LECTURE NOTES ON

MANAGEMENT SCIENCE
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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

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CONTENTS

Management in businesses and organizations is the function that coordinates the efforts of people to accomplish goals and objectives by using available resources efficiently and effectively.

Introduction to Management:

When human being started group activities for the attainment of same common objectives whenever a group is formed and a group activity is organized to achieve certain common objectives management is needed to direct, co-ordinate and integrate the individual activities of a group and secure teams work to accomplish organizational objectives. The objectives of all business are attained by utilizing the scare resources like men, materials, machines, money etc.

In process of management, a manage uses human skills, material resources and scientific methods to perform all the activities leading to the achievement of goods.

CONCEPT OF MANAGEMENT

"**Management** is the coordination of all resources through the process of planning, organizing, directing and controlling in order to attain stated goals."

1. **"To manage is to forecast, to plan, to organize, to command, to co-ordinate and to control."** — Henry Fayol. It attempts to describe management in terms of what a manager does, and not what management is.
2. **"Management is a multipurpose organ that manages a business and manages manager, and manages worker and work."**— P. Drucker: The Practice of Management
(i) Managing a business;
(ii) Managing manager; and
(iii) Managing workers and work.
Even if one is omitted, we would not have management anymore and we also would not have a business enterprise or an industrial society. According to P. Drucker, the manager has to balance and harmonies three major functions of the business enterprise.
Hence, a manager is a dynamic and life-giving element in every business. Without efficient management we cannot secure the best allocation and utilization of human, material and financial resources.

DEFINITION OF MANAGEMENT

Management is an art of getting things done through by others with the help of planning, organising, staffing, directing and controlling functions to achieve an individual/group goals and objectives.

"Management is knowing exactly what you want men to do and then seeing that they do it the best and cheapest ways". By_F.W.Taylor

"Management is defined as the creation and maintenance of an internal environment in an enterprise where individuals working together in groups, can perform efficiently and effectively towards the attainment of group goals". BY_Koontz and O'Donell

NATURE AND IMPORTANCE OF MANAGEMENT

NATURE

1. Management is goal oriented or purposive activity

2. Management is group activity

3. Management is a universal process or pervasive activity

4. Management is multi-disciplinary

5. Management is ongoing activity/continuous process

6. Management is a social process

7. Coordination of human and physical resources or management integrates human and physical resources

8. Activating employees

9. Management is both a science and an art

IMPORTANCE

Achieving business objective

Optimum use of business resources

Effective leadership and motivation

Effective organization and co-ordination

Establishing clear authority andresponsibility

Solution of labour problems

Fulfilling social responsibility

FUNCTIONS OF MANAGEMENT:

Planning: Involves selecting the objectives and actions to achieves them planning stage involves decision making and choosing future courses of action from the various alternatives

Organizing: Role of each person in any organization is fixed. The concept of role is who will be doing what should be known, to achieve organizational targets efficiently. It is intended that all the tasks necessary to achieve targets are assigned to people who can do the best.

Staffing: Staffing function includes keeping the various organizational position fixed. This activity is done by identifying work force requirements, keeping the records of the performance of people working with the organization. So that suitable people can be prompted and at the same time people performing not up to the mark could be send for training. If all the above activities are taking place in nice way in any organization, it will give rise minimum work force turnover.

Directing: Directing means influencing people, so that they will contribute to the organization targets directing involves motivation, leadership styles and proper communication.

Controlling: It is the process of comparing the plans with the results. If there is deviation attain taken to be bridge the gap between plan and actual results.

EVALUATION OF SCIENTIFIC MANAGEMENT

Scientific management is a theory of management that analyzes and synthesizes workflows. Its main objective is improving economic efficiency, especially labour productivity. It was one of the earliest attempts to apply science to the engineering of processes and to management. Scientific management is sometimes known as **Taylorism** after its founder, Frederick Winslow Taylor.

F.W.TAYLOR 1856-1915

Taylor began the theory's development in the United States during the 1880s and '90s within manufacturing industries, especially steel. Its peak of influence came in the 1910s;[2] Taylor died

in 1915 and by the 1920s, scientific management was still influential but had entered into competition and syncretism with opposing or complementary ideas.

Although scientific management as a distinct theory or school of thought was obsolete by the 1930s, most of its themes are still important parts of industrial engineering and management today. These include: analysis; synthesis; logic; rationality; empiricism; work ethic; efficiency and elimination of waste; standardization of best practices; disdain for tradition preserved merely for its own sake or to protect the social status of particular workers with particular skill sets; the transformation of craft production into mass production; and knowledge transfer between workers and from workers into tools, processes, and documentation.

The main elements of the Scientific Management are : "Time studies Functional or specialized supervision Standardization of tools and implements Standardization of work methods Separate Planning function Management by exception principle The use of "slide-rules and similar time-saving devices" Instruction cards for workmen Task allocation and large bonus for successful performance The use of the 'differential rate' Mnemonic systems for classifying products and implements A routing system A modern costing system etc. etc. " Taylor called these elements "merely the elements or details of the mechanisms of management" He saw them as extensions of the four principles of management.

1. The development of a true science
2. The scientific selection of the workman
3. The scientific education and development of the workman
4. Intimate and friendly cooperation between the management and the men.

PRINCIPLES OF SCIENTIFIC MANAGEMENT

Principles of scientific management propounded by Taylor are: 1. Science, Not Rule of Thumb 2. Harmony, Not Discord 3. Mental Revolution 4. Cooperation, Not Individualism 5. Development of each and every person to his or her greatest efficiency and prosperity.

1. Science, Not Rule of Thumb:
In order to increase organisational efficiency, the 'Rule of Thumb' method should be substituted by the methods developed through scientific analysis of work.

Rule of Thumb means decisions taken by manager as per their personal judgments. According to Taylor, even a small production activity like loading iron sheets into box cars can be scientifically planned. This will help in saving time as well as human energy. Decisions should be based on scientific enquiry with cause and effect relationships.

This principle is concerned with selecting the best way of performing a job through the application of scientific analysis and not by intuition or hit and trial methods.

The work assigned to any employee should be observed and analyzed with respect to each element or part thereof and the time involved therein so as to decide the best way of performing that the work and to determine the standard output for same.

2. Harmony, Not Discord:

Taylor emphasized that there should be complete harmony between the workers and the management since if there is any conflict between the two, it will not be beneficial either for the workers or the management.

Both the management and the workers should realize the importance of each other. In order to achieve this state, Taylor suggested complete mental revolution on the part of both management and workers.

It means that there should be complete change in the attitude and outlook of workers and management towards each other. It should always be kept in mind that prosperity for an employer cannot exist for a long time unless it is accompanied by the prosperity of the employees of that organisation and vice versa.

It becomes possible by (a) sharing a part of surplus with workers (b) training of employees, (c) division of work (d) team spirit (e) positive attitude (f) sense of discipline (g) sincerity etc.

Management should always be ready to share the gains of the company with the workers and the latter should provide their full cooperation and hard work for achieving organizational goals. Group action with mutual-trust and understanding should be perfect understanding the focus of working.

This principle requires that there should be perfect understanding between the management and workers and both should feel that they are part of same family. It helps to produce synergy effect since both management and workers work in unison.

For example, in most of the Japanese companies, paternalistic style of management is in practice and there is complete openness between workers and the management. Usually, workers don't go on the strike but, if at all they do so, they just wear a black badge and work even more than the normal hours just to impress upon the management that their focus is on their demands as well as organisational objectives.

3. Mental Revolution:

The technique of Mental Revolution involves a change in the attitude of workers and management towards each other. Both should realize the importance of each other and should work with full cooperation. Management as well as the workers should aim to increase the profits of the organization.

For this the workers should put in their best efforts so that the company makes profit and on the other hand management should share part of profits with the workers. Thus, mental revolution requires a complete change in the outlook of both management and workers. There should be a spirit of togetherness between workers and management.

4. Cooperation, Not Individualism:

This principle is an extension of principle of 'Harmony, not discord' and lays stress on mutual cooperation between workers and the management. Cooperation, mutual confidence, sense of goodwill

should prevail among both, managers as well as workers. The intention is to replace internal competition with cooperation.

Both 'Management' and 'Workers' should realize the importance of each other. Workers should be considered as part of management and should be allowed to take part in decision making process of the management. Management should always welcome their suggestions and should also reward them if their suggestions prove to be beneficial for the organisation viz. reduction of costs or increase in production etc.

At the same time, workers should also resist from going on strike or making unnecessary demands from management. Workers should be treated as integral part of organisation and all important decisions should be taken after due consultation with workers. Both of them should visualize themselves as two pillars whose soundness alone can ensure achievement of common goals of the organisation.

Taylor also suggested that there should be proper division of work and responsibility between the two. Management should always guide, encourage and help the workers.

5. Development of each and every person to his or her greatest efficiency and prosperity:
Efficiency of any organisation also depends on the skills and capabilities of its employees to a great extent. Thus, providing training to the workers was considered essential in order to learn the best method developed through the use of scientific approach. To attain the efficiency, steps should be taken right from the process of selection of employees. Employees should be scientifically selected.

The work assigned to each employee should suit his/her physical, mental and intellectual capabilities. Efficient employees produce more to earn more. This ultimately helps to attain efficiency and prosperity for both organisation and the employees.

EVOLUTION OF MODERN MNAGEMENT (OR) HENRY FAYOL'S ADMINISTRATIVE THEORY

HENRY FAYOL 1841 - 1925

Henri Fayol (Istanbul, 29 July 1841 – Paris, 19 November 1925) was a French mining engineer, mining executive, author and director of mines who developed a general theory of business administration that is often calledFayolism. Mining engineering
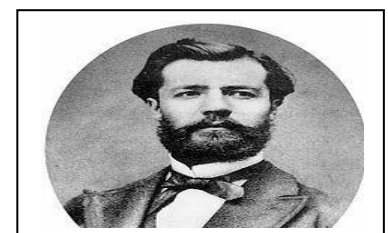
He and his colleagues developed this theory independently of scientific management but roughly contemporaneously. Like his contemporary, Frederick Winslow Taylor, he is widely acknowledged as a founder of modern management methods.

1. **Division of work** - The division of work is the course of tasks assigned to, and completed by, a group of workers in order to increase efficiency. Division of work, which is also known as division of labour, is the breaking down of a job so as to have a number of different tasks that make up the whole.
2. **Authority and Responsibility** - Authority is the right to give orders and obtain obedience, and responsibility is the corollary of authority.
3. **Discipline** - Employees must obey and respect the rules that govern the organization. Good discipline is the result of effective leadership.
4. **Unity of command** - Every employee should receive orders from only one superior or behalf of the superior.
5. **Unity of direction** - Each group of organizational activities that have the same objective should be directed by one manager using one plan for achievement of one common goal.
6. **Subordination** - The interests of any one employee or group of employees should not take precedence over the interests of the organization as a whole.
7. **Remuneration** - All Workers must be paid a fair wage for their services.
8. **Centralisation and decentralisation** - Centralisation refers to the degree to which subordinates are involved in decision making.
9. **Scalar chain** - The line of authority from top management to the lowest ranks represents the scalar chain. Communications should follow this chain.
10. **Order** - this principle is concerned with systematic arrangement of men, machine, material etc. There should be a specific place for every employee in an organization
11. **Equity** - Managers should be kind and fair to their subordinates.
12. **Stability of tenure of personnel** - High employee turnover is inefficient. Management should provide orderly personnel planning and ensure that replacements are available to fill vacancies.
13. **Initiative** - Employees who are allowed to originate and carry out plans will exert high levels of effort.
14. **Esprit de corps** - Promoting team spirit will build harmony and unity within the organization.

MOTIVATION THEORIES
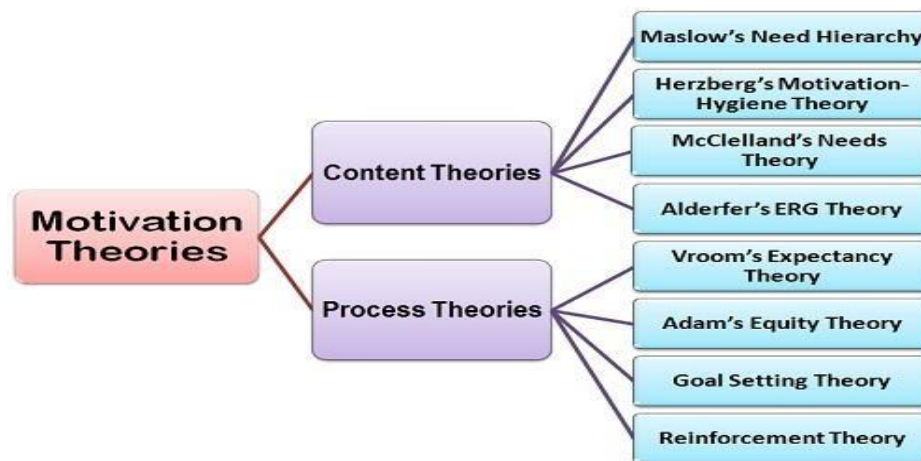
1. Maslow's Need Hierarchy Theory:

It is probably safe to say that the most well-known theory of motivation is Maslow's need hierarchy theory Maslow's theory is based on the human needs. Drawing chiefly on his clinical experience, he classified all human needs into a hierarchical manner from the lower to the higher order.

In essence, he believed that once a given level of need is satisfied, it no longer serves to motivate man. Then, the next higher level of need has to be activated in order to motivate the man. Maslow identified five levels in his need hierarchy as shown in figure

1. Physiological Needs:

These needs are basic to human life and, hence, include food, clothing, shelter, air, water and necessities of life. These needs relate to the survival and maintenance of human life. They exert tremendous influence on human behaviour. These needs are to be met first at least partly before higher level needs emerge. Once physiological needs are satisfied, they no longer motivate the man.

2. Safety Needs:

After satisfying the physiological needs, the next needs felt are called safety and security needs. These needs find expression in such desires as economic security and protection from physical dangers. Meeting these needs requires more money and, hence, the individual is prompted to work more. Like physiological needs, these become inactive once they are satisfied.

3. Social Needs:

Man is a social being. He is, therefore, interested in social interaction, companionship, belongingness, etc. It is this socialising and belongingness why individuals prefer to work in groups and especially older people go to work.

4. Esteem Needs:

These needs refer to self-esteem and self-respect. They include such needs which indicate self-confidence, achievement, competence, knowledge and independence. The fulfillment of esteem needs leads to self-confidence, strength and capability of being useful in the organisation. However, inability to fulfill these needs results in feeling like inferiority, weakness and helplessness.

5. Self-Actualisation Needs:

This level represents the culmination of all the lower, intermediate, and higher needs of human beings. In other words, the final step under the need hierarchy model is the need for self-actualization. This refers to fulfillment.

The term self-actualization was coined by Kurt Goldstein and means to become actualized in what one is potentially good at. In effect, self- actualization is the person's motivation to transform perception of self into reality.

According to Maslow, the human needs follow a definite sequence of domination. The second need does not arise until the first is reasonably satisfied, and the third need does not emerge until the first two needs have been reasonably satisfied and it goes on. The other side of the need hierarchy is that human needs are unlimited. However, Maslow's need hierarchy-theory is not without its detractors.

