed about the decision taken.

3) Step 3 - Collecting Relevant Data :- i) After defining the problem & analysing its nature, the next step is to obtain the relevant information/ data about it.
ii) All available information should be utilised fully for analysis of the problem. This brings clarity to all aspects of the problem.

4) Step 4 → Developing Alternative Solutions :-
i) After the problem has been defined, diagnosed on the basis of relevant information

the manager has to determine available
alternative courses of action that could be
used to solve the problem at hand.
ii) Only realistic alternatives should be
considered.

5) Step 5 - Selecting the Best Solution :- i) After
preparing alternative solutions, the next step
in the decision - making process is to select an
alternative that seems to be most rational
for solving the problem.
ii) The alternative thus selected must be
communicated to those who are likely to
be affected by it.

6) Step 6 - Converting Decision into Action :-
i) After the selection of the best decision,
the next step is to convert the selected
decision into an effective action.
ii) Without such action, the decision will
remain merely a declaration of good intension
iii) Here manager has to convert 'his decision'
into 'their decision' through his leadership.

7) Step 7 - Ensuring feedback :- i) Feedback is
the last step in the decision - making
process.
ii) Here the manager has to make built-in
arrangements to ensure feedback for
continuously testing actual developments
against the expectations.

↳ Techniques of Decision + making

1. Operations Research (OR) :- "Operations Research is the application of methods of Science to complex problems arising in the direction of management of large System of men, machines, materials & money in industry, business, government & defense".
   - Operations Research helps the decision maker to make objective decisions.

2. Models :- i) Model building is the Central concept in the application of O.R. while making use of qualifying models.
   2) Models are simple, convenient & relatively economic resource conservation device for testing hypothesis.

3. Simulation :- This technique is used to test the feasibility & possible outcome of various decision alternatives.
   - "Simulation is a quantitive technique for evaluating alternative courses of action based upon facts & assumptions with a computerised mathematical model in order to represent actual decision - making under conditions of uncertainty".

4. Linear Programming :- This is defined "How could a company with limited resources make optimum use with their resources, Combination for the achievement of a desired

objective or goal was the central idea of this mathematical techniques".

5. **Games Theory :-** Games Theory attempts to work out an optimum solution in which an individual in a given situation can develop a strategy irrespective of what a competition does with maximising gains or minimising losses.

6. **PERT & CPM :-**

(a) Programme Evaluation & Review Technique (PERT) is useful to analyse & control the timing aspects of programmes.

In planning & controlling a programme, PERT helps in obtaining lower costs & reducing programme time, bringing about better utilisation of human & physical resources.

(b) Critical Path Method (CPM) is a commonly used term for all network analysis & for a particular version of these techniques.

- PERT relies on three estimates, an optimistic, most likely & pessimistic of the time each activity may take.

- CPM relies only one 'most likely'.

7. **Probability Theory analysis :-** → probability refers to a chance that a particular event will occur.

2) The probability of success is defined as the number of successful outcomes divided by the total number of outcomes.

(E) Relationship between Planning and Decision-making

There is a close relationship between planning and decision-making. Decision-making has priority over the planning function. It is the starting point of the whole management process. In fact, decision-making is a particular type of planning. A decision is a type of plan involving commitment to resources for achieving specific objective. According to Peter Drucker, it is the top management which is responsible for all strategic decisions such as the objectives of the business, capital expenditure decisions as well as operating decisions such as training of manpower and so on. Without management decisions, no action can take place and naturally the resources would remain idle and unproductive. The managerial decisions should be correct to the maximum extent possible. For this, scientific decision-making is essential.

↳ Relationship between planning & Decision-making

↳ Types of Decision - making :-

1) Programmed & Non-programmed decisions
2) Major & Minor Decisions
3) Individual & Group Decisions
4) Departmental & organisational Decisions.

4) Direction

- Directing is said to be the heart of the organisational management process.

Defⁿ :- Directing consists of a process or technique by which instruction can be issued & operations can be carried out as originally Planned".

* Characteristics

1. Pervasive Function
2. Continuous Activity
3. Human factor
4. Creative Activity
5. Executive Function
6. Delegate Function.

* Importance

1) Initiates Action
2) It integrates Efforts
3) Means of Motivation
4) Provides Stability

- All the activities are interrelated. Directing is vitally important in order to coordinate the activities carried out in different departments and to ensure that they are performed as per the schedule. It thus helps in integrating the various functions of the organisation and also towards the integration of individual goals with the organisational goals.
- Directing involves leadership that essentially helps in creating appropriate work environment and in building up the team spirit.

Planning, organising, staffing will face failures if direction is not executed efficiently. Directing initiates action and it is from here that the actual work starts. Direction is said to be consisting of human effort factors in the operational process.

In simple words, it can be described as the function of providing information and guidance to the workers and employees in executing work and actions effectively and efficiently. In the field of management, direction is considered to include all such activities which are designed to encourage the subordinates to work effectively and efficiently.

(B) Characteristics of Direction

The characteristics of Directing can be discussed as follows:

1. **Directing is a Pervasive Function:** Directing is required at all levels of organisation. Every manager provides guidance and inspiration to his subordinates.
2. **Directing is a Continuous Activity:** Direction is a continuous activity as it is constantly required throughout the life of an organisation in all the phases of business.
3. **Directing has a Human Factor:** The directing function is related to subordinates and therefore it is influenced by the human factor. Since human factor is complex and behaviour is unpredictable, direction function becomes very critical, complex and hence vitally important for execution.
4. **Creative Activity:** Direction function converts plans into actions, hence it is considered to be the performance oriented function of management.
5. **Executive Function:** Direction function is carried out by all managers and executives at all the levels of management throughout the working of an enterprise.
6. **Delegate Function:** Direction is supposed to be a function dealing with human beings. Human behaviour is unpredictable by nature and channelising the human behaviour and attitudes towards the goals of the enterprise are the most complex tasks in the hands of management.

(C) Importance of Direction

Direction is considered to be the central point around which accomplishment of goals exists. A few philosophers consider direction as the "Life spark of an enterprise". Being the central character of an enterprise, it provides many benefits to an organisation. These can be studied as follows:
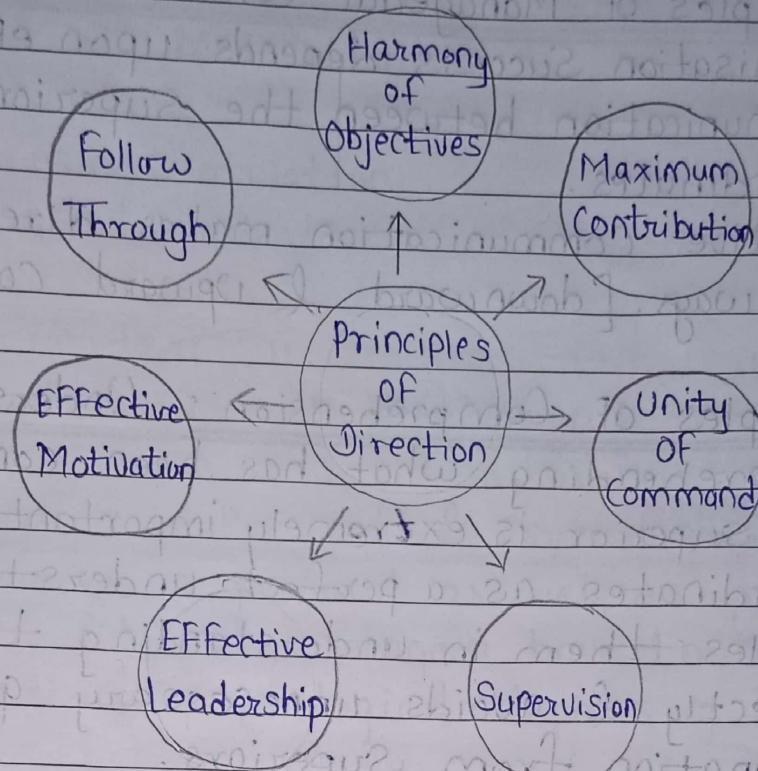
1. **It Initiates Actions:** Direction is the function which is the inception point of the work performance of subordinates. It is from this function that the action starts taking place, subordinates understand their jobs and work according to the instructions and responsibilities delegated to them.
2. **It Integrates Efforts:** Through direction, the superiors are able to guide, inspire and instruct the subordinates to work. For this purpose, the efforts and contribution of each and every individual is required towards the accomplishment of goals. It is through direction that the efforts of each department can be related and integrated with other departments. This can be done through persuasive leadership and effective communication.
3. **Means of Motivation:** The direction function helps in the achievement of goals and objectives of an organisation. A manager makes use of the element of motivation in direction to improve the performances of the employees and workers. This is done by providing incentives or compensation, whether monetary or nonmonetary, which serves as a "Morale booster" to the subordinates. Motivation is also helpful for the subordinates to give the best of their abilities which ultimately helps in growth.
4. **It Provides Stability:** Stability and departmental balance in an organisation becomes essentially important for long term survival in the market. This can be brought upon by the managers with the help of four tools or elements of direction function:
   - Judicious blend of persuasive leadership.
   - Effective communication.
   - Strict supervision.
   - Efficient motivation.
5. **Coping Up with the Changes:** It is human behaviour that human beings show resistance to change. Adaptability with the changing environment helps in sustaining planned growth and becoming a market leader. It is the directing function which is useful in meeting changes in an environment – both internal as well as external. Effective communication helps in coping up with the changes. It is the role of management to communicate the nature and contents of changes very clearly to the subordinates. This helps in clarifications, easy adaptions and smooth running of an enterprise.