2. Herzberg's Motivation Hygiene Theory:

The psychologist Frederick Herzberg extended the work of Maslow and propsed a new motivation theory popularly known as Herzberg's Motivation Hygiene (Two-Factor) Theory. Herzberg conducted a widely reported motivational study on 200 accountants and engineers employed by firms in and around Western Pennsylvania.

He asked these people to describe two important incidents at their jobs:

(1) When did you feel particularly good about your job, and

(2) When did you feel exceptionally bad about your job? He used the critical incident method of obtaining data.

The responses when analysed were found quite interesting and fairly consistent. The replies respondents gave when they felt good about their jobs were significantly different from the replies given when they felt bad. Reported good feelings were generally associated with job satisfaction, whereas bad feeling with job dissatisfaction. Herzberg labelled the job satisfiers motivators, and he called job dissatisfies hygiene or maintenance factors. Taken together, the motivators and hygiene factors have become known as Herzberg's two-factor theory of motivation

According to Herzberg, the opposite of satisfaction is not dissatisfaction. The underlying reason, he says, is that removal of dissatisfying characteristics from a job does not necessarily make the job satisfying. He believes in the existence of a dual continuum. The opposite of 'satisfaction' is 'no satisfaction' and the opposite of 'dissatisfaction' is 'no dissatisatisfaction'.

According to Herzberg, today's motivators are tomorrow's hygiene because the latter stop influencing the behaviour of persons when they get them. Accordingly, one's hygiene may be the motivator of another.

However, Herzberg's model is labeled with the following criticism also:
1. People generally tend to take credit themselves when things go well. They blame failure on the external environment.

2. The theory basically explains job satisfaction, not motivation.

3. Even job satisfaction is not measured on an overall basis. It is not unlikely that a person may dislike part of his/ her job, still thinks the job acceptable.

4. This theory neglects situational variable to motivate an individual.

Because of its ubiquitous nature, salary commonly shows up as a motivator as well as hygine.

Regardless of criticism, Herzberg's 'two-factor motivation theory' has been widely read and a few managers seem untaminar with his recommendations. The main use of his recommendations lies in planning and controlling of employees work.

3. McClelland's Need Theory:
Another well-known need-based theory of motivation, as opposed to hierarchy of needs of satisfaction-dissatisfaction, is the theory developed by McClelland and his associates'. McClelland developed his theory based on Henry Murray's developed long list of motives and manifest needs used in his early studies of personality. McClelland's need-theory is closely associated with learning theory, because he

believed that needs are learned or acquired by the kinds of events people experienced in their environment and culture.

He found that people who acquire a particular need behave differently from those who do not have. His theory focuses on Murray's three needs; achievement, power and affiliation. In the literature, these three needs are abbreviated "n Ach", "n Pow", and "n Aff" respectively'.

They are defined as follows:
Need for Achievement:
This is the drive to excel, to achieve in relation to a set of standard, and to strive to succeed. In other words, need for achievement is a behaviour directed toward competition with a standard of excellence. McClelland found that people with a high need for achievement perform better than those with a moderate or low need for achievement, and noted regional / national differences in achievement motivation.

Through his research, McClelland identified the following three characteristics of high-need achievers:
1. High-need achievers have a strong desire to assume personal responsibility for performing a task for finding a solution to a problem.

2. High-need achievers tend to set moderately difficult goals and take calculated risks.

3. High-need achievers have a strong desire for performance feedback.

Need for Power:
The need for power is concerned with making an impact on others, the desire to influence others, the urge to change people, and the desire to make a difference in life. People with a high need for power are people who like to be in control of people and events. This results in ultimate satisfaction to man.

People who have a high need for power are characterized by:
1. A desire to influence and direct somebody else.

2. A desire to exercise control over others.

3. A concern for maintaining leader-follower relations.

Need for Affiliation:
The need for affiliation is defined as a desire to establish and maintain friendly and warm relations with other people'. The need for affiliation, in many ways, is similar to Maslow's social needs.

The people with high need for affiliation have these characteristics:
1. They have a strong desire for acceptance and approval from others.

2. They tend to conform to the wishes of those people whose friendship and companionship they value.

3. They value the feelings of others.

4. ALDERFER'S ERG Theory:

Alderfer further developed Maslow's hierarchy of needs by categorizing the hierarchy into his **ERG theory** (Existence, Relatedness and Growth). The existence group is concerned with providing the basic material existence requirements of humans. They include the items that Maslow considered to be physiological and safety needs. The second group of needs is those of relatedness – the desire people have for maintaining important interpersonal relationships. These social and status desires require interaction with others if they are to be satisfied, and they align with Maslow's social need and the external component of Maslow's esteem classification. Finally, Alderfer isolates growth needs: an intrinsic desire for personal development. These include the intrinsic component from Maslow's esteem category and the characteristics included under self-actualization. Alderfer categorized the lower order needs (Physiological and Safety) into the Existence category. He fit Maslow's interpersonal love and esteem needs into the Relatedness category. The Growth category contained the self-actualization and self-esteem needs. Alderfer also proposed a regression theory to go along with the ERG theory. He said that when needs in a higher category are not met then individuals redouble the efforts invested in a lower category need. For example if self-actualization or self-esteem is not met then individuals will invest more effort in the relatedness category in the hopes of achieving the higher need.

LEADERSHIP AND STYLES OF LEADERSHIP

LEADERSHIP

Leadership is both a research area and a practical skill encompassing the ability of an individual or organization to "lead" or guide other individuals, teams, or entire organizations.

Definition

Leadership can be described as the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of an organization or group of which they are members. A person who can bring about change, therefore, is one who has this ability to be a **leader**

QUALITIES OF SUCCESSFUL LEADERS

1.HONESTY	2.DELEGATE	3.COMMUNICATION	4.CONFIDENCE	5.COMMITMENT
6.POSITIVE ATTITUDE	7.CREATIVITY	8.INTUITION	9.INSPIRE	10.APPROACH

Honesty

Whatever ethical plane you hold yourself to, when you are responsible for a team of people, its important to raise the bar even higher. Your business and its employees are a reflection of yourself, and if you make honest and ethical behavior a key value, your team will follow suit.

Delegate

Finessing your brand vision is essential to creating an organized and efficient business, but if you don't learn to trust your team with that vision, you might never progress to the next stage. Its important to remember that trusting your team with your idea is a sign of strength, not weakness.

Communication

Knowing what you want accomplished may seem clear in your head, but if you try to explain it to someone else and are met with a blank expression, you know there is a problem. If this has been your experience, then you may want to focus on honing your communication skills.

Confidence

There may be days where the future of your brand is worrisome and things aren't going according to plan. This is true with any business, large or small, and the most important thing is not to panic. Part of your job as a leader is to put out fires and maintain the team morale.

Commitment

If you expect your team to work hard and produce quality content, you're going to need to lead by example. There is no greater motivation than seeing the boss down in the trenches working alongside everyone else, showing that hard work is being done on every level.

Positive Attitude

You want to keep your team motivated towards the continued success of the company, and keep the energy levels up. Whether that means providing snacks, coffee, relationship advice, or even just an occasional beer in the office, remember that everyone on your team is a person. Keep the office mood a fine balance between productivity and playfulness.

Creativity

Some decisions will not always be so clear-cut. You may be forced at times to deviate from your set course and make an on the fly decision. This is where your creativity will prove to be vital. It is during these critical situations that your team will look to you for guidance and you may be forced to make a quick decision. As a leader, its important to learn to think outside the box and to choose which of two bad choices is the best option.

Intuition

When leading a team through uncharted waters, there is no roadmap on what to do. Everything is uncertain, and the higher the risk, the higher the pressure. That is where your natural intuition has to kick in. Guiding your team through the process of your day-to-day tasks can be honed down to a science.

Inspire

Creating a business often involves a bit of forecasting. Especially in the beginning stages of a startup, inspiring your team to see the vision of the successes to come is vital. Make your team feel invested in the accomplishments of the company.

LEADERSHIP STYLES
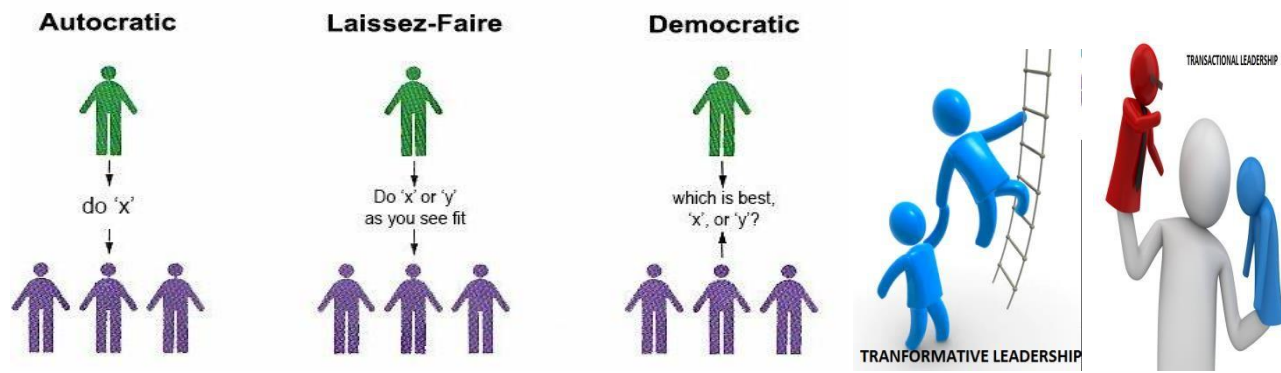
Leadership Styles

AUTOCRATIC LEADERSHIP

The **authoritarian leadership style** keep main emphasis on the distinction of the authoritarian leader and their followers, these types of leaders make sure to only create a distinct professional relationship. Direct supervision is what they believe to be key in maintaining a successful environment and follower ship. Authoritarian leadership styles often follow the vision of those that are in control, and may not necessarily be compatible with those that are being led. Authoritarian leaders have a focus on efficiency, as other styles, such as a democratic style, may be seen as a hindrance on progress.

Examples of authoritarian leadership is the wrong type of information that can be edited communicative behavior: a police officer directing traffic, a teacher ordering a student to do his or her assignment, and a supervisor instructing a subordinate to clean a workstation. All of these positions require a distinct set of characteristics that give the leader the position to get things in order or get a point across. Authoritarian Traits: sets goals individually, engages primarily in one-way and downward communication, controls discussion with followers, and dominate interaction.

DEMOCRATIC LEADERSHIP

The **democratic leadership style** consists of the leader sharing the decision-making abilities with group members by promoting the interests of the group members and by practicing social equality.[4]

The boundaries of democratic participation tend to be circumscribed by the organization or the group needs and the instrumental value of people's attributes (skills, attitudes, etc.). The democratic style encompasses the notion that everyone, by virtue of their human status, should play a part in the group's decisions. However, the democratic style of leadership still requires guidance and control by a specific leader. The democratic style demands the leader to make decisions on who should be called upon within the group and who is given the right to participate in, make and vote on decisions.[5] Traits of a Good Leader compiled by the Santa Clara University and the Tom Peters Group:

- **Honest** – Display sincerity, integrity, and candor in all your actions. Deceptive behavior will not inspire trust.

- **Competent** – Base your actions on reason and moral principles. Do not make decisions based on childlike emotional desires or feelings.
- **Forward-looking** – Set goals and have a vision of the future. The vision must be owned throughout the organization. Effective leaders envision what they want and how to get it. They habitually pick priorities stemming from their basic values.
- **Inspiring** – Display confidence in all that you do. By showing endurance in mental, physical, and spiritual stamina, you will inspire others to reach for new heights. Take charge when necessary.
- **Intelligent** – Read, study, and seek challenging assignments.
- **Fair-minded** – Show fair treatment to all people. Prejudice is the enemy of justice. Display empathy by being sensitive to the feelings, values, interests, and well-being of others.
- **Broad-minded** – Seek out diversity.
- **Courageous** – Have the perseverance to accomplish a goal, regardless of the seemingly insurmountable obstacles. Display a confident calmness when under stress.
- **Straightforward** – Use sound judgment to make a good decisions at the right time.
- **Imaginative** – Make timely and appropriate changes in your thinking, plans, and methods. Show creativity by thinking of new and better goals, ideas, and solutions to problems. Be innovative!

LAISSEZ-FAIRE

The **laissez-faire leadership style is where all the rights and power to make decisions is fully given to the worker.** This was first described by Lewin, Lippitt, and White in 1938, along with the autocratic leadership and the democratic leadership styles.

Laissez-faire leaders allow followers to have complete freedom to make decisions concerning the completion of their work. It allows followers a self-rule, while at the same time offering guidance and support when requested. The laissez-faire leader using guided freedom provides the followers with all materials necessary to accomplish their goals, but does not directly participate in decision making unless the followers request their assistance.

This is an effective style to use when:

- Followers are highly skilled, experienced, and educated.
- Followers have pride in their work and the drive to do it successfully on their own.
- Outside experts, such as staff specialists or consultants are being used.
- Followers are trustworthy and experienced.

TRANSFORMATIONAL LEADERSHIP

Transformational leadership is a theory of leadership where a leader works with teams to identify needed change, creating a vision to guide the change through inspiration, and executing the change in tandem with committed members of a group;[1]; it is an integral part of the Full Range Leadership Model. Transformational leadership serves to enhance the motivation, morale, and job performance of followers through a variety of mechanisms; these include connecting the follower's

sense of identity and self to a project and to the collective identity of the organization; being a role model for followers in order to inspire them and to raise their interest in the project; challenging followers to take greater ownership for their work, and understanding the strengths and weaknesses of followers, allowing the leader to align followers with tasks that enhance their performance.

There are 4 components to transformational leadership, sometimes referred to as the 4 I's:

- **Idealized Influence (II)** - the leader serves as an ideal role model for followers; the leader "walks the talk," and is admired for this.
- **Inspirational Motivation (IM)** - Transformational leaders have the ability to inspire and motivate followers. Combined, these first two I's are what constitute the transformational leader's charisma.
- **Individualized Consideration (IC)** - Transformational leaders demonstrate genuine concern for the needs and feelings of followers. This personal attention to each follower is a key element in bringing out their very best efforts.
- **Intellectual Stimulation (IS)** - the leader challenges followers to be innovative and creative. A common misunderstanding is that transformational leaders are "soft," but the truth is that they constantly challenge followers to higher levels of performance.[7]

Transformational leadership is said to have occurred when engagement in a group results in leaders and followers raising one another to increased levels of motivation and morality

TRANSACTIONAL LEADERSHIP

Transactional leadership is a part of a style of leadership that focuses on supervision, organization, and performance; it is an integral part of the Full Range Leadership Model. Transactional leadership is a style of leadership in which leaders promote compliance by followers through both rewards and punishments. Unlike transformational leaders, those using the transactional approach are not looking to change the future, they look to keep things the same. Leaders using transactional leadership as a model pay attention to followers' work in order to find faults and deviations.

This type of leadership is effective in crisis and emergency situations, as well as for projects that need to be carried out in a specific way.

DECISION MAKING PROCESS

DECISION MAKING

DEFINITION:**The thought process of selecting a logical choice from the available options. When trying to make a good decision, a person must weight the positives and negatives of each option, and consider all the alternatives.**

For effective decision making, a person must be able to forecast the outcome of each option as well, and based on all these items, determine which option is the best for that particular situation.

Introduction

Decision making is a daily activity for any human being. There is no exception about that. When it comes to business organizations, decision making is a habit and a process as well.