For example, if a concern shifts from handlooms to power looms, an important change in technique of production takes place. The resulting factors are less of manpower and more of machinery. This can be resisted by the subordinates. The manager here can explain that the change was for the benefit of the subordinates. Through more mechanization, production increases, and thereby the profits. Indirectly, the subordinates are benefited out of that in form of higher remuneration.

6. **Efficient Utilisation of Resources:** The function of direction helps in clarifying the roles of all the subordinates towards their work. The resources are utilised efficiently only when wastages, duplication of efforts, overlapping of performances are substantially reduced. Through direction, the role of subordinates becomes clear as manager makes use of his supervisory, guidance, instructions and motivation skills to inspire the subordinates. This helps in the maximum utilisation of resources – men, machine, materials and money which helps in reducing costs and thereby increasing profits.

5) Coping up with the changes
6) Efficient Utilisation of Resources.

Imp ⟶ * Principles of Direction

```
                    ┌──────────┐
                    │ Harmony  │
                    │    of    │
        ┌────────┐  │Objectives│  ┌──────────┐
        │ Follow │  └──────────┘  │ Maximum  │
        │Through │       ↑        │Contribution│
        └────────┘  ┌──────────┐  └──────────┘
                    │Principles│
        ┌────────┐  │    of    │  ┌──────────┐
        │Effective│←─│Direction │─→│  Unity   │
        │Motivation│ └──────────┘  │    of    │
        └────────┘       ↓         │ Command  │
                                   └──────────┘
        ┌──────────┐  ┌──────────┐
        │ Effective│  │Supervision│
        │Leadership│  └──────────┘
        └──────────┘
```

1) **Principles of Unity of Command :-** According to
this principle, a person in an organisation must
receive orders & instructions only from one
superior & he should be answerable only to
Supervisor who co-ordinates his activities.
   - getting orders from more than one superior,
   Creates confusion, disorder & instability in an
   organisation.

2) **Principles of Appropriateness of Direction Technique:**
   - There are 3 direction techniques :-   1) Authoritarian
                                            2) Consultative
                                            3) Free - rein

- Each technique has its own relative strength.
- Hence, the technique which is the most appropriate considering the phase & situation of business must be implemented.

3) **Principles of Managerial Communication :-** In an organisation success depends upon effective communication between the Superior & his Subordinates.
- Effective communication makes direction effective both ways. [downward & upward communication]

4) **Principles of Comprehension :-** Understanding & comprehending what has been conveyed by the superior is extremely important for the Subordinates as a perfect understanding enables them in understanding the situation perfectly & avoids unnecessary queries & explanation from Superiors.

5) **Principle of Use of Informal Organisation :-** A formal organisation structure prescribes the Official relationship among individuals.
- Besides, people working together develop certain relationships known as Informal groups or informal Organisations.

6) **Principle of leadership :-** Leadership is the process of influencing individuals in the Organisation for goal achievement.
- When Subordinates function efficiently, Organisational goals are achieved.

5) **Motivation :-** It is a form of tension occurring within individual, with resulting behaviour aimed at reducing, eliminating or diverting the tension.

* Types of Motivation :-

1) Intrinsic Motivation
2) Extrinsic Motivation

* Characteristics of Motivation :-

1) **Motivation is Personal & Psychological Concept :-**
   - Motivation is personal as well as psychological Concept ; hence, managers have to study the mental & psychological aspects of individuals.

2) **Motivation is a process :-** Motivation is a process of inspiring, energising, reducing & activating the employees for higher level of performance.

3) **Motivation is a continuous process :-** It is a continuous & circular process.
   - Subordinates need motivation in a continuous manner as their needs & expectations change from time to time.

4) **Motivation is Goal oriented :-** Management diverts human behaviour towards certain goals.

5) **Intrinsic & Extrinsic Motivation :-**
→ The intrinsic factors include recognition, Social Status, self-esteem & self-actualisation needs which are related to inner aspects of an individual.
→ On the other hand, the extrinsic factors are physiological & Social needs such as food, Shelter, health, education, salary & benefits etc.

6) **Motivation is Behaviour - oriented :-** As a motivation is person specific, it is related with the personal behaviour of an employee.
→ Behaviour is a series of activities undertaken by an individual in the organisational work place.

7) **Motivation is an Unending Process :-** Man is a social animal. As a social animal he has innumerable Wants which induce him to work.

8) **Produces Goal - Directed Behaviour :-** Motivation is closely intertwined with with behaviour.
→ As a behavioural concept, it directs human behaviour towards certain goals.

9) **Motivation is different from Satisfaction :-**
→ Motivation refers to the drive & effort to satisfy a want or goal.
→ Satisfaction refers to the contentment experienced when a want is fulfilled.

10) **Initiative by Manager :-** The initiative for motivation by the manager by offering guidance & also by other methods like appreciation of good work or offering incentives.

12) **Broad Concept :-** Motivation covers needs, human relations & satisfaction of employees.
→ job satisfaction is one such need & is useful for their motivation.

13) **Essence of Management Process :-** Motivation is an essential function of a manager. He has to motivate his subordinates for achieving organisational objectives.

14) **Beneficial to Employees & Management :-**
→ Motivation offers benefits to employees & organisations. It avoids clashes & encourages cooperative outlook among employees.

15) **Varied measures available for motivation:-**
→ for motivation, various monetary & non-monetary incentives can be offered to employees by management.
for eg :- Attractive wages, welfare facilities, job satisfaction, appreciation of good work, etc.

award or anything which may drive a person towards achieving and advancing his motives and goals.

In the management theory, self-motivation is considered as Intrinsic Motivation, whereas external motivation is considered as extrinsic motivation. All types of motivation are important as they have the potential to shape our experiences and how well we perform.

1. Intrinsic Motivation

Becoming and staying motivated is easy when you have to do something that is interesting and enjoyable. It might even be easy when you have to do something that you think is a challenge. This type of motivation is called intrinsic motivation. Intrinsic motivation is when you see a task as being fun, or interesting, or you see the task as a challenge. This is what helps you get motivated as you find the task motivating. Features of intrinsic motivation include being enthusiastically involved in a task, striving for excellence, striving to improve and seeing the purpose in what you are doing. Seeing the purpose in what you are doing is also referred to as goal direction. Intrinsic motivation is important. It helps you to develop and grow. Intrinsic motivation has the potential to influence your learning and thinking; how you socialize with your friends, family and colleagues; it may even influence how you physically develop. Intrinsic motivation shapes your opportunities for growth, development and ultimately what goals you do or don't achieve in your life. Intrinsic motivation is an important capacity to identify, nurture and develop.

Intrinsic motivation means that the individual's motivational stimuli are coming from within. The individual has the desire to perform a specific task, because its results are in accordance with his belief system or fulfills a desire and therefore importance is attached to it. Our deep-rooted desires have the highest motivational power. Below are some examples:

- **Acceptance:** We all need to feel that we, as well as our decisions, are accepted by our co-workers.
- **Curiosity:** We all have the desire to be in focus.
- **Honour:** We all need to respect the rules and to be ethical.
- **Independence:** We all need to feel we are unique.
- **Order:** We all need to be organised.
- **Power:** We all have the desire to be able to have influence.
- **Social contact:** We all need to have some social interactions.
- **Social Status:** We all have the desire to feel important.

Extrinsic motivation refers to doing something because it leads to an outcome that will help you achieve something other than the task at hand. But not all of us can call upon intrinsic motivation all of the time as we don't always find daily tasks fun, enjoyable or interesting. In these circumstances, we may need to look outside of ourselves in order to get motivated. This is called extrinsic motivation. In these circumstances, getting motivated can be improved by finding some way of working out how the task that we have to do might relate to us.

Intrinsic and extrinsic motivations were once viewed as opposites, but the latest research suggests that these two types of motivation can coexist. Optimising both of these types of motivation is the key as this will help with adaptation to different goals and situations.

Extrinsic motivation is distinct from doing a task because if feels fun, interesting or challenging. Intrinsic motivation may be more relevant when tasks are fun, interesting or challenging. In contrast, an example of extrinsic motivation is where you might be motivated to complete a task because you may get a reward or bonus of some sort.

Another example of extrinsic motivation is where you are motivated to do well in your studies in order to get into a degree programme because getting into the degree programme will help you get enough money to have a comfortable lifestyle. You may not find the study particularly motivating. Alternatively, you might be motivated to do well at work in order to get a promotion that involves more success and a higher salary. Features of extrinsic motivation include focusing on feedback, praise, rewards and grades, for example. There are many different variations of extrinsic motivation.

Extrinsic motivation can range from not feeling motivated at all to having some belief in the value of the task and a sense of how the success of this task might stem from you. Extrinsic motivation was once viewed as something that we all just have to put up with now and again, but the latest research shows ways to shape our types of extrinsic motivation. This means that we can harness our extrinsic motivation potential in order to get motivated and achieve our goals. Another reason why motivation is important is because it both shapes our interactions with others and influences people's perceptions of us. In this respect, motivation is integral to our social environment. For example it operates in schools, in our places of work and within our informal social environments. Basically, motivation is involved in all of our social encounters. It is involved anywhere that we meet and interact with others, including social networks. The types of motivation that we experience have the potential to shape how we relate to others and our relationships.

(D) Importance of Motivation IMP

Motivation occupies an important place and position in the whole management process. This technique can be used fruitfully for encouraging workers to make positive contribution for achieving organisational objectives. Motivation is necessary as human nature needs some sort of inducement, encouragement or incentive in order to get better performance. Motivation of employee's offers may benefit to the organisation and also to the employees.

The importance of Motivation can be understood as follows:

1. **Importance of Motivation to Management / Organisation**

    (i) Increase in the efficiency and productivity of employees. Motivation ensures a high level performance of employees.

    (ii) Better co-operation from employees and cordial labor-management relations.

    (iii) Reduction in the rate of labor absenteeism and turnover.

    (iv) Reduction in the wastages and industrial accidents.

    (v) Improvement in the morale of employees.

    (vi) Quick achievement of business/corporate objectives and favorable corporate image.

2. **Importance of Motivation to Employees / Workers**

    (i) Employees get various monetary and non-monetary facilities/benefits which provide better life and welfare to them.

    (ii) Security of employment and other benefits due to cordial relations with the management.

    (iii) Job attraction and job satisfaction.

    (iv) Higher status and opportunities of participation in management.

    (v) Positive approach and outlook of employees towards company, management and superiors.

    (vi) Reduction in the rate of labor turnover which is harmful to employees and management.

    (vii) Better scope for improvement in knowledge and skills of employees.

(E) Tools of Motivation

Various tools can be used for effective motivation of the employees and the labor force. The tools of motivation may be financial or non-financial. These tools of motivation can be further understood as follows:

(A) Monetary or Financial Incentives

Monetary incentives are offered in terms of money. Such incentives provide more cash or purchasing power to employees. Monetary incentives are extremely attractive to employees (particularly those working at lower levels) as they get the benefit quickly and in concrete terms. At the higher levels of management, non-monetary incentives are more important than monetary incentives.

Monetary incentives may be further classified as following:

1. **Individual Monetary Incentives:** The benefit of individual monetary incentive is available to concerned worker only. For example, F. W. Taylor suggested differential piece rate system which offers different wage rates to different

workers as per their production efficiency. Different incentive wage plans are the examples of individual monetary incentives as the benefit is offered individually to every worker.

2. **Group Monetary Incentives:** In the group monetary incentives, the monetary benefit is not given individually but to a group of workers or to all workers in the Organisation. Workers have to work jointly/collectively as a team, in order to secure the benefits of group monetary incentives. Bonus payments, pension, P.F, production/productivity bonus, profit sharing, etc. are the examples of group monetary incentives. For the employer/management, group incentives are more important as they offer many benefits to the management.

(B) Non-monetary Incentives for Employee Motivation

1. **Job security and job enrichment:** Job security is useful for the motivation of employees. Such security keeps the employee away from the tension of becoming unemployed. Job enrichment provides an opportunity for greater recognition and advancement.

2. **Fair treatment to employees:** Employer should give attention to the needs, difficulties and grievances of employees. Small work groups and effective communication are useful for solving the problems of workers. Employees must be given decent treatment. They will be co-operative only when they are treated with sympathy and love, affection and dignity. Employees should also be given help in personal matters.

3. **Recognition of good work:** Recognition of good work at an appropriate time gives encouragement to employees to show better performance in future. As an appreciation of good work, prizes, rewards, promotions, etc. should be given.

4. **Encouragement to self-development and career development:** Employees should be given varied training facilities. Training facilitates self-development and also provides opportunities for career development. Every employee has a desire to grow, develop and rise higher. This desire should be exploited fully for motivating employees. For this, training as well as management development programmes should be introduced.

5. **Delegation of authority:** Due to delegation of authority, a subordinate employee feels that his superior has faith in him and also in his ability to use authority in a proper manner. Employees get mental satisfaction when authority is given to them. They take interest and initiative in the work and try to prove that they are competent to work at the higher levels. Thus, delegation of authority becomes a motivating factor.

6. **Congenial working conditions:** It is a non-financial incentive for motivation. Employees should be given various facilities and conveniences at the work place. The work environment should be pleasant and safe. This creates desire to work efficiently.

7. **Helpful attitude of management:** The helpful attitude of management towards its employees creates a sense of affinity for the Organisation. Fair treatment to workers creates better understanding among workers. Cordial industrial relations also motivate employees. Thus, enlightened and pro-employee attitude of management acts as a motivating factor.

8. **Fair opportunity of promotion:** Fair opportunity of promotion to all eligible workers is one more method useful for motivating employees. They take interest in the work as they feel that they will be rewarded in the form of promotions. Training facility should be provided to employees in order to make them eligible for promotion.

9. **Labor participation in management:** Labour participation in management is useful for the motivation of employees. Workers get higher status and better scope for expressing their views through such participation. Even the formation of quality circles or joint management councils is useful for motivating employees.

10. **Designation and status:** When an employee is provided with a better designation, it adds to his status. Employees are proud to reveal their attractive and high-sounding designations.

↳ Theories of Motivation

(I) Abraham Maslow's Hierarchy of Needs Theory:

1. Maslow's theory is based on the Hierarchy of Human Needs.

2. According to Maslow, human behaviour is related to his needs. It is adjusted as per the nature of needs to be satisfied.