Effective and successful decisions make profit to the company and unsuccessful ones make losses. Therefore, corporate decision making process is the most critical process in any organization.

In the decision making process, we choose one course of action from a few possible alternatives. In the process of decision making, we may use many tools, techniques and perceptions.

In addition, we may make our own private decisions or may prefer a collective decision.

Usually, decision making is hard. Majority of corporate decisions involve some level of dissatisfaction or conflict with another party.

Let's have a look at the decision making process in detail.

Steps of Decision Making Process

Following are the important steps of the decision making process. Each step may be supported by different tools and techniques.

Step 1: Identification of the purpose of the decision

In this step, the problem is thoroughly analysed. There are a couple of questions one should ask when it comes to identifying the purpose of the decision.

- What exactly is the problem?

- Why the problem should be solved?

- Who are the affected parties of the problem?

- Does the problem have a deadline or a specific time-line?

Step 2: Information gathering

A problem of an organization will have many stakeholders. In addition, there can be dozens of factors involved and affected by the problem.

In the process of solving the problem, you will have to gather as much as information related to the factors and stakeholders involved in the problem. For the process of information gathering, tools such as 'Check Sheets' can be effectively used.

Step 3: Principles for judging the alternatives

In this step, the baseline criteria for judging the alternatives should be set up. When it comes to defining the criteria, organizational goals as well as the corporate culture should be taken into consideration.

As an example, profit is one of the main concerns in every decision making process. Companies usually do not make decisions that reduce profits, unless it is an exceptional case. Likewise, baseline principles should be identified related to the problem in hand.

Step 4: Brainstorm and analyse the different choices

For this step, brainstorming to list down all the ideas is the best option. Before the idea generation step, it is vital to understand the causes of the problem and prioritization of causes.

For this, you can make use of Cause-and-Effect diagrams and Pareto Chart tool. Cause-and-Effect diagram helps you to identify all possible causes of the problem and Pareto chart helps you to prioritize and identify the causes with highest effect.

Then, you can move on generating all possible solutions (alternatives) for the problem in hand.

Step 5: Evaluation of alternatives

Use your judgement principles and decision-making criteria to evaluate each alternative. In this step, experience and effectiveness of the judgement principles come into play. You need to compare each alternative for their positives and negatives.

Step 6: Select the best alternative

Once you go through from Step 1 to Step 5, this step is easy. In addition, the selection of the best alternative is an informed decision since you have already followed a methodology to derive and select the best alternative.

Step 7: Execute the decision

Convert your decision into a plan or a sequence of activities. Execute your plan by yourself or with the help of subordinates.

Step 8: Evaluate the results

Evaluate the outcome of your decision. See whether there is anything you should learn and then correct in future decision making. This is one of the best practices that will improve your decision-making skills.

Conclusion

When it comes to making decisions, one should always weigh the positive and negative business consequences and should favour the positive outcomes.

This avoids the possible losses to the organization and keeps the company running with a sustained growth. Sometimes, avoiding decision making seems easier; especially, when you get into a lot of confrontation after making the tough decision.

But, making the decisions and accepting its consequences is the only way to stay in control of your corporate life and time.

DESIGNING ORGANISATION STRUCTURE – PRINCIPLES AND TYPES OF ORGANISATION

Organization:
Organization is form of organizing which is a part of management process Organization defined as collectivity of people for achieving common objectives

"Organization means the determination and assignment of duties to people, and also the establishment and the maintenance of authority relationships among these grouped activities it is the structural frame work with in which the various efforts are coordinated and related to each other".

Definitions: "Organization are collectivities of people that have been established for the pursuit of relatively specific objectives on a more or less continuous basis".

William Scott

"Organization is the form of every human association for the attainment of a common purpose".

Mooney and Reilly

"Organization involves the grouping of activities necessary to accomplish goals and plans assignment and these activities to appropriate departments and positions to appropriate departments and positions for authority delegation and coordination".

Koontz and O'Donnell

Organization is used in the following ways with or without prefix or suffix

1. as entity

2. as group of people

3. as structure

4. as process

Process of Organization:
Determination of objectives, strategies, plans and policies: Objectives should be clear and precise, because the entire organization is to be built around the objectives of the enterprises.

Determination of activities: Determine activities needed to execute these plans and policies and accomplish the objectives. The work load is broken into component activities that are to be performed by all the employees. The activities are so split to determine the job which can be performed by an individual.

Separation and grouping of activities: To attain the benefits of specialization and division of labour, every company, will separate its activities on the basis of primary functions like finance, engineering, purchasing, production, sales and industrial relations. All the similar or directly related activities are grouped together in the form of departments.

Delegation of authority: Authority is necessary for the performance of the job and therefore authority is delegated to the subordinates for enabling them to carry out their work smoothly and efficiently.

Delegation of responsibility: Responsibility may be described as the obligation and accountability for the performance of delegated duties. A superior is always accountable for the acts of his subordinate. Therefore, responsibility always flows from subordinates to superiors.

Establish inter-relationships: The grouped activities are placed in the overall organization structure at appropriate level. It is necessary to integrate or the these groups of activities through.

a) Authority relationship horizontally, vertically and diagonally

b) Organized information or communication system i.e., with the help of effective coordination and communication.

Providing physical facilities and proper environment: Physical facilities means provide machinery, tools equipments, infrastructure etc, environment means provide proper lighting, ventilation, heating, cooling arrangement at the work place, reasonable hors of work, safety devices, job security etc

Principles of Organization:

Principle of unity of objectives: An organization structure is effective if is enables individuals to contribute to entire objectives.

Principle of co-ordination: The aim of the objective can be achieved it proper coordination exists for efferent activities

Principles of organizational efficiency: An organization is efficient it is structured to aid the accomplishment of enterprise objective with a minimum of unsought consequences or costs.

Span of management principle: In each managerial position, there is a limit to the number of persons an individual can effectively manage but the exact number will depend on the impact of underlying variables.

Scalar principle: The clearer the line of authority from the ultimate management position in an enterprise to every subordinate position, the clearer will be the responsibility for decision making the more effective will be organization communication.

Principle of delegation by results expected: Authority delegated to all individual managers should be adequate enough to ensure their ability to accomplish the results expected.

Principle of responsibility: The responsibility of subordinates to their superiors for performance is absolute, and superiors can not escape responsibility for the organization activity of their

subordinates.

Principle of parity of authority and responsibility: The responsibility for actions can not be greater than that implied by the authority delegated, not should it be less.

Principle of unity command: The more complete an individual's reporting relationships to a single superior, the smaller the problem of conflicting instructions and the greater the feeling of personal responsibility for results.

Authority level principle: Maintenance of intended delegation requires that decisions with in the authority of individual managers should be made by them and not be referred upward in the organization structure.

Principle of balance: The application of principles or technique must be balanced to ensure the over all effectiveness of the structure in meeting enterprise objectives.

Principle of flexibility: the more that provisions are made for building flexibility in to an organization structure can fulfill its purpose.

Principle of leadership facilitation: The more an organization structure and its delegations of authority enable managers to design and maintain an environment for performance, the more they will help the leadership abilities of those managers.

Design of Organization structure:

The main objective of an organization structure is to ensure that efforts of all the people working in various sections are co-ordinate and integrated for achieving the task in the most efficient effective way with minimum consumption of resources i.e. economical ways

1) Formal organization structure   2) Informal organization structure

Formal organization structure: According to classical theorists the formal organization is built an four pillars

1) Division of labour

2) Scalar functional processes

3) Structure

4) Span of control

Definition: An organization is formal when the activities of two or more persons are consciously coordinated towards common objectives.

Informal organization: Informal organization arises spontaneously based on friendship or some common interest and not based on rules, regulation and procedures. It is developed by the employees themselves and not by the formal authority.

Definition: Informal organization brings cohesiveness to a formal organization, it brings to the members of formal organization a feeling of belonging of status, of self-respect and of gregarious satisfaction.

Comparison between formal and informal organization:

Basis of comparison	Formal	Informal
Formation	Planned & Spontaneous	deliberated
Purpose interaction	Well-set goals	Social
Structure structured	Well structured	Un
Focus	Positions	Persons
Nature	Official	Unofficial
Leadership	Superior	Any one
Source of power group	Delegated	Given by
Guidelines for behaviour norms	Rules procedures	Group
Source of control	Rewards/Punishment	Sanctions

Type of organization: On the basis of authority relationships organization classified as follows

1. Line organization or Military organization or Scalar organization

2. Functional organization

3. Line and Staff organization

4. Project organization

5. Committee organization

6. Matrix organization

1.LINE ORGANIZATION STRUCTURE
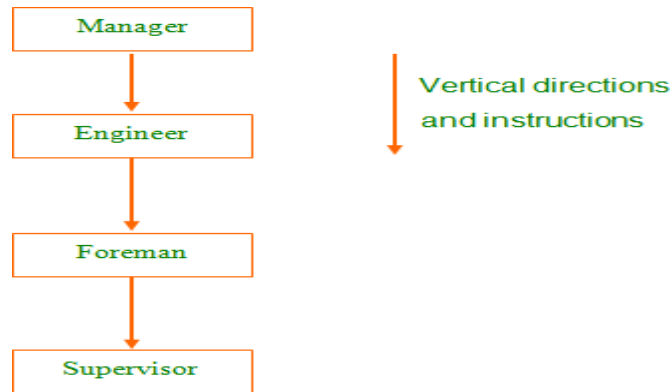
Where efforts of large number of people have to be controlled and discipline is of prime importance line type organization structure will serve the purpose. This is also one of the oldest structures. However, in present conditions this type of structure has lost the applicability. In line structure ten lines of instruction, directing is vertical. This means in this type boss is always right and his orders are to be obeyed at any cost.

Merits:

Simplicity: Line organization is very simple to establish and can be easily understand by the employees

Discipline: Since each position is subject to control by its immediate superior position, often the maintenance of discipline is easy unity of command and unity of direction foster discipline among the people in the organization.

Co-ordination: The hierarchy in management helps in achieving effective coordination

Effective communication: There will be a direct link between superior and his subordinate; both can communicate properly among himself or herself.

Economical: Line organization is easy to operate and less expensive

Unity of command: In line organization every person is under the command of one boss only.

Prompt decision: Only one person is in charge of one division or department. This enables manager to take quick decisions.

Over all development of the managers: The departmental head has to look after all the activities of his department; therefore, it encourages the development of all round managers at the higher level of authority.

Demerits:

Undue reliance: The success of the enterprise depends upon the caliber and ability of few departmental heads, loss of one or two capable men may put the organization in difficulties.

Personnel limitations: In this type of organization an individual executive is suppose to discharge different types of duties. He cannot do justice to all different activities because he cannot be specialized in all the trades.

<u>Overload of work</u>: Departmental heads are overloaded with various routine jobs hence they can not spare time for important managerial functions like planning, development budgeting etc.

<u>Dictatorial way</u>:   In line organization, too much authorities centre on line executive. Hence it encourages dictatorial way of working.

<u>Duplication of work</u>:   Conflicting policies of different departments result in duplication of work.

<u>Unsuitable for large concerns</u>: It is limited to small concerns

<u>General interest of enterprise may be over looked</u>: Departments may work for their self-interest and may sacrifice the general interest of the enterprise.

2.LINE AND STAFF ORGANIZATION STRUCTURE

Line and Staff organization is the in which the line heads are assisted by specialist staff.

If the firm is of large size, manager cannot give careful attention to every aspect of management. They are busy with ordinary task of production and selling. Hence staff is deputed to do the work of investigation, research, recording, and advising to managers. Thus the staff brings advising to managers. Thus the staff brings specialization by assisting the line officers.

<p align="center">"Line" means - Operating</p>

<p align="center">"Staff" means - Service</p>
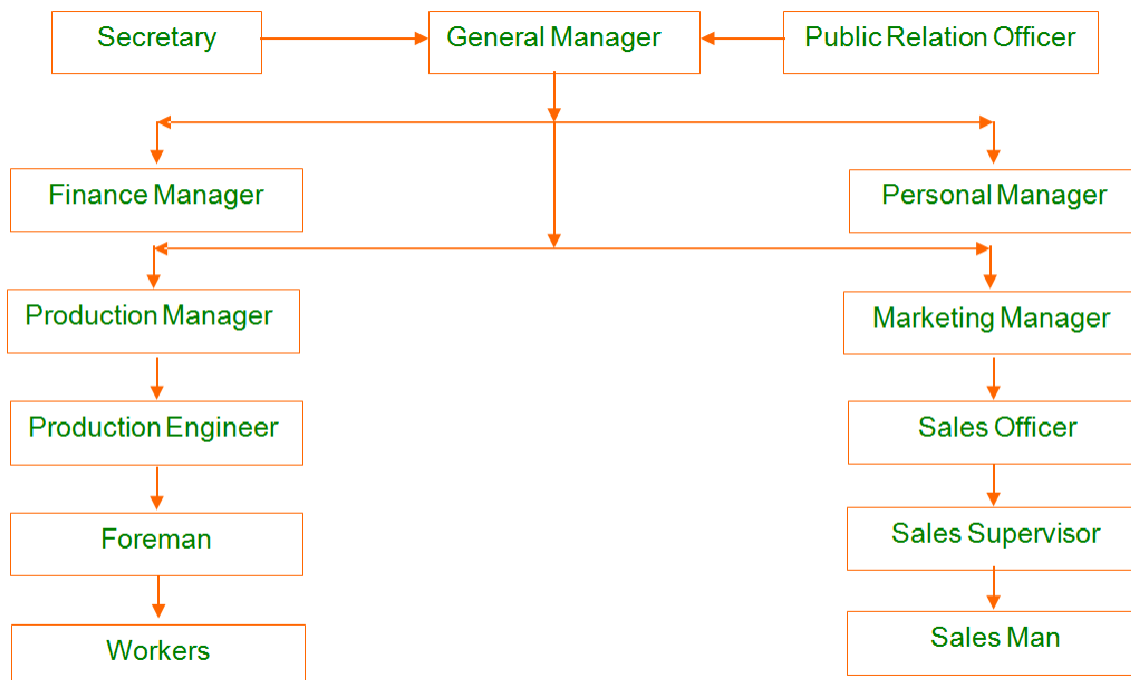
Merits:

Planned specialization: The line and staff structure is based upon the principle of specialization. The line managers are responsible for operations contributing directly to the achievement of organizational objectives where as staff people are there to provide expert advice on the matters of their concerns.

Quality decisions: Decisions come after careful consideration and thought each expert gives his advise in the area of his specialization which is reflected in the decisions.

Prospect for personal growth: Prospect for efficient personal to grow in the organization not only that, it also offers opportunity for concentrating in a particular area, there by increasing personal efficiency

Less wastage: There will be less wastage of material.

Training ground for personnel: It provides training ground to the personnel in two ways. First, since everybody is expected to concentrate on one field, one's training needs can easily be identified. Second, the staff with expert knowledge provides opportunities to the line managers for adopting rational multidimensional approach towards a problem.

Demerits:

Chances of Misinterpretation: Although the expert advice is available, yet it reaches the workers through line supervisors. The line officers may fail to understand the meaning of advice and there is always a risk of misunderstanding and misinterpretation.

Chances of friction: There are bound to be occasions when the line and staff may differ in opinion may resent in conflict of interests and prevents harmonious relations between the two.

Ineffective Staff in the absence of authority: The staff has no authority to execute their own advice. Their advice is not a binding on the line officers. Therefore the advice given by specialist may be ignored by line heads.