3. In hierarchy of Needs theory, Maslow identify five types/ sets of human need arranged in a hierarchy of their importance & priority

Assumptions in Hierarchy of Needs Theory

Maslow's Assumptions in Hierarchy of Needs Theory are:

1. Man is a wanting being, i.e. his wants are growing continuously even when some wants are satisfied. Human needs are of varied and diversified nature. They can be arranged in a hierarchy of importance progressing from a lower to a higher order of needs.

2. Needs have a definite hierarchy of importance. As soon as needs on a lower level is fulfilled, those on the next level will emerge and demand satisfaction. This suggests that bread (food) is essential and is a primary need of every individual. According to Maslow, "Man lives by bread alone when there is no bread." However, he feels the other needs when his physiological needs are fulfilled. In brief, bread is important but man does not live by bread alone. There are other needs (security / safety, social, esteem and self actualisation which influence behaviour of people (employees) to work. This is the basic feature of Maslow's need hierarchy. Attention to all human needs is essential for motivation of employees. Attention to the provision of bread alone is not adequate for motivating employees. Bread can act as motivating factor when there is no bread, but when it is available, its use as motivator comes to an end. Here, other motivators (e.g. security of job, social status, etc.) will have to be introduced for motivating employees. Attention to other needs such as security needs, social needs, esteem needs and self actualisation needs is equally important and essential for the motivation of different categories of employees. Maslow, in his theory, has referred to different needs and suggested that attention needs to be given to all such needs as attention to physiological needs alone is not adequate for motivating employees. According to Maslow, "Man does not live by bread alone". This conclusion of Maslow is a practical reality and needs to be given adequate attention while motivating employees.

3. A satisfied need does not act as a motivator.
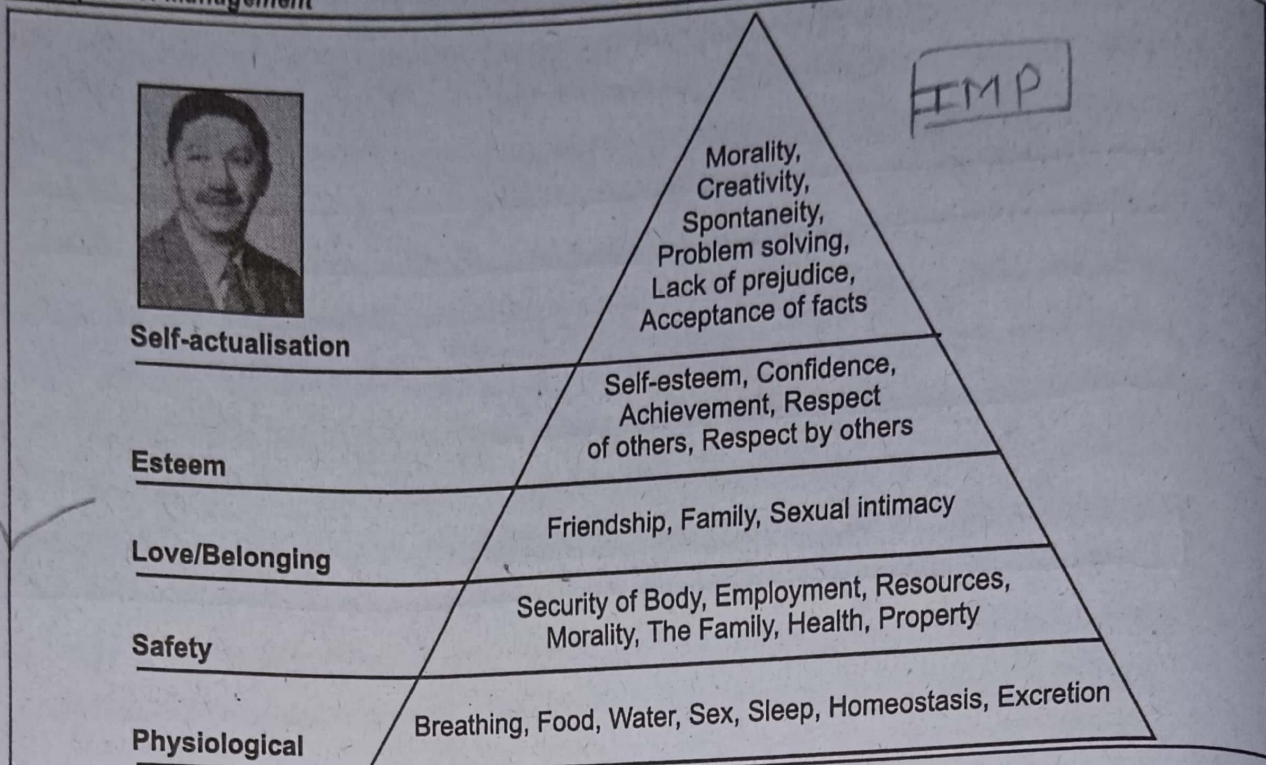
4. As one need is satisfied, another replaces it.

IMP

Morality,
Creativity,
Spontaneity,
Problem solving,
Lack of prejudice,
Acceptance of facts

Self-actualisation

Self-esteem, Confidence,
Achievement, Respect
of others, Respect by others

Esteem

Friendship, Family, Sexual intimacy

Love/Belonging

Security of Body, Employment, Resources,
Morality, The Family, Health, Property

Safety

Breathing, Food, Water, Sex, Sleep, Homeostasis, Excretion

Physiological

Fig. 3.7 : Maslow's Pyramid of Human Needs

The Maslow's Pyramid of Human Needs :

(a) **Physiological Needs:** Physiological needs are the basic needs for sustaining human life. These needs include food, shelter, clothing, rest, air, water, sleep and sexual satisfaction. These basic human needs (also called biological needs) lie at the lowest level in the hierarchy of needs as they have priority over all other needs. Unless and until these basic physiological needs are satisfied to the required extent, other needs do not motivate an employee. A hungry person, for example, is just not in a position to think of anything else except his hunger or food. According to Maslow, 'man lives by bread alone,' when there is no bread. The management attempts to meet such physiological needs through fair wages.

(b) **Security / Safety Needs:** These are the needs connected with the psychological fear of loss of job, property, natural calamities or hazards, etc. An employee wants protection from such types of fear. He prefers adequate safety or security in this regard i.e. protection from physical danger, security of job, pension for old age, insurance cover for life, etc. The safety needs come after meeting the physiological needs. Such physiological needs lose their motivational potential when they are satisfied. As a result, safety needs replace them. They begin to manifest themselves and dominate human behaviour. Safety needs act as motivational forces only if they are unsatisfied.

(c) **Social Needs:** An employee as a human being is rightly treated as a social animal. He desires to stay in a group. He feels that he should belong to one or

the other group and the member of the group should accept him with love and affection. Every person desires to be affiliated to such groups. This is treated as basic social need of an individual. Social needs occupy third position in the hierarchy of needs.

(d) **Esteem Needs:** This category of needs include the need to be respected by others, need to be appreciated by others; need to have power and finally prestigious position. Once the previous needs are satisfied, a person feels to be held in esteem both by him and also by others. Thus, esteem needs are two fold in nature. Self-esteem needs include those for self-confidence, self-respect, competence, etc. The second group of esteem needs are those related to one's status, reputation, recognition and appreciation by others. This is a type of personal ego which needs to be satisfied. The Organisation can satisfy this need (ego) by giving recognition to the good work of employees. Esteem needs do not assume the motivational properties unless the previous needs are satisfied.

(e) **Self-actualization Needs:** This is the highest among the needs in the hierarchy of needs advocated by Maslow. Self-actualisation is the desire to become what one is capable of becoming. It is a 'growth' need. A worker must work efficiently if he is to be ultimately happy. Here, a person feels that he should accomplish something in his life. He wants to utilize his potentials to the maximum extent and desires to become what one is capable of becoming. A person desires to have challenges and achieves something special in his life or in the area of his specialization. Though everyone is capable of self-actualization, many do not reach this stage. This need is rarely fully satisfied .