Expensive: The overhead cost of the product increases because of high salaried specialized staff.

Loss of initiative by line executives: If is they start depending too much on staff may loose their initiative drive and ingenuity.

3.FUNCTIONAL ORGANIZATION STRUCTURE

Functional organization: This structure most widely used, in the medium and large organizations having limited number of products.

This was introduced by F.W.Taylor and is logical extension of the division of labour cover departments as well as men. In this authority is delegated to an individual or department to control specified processes, policies or other matter relating to activities under taken by persons in other departments.

In this system planning is separated from performance since the direction of work is divided by

various function in the factory. It has been found that this type of structure becomes ineffective when the work of departments and individuals increases in variety and complexity.

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   │ Plant-1 │          │ Plant-2  │          │ Plant-3  │
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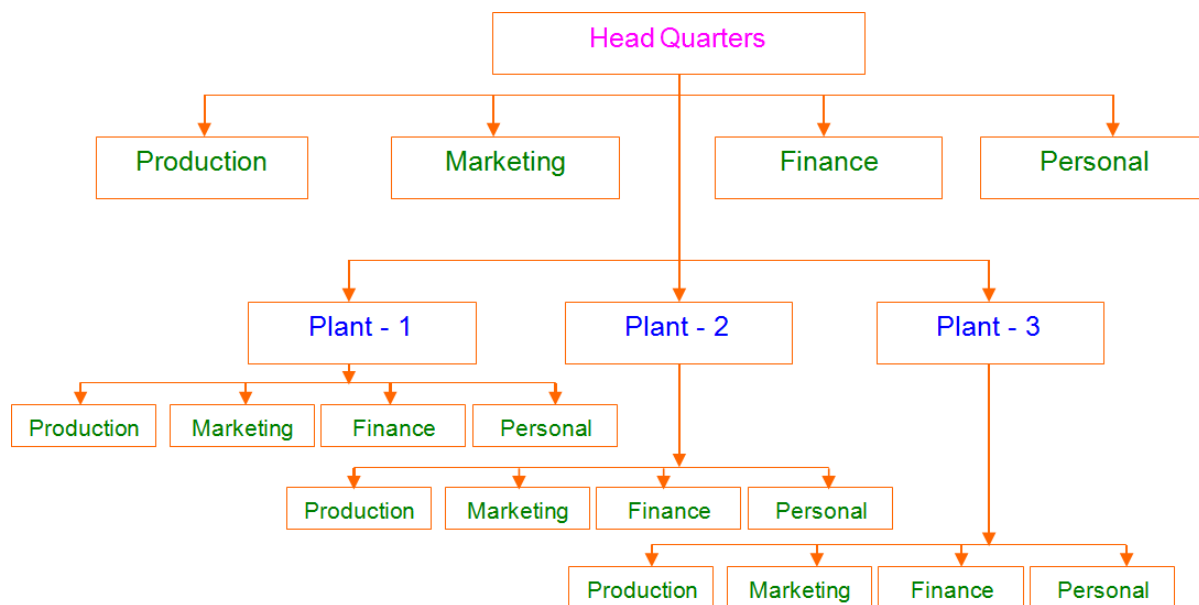
Merits:

Separation of work: In functional organization, work has been separated from routine work. The specialist has been given the authority and responsibility for supervision and administration pertaining to their field of specialization unnecessary over loading of responsibilities is thus avoided.

Specialization: Specialization and skilled supervisory attention is given to workers the result is increase in rate of production and improved quality of work.
Narrow range with high depth: The narrow range of activities enable the functional expert to developing in depth understanding in his particular area of activity
Ease in selection and training: Functional organization is based upon expert knowledge. The availability of guidance through experts makes it possible to train the workers properly in comparatively short span of time.
Reduction in prime cost: Since for every operation expert guidance is there, wastage of material is reduced and thus helps to reduce prime cost.
Scope of growth and development of business: This type of organization presents ample scope for the growth and development of business.
Demerits:
Indiscpline: Since the workers receive instructions from number of specialist it leads to confusion to whom they should follow. Therefore, it is difficult to maintain discipline
Shifting of responsibility: It is difficult for the top management to locate responsibility for the unsatisfactory work every body tries to shift responsibility on others for the faults and

failure.

Kills the initiative of workers: As the specialized guidance is available to the workers the workers will not be using their talents and skills therefore their initiative cannot be utilized.

Overlapping of authority: The sphere of authority tends to overlap and gives rise to friction between the persons of equal rank.

Lack of co-ordination between functions: except the function in which he is specialized he is absolutely indifferent to other functions. Therefore, there is a lack of coordination of function and efforts.

4.PROJECT ORGANIZATION STRUCTURE

Project Organization: A project organization is a special case where common service like finance, purchase etc. are organized at the functional level. But project resources are allocated to the project manager. Since the business responsibility rests with the project manager, necessary authority is given to him with the requisite resources. This type of organization structure helps in making decisions for project control in terms of cost, resource and time. In a project organization some of the functions are corporate responsibility and some of them are project manager's responsibility.
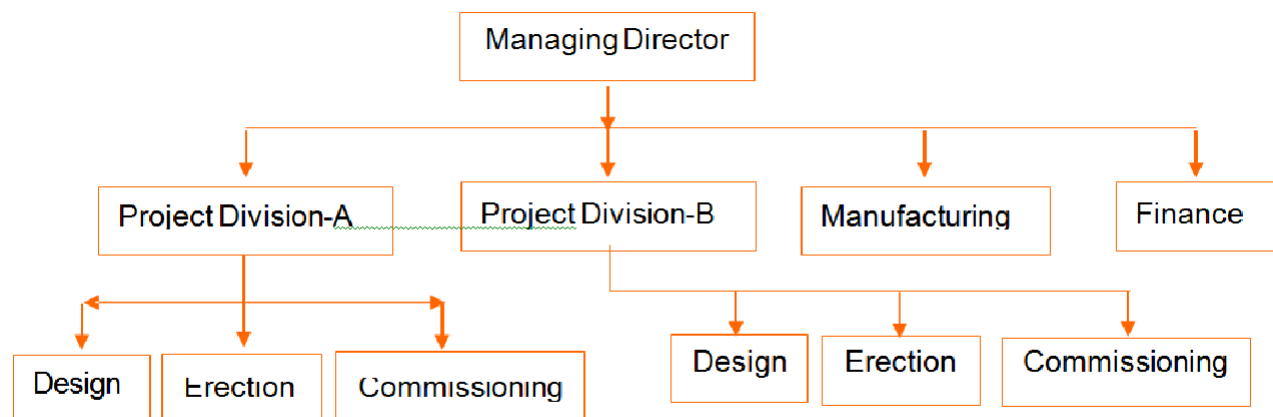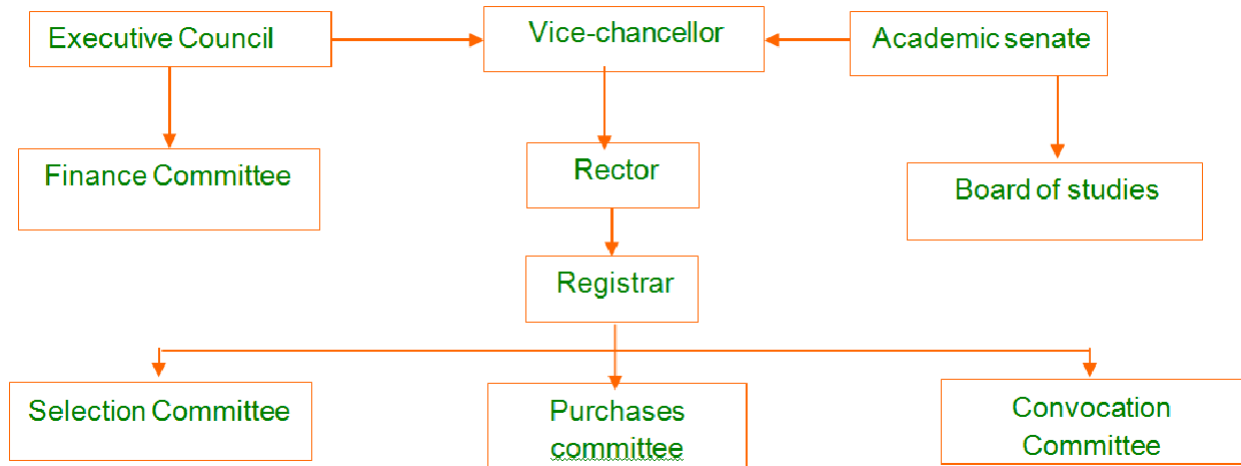

Merits:

1. This calls for quick divisions

2. Organizing all functional
3. Proper coordination of work of different departments

Demerits:

1. It tends to increase the problems of control for top management

2. It is special case of product organization
3. The organization may get disintegrated with increasing focus on departments

5.COMMITTEE ORGANIZATION STRUCTURE

Committee Organization: A committee is formed when two or more persons are appointed to work as a team to arrive at a decision on the matters referred to it. It is intended to utilize the knowledge, skills, and experiences of all the concerned parties. Particularly, in large organizations, problems are too big to be handled by one single expert.

Merits:

1. It pools up the organizational resources in terms of knowledge skills and experiences.

2. It represents all interested groups and thus, facilitates group decision.

3. It yields good results if the committee are headed by taskmaster like chairman and time bound in terms of decision-making.

4. It minimizes the fear of too much authority vested in one person

5. It motivates all the concerned or effected groups to participate.

Demerits:

1. Responsibility of decisions cannot be fixed on a particular person.

2. It calls for high degree of coordination.

3. It involved high cost in terms of time and money.

6.MATRIX ORGANIZATION STRUCTURE

Matrix Organization: This is also called as project orgnisation it is a combination of all relationships in the organization in vertical, horizontal and diagonal. It is mostly used in complex projects. It provides a high degree of operational freedom, flexibility and adoptability for both the line and staff managers in performing their respective roles. The main objective of matrix

organization is to secure a higher degree of coordination than what is possible from the conventional organizational structure as the line and staff.
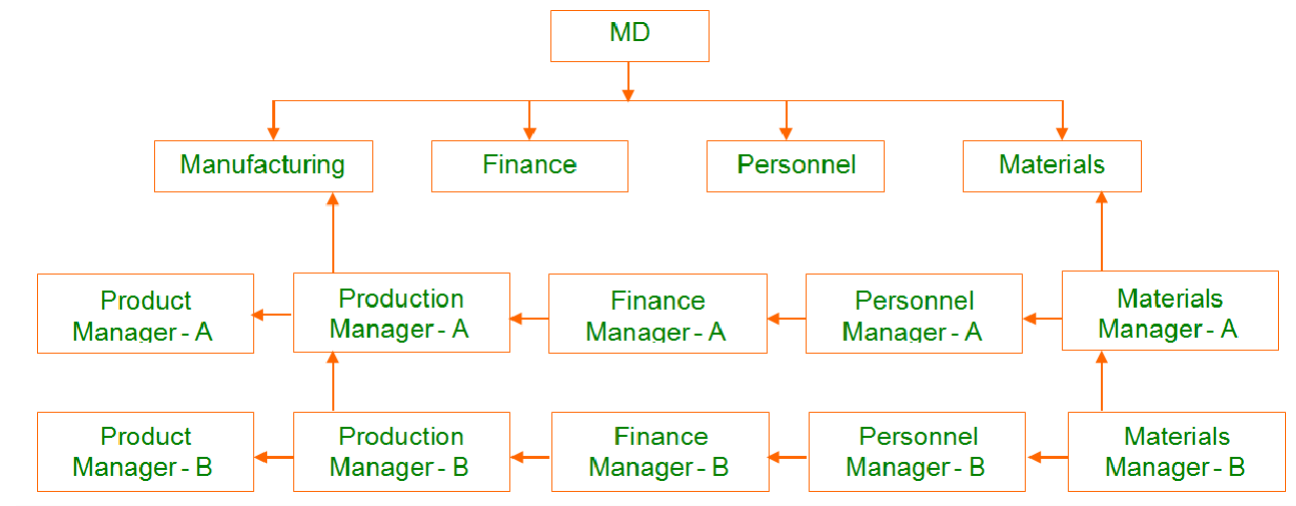
Merits:

1. It offers operational freedom and flexibility

2. It seeks to optimize the utilization of resources

3. It focuses on results

4. It maintains professional identity
5. It holds employees responsible for management of resources
Demerits:

1. It calls for greater degree of coordination

2. It violates unity of command principle

3. It may be difficult to define authority and responsibility precisely

4. Employees may find it frustrating to work with two bosses

PART-A

2 Marks Questions Answers

1. **Define Management**.
   According to Harold Koontz, 'Management is an art of getting things done through and with the people in formally organized groups. It is an art of creating an environment in which people can perform and individuals and can co-operate towards attainment of group goals.'

2. **Define leadership.**
   Leadership is the potential to influence behavior of others. It is also defined as the capacity to influence a group towards the realization of a goal. Leaders are required to

develop future visions, and to motivate the organizational members to want to achieve the visions**.**

3. **Explain the qualities of a successful leader.**
   The qualities of a successful leader are:
   Honesty and Integrity
   Confidence
   Inspire Others
   Commitment and Passion
   Good Communicator
   Decision-Making Capabilities
   Accountability

4. **Define Transformational leadership**
   Transformational leadership is a leadership style in which leaders encourage, inspire and motivate employees to innovate and create change that will help grow and shape the future success of the company. This is accomplished by setting an example at the executive level through a strong sense of corporate culture, employee ownership and independence in the workplace.

5. **Define Organizational Structure.**
   A system that is used to define hierarchy in the organization is called the organizational structure. It gives the organizational leadership direction in terms of job identification and functions and who reports to whom within the organization.

6. **List the Principles l of good Organization.**
   Principle of Co-Ordination
   Principle of Unity of Command
   Principal of Scalar Chain
   Principle of span of control
   Principle of Departmentation
   Principle of flexibility
   Principle of continuity

7. **State Decision making process.**

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│   Identification of the  │
│  purpose of the decision │
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│  Information gathering   │
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│  Principles for judging the │
│        alternatives      │
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│  Brainstorm and analyze the │
│     different choices    │
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│  Evaluation of alternatives │
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│  Select the best alternative │
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│    Execute the decision  │
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│    Evaluate the results  │
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PART-B

1. Define Management? Explain its features, importance and nature?
2. Briefly explain about functions of management
3. Define leadership and explain leadership styles?
4. Briefly explain about decision making process?
5. Discuss in detail about principles of management?
6. Explain the 14 principles of management.
7. Explain the types of organizational structures with merits and demerits.
8. Briefly explain about motivational theories?
9. Discuss in detail about modern management?
10. Discuss in detail about scientific management?

PLANT LOCATION AND PLANT LAYOUT

PLANT LOCATION

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

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

Factors affecting the plant location

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

Primary factors

Availability of raw materials

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

Nearness to the market

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

Availability of labor

Another most important factor which influences the plant location decisions is the availability of labor.

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

Transport facilities

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

Availability of fuel and power

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

Availability of water

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

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

Secondary factors

Suitability of climate

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

Government policies

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

Availability of finance

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

Competition between states

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

Availability of facilities

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

Disposal of waste

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

PLANT LAYOUT
Meaning and Definition of Plant Layout:
Plant layout is the most effective physical arrangement, either existing or in plans of industrial facilities i.e arrangement of machines, processing equipment and service departments to achieve greatest co-ordination and efficiency of 4M's (Men, Materials, Machines and Methods) in a plant.