(II) Fredrick Herzberg's Theory of Motivation : (IMP)   B.C.A. : April 2014

Herzberg's theory of motivation is also called 'Two Factor Theory', 'Dual Factor Theory' and 'Hygiene / Maintenance Theory of Motivation'. This theory is based on the information collected by him and his associates (in the USA in 1959) by interviewing two hundred engineers and accountants. The information collected relates to the attitude of people towards work. This attitude towards work depends on two sets of factors namely hygiene or maintenance factors and the motivating factors.

Hygiene Factors of Two Factor Theory

According to Frederick Herzberg, the **Hygiene Factors** do little contribution to provide job satisfaction. He called them "dissatisfies' as their absence causes dissatisfaction but their presence is not motivating but only prevent dissatisfaction. The hygiene factors meet man's needs to avoid unpleasantness but do not motivate them to take more interest in the work. Hygiene factors (when provided) create a favorable environment for motivation and prevent job dissatisfaction. They are not an intrinsic part

of a job, but they are related to the conditions under which a job is performed. When employer is unable to provide enough of these factors to his employees, there will be job dissatisfaction. However, if they are provided, they will not necessarily act as motivators. They will just lead employees to experience no job dissatisfaction. Such hygiene factors are as noted below.

Hygiene / Maintenance Factors of Two Factor Theory :

1. Company's Policies and Administration,
2. Supervision,
3. Working Conditions,
4. Interpersonal Relations with superiors and other subordinates,
5. Salary,
6. Job Security,
7. Status,
8. Personal Life, and
9. Employee Benefits.

Motivating Factors of Two Factor Theory

Motivating Factors act as forces of **job satisfaction**. They create positive and a longer lasting effect on employee's performance and are related to work it. Adequate provision of such factors called is 'Satisfiers'. They make people happy with their jobs because they serve man's basic needs for psychological growth. In addition, they also motivate employees in their work. Such factors are five and are called motivators by Herzberg. The motivating factors are:

Motivating Factors are:

1. Achievement,
2. Recognition for Accomplishment,
3. Increased Responsibility,
4. Opportunity for Growth and Development, and
5. Creative and Challenging Work.

Motivating factors motivate subordinates to take more interest in the work. They raise efficiency and productivity of employees. According to Frederick Herzberg, motivating factors are essential in order to provide job satisfaction and in order to maintain a high level of job performance. Employees will not have job satisfaction if the motivating factors are not provided in sufficient quality by the employer.

Hygiene factors	Motivating factors
• Company's Policies and Administration	• Achievement
	• Recognition for accomplishment
• Supervision	• Increased responsibility

• Working conditions • Interpersonal relations • Salary • Job security • Status • Personal Life • Employee Benefits	• Opportunity of growth and development • Creative and Challenging work

According to Frederick Herzberg, these two sets of factors are quite independent of each other. It may be noted that hygiene factors, when satisfied, tend to eliminate dissatisfaction, but do not motivate an individual employee for better performance. The motivating factors will permit an individual to grow and develop in a natural way. In brief, hygiene factors affect an individual's willingness to work while motivating factors affect his ability and efficiency to work. This theory can be compared to Maslow's theory of human needs as both the theories refer to needs and their role in motivation. In addition, the assumptions in both the theories are identical.

Comparison of Maslow's Theory and Herzberg Theory of Motivation

Distinction between Maslow and Herzberg's Theory of Motivation:

Aspect	Maslow's Theory of Motivation	Herzberg's Theory of Motivation
Meaning	This is based on human needs and their satisfaction.	This is based on the use of motivators which include achieve-ment, recognition and oppor-tunity for growth.
Basis of Theory	This is based on the hierarchy of human needs. Maslow identified sets of human needs (on priority basis) and their satisfaction in motivating employees.	Herzberg refers to hygiene factors and motivating factors in his theory. Hygiene factors are dis-satisfiers while motivating factors motivate subordinates. Hierar-chical arrangement of needs is not given.
Nature of Theory	Maslow's theory is rather simple and descriptive. This theory is based on a research on human behaviour and needs.	Herzberg's theory is more pres-criptive. It suggests the motive-ting factors which can be used effectively. This theory is based on actual information collected by Herzberg by interviewing 200 engineers and accountants.

Jakap - version

Aspect	Maslow's Theory of Motivation	Herzberg's Theory of Motivation
Applicability	• It is most popular and widely cited theory of motivation and has wide applicability. • Maslow's theory is mostly applicable to poor and developing countries where money is still a motivating factor.	• Herzberg's theory is an extension of Maslow's theory of motivation. Its applicability is narrower. • Herzberg's theory is applicable to rich countries where money is a less important motivating factor.
Descriptive/ Prescriptive	Maslow's Motivation theory is descriptive in nature.	Herzberg's Theory is prescriptive in nature.
Motivators	According to Maslow, any need can act as a motivator provided it is not satisfied or relatively less satisfied.	In the dual factor model of Herzberg, hygiene factors (lower level needs) do not act as motivators. Only the higher order needs (achievement, recognition, challenging work) act as motivators.

(G) Principles of Motivation

1. **Recognise the Individuality of Individuals:** Remember that people are different. Psychologically, no two persons are the same. It is dangerous to assume that all the members of a group are motivated by the same needs or desires. Without finding out what needs are craving in the minds of the individual, it is difficult to motivate him adequately.

2. **Make Your Subordinates Feel Important:** Human beings generally nurture the desire to be appreciated and are considered important. Satisfaction of this need to feel important can be provided by asking for opinions and praising in public. It is for this reason that one of the rules often given for human relations, or getting things done through people, is *"Praise in public and criticise in private."* Give credit where it is due and show interest in, an appreciation of, your subordinates. In this way, use every opportunity to build up in your subordinates a sense of importance of their work.

3. **Guide Rather than Order:** The job of a manager as a leader is to guide his subordinates towards the attainment of the departmental goals. However, instead of giving orders, providing suggestions are likely to produce better results.

4. **Set a Good Example:** Remember that the manager sets the style for his people. Subordinates are always watching their superior and often presuming that the superior's conduct is the appropriate one for adoption. Therefore, play up the positive and be consistent.

5. **Show Confidence in your Subordinates:** An indication of confidence in the subordinates would instill confidence in themselves. Therefore, show confidence in your subordinates and adopt the attitude that you are sure that they will do their best. Even ask them for their counsel and suggestions.

6. **Listen Attentively:** Before guidance can be given, it is necessary to understand the facts. Listening can provide this deeper understanding. Very often, merely listening and thereby permitting the subordinate to talk without interruption can result in the subordinate seeing the error of his own opinion.

7. **Watch How You Communicate:** Be careful not only of **what** you say but **how** you say it. Even the tone of the voice is relevant. Be aware of unconscious communications, such as the frown.

8. **Encourage Participation:** Whenever possible, provide the subordinates with an opportunity to take part in the decisions, particularly where they affect such subordinates. Keep them also well-informed on matters which affect them as effective participation requires possession of adequate knowledge by the subordinates.

9. **Do Not Be Secretive:** Being secretive induces frustration in the subordinates. Motivation requires the creation of a feeling of belonging. Team spirit and group cohesiveness have to be inspired. This cannot be done by a secretive leader.

10. **Make Your Subordinates "Want To Do" things that you want them to do:** This summarises the most important element of effective motivation. Merely asking the subordinates to do something cannot get the same result as when the subordinates *"Want To Do"* those very things themselves. Making the subordinates want to do the thing is only secured by an integration of objectives whereby the subordinates feel that they will achieve their own goals best by striving towards the achievement of the organisation's goals.

3.6 ORGANISING : CONCPET, DELEGATION OF AUTHORITY, DECENTRATLISATION : CONCEPT AND IMPORTANCE

(A) Definitions and Meaning of Organisation

1. **Louis A. Allen:** "*Organisation is the process of identifying and grouping the work to be performed, defining and delegating responsibility and authority, and establishing relationship for the purpose of enabling people to work most effectively in accomplishing objectives*".