Layout problems are fundamental to every type of organisation/enterprise and are experienced in all kinds of concerns/undertakings.

The adequacy of layout affects the efficiency of subsequent operations. It is an important pre-requisite for efficient operations and also has a great deal in common with many problems. Once the site of the plant has been decided, the next important problem before the management of the enterprise is to plan suitable layout for the plant.

Definition:
According to James Lundy, **"Layout identically involves the allocation of space and the arrangement of equipment in such a manner that overall operating costs are minimized."**

Need of Plant Layout:
Many situations give rise to the problem of plant layout. Two plants having similar operations may not have identical layouts. This may be due to size of the plant, nature of the process and management's calibre.

The necessity of plant layout may be felt and the problem may arise when:
(i) There are design changes in the product.

(ii) There is an expansion of the enterprise.

(iii) There is proposed variation in the size of the departments.

(iv) Some new product is to be added to the existing line.

(v) Some new department is to be added to the enterprise and there is reallocation of the existing department.

(vi) A new plant is to be set up.

Importance of Plant Layout:
The layout of a plant is quite important in view of the above definition but the importance of a layout may greatly vary from industry to industry.

The possibility of attaining the best possible layout is directly proportional to following factors:
(i) The Weight, Volume or Mobility of the Product:
If the final product is quite heavy or difficult to handle involving costly material handling equipment or a large amount of labour, important consideration will be to move the product minimum possible e.g. boiler, turbines, locomotive industries and ship building companies etc.

(ii) Complexity of the Final Product:
If the product is made up of a very large number of components and parts i.e. large number of people may be employed for handling the movement of these parts from shop to shop or from machine to machine or one assembly point to another e.g. automobile industry.

(iii) The Length of the Process in Relation to Handling Time:
If the material handling time represents a appreciable proportion of the total time of manufacturing, any reduction in handling time of the product may result in great productivity improvement of the industrial unit e.g. Steam Turbine Industry.

(iv) The Extent to which the Process Tends towards Mass Production:
With the use of automatic machines in industries for adopting mass production system of manufacturing the volume of production will increase. In view of high production output, larger percentage of manual labour will be engaged in transporting the output unless the layout is good.

Objectives of Good Plant Layout:
A good rather an optimum layout is one which provides maximum satisfaction to all concerned i.e. shareholders, management employees and consumers.

The objectives of a good layout are as follows:
(i) Should provide overall satisfaction to all concerned.

(ii) Material handling and internal transportation from one operation to the next is minimized and efficiently controlled.

(iii) The production bottle necks and points of congestions are to be eliminated so that input raw materials and semi-finished parts move fast from one work station to another.

(iv) Should provide high work in process turnover.

(v) Should utilize the space most effectively; may be cubical utilization.

(vi) Should provide worker's convenience, promote job satisfaction and safety for them.

(vii) Should avoid unnecessary investment of capital.

(viii) Should help in effective utilization of labour.

(ix) Should lead to increased productivity and better quality of the product with reduced capital cost.

(x) Should provide easy supervision.

(xi) Should provide space for future expansion of the plant.

(xii) Should provide proper lighting and ventilation of the areas of work stations

Factors Affecting Plant Layout:
Whatever be the type of layout being contemplated the following factors are to be considered because these factors have got significant influence on the design of the layout.

(i) Man Factor:
The man is very flexible element who can be made suitable for all sort of layouts.

Main considerations are as follows:
(i) Safety and working conditions.

(ii) Man power requirements-skill level of workers, their number required and their training programme.

(iii) Man power utilization in the plant.

(iv) Human relations.

(ii) Material Factor:
It includes the various input materials like raw materials, semi-finished parts, and materials in process scrap, finished products, packing materials, tools and other services.

The main considerations are:

(i) Design and specifications of the product to be manufactured.

(ii) Quantity and variety of products and materials.

(iii) Physical and chemical characteristics of various inputs materials.

(iv) Component parts or material and their sequence of operations i.e. how they go together to generate the final product.

(iii) Machinery Factor:

The operating machinery is also one of the most important factors therefore all the information regarding equipment and the tools are necessary for inspection, processing and maintenance etc.

(i) The processes and methods should be standardized first.

(ii) Machinery and tools selections depend upon the type of process and method, so proper machinery and other supporting equipment should be selected on the basis of volume of production.

(iii) Equipment utilization depends on the variation in production, requirements and operating balance.

(iv) Machines should be used to their optimum levels of speed, feed and depth of cut.

(v) Machinery requirement is mostly based on the process/method.

(v) Maintenance of machines and replacement of parts is also important.

(iv) Movement Factor:

It mainly deals with the movement of men and materials. A good layout should ensure short moves and should always tend towards completion of product. It also includes interdepartmental movements and material handling equipment. This includes the flow pattern reduction of unnecessary handling, space for movement and analysis of handling methods.

(v) Waiting Factor:

Whenever material or men is stopped, waiting occurs which costs money. Waiting cost includes handling cost in waiting area, money tied up with idle material etc.

Waiting may occur at the receiving point, materials in process, between the operations etc.

(vi) Service Factor:

It includes the activities and facilities for personnel such as fire protection, lighting, heating and ventilation etc. Services for material such as quality control, production control, services for machinery such as repair and maintenance and utilities like power, fuel/gas and water supply etc.

(vii) Building Factor:

It includes outside and inside building features, shape of building, type of building (single or multi-storey) etc.

(viii) Flexibility Factor:

This includes consideration due to changes in material, machinery, process, man, supporting activities and installation limitations etc. It means easy changing to new arrangements or it includes flexibility and expendability of layouts.

Types of Plant Layout:

Production results from men, materials and machinery together with management. The characteristics are changed. To manufacture a product layout begins with which element or elements mentioned above move.

Keeping in view the type of industry and volume of production, the type of layout to be selected is to be decided from the following:

1. Product or Line Layout.

2. Process or Functional Layout.

3. Fixed Position Layout.

4. Combination type of Layout.

1. Product or Line Layout:

If all the processing equipment and machines are arranged according to the sequence of operations of a product, the layout is called product type of layout. In this type of layout, only one product or one type of products is produced in an operating area. This product must be standardized and produced in large quantities in order to justify the product layout.

The raw material is supplied at one end of the line and goes from one operation to the next quite rapidly with a minimum work in process, storage and material handling. Fig. 3.3 shows product layout for two types of products A and B.

Fig. 3.3
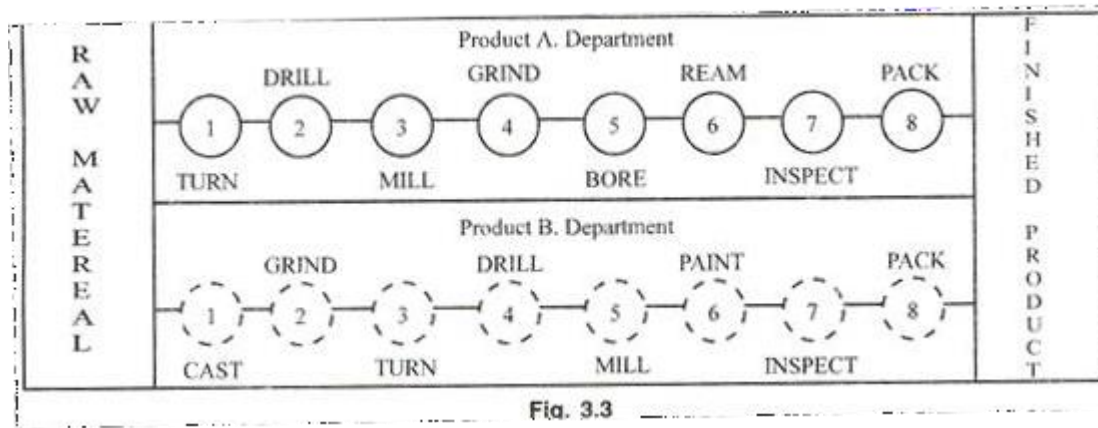
Advantages offered by Product Layout:

(i) Lowers total material handling cost.

(ii) There is less work in process.

(iii) Better utilization of men and machines.

(iv) Less floor area is occupied by material in transit and for temporary storages.

(v) Greater simplicity of production control.

(v) Total production time is also minimized.

Limitations of Product Layout:

(i) No flexibility which is generally required is obtained in this layout.

(ii) The manufacturing cost increases with a fall in volume of production.

(iii) If one or two lines are running light, there is a considerable machine idleness.

(iv) A single machine breakdown may shut down the whole production line,

(v) Specialized and strict supervision is essential.

2. Process or Functional Layout:

The process layout is particularly useful where low volume of production is needed. If the products are not standardized, the process layout is more desirable, because it has greater process flexibility than other. In this type of layout the machines are not arranged according to the sequence of operations but are arranged according to the nature or type of the operations.

This layout is commonly suitable for non-repetitive jobs. Same type of operation facilities are grouped together such as lathes will be placed at one place all the drill machines are at another place and so on. See Fig. 3.4 for process layout. Therefore, the process carried out in any area is according to the machine available in that area.

Fig. 3.4
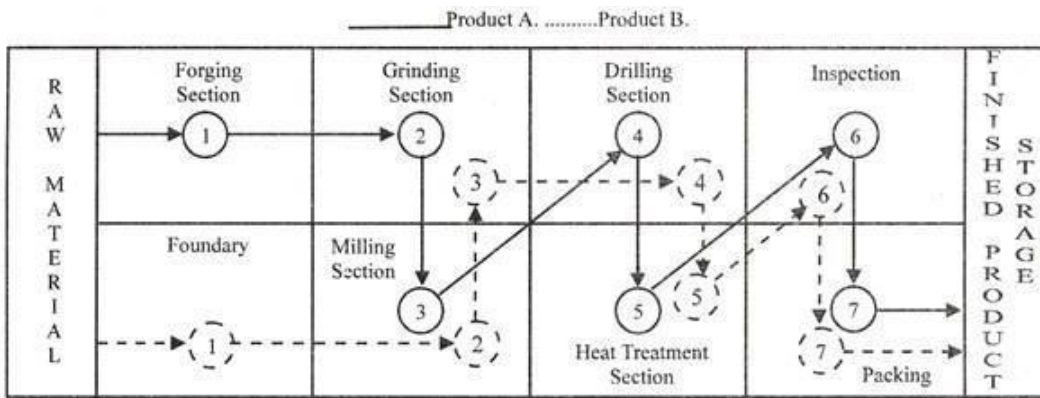
Advantages of Process Layout:

(i) There will be less duplication of machines. Thus total investment in equipment purchase will be reduced.

(ii) It offers better and more efficient supervision through specialization at various levels.

(iii) There is a greater flexibility in equipment and man power thus load distribution is easily controlled.

(iv) Better utilization of equipment available is possible.

(v) Breakdown of equipment can be easily handled by transferring work to another machine/ work station.

(vi) There will be better control of complicated or precision processes, especially where much inspection is required.

Limitations of Process Layout:

(i) There are long material flow lines and hence the expensive handling is required.

(ii) Total production cycle time is more owing to long distances and waiting at various points.

(iii) Since more work is in queue and waiting for further operation hence bottlenecks occur.

(iv) Generally more floor area is required.

(v) Since work does not flow through definite lines, counting and scheduling is more tedious.

(v)Specialization creates monotony and there will be difficulty for the laid workers to find job in other industries.

3. Fixed Position Layout:

This type of layout is the least important for today's manufacturing industries. In this type of layout the major component remain in a fixed location, other materials, parts, tools, machinery, manpower and other supporting equipment are brought to this location.

The major component or body of the product remains in a fixed position because it is too heavy or too big and as such it is economical and convenient to bring the necessary tools and equipment's to work place along-with the man power. This type of layout is used in the manufacture of boilers, hydraulic and steam turbines and ships etc.

Advantages Offered by Fixed Position Layout:

(i) Material movement is reduced

(ii) Capital investment is minimized

(iii) The task is usually done by gang of operators, hence continuity of operations is ensured

(iv) Production centres are independent of each other. Hence effective planning and loading can be made. Thus total production cost will be reduced and

(v) It offers greater flexibility and allows change in product design, product mix and production volume.

Limitations of Fixed Position Layout:

(i) Highly skilled man power is required.

(ii) Movement of machines equipment's to production centre may be time consuming.

(iii) Complicated fixtures may be required for positioning of jobs and tools. This may increase the cost of production.

4. Combination Type of Layout:

Now days in pure state any one form of layouts discussed above is rarely found. Therefore generally the layouts used in industries are the compromise of the above mentioned layouts. Every layout has got certain advantages and limitations therefore, industries would not like to use any type of layout as such.

Flexibility is a very important factor, so layout should be such which can be moulded according to the requirements of industry, without much investment. If the good features of all types of layouts are connected, a compromise solution can be obtained which will be more economical and flexible.

Principles of Plant Layout:

According to Muther there are six basic principles of "best layout".

These are:

(i) Principle of Overall Integration:
According to this principle the best layout is one which provides integration of production facilities like men, machinery, raw materials, supporting activities and any other such factors which result in the best compromise.

(ii) Principle of Minimum Distance:
According to this principle the movements of men and materials should be minimized.

(iii) Principle of Flow:
According to Muther, the best layout is one which arranges the work station for each operation process in same order or sequence that forms treats or assembles the materials.

(iv) Principle of Cubic Space Utilization:
According to this, the best layout utilizes cubic space i.e. space available both in vertical and horizontal directions is most economically and effectively utilized.

(v) Principle of Satisfaction and Safety:
According to this principle best layout is one which provides satisfaction and safety to all workers concerned.

(vi) Principle of Flexibility:
In automotive and other allied industries where models of products change after sometime the principle of flexibility provides adoption and rearrangement at a minimum cost and least inconvenience.

Advantages of a Good Plant Layout:
The advantages expressed by Mallick and Gandeau are as follows:
To the Worker:
(i) Reduces the effort of the worker.

(ii) Reduces the number of handlings.

(iii) Extends the process of specialization.

(iv) Permits working at optimum conditions by eliminating congestions.

(v) Produces better working conditions by eliminating congestions.

(vi) Reduces the number of accidents.

(vii) Provides better employee service facilities/conditions.

(viii) Provides basis for higher earning for employees.

In Labour Cost:

(i) Increases the output per man-hour.

(ii) Reduces set up time involved.

(iii) Reduces the number of operations or some operations may be combined.

(iv) Reduces the number of handlers. Thus reducing labour cost.

(v) Reduces the length of hauls.

(vi) Reduces lost motions between operations.

(vii) Converts operator into a producer instead of a handler by eliminating the various unnecessary movements.

In Other Manufacturing Costs:

(i) Reduces the cost of expensive supplies.

(ii) Decreases maintenance costs.

(iii) Decreases tool replacement costs.

(iv) Effects a saving in power loads.

(v) Decreases spoilage and scrap. Thus waste is minimized

(v) Eliminates some of the waste in raw material consumption.

(vii) Improves the quality of the product by decreasing handling.

(viii) Provides better cost control.

In the Manufacturing Cycle:

(i) Shortens the moves between work-stations.

(ii) Reduces the manufacturing cycle in each department.

(iii) Reduces the length of the travel by the product for completion.

(iv) Reduces the overall time of manufacturing the product.

In Production Control:

(i) Facilitates receipts, shipments and delivery of inputs and finished goods.