2. **Koontz and O'Donnell:** "*Organisation involves the grouping of activities necessary to accomplish goals and plans, the assignment of these activities to appropriate departments and the provision for authority, delegation and coordination*".

Thus, organising is the determining, grouping and arranging of various activities deemed necessary for the attainment of the objectives, the assigning of people to activities, providing of suitable physical factors of environment and indicating the relative authority delegated to each individual.

(B) Features of Organisation   IMP   B.C.A. : April 2015, 2017

Organisation has certain essential features. They have been discussed below:

1. **Division of work:** The total work of the enterprise is divided into activities and functions. Various activities are assigned to different persons for their efficient accomplishment. This brings in division of labour.

2. **Coordination:** Coordination of various activities is as essential as their division. It helps in integrating and harmonising various activities. Coordination also avoids duplication of work and delays.

3. **Common objective:** An organisational structure is a means towards achievement of enterprise goals. The goals of various segments lead to the achievement of major business goals.

4. **Co-operative relationship:** An organisation creates co-operative relationship among various members of the group. Organising leads to a system which helps in creating meaningful relationship among persons. The structure should be so designed that it motivates people to perform their part or work together.

5. **Well-defined authority-responsibility relationship:** An organisation consists of various positions arranged in a hierarchy with well-defined authority and responsibility.

(C) Steps in Organisation   IMP   B.C.A. : Oct. 2011, 2012

Organising is the function of management which follows planning. It is a function in which the synchronisation and combination of human, physical and financial resources

takes place. All the three resources are important to get results. Therefore, organisational function helps in achievement of results which in fact is important for the functioning of a concern. According to *Chester Barnard*, "*Organising is a function by which the concern is able to define the role positions, the jobs related and the co-ordination between authority and responsibility*'. Hence, a manager always has to organise in order to get results.

A manager performs the organising function with the help of following steps:-

1. **Identification of activities:** All the activities which have to be performed in a concern have to be identified first. For example preparation of accounts, making sales, record keeping, quality control, inventory control, etc. All these activities have to be grouped and classified into units.

2. **Departmentally organising the activities:** In this step, the manager tries to combine and group similar and related activities into units or departments. This organisation of dividing the whole concern into independent units and departments is called departmentation.

3. **Classifying the authority:** Once the departments are made, the manager likes to classify the powers and its extent to the managers. This activity of giving a rank in order to the managerial positions is called hierarchy. The top management is into formulation of policies, the middle level management into departmental supervision and lower level management into supervision of foremen. The clarification of authority helps in bringing efficiency in the running of a concern. This helps in achieving efficiency in the running of a concern. This helps in avoiding wastage of time, money, effort, in avoidance of duplication or overlapping of efforts and this helps in bringing smoothness in a concern's working.

4. **Coordination between authority and responsibility:** Relationships are established among various groups to enable smooth interaction toward the achievement of the organisational goal. Each individual is made aware of his authority and he/she knows whom they have to take orders from and to whom they are accountable and to whom they have to report. A clear organisational structure is drawn and all the employees are made aware of it.

(D) Objectives of Organisation

Organisation aims at the achievement of the following objectives:

1. **To help management:** The function of organisation helps management in having a control over various business functions. The work is divided properly and control centers are established. The authority is delegated and

responsibilities are fixed. It helps the management in having a coordinated administration.

2. **To increase production:** The duties are assigned according to the principles of division of labour. The efficient system of organisation encourages every employee to make his best contribution in raising output.

3. **Co-operation of employees:** The organisation structure will succeed only if employees co-operate in the work; the employees learn working in close cooperation of other. The management introduces various incentive schemes and gives monetary and other benefits to the employees, so that they work with a team spirit.

(E) Types of Organisation

Small companies can use a variety of organisational structures. However, a small company's organisation structure must be designed to effectively meet its goals and objectives, according to the Lamar University article titled "Organisational Structure" on its website. Types of organisational structure in management can include flat structures as well as functional, product and geographical-structured organisations.

1. **Flat Organisational Structure:** Many small companies use a flat organisational structure, where very few levels of management separate executives from analysts, secretaries and lower-level employees. Flat organisations work best when a company has less than 20 employees, especially if the company employs one or two employees per department. One advantage of using a flat organisational structure for management is that decisions can be made relatively quickly. The flat organisational lacks the typical bureaucracy of taller organisational structures--those with many levels of management.

2. **Functional Organisational Structure:** A functional organisational structure is centered on job functions, such as marketing, research and development and finance. Small companies should use a functional organisation when they want to arrange their organisational structure by department. For example, a small company may have a director, two managers and two analysts in the marketing department. A functional organisational structure works well when small companies are heavily project-focused. Directors can assign certain projects to managers, who can then divide up tasks with their analysts. The department can then more effectively meet their project deadlines.

3. **Product Organisational Structure:** A product organisational structure has managers reporting to the president or head of the company by product type. Product organisational structures are primarily used by retail companies that have stores in various cities. However, stores in each city may still need a local human resources or marketing department to carry out functions locally.

4. **Geographical Organisational Structure:** The Small Business Administration is responsible for defining small businesses in different industries. A geographical organisational structure is when companies decentralise the functional areas. For example, unlike the product organisational structure, there may be a local marketing, finance, accounting and research development person based in each region. For example, a small consumer products food company may be large enough to place a marketing research manager and analyst in each of six different regions. This can be important because consumers in various areas have different tastes. Hence, a geographical structure will enable the company to better serve the local market.

(F) Delegation of Authority

Delegation of authority is a very vital organisational process. It is inevitable along with the expansion and growth of a business enterprise. Delegation means assigning of certain responsibilities along with the necessary authority by a superior to his subordinate managers. Delegation does not mean surrender of authority by the higher level manager. It only means transfer of certain responsibilities to subordinates and giving them the necessary authority, which is necessary to discharge the responsibility properly. Delegation is quite common in all aspects of life including business. Even in the college, the principal delegates some of his authority to the vice-principal. In delegation, an attempt is being made to have meaningful participation and cooperation from the subordinates for achieving certain well-defined results. Due to delegation, the routine responsibilities of the superior are reduced. As a result, he concentrates on more urgent and important matters. Secondly, due to delegation, subordinate becomes responsible for certain functions transferred to him. Delegation is a tool, which a superior manager uses for sharing his work with the subordinates and thereby raising his efficiency.

Delegation is not a process of abdication. The person who delegates does not divorce himself from the responsibility and authority with which he is entrusted. He remains accountable for the overall performance and also for the performance of his subordinates. Delegation is needed when the volume of work to be done is in excess of an individual's physical and mental capacity.

- Delegation involves the following three basic elements:
- Assignment of duties to subordinates,
- Granting of authority to enable the subordinates to perform the duties assigned, and
- Creation of obligation on the part of subordinate to perform duties in an orderly manner.

Definitions of Delegation of Authority

1. According to **F. C. Moore:** "Delegation means assigning work to the others and giving them authority to do so."

2. According to **O. S. Miner:** "Delegation takes place when one person gives another the right to perform work on his behalf and in his name and the second person accepts a corresponding duty or obligation to do that is required of him."

3. According to **Louis Allen:** "Delegation is the dynamics of management, it is the process a manager follows in dividing the work assigned to him so that he performs that part which only he, because of his unique organisational placement, can perform effectively, and so that he can get others to help him with what remains."

Need of Delegation of Authority   B.C.A., April 2012

1. **Relieves manager for more challenging jobs:** Delegation makes it possible for the managers to distribute their workload to others. Thus, managers are relieved of routine work and they can concentrate on higher functions of management like planning, organising, controlling, etc.

2. **Leads to motivation of subordinates:** Subordinates are encouraged to give their best at work when they have authority with responsibility. They take more initiative and interest in the work and are also careful and cautious in their work. Delegation leads to motivation of employees and manpower development.

3. **Facilitates efficiency and quick actions:** Delegation saves time enabling tile subordinates to deal with the problems promptly. They can take the decisions quickly within their authority. It is not necessary to go to the superiors for routine matters. This raises the overall efficiency in an organisation and offers better results in terms of production, turnover and profit.