(ii) Provides adequate and convenient storage facilities.

(iii) Permits the maximum possible output with same input.

(iv) Paces production & determines production flow.

(v) Makes production time predictable.

(vi) Makes scheduling and dispatching automatic.

(vii) Sets up production centre & permits straight line layout by products for mass production.

(viii) Permits layout by process for job order manufacturing.

(ix) Moves work in process by most direct lines.

(x) Reduces the number of lost or mishandled parts leading to waste minimization.

(xi) Reduces the paper work for production control & reduces the number of stock chasers. Thus reduces production control expenses.

In Supervision:
(i) Tends to ease the burden of supervision.

(ii) Determines the supervisory control.

(iii) Reduces the cost of supervision process.

(iv) Reduces cost of piece counts.

(v) Decreases the amount of inspection involved.

In Capital Investment:
(i) Holds permanent investment at its minimum level.

(ii) Keeps the plant from becoming obsolete before it is worn out.

(iii) Reduces the investment in machinery and equipment by

(a) Increasing the production per machine.

(b) Utilizing idle machine time.

(c) Reducing the number of operations per machine.

(iv) Maintains a proper balance of departments.

(v) Eliminates wasted aisle space.

(vi) Reduces the capital investment by proper space utilization of material handling equipment required.

(vii) Reduces the inventory level of work in process and of finished product.

METHODS OF PRODUCTION

JOB PRODUCTION

Job Production is used when a product is produced with the labor of one or few workers and is rarely used for bulk and large scale production. It is mainly used for one-off products or prototypes (hence also known as Prototype Production), as it is inefficient; however, quality is greatly enhanced with job production compared to other methods. Individual wedding cakes and made-to-measure suits are examples of job production. New small firms often use job production before they get a chance or have the means to expand. Job Production is highly motivating for workers because it gives the workers an opportunity to produce the whole product and take pride in it.

BATCH RPDUCTION

Batch production is the method used to produce or process any product in groups or batches where the products in the batch go through the whole production process together. An example would be when a bakery produces each different type of bread separately and each product(in this case, bread) is not produced continuously. Batch production is used in many different ways and is most suited to when there is a need for a quality/quantity balance. This technique is probably the most commonly used method for organizing manufacture and promotes specialist labor, as very often batch production involves a small number of persons. Batch production occurs when many similar items are produced together. Each batch goes through one stage of the production before moving onto next stage.

MASS PRODUCTION
Mass production is the manufacture of large quantities of standardized products, frequently using assembly line or automation technology. **Mass production** refers to the **production** of a large number of similar products efficiently.

WORK STUDY

"**Work study** is a generic term for those techniques, method study and work measurement which are used in the examination of human work in all its contexts. And which lead systematically to

the investigation of all the factors which affect the efficiency and economy of the situation being reviewed, in order to effect improvement."

Framework of work study
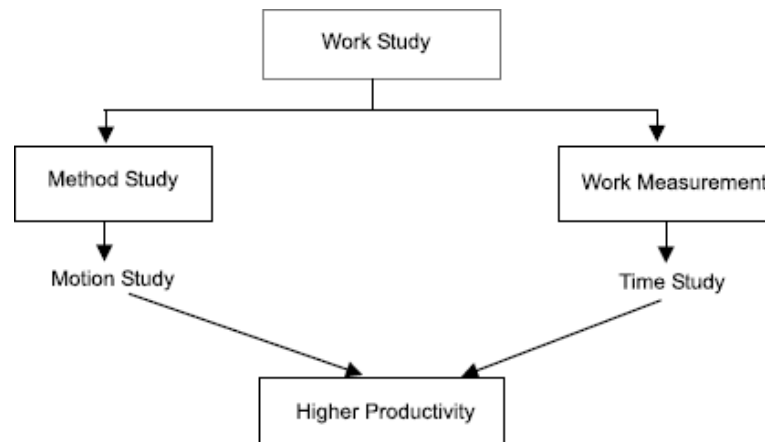
Advantages of Work Study

Following are the advantages of work study:

1. It helps to achieve the smooth production flow with minimum interruptions.
2. It helps to reduce the cost of the product by eliminating waste and unnecessary operations.
3. Better worker-management relations.
4. Meets the delivery commitment.
5. Reduction in rejections and scrap and higher utilization of resources of the organization.
6. Helps to achieve better working conditions.
7. Better workplace layout.
8. Improves upon the existing process or methods and helps in standardization and simplification.
9. Helps to establish the standard time for an operation or job which has got application in manpower planning, production planning.

Types of Work Study:

1. Method Study:

According to ILO, method study is **"the systematic recording, analysis and critical examination of existing and proposed ways of doing work and the development and application of easier and more effective method".** In short, it is a systematic procedure to analyse the work to eliminate unnecessary operations.

Objectives:

The objectives of method study are:

(i) It improves the proper utilisation of manpower, machine and materials;

(ii) It also improves the factory layout, work place, etc.;

(iii) It also improves the process and procedure;

(iv) It develops better physical working environment;

(v) It reduces undesirable fatigue.

Steps:
The steps of method study are:
(i) At first select the proper work which are to be studied;

(ii) Record all the facts of existing method;

(iii) Examine the facts very critically;

(iv) Develop the most practical, economic, and effective method;

(v) Install the method and the same should be maintained.

2. Time And Motion Study:

According to ILO, Time Study means **"a technique for determining as accurately as possible from a limited number of observations the time necessary to carry out a given activity at a different standard of performance".** In other words, "time study is the art of observing and recording time required to do each detailed element of an individual operation." Practically, it studies the time taken on each element of a job.

Motion study, on the other hand, is the study of the body motion used in performing an operation, with the thought of improving the operation by eliminating unnecessary motion and simplifying necessary motion and thus establishing the most favourable motion sequence for maximum efficiency.

So, in short, 'Time Study' means the determination of standard time that is taken by a worker of average ability under normal working conditions for performing a job. But 'Motion Study' determines the correct method of doing a job to avoid wasteful movements, for which the workers are unnecessarily tired.

Steps:
1. Time and Motion studies eliminate wasteful movements;

2. They examine the proposed method critically and determine the most effective one;

3. They determine for each element having a stop-watch;

4. They record all the parts of a job which are done by the existing method;

5. They install the method as standard one;

6. They critically observe the workers who are engaged with the work;

7. They assess the proper speed of the operator who is working.

STATISTICAL QUALITY CONTROL THROUGH CONTROL CHARTS

Statistical Quality Control (SQC) is the term used to describe the set of statistical tools used by quality professionals. SQC is used to analyze the quality problems and solve them.

Statistical quality control refers to the use of statistical methods in the monitoring and maintaining of the quality of products and services.

All the tools of SQC are helpful in evaluating the quality of services. SQC uses different tools to analyze quality problem.

1) Descriptive Statistics
2) Statistical Process Control (SPC)
3) Acceptance Sampling

Descriptive Statistics involves describing quality characteristics and relationships.

SPC involves inspect random sample of output from process for characteristic.

Acceptance Sampling involve batch sampling by inspection.

Improsys's strategic approach to problems make us understand the root causes of problems and helps our customer to come up with a long lasting and effective solution.

With our expertise in understanding the business and its all aspects we provide solutions that will satisfy our customers deeply. Improsys has successfully implemented the quality control solutions in various organizations.

Objective of Statistical Quality Control

Quality Control is very important for a every company. Quality control includes service quality given to customer, company management leadership, commitment of management, continuous improvement, fast response, actions based on facts, employee participation and a quality driven culture.

The main objectives of the quality control module are to control of material reception, internal rejections, clients, claims, providers and evaluations of the same corrective actions are related to their follow-up. These systems and methods guide all quality activities. The development and use of performance indicators is linked, directly or indirectly, to customer requirements and satisfaction, and to management.

TYPES OF QUALITY CONTROL CHARTS
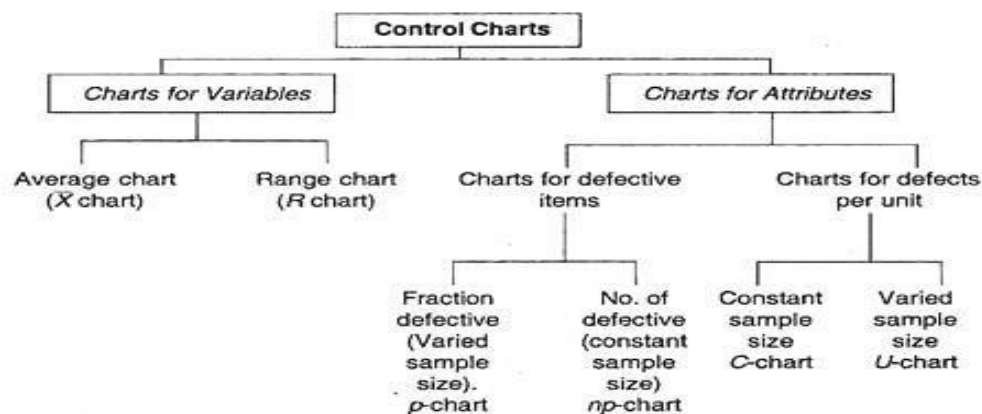
X BAR CHART

In industrial statistics, the **X-bar chart** is a type of Shewhart control chart that is used to monitor the arithmetic means of successive samples of constant size, n. This type of control chart is used for characteristics that can be measured on a continuous scale, such as weight, temperature, thickness etc. For example, one might take a sample of 5 shafts from production every hour, measure the diameter of each, and then plot, for each sample, the average of the five diameter values on the chart.

For the purposes of control limit calculation, the sample means are assumed to be normally distributed, an assumption justified by the Central Limit Theorem.

The X-bar chart is always used in conjunction with a variation chart such as the and R

chart or   and s chart. The R-chart shows sample ranges (difference between the largest and the smallest values in the sample), while the s-chart shows the samples' standard deviation. The R-chart was preferred in times when calculations were performed manually, as the range is far easier to calculate than the standard deviation; with the advent of computers, ease of calculation ceased to be an issue, and the s-chart is preferred these days, as it is statistically more meaningful and efficient. Depending on the type of variation chart used, the average sample range or the average sample standard deviation is used to derive the X-bar chart's control limits.
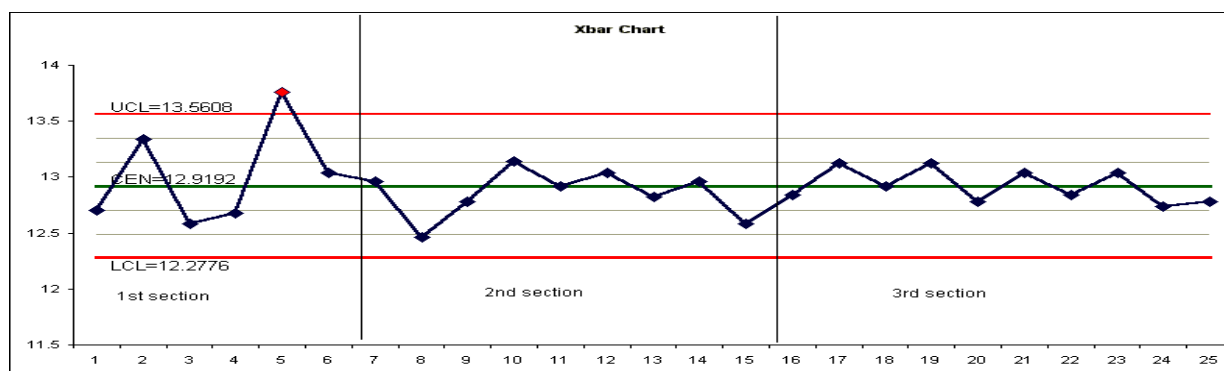
R CHART

An X-bar and **R** (range) **chart** is a pair of control **charts** used with processes that have a subgroup size of two or more. The standard **chart** for variables data, X-bar and **R charts**help determine if a process is stable and predictable.
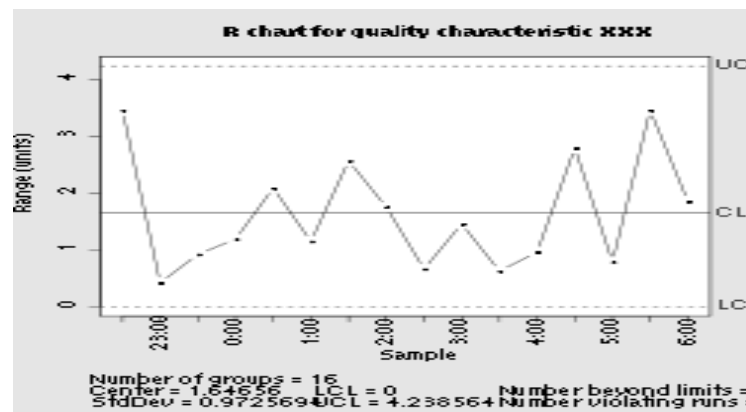
P CHART

In statistical quality control, the **p-chart** is a type of control**chart** used to monitor the proportion of nonconforming units in a sample, where the sample proportion nonconforming is defined as the ratio of the number of nonconforming units to the sample size, n.
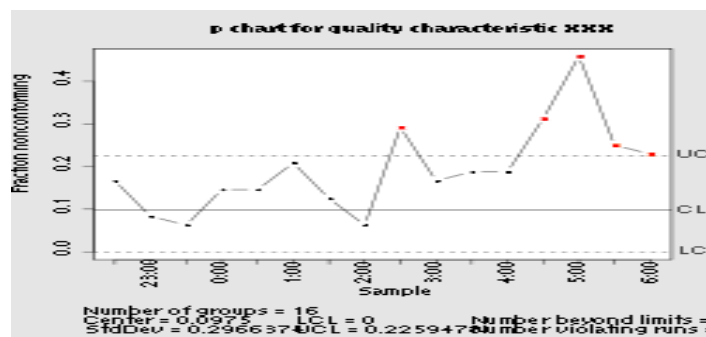
C CHART

A **c-chart** is an attributes **control chart** used with data collected in subgroups that are the same size. **C-charts** show how the process, measured by the number of nonconformities per item or group of items, changes over time. Nonconformities are defects or occurrences found in the

U CHART

A **u-chart** is an attributes control **chart** used with data collected in subgroups of varying sizes. **U-charts** show how the process, measured by the number of nonconformities per item or group of items, changes over time. Nonconformities are defects or occurrences found in the sampled subgroup.
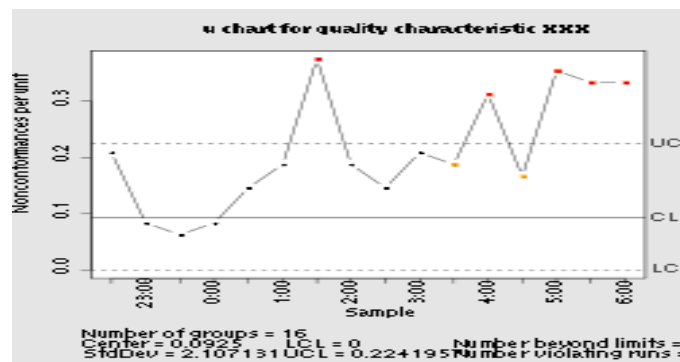
OBJECTIVES OF INVENTORY MANAGEMENT

Inventory: It defined as a comprehensive list of movable items which are required for manufacturing the products and to maintain the plant facilities in working conditions.
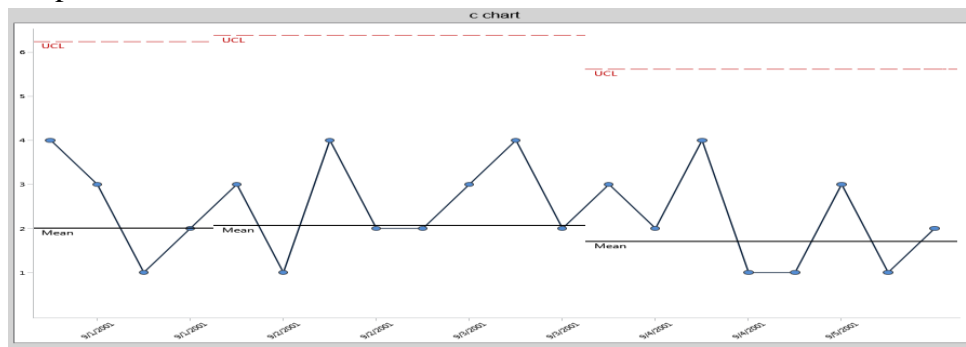
Inventory Management

A manufacturing company requires many types of material to produce any goods or service. If a company does not get the required material as needed than the production system gets disturbed and fails to produce and sale required quantity of products on time. The over stock of inventory is unsuitable due to the large amount of investment on it as well as other cost associated with it. On the other hand, the lower stock inventory might create the problem of shortage resulting inn the disturbance on production. Therefore, inventory management includes the requirement of different types of inventory, period of stock and cost associate on it. Inventory is the stock that firm maintains to meet its future requirement for production and selling. The basis reason for holding inventory is to keep up the production activities unhampered. Inventories are a part of current assets, which are used within one year. In a normal courses of business operation manufacturing organizations maintains the inventory of raw materials, work-in-progress,

finished goods, spare parts, suppliers etc. in case of manufacturing concern, inventories link the production and sales. Tading organizations are unsold goods i.e. finished goods.