4. **Improves employee morale:** Delegation raises the morale of subordinates as they are given duties and supporting authority. They feel that they are responsible employees. The attitude and outlook of subordinates towards work assigned becomes more constructive.

5. **Develops team spirit:** Due to delegation, effective communication develops between the superiors and subordinates. The subordinates are answerable to superiors and the superiors are responsible for the performance of subordinates. This brings better relations and team spirit among the superiors and subordinates.

6. **Maintains cordial relationships:** The superiors trust subordinates and give them necessary authority. The subordinates accept their accountability and this develops cordial superior-subordinate relationships.

7. **Facilitates management development:** Delegation acts as a training ground for management development. It gives opportunity to subordinates to learn, to grow and to develop new qualities and skills. It builds up a reservoir of executives, which can be used as and when required. Delegation creates managers and not mere messengers.

8. **The advantages of delegation will not be available easily and automatically:** The advantages of delegation will not be available easily and automatically. They will be available only when the process of delegation moves smoothly. Problems may develop, if the delegation is not introduced with proper planning and in proper spirit. For example, the authority given to subordinate is inadequate or the subordinate is not competent to discharge the responsibilities assigned or the superior fails to monitor the whole process of delegation effectively. In all such cases, the delegation will be ineffective and the expected advantages will not be available to the organisation and also to concerned parties.

(G) Decentralisation

Decentralisation means diffusion of authority. The dispersal of authority of decision-making to the lower level management is termed as decentralisation. Decentralisation of authority is a fundamental phase of delegation and the extent to which authority is not delegated is called centralisation. According to Fayol "Everything that goes to increase the importance of the subordinate's role is called decentralisation."

Decentralisation in relation to office denotes disperse of office services and activities. The necessity of decentralisation of office services occurs when official activities are performed at functional departmental level. Thus, decentralisation in relation to office may include departmentation of activities. When authority is dispersed, decentralisation is present.

The need for decentralisation is felt when the business grows in its size which necessitates diversification of office activities. Decentralisation occurs at the time of decisions of routine nature but if decisions are vital, the authority is not decentralised. The technological development, political factors, availability of managers also affects the

degree of decentralisation. Decentralisation does not exist in its pure sense. There is a mixture of the two because some activities are centralised and some are decentralised.

Advantages of Decentralisation

1. **Distribution of burden of top executive:** Decentralisation enables to its executive to share his burden with others at lower levels because here authority is delegated. The top executive is relieved of some burden and concentrates his activities to think for the future of the organisation.

2. **Increased motivation and morale:** The morality of the employees is increased because of delegation of authority. Decentralisation helps to increase employee's morale because it involves delegation. The employees are motivated to work.

3. **Greater efficiency and output:** Decentralisation gives emphasis on care, caution and enthusiastic approach to the work which in turn results in increased efficiency and output. This is possible because it involves delegation of authority and responsibility.

4. **Diversification of Activities:** Decentralisation helps in diversification of activities. It creates more employment opportunities because new managers are to be entrusted with new assignments.

5. **Better Coordination:** The various operations and activities are coordinated in a decentralised set up.

6. **Maintenance of Secrecy:** Decentralisation enables to maintain secrecy without much cost and unnecessary trouble.

7. **Facilitate effective control and quick decision:** Decentralisation enables to measure the work according to standard easily and quickly. This facilitate taking up quick decision.

Disadvantages of Decentralisation

A decentralised organisation suffers from the following disadvantages:

1. **More cost:** Decentralisation is costly because it encourages duplication of functions and equipment's. As it is costly, it cannot be adopted by small organisations.

2. **No specialisation:** Specialisation suffers in decentralisation because everyone becomes jack-of-all-trades but master of none. So specialisation is affected.

3. **Need more specialists:** In decentralisation more specialists are needed. The services of specialists are not utilised effectively and efficiently, as they are large in numbers.

4. **No uniform action:** It becomes difficult to maintain uniformity in action because routine and methods differ from organisation to organisation and department to department.

5. **No equitable distribution of work:** It becomes difficult to distribute workload equitably among different employees.

3.7   CONTROLLING : MEANING, NEED, PROCESS, TECHNIQUES

(A) Meaning of Control :

In 1916, Henri Fayol formulated one of the first definitions of control as it pertains to management: "Controlling consists of verifying whether everything occurs in conformity with the plan adopted, the instructions issued, and principles established. Its object is to point out weaknesses and errors in order to rectify [them] and prevent recurrence."

Management control can be defined as a systematic effort by business management to compare performance to predetermined standards, plans, or objectives in order to determine whether performance is in line with these standards. It is also used to determine, presumably, if any remedial action is required to ensure that human and other corporate resources are being used in the most effective and efficient way possible to achieve corporate objectives.

Control can also be defined as "that function of the system that adjusts operations as needed to achieve the plan, or to maintain variations from system objectives within allowable limits." The control subsystem functions in close harmony with the operating system. The degree to which they interact depends on the nature of the operating system and its objectives. Stability concerns a system's ability to maintain a pattern of output without wide fluctuations. Rapidity of response pertains to the speed with which a system can correct variations and return to expected output.

(B) Characteristics/ Features of Controlling

- Controlling is a continuous process.
- Controlling is a management process.
- Controlling is embedded in each level of organisational hierarchy.
- Controlling is forward-looking.
- Controlling is closely linked with planning.
- Controlling is a tool for achieving organisational activities.
- Controlling is an end process.

The characteristics of controlling can be understood in greater depth as follows:

1. **Controlling is a Continuous Process:** Controlling is not a single step activity. Rather, it is a dynamic process that involves constant analysis of actual and planned performance and the resultant deviations as well as the revision of objectives, plans, policies, procedures, positions, incentives etc. in the light of such deviations.

2. **Purpose of Controlling is Positive:** George Terry says, the function of controlling is positive – it is to make things happen, i.e. to achieve the goal within stated constraints, or by means of the planned activities. Controlling is a managerial necessity and a help, not an impediment or a hindrance.

3. **Controlling is an exercise at all levels in the Management Hierarchy:** Controlling is a function of every manager, from Chairman and Managing Director to a supervisor, though it may vary in scope among managers. For example the top managers are concerned with administrative control, which is exercised through broad policies, plans and other directives. The middle level managers are concerned with the executor control for the purpose of getting the plans, policies, and programmes executed. At the lower level, supervisors exercise operational control to ensure successful performing of actual operations or production activities by their close monitoring.

4. **Controlling Guides Behaviour of People and use of Resources and Facilities:** Controlling guides the action and the behaviour of the people who are responsible for carrying out different activities or operation.

5. **Control is mainly Forward Looking:** Controlling mainly aims at the future because future is ahead and past is gone.

6. **Control Measures and Evaluates Performances:** Controlling involves measurements of the actual results in order to facilitate other evaluation or comparison against the planned results. It also suggests guidelines for future course of action.

7. **Control Facilities Coping with Environment:** An effective controlling system foresees the likely changes in consumer preferences and demands and therefore guides the members of the organisation to modify the products or services to meet the anticipated needs and requirements of the consumers in the future market.

8. **Control Closely Related to Planning:** Planning is the basis of controlling. Controlling implies the existence of certain standards or yardsticks against which actual results are to be evaluated. Planning provides such standards, if there is no plan; it means that there is no basis for control. Planning sets the course of action and controlling monitors the operation or activities to follow such course of action. In fact, planning initiates the process of management and control completes this process.

On the other hand, planning without control is not a reality. Controlling ensures to the organisational activities and the functions on the right track and aligned with plans and goals. Standards for evaluation of performance are the beginning point of the

(C) The Elements of Control

The four basic elements in a control system are as follows :

1. **The characteristic or condition to be controlled:** The first element is the characteristic or condition of the operating system that is to be measured. We select a specific characteristic because a correlation exists between it and how the system is performing. The characteristic may be the output of the system during any stage of processing or it may be a condition that is the result of the system. For example, it may be the heat energy produced by the furnace or the temperature in the room that has changed because of the heat generated by the furnace. In an elementary school system, the hours a teacher works or the gain in knowledge demonstrated by the students on a national examination are examples of characteristics that may be selected for measurement, or control.

2. **The sensor:** The second element of control, the sensor, is a means for measuring the characteristic or condition. For example, in a home-heating system, this device would be the thermostat; and in a quality-control system, this measurement might be performed by a visual inspection of the product.

3. **The comparator:** The third element of control, the comparator, determines the need for correction by comparing what is occurring with what has been planned. Some deviation from plan is usual and expected, but when variations are beyond

those acceptable limits, corrective action is required. It involves a sort of preventative action to indicate that good control is being achieved.

4. **The activator:** The fourth element of control, the activator, is the corrective action taken to return the system to expected output. The actual person, device, or method used to direct corrective inputs into the operating system may take a variety of forms. It may be a hydraulic controller positioned by a solenoid or electric motor in response to an electronic error signal, an employee directed to rework the parts that failed to pass quality inspection, or a school principal who decides to buy additional books to provide for an increased number of students. As long as a plan is performed within limits, corrective action is not necessary.

(D) Process of Controlling ✱   B.C.A. : April 2016

We have understood the concept and elements of controlling. Controlling is a continuous and a circular process which is carried out on a chain basis. The steps of the controlling process are discussed ahead:

1. Step 1: Fixing the Control Standards / Objectives / Targets

A standard is a criterion (base) which is used to measure the performance of the subordinates. Standards may be of two types, i.e. Quantitative Standards and Qualitative Standards.

(a) Quantitative Standard can be easily defined and measured. For e.g. number of products, number of customers, cost, net profit, time limits, etc.

(b) Qualitative Standard cannot be easily defined and measured. For e.g. measurement of morale, measurement of job satisfaction, measurement of effect of a training programme, advertisement programme, etc. It is better to have quantitative standards because they are measurable.

The standards should be as clear as possible. It should be easily understood by both superiors and subordinates. The responsibility of each individual should also be clearly defined i.e. everyone should be responsible for achieving a particular goal, objective, target, etc.

Example: The marketing department fixes a standard - "We will sell 2,000 units of product X in one month". So here the standard is 2,000 units.

2. Step 2: Measuring the Actual Performances

After establishing the standards, the subordinates should be provided with all the resources for performing the job. They should be directed and motivated to perform the job. Similarly, they should be supervised. If the subordinated comes under Theory X they require maximum supervision. However, if they come, under Theory Y then they require minimum supervision. After they complete the job their performance

should be measured. There are many traditional and modern techniques for measuring the performances of subordinates.

Example: After one month, the marketing department sold only 10,000 units of product X. So, their actual performance is only 10,000 units.

Step 3: Comparison

The actual performances of the subordinates are compared with established standards, and then the deviations are found out. The deviations which are found out may be positive or negative.

(a) Positive Deviation means that the actual performance is better than the established standards. Positive deviations should be appreciated.

(b) Negative Deviation means that the actual performance is less than the established standards. The management should pay special attention to the negative deviation. They should find out the cause of negative deviations.

Generally, minor (small) deviations are ignored. However, major deviations should be immediately addressed and reported to the top management. PERT, Budgetary Control, Observation, Inspection, Reports, etc. are some of the methods used for comparison.

Example: 10,000 units (Standard) minus 9,000 units (Actual Performance) = 1,000 units (Negative Deviation).

4. Step 4: Corrective Action

After finding out the negative deviations and their causes, the managers should take steps to correct these deviations. Corrective action may include, changing the standards, providing better motivation, giving better training, using better machines, etc. The management should take essential steps to prevent these deviations in the future.

Example: The cause of the negative deviation was less advertising and untrained salesmen. So, the company must spend reasonable money on advertising and training.

5. Step 5: Follow-up

After taking corrective action, the management must do a follow-up. Follow up finds out whether the deviations and their causes are removed. If follow-up is done properly, then the actual performance will be equal to or better than the established standards.
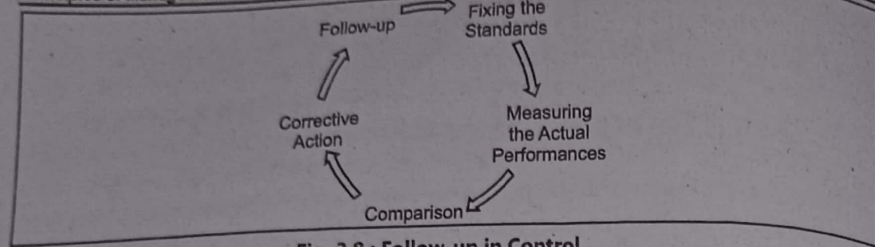
Fig. 3.8 : Follow-up in Control

(E) Techniques of Controlling

The ten types of traditional techniques of controlling are discussed below:

1. **Direct Supervision and Observation:** Direct Supervision and Observation' is the oldest technique of controlling. The supervisor himself observes the employees and their work. This brings him in direct contact with the workers. So, many problems are solved during supervision. The supervisor gets firsthand information, and he has better understanding with the workers. This technique is most suitable for a small-size business.

2. **Financial Statements:** All business organisations prepare Profit and Loss Account. It gives a summary of the income and expenses for a specified period. They also prepare Balance Sheet, which shows the financial position of the organisation at the end of the specified period. Financial statements are used to control the organisation. The figures of the current year can be compared with the previous year's figures. They can also be compared with the figures of other similar organisations.

Ratio analysis can be used to find out and analyse the financial statements. Ratio analysis helps to understand the profitability, liquidity and solvency positions of the business.

3. **Budgetary Control:** A budget is a planning and controlling device. Budgetary control is a technique of managerial control through budgets. It is the essence of financial control. Budgetary control is done for all aspects of a business such as income, expenditure, production, capital and revenue. Budgetary control is done by the budget committee.

4. **Break Even Analysis:** Break Even Analysis or Break Even Point is the point of no profit, no loss. For example when an organisation sells 50000 cars it will break even. It means that, any sale below this point will cause losses and any sale above this point will earn profits. The Break-even analysis acts as a control device. It helps to find out the company's performance. So the company can take

corrective action to improve its performance in the future. Break-even analysis is a simple control tool.

5. **Return on Investment (ROI):** Investment consists of fixed assets and working capital used in business. Profit on the investment is a reward for risk taking. If the ROI is high then the financial performance of a business is good and vice-versa. ROI is a tool to improve financial performance. It helps the business to compare its present performance with that of previous years' performance. It helps to conduct inter-firm comparisons. It also shows the areas where corrective actions are needed.

6. **Management by Objectives (MBO):** MBO facilitates planning and control. It must fulfill the following requirements:
   - Objectives for individuals are jointly fixed by the superior and the subordinate.
   - Periodic evaluation and regular feedback to evaluate individual performance.
   - Achievement of objectives brings rewards to individuals.

7. **Management Audit:** Management Audit is an evaluation of the management as a whole. It critically examines the full management process, i.e. planning, organising, directing, and controlling. It finds out the efficiency of the management. To check the efficiency of the management, the company's plans, objectives, policies, procedures, personnel relations and systems of control are examined very carefully. Management auditing is conducted by a team of experts. They collect data from past records, members of management, clients and employees. The data is analysed and conclusions are drawn about managerial performance and efficiency.

8. **Management Information System (MIS):** In order to control the organisation, the management needs accurate information. They need information about the internal working of the organisation and also about the external environment. Information is collected continuously to identify problems and find out solutions. MIS collects data, processes it and provides it to the managers. MIS may be manual or computerised. With MIS, managers can delegate authority to subordinates without losing control.

9. **PERT and CPM Techniques:** Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM) techniques were developed in USA in the late 50's. Any programme consists of various activities and sub-activities. Successful completion of any activity depends upon doing the work in a given sequence and in a given time.CPM / PERT can be used to minimize the total time or the total cost required to perform the total operations.