Hence, inventories may be defined as the combination of raw materials, work-in-progress, finished goods and other suppliers required for the smooth operation and sales of an sales of an organization. Managing the stock at lowest cost without compromising on the production and sales activities is called inventory management.

OBJECTIVES OF INVENTROY MANAGEMENT

1. To supply the required materials continuously: there should be a continuous available of materials in the factory or finished goods for trade. The main objective of inventory management in to maintain required inventory so that production and sales process run smoothly.

2. To minimize the risk of under and over stocking of material: if a company keeps inventory without proper analysis, there will be a chance of overstocking, which will increase the cost of carrying the inventory or under stocking of inventory that create problem in smooth operation of a business. So one of the main objectives of the inventory management is to minimize the risk caused due to under and over stocking of inventory.

3. To maintain systematic record of inventory: management needs different information regarding inventory for planning and decision-making. A systematic recodes of inventory helps provides such information to the management. It also assists to evaluate the current inventory management policy.

4. To reduce losses, damages and misappropriation of materials: inventory management aims to reduce or remove the losses and misappropriate of materials. This is done by maintaining the proper stocks of materials with utmost care.

5. To minimize the cost associated with inventory: the proper maintenance of the information regarding inventory helps to make decisions like whether to take discounts or not, the size of order to be placed, when to order etc. the total cost associated with inventory may be minimized by analyzing the lot size to be acquired, the offer of discount on variable lot size and the timing of order. Such analysis helps to reduce the unnecessary inventory in inventories.

6. To make stability in price: an effective inventory management system minimizes the effects of regular price fluctuation. This is turn helps to gain the stability is selling price.

NEED FOR INVENTORY CONTROL

Inventory Control: The systematic location, storage and recording of goods in such a way the desired degree of service can be made to the operating shops at minimum ultimate cost.

Objectives of Inventory Control:

1. To support the production departments with materials of the right quality in the right quantity, at the right time and the right price, and from the right supplier

2. To minimize investments in the materials by ensuring economies of storage and ordering costs

3. To avoid accumulation of work in process

4. To ensure economy of costs by processing economic order quantities
5. To maintain adequate inventories at the required sales outlets to meet the market needs promptly, thus avoiding both excessive stocks or shortages at any given time
6. To contribute directly to the overall profitability of the enterprise

Functions of inventory control:

* To develop policies, plans and standards essential to achieve the objectives To build up a logical and workable plan of organization for doing the job satisfactory
* To develop procedure and methods that will produce the desired results economically
* To provide the necessary physical facilities
* To maintain overall control by checking results and taking corrective actions.

ECONOMIC ORDER QUANTITY (EOQ)

Economic Order Quantity (EOQ): Economic order quantity is defined that quantity of materials, which can be ordered at one time to minimize the cost of ordering and carrying the stocks. In other words, it refers to size of each order that keeps the total cost low.

Determine EOQ:

Step1:
Total Ordering cost per year = No. of orders placed per year x ordering cost per Order

= (A/S) x O

        A = Annual demand
        S = Size of each order (unitsper order)
        O = Ordering cost per order

Step2:
Total Carrying cost per year = Average inventory level x Carrying cost per year = (S/2) x C

        A = Annual demand
        S = Size of each order (units per order)
        C = Carrying cost per unit

Step3:

EOQ is one where the total ordering is equal to total carrying cost
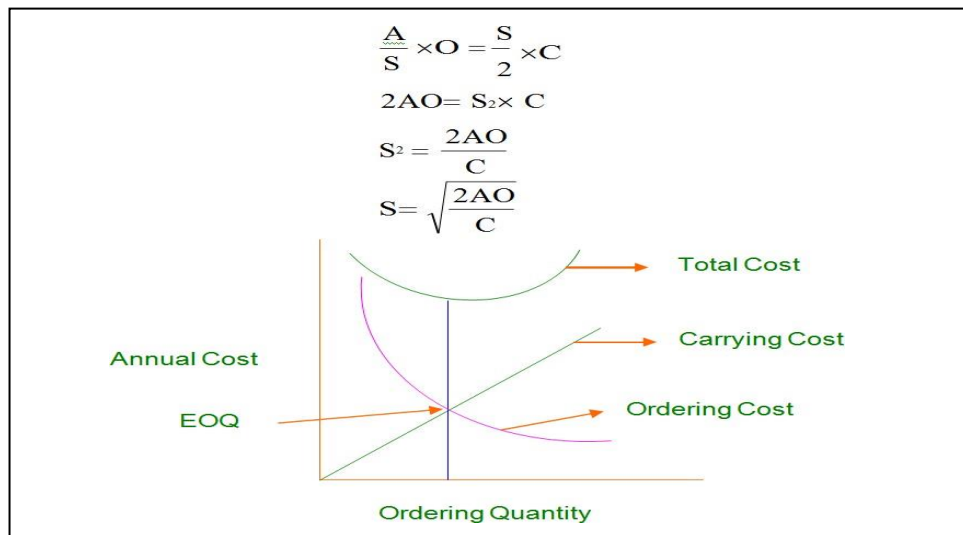
Where S is the Economic order quantity, A is the annual demand in units, O is the ordering cost per order and C is the carrying cost per unit

ABC ANALYSIS

ABC Analysis: ABC analysis is a technique of controlling inventories based on their value and quantities. It is more remembered as an analysis for 'Always Better Control' of inventory. Here all items of the inventory are listed in the order of descending values, showing quantity held and their corresponding value. Then, the inventory is divided into three categories A, B and C based on their respective values.
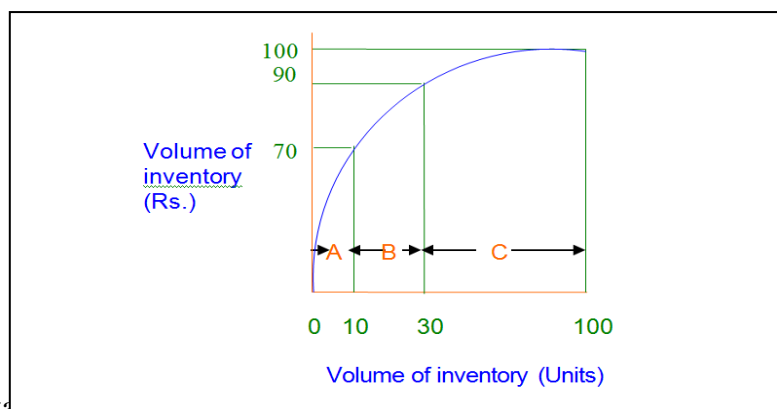
A - Refers to high value item
B - Refers to medium value item
C - Refers to low value item

A category comprises of inventory, which is very costly and valuable. Normally 70% of the funds are tied up in such costly stocks, which would be around 10% of the total volume of stocks. Because the stocks in this category are very costly, these require strict monitoring on a day-to-day basis.

B category comprises of inventory, which is less costly. Twenty percent of

the funds are tied up in such stocks and these accounts for over 20% of the volume of stocks. These items require monitoring on a weekly or fortnightly basis.

C category consists of such stocks, which are of least cost. Volume-wise, they form 70% of the total stocks but value-wise, they do not cost more than 10% of the investment in the stocks. This category of stocks can be monitored on a monthly or bi-monthly basis.

The following table summarizes the concept of ABC analysis;

Category	Value (%)	Volume (%)	Desired Degree of Control
A	70	10	STRICT
B	20	20	MODERATE
C	10	70	LOW

MARKETING MANAGEMENT

2.9.MEANING OF MARKETING

Marketing: Marketing as a social process by which individuals and groups obtain what they need and want through creating, offering exchanging products and services of value with others.

NATURE OF MARKETING MANAGEMENT

The Nature of Marketing (or Modern marketing) may be studied under the following points:

1. **Human activity:** Originally, the term marketing is a human activity under which human needs are satisfied by human efforts. It's a human action for human satisfaction.

2. **Consumer-oriented:** A business exist to satisfy human needs, hence business must find out what the desire of customer (or consumer) and thereby produce goods & services as per the needs of the customer. Thus, only those goods should be produce that satisfy consumer needs and at a reasonable profit to the manufacturer (or producer).

3. **Art as well as science**: In the technological arena, marketing is the art and science of choosing target markets and satisfying customers through creating, delivering, and communicating superior customer value. It is a technique of making the goods available at right time, right place, into right hands, right quality, in the right form and at right price.

4. **Exchange Process:** All marketing activities revolve around commercial exchange process. The exchange process implies transactions between buyer and seller. It also involves exchange of technology, exchange of information and exchange of ideas.

5. **Starts and ends with customers:** Marketing is consumer oriented and it is crucial to know what the actual demand of consumer is. This is possible only when required information related to the goods and services is collected from the customer. Thus, it is the starting of marketing and the marketing end as soon as those goods and services reach into the safe hands of the customer.

6. **Creation of Utilities:** Marketing creates four components of utilities viz. time, place, possession and form. The form utility refers to the product or service a company offers to their customers. The place utility refers to the availability of a product or service in a location i.e. Easier for customers. By time utility, a company can ensure that products and services are available when customers need them. The possession utility gives customers ownership of a product or service and enables them to derive benefits in their own business.

7. **Goal oriented:** Marketing seeks to achieve benefits for both buyers and sellers by satisfying human needs. The ultimate goal of marketing is to generate profits through the satisfaction of the customer.

8. **Guiding element of business:** Modern Marketing is the heart of industrial activity that tells what, when, how to produce. It is capable of guiding and controlling business.

9. **System of Interacting Business Activities:** Marketing is the system through which a business enterprise, institution or organization interacts with the customers with the objective to earn profit, satisfy customers and manage relationship. It is the performance of business activities that direct the flow of goods and services from producer to consumer or user.

10. **Marketing is a dynamic process.** series of interrelated functions: Marketing is a complex, continuous and interrelated process. It involves continuous planning, implementation and control.

FUNCTIONS OF MARKETING MANAGEMENT

Seven Functions of Marketing

Buying: Buying involves both the marketing and the customers. The marketing manager must know abut the type of customers, their consuming habits demands and buying pattern

Selling: It creates a demand for a product selling function involves.

1. Product planning and development

2. Finding out or locating buyers
3. Demand creation through salesmanship, advertising and sales promotion

4. Negotiation of terms of sales such as price, quantity and quality etc.

Transporting: It involves the creation of place utility. In order to have value goods must first be transported from the place they are produced to the place where they are needed.

Storage: It concerned with storing finished products properly without any damage, until they are dispatched to the customers it is also concerned to the customers it is also concerned with maintaining stock of raw materials with maintaining stock of raw materials, components etc. to meet production schedules.

Standardization and grouping: These two functions are supplementary and complementary to each other. A standard is a measure of fixed value. The standard could be based on colour, weight, quality, and number of items, price, or any other parameter. Both domestic and export markets rely extensively on this function. Grading is the process of sorting the goods. The price varies with the grade of the goods. This function enables the marketer to fix a uniform price for a given grade of the goods. It further promotes good understanding between the buyer and the seller.

Finance: Finance is the life blood of business value of goods is expressed is money and it donated by price to be paid by buyer to seller credit is necessary in marketing it plays all important role in retail trade particularly in the sales of costly consumer goods.

Marketing research: The marketing personnel must study the trends in market demand, supply prices and related market information. The knowledge about the latest market information may help the firm to reduce risk loss in purchasing, in pricing, in forecasting market demand and in facing competition in the market.

MARKETING MIX

Marketing Mix: It refers to the combination of four basic elements, viz., product, price, promotion and the place, known as the four P's of marketing.

Product Mix: It is used to describe the assortment of different product types (product lines) and their varieties (product depth). In addition, different tangible and intangible features of the product also form the product mix.

Price Mix: Price mix refers to the decisions relating to the price chargedfor the product, service or idea.

Promotion Mix: Refers to the activities relating to promotion of the product, service or idea.

Place Mix: Place or physical distribution mix refers to the activities that are involved in transferring ownership to consumers at the right time and price.

CHANNELS OF DISTRIBUTION
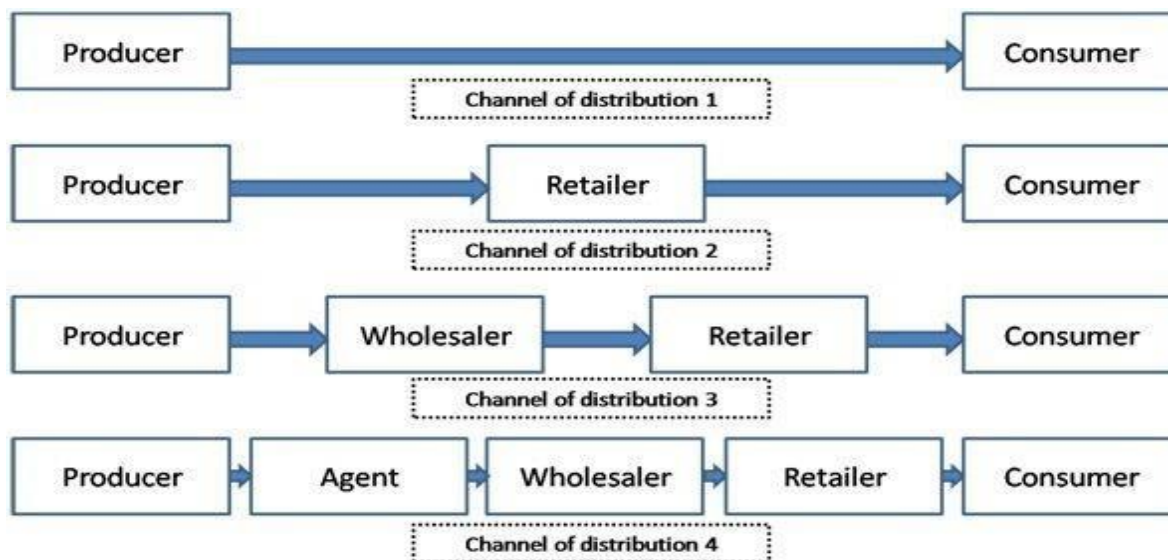
Type of Channels of Distribution: Channels of distribution refer to the ways and means of reaching the customer through the intermediaries such as wholesalers, retailers, and other agencies, if any.

LEVEL – 1   Manufacturer - consumer:

This is a direct marketing channel where the manufacturer contacts the customer directly without involving middlemen or intermediaries. The manufacturers of industrial goods such as aeroplanes, turbo-engines, ships, and other high-value capital goods mostly follow this route. However, consumer product manufacturers also through Internet, mail order operations, and door-to-door selling are following this method. It is common sight to find the representatives of the manufacturers going from house to house to sell their products, which are normally used in the households.

LEVEL – 2 Manufacturer - wholesaler - consumer:

This channel is primarily used in the case of industrial goods and high-value consumer durable products. The wholesaler, who may also be called as distributor in this channel, carries out the functions of retailing to large customers who may in themselves be the manufacturers also. The wholesalers in this channel buy goods from many manufacturers, stock, and subsequently, sell them through internet or directly to the customers in a wider geographical area. An example of the use of this method can be observed in the computer hardware industry.

LEVEL – 3 Manufacturer - retailer - consumer:

Here, the large retailing chains, including supermarkets, use this channel to buy products in large quantities from manufacturers at a very competitive price and sell the same to the ultimate consumers. As the retailers enjoy large discounts in this process, they share this benefit with their customers by keeping their products competitively priced. The consumers patronage this channel because they can buy in small quantities from a wide variety at lower prices.

LEVEL – 4 Manufacturer - wholesaler - retailer - consumer:

This is a chain widely followed for fast moving consumer goods, which are likely to have mass markets. When the consumers are large in number, widely dispersed geographically, and products are of low value, this channel is favoured. Manufacturers would find it prohibitively expensive to set up their own outlets in such circumstances. For manufacturers of consumer goods such as hosiery, food items, confectionery, clothes, and readymade garments, cosmetics, and so on, intermediaries are indispensable in the distribution chain.

ADVERTISEMENT AND SALES PROMOTION

ADVERTISEMENT (OR) ADVERTISING

Advertising is an audio or visual form of marketing communication that employs an openly sponsored, non-personal message to promote or sell a product, service or idea.[1]:465 Sponsors of advertising are typically businesses wishing to promote their products or services. Advertising is differentiated from public relations in that an advertiser pays for and has control over the message. It differs from personal selling in that the message is non-personal, i.e., not directed to a particular individual.[1]:661,672 Advertising is communicated through various mass

media,[2] including traditional media such as newspapers, magazines, television, radio, outdoor advertising or direct mail; and new media such as search results, blogs, social media, websites or text messages. The actual presentation of the message in a medium is referred to as an **advertisement** or "**ad**" or **advert** for short.

Commercial ads often seek to generate increased consumption of their products or services through "branding", which associates a product name or image with certain qualities in the minds of consumers. On the other hand, ads that intend to elicit an immediate sale are known as direct-response advertising. Non-commercial entities that advertise more than consumer products or services include political parties, interest groups, religious organizations and governmental agencies. Non-profit organizations may use free modes of persuasion, such as a public service announcement. Advertising may also be used to reassure employees or shareholders that a company is viable or successful.

Types of advertising

- **Newspaper**. **Newspaper** advertising can promote your business to a wide range of customers. ...
- **Magazine**. Advertising in a specialist **magazine** can reach your **target market** quickly and easily. ...
- **Radio**. ...
- **Television**. ...
- **Directories**. ...
- **Outdoor** and **transit**. ...
- **Direct mail**, catalogues and leaflets. ...
- **Online.**

SALES PROMOTION

Sales promotion is the process of persuading a potential customer to buy the product. **Sales promotion** is designed to be used as a short-term tactic to boost **sales** – it is rarely suitable as a method of building long-term customer loyalty. Some **sales promotions** are aimed at consumers.

Sales promotions can be directed at either the customer, sales staff, or distribution channel members (such as retailers). Sales promotions targeted at the consumer are called **consumer sales promotions**. Sales promotions targeted at retailers and wholesale are called **trade sales promotions**.

Sales promotion includes several communications activities that attempt to provide added value or incentives to consumers, wholesalers, retailers, or other organizational customers to stimulate immediate sales. These efforts can attempt to stimulate product interest, trial, or purchase. Examples of devices used in sales promotion include coupons, samples, premiums, point-of-purchase (POP) displays, contests, rebates, and sweepstakes.

Sales promotion is implemented to attract new customers, to hold present customers, to counteract competition, and to take advantage of opportunities that are revealed by market research. It is made up of activities, both outside and inside activities, to enhance company sales.

Outside sales promotion activities include advertising, publicity, public relations activities, and special sales events. Inside sales promotion activities include window displays, product and promotional material display and promotional programs such as premium awards and contests.[1]

Sale promotions often come in the form of discounts. Discounts impact the way consumers think and behave when shopping. The type of savings and its location can affect the way consumers view a product and affect their purchase decision.[2] The two most common discounts are price discounts ("on sale items") and bonus packs ("bulk items").[2] Price discounts are the reduction of an original sale by a certain percentage while bonus packs are deals in which the consumer receives more for the original price.[2] Many companies present different forms of discounts in advertisements, hoping to convince consumers to buy their products.

Consumer sales promotion types

Consumer sales promotions are short term techniques designed to achieve short term objectives, such as to stimulate a purchase, encourage store traffic or simply to build excitement for a product or brand. Traditional sales promotions techniques include:

- **Price deal:** A temporary reduction in the price, such as 50% off.
- **Loyal Reward Program:** Consumers collect points, miles, or credits for purchases and redeem them for rewards.
- **Cents-off deal:** Offers a brand at a lower price. Price reduction may be a percentage marked on the package.
- **Price-pack/Bonus packs deal:** The packaging offers a consumer a certain percentage more of the product for the same price (for example, 25 percent extra). This is another type of deal "in which customers are offered more of the product for the same price".[2] For example, a sales company may offer their consumers a bonus pack in which they can receive two products for the price of one. In these scenarios, this bonus pack is framed as a gain because buyers believe that they are obtaining a free product.[2] The purchase of a bonus pack, however, is not always beneficial for the consumer. Sometimes consumers will end up spending money on an item they would not normally buy had it not been in a bonus pack. As a result, items bought in a bonus pack are often wasted and is viewed as a "loss" for the consumer.
- **Coupons:** coupons have become a standard mechanism for sales promotions.
- **Loss leader:** the price of a popular product is temporarily reduced below cost in order to stimulate other profitable sales
- **Free-standing insert (FSI):** A coupon booklet is inserted into the local newspaper for delivery.
- **Checkout dispensers:** On checkout the customer is given a coupon based on products purchased.
- **Mobile couponing:** Coupons are available on a mobile phone. Consumers show the offer on a mobile phone to a salesperson for redemption.
- **Online interactive promotion game:** Consumers play an interactive game associated with the promoted product.

- **Rebates:** Consumers are offered money back if the receipt and <u>barcode</u> are mailed to the producer.

<u>MARKETING STRATEGIES</u>

Marketing strategy is a long-term, forward-looking approach to planning with the fundamental goal achieving a sustainable <u>competitive advantage</u>.[1] Strategic planning involves an analysis of the company's strategic initial situation prior to the formulation, evaluation and selection of <u>market-oriented</u> competitive position that contributes to the company's goals and marketing objectives.[2]

Strategic marketing, as a distinct field of study emerged in the 1970s, and built on strategic management that preceded it. Marketing strategy highlights the role of marketing as a link between the organisation and its customers.

At its most basic level, strategic marketing addresses three deceptively simple questions: (1) Where are we now? (2) Where are we going? and (3) How are we going to get there? In attempting to answer these questions, strategic planners require sophisticated skills in both research and analysis.

<u>10 MARKETING STRATEGIES</u>

1. Use social media.

You can't ignore social media. That's where all the so-called magic is happening. Some businesses have been built solely on the backs of social media. It can be intimidating at first. Sure. But as you build momentum, you'll find posting on social media to get easier and easier over time.

2. Create video tutorials.

One of the most effective ways to get the word out on your business is to create video tutorials. Teach people something useful. Walk them through it. Hold their hands. Step-by-step tutorials are all the rage. The better you are at this, and the more value you provide, the quicker you can boost your visibility, and ultimately, your sales.

3. Start blogging now.

Sure, you could start a blog. If you don't have a blog for your business, then you need to start one immediately. But you don't just have to blog on your own blog. Most people find blogging mundane because they lack the visibility. The truth is that your blog is going to be like a barren desert unless you know what you're doing.

4. Understand search engine optimization.

This is an area of marketing that I'm incredibly passionate about. But it's also an area that many people are deathly frightened by. Yes, SEO can be frightening. But it can also be powerful. And when you learn to leverage it and you learn SEO the right way,the sky truly is the limit.

5. Leverage influencers.

Want to get the word out there and boost your visibility on social media without taking years to build the audience? Then you should certainly leverage influencers. But the key is to find the right influencer. You don't have to go with influencers with millions of followers. You could opt for micro-influencers with tens of thousands or even a hundred thousand followers.

6. Build a great lead magnet.

So much effectiveness in marketing really does boil down to creating a great lead magnet. I've found that the right lead magnet presented to the right audience can have explosive results. The best way to do this is if you can identify the right pain points and present a solution in your lead magnet, then you're well on your way.

7. Use Facebook ads with re-targeting.

One of the most powerful methods you can use to market just about anything these days are Facebook ads. With Facebook, you can reach a very specific audience and you can do it very easily. You can target by interest, age, relationships status, geographic location, and so much much more.

8. Use LinkedIn the right way.

Do you have a video on your LinkedIn profile? Did you know that you can easily add one? Why not take the time to introduce yourself and your business. Link that to your profile description. This is an easy way to passively market your business, and when it's done right, it can lead to shocking results.

9. Create an affiliate program.

Most people don't understand the power of affiliate marketing. Affiliates can provide massive fuel for growth. But approaching the right partners isn't always that easy. You have to have good conversion if you want the bigger affiliate to take you seriously.

10. Use Email Marketing Sequences

Part of any good sales funnel is going to be an email marketing sequence. These are the automated messages that go out to users once they subscribe to your list. Use your email

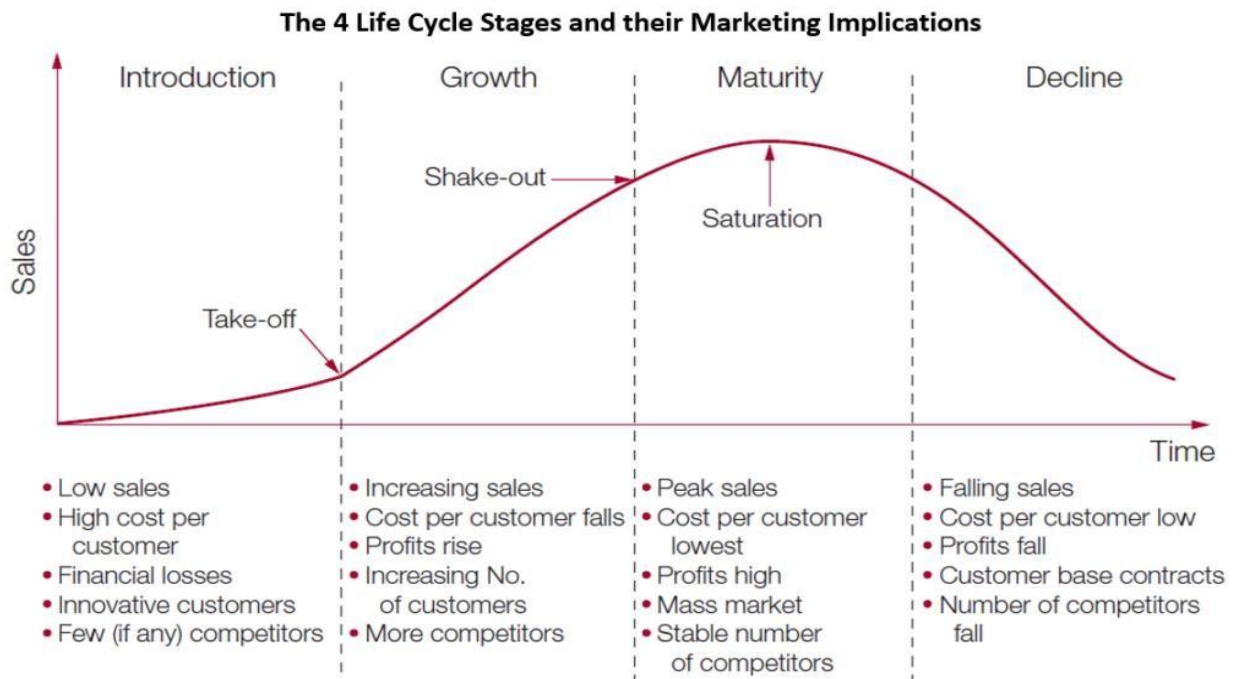sequence to build a relationship with the subscriber. Be authentic and transparent. And convey your journey.

PRODUCT LIFE CYCLE

Product life-cycle management (**PLM**) is the succession of strategies by business management as a product goes through its life-cycle. The conditions in which a product is sold (advertising, saturation) changes over time and must be managed as it moves through its succession of stages.

The concept of product life cycle (PLC) concerns the life of a product in the market with respect to business/commercial costs and sales measures. The product life cycle proceeds through multiple phases, involves many professional disciplines, and requires many skills, tools and processes. PLC management makes the following three assumptions: Products have a limited life and thus every product has a life cycle.

- Product sales pass through distinct stages, each posing different challenges, opportunities, and problems to the seller.
- Products require different marketing, financing, manufacturing, purchasing, and human resource strategies in each life cycle stage.

Once the product is designed and put into the market, the offering should be managed efficiently for the buyers to get value from it. Before entering into any market complete analysis is carried out by the industry for both external and internal factors including the laws and regulations, environment, economics, cultural values and market needs. Product life cycle is guanine concept and this term 'product life cycle' is associated with every product that exists, however, due to a limited shelf life the product has to expire. From the business perspective, as a good business, the product needs to be sold before it finishes its life. In terms of profitability, expiry may jolt the overall profitability of the business therefore there are few strategies, which are practiced to ensure that the product is sold within the defined period of maturity.

The 4 Life Cycle Stages and their Marketing Implications

Introduction | Growth | Maturity | Decline

Shake-out

Saturation

Take-off

Sales

Time

- Low sales
- High cost per customer
- Financial losses
- Innovative customers
- Few (if any) competitors

- Increasing sales
- Cost per customer falls
- Profits rise
- Increasing No. of customers
- More competitors

- Peak sales
- Cost per customer lowest
- Profits high
- Mass market
- Stable number of competitors

- Falling sales
- Cost per customer low
- Profits fall
- Customer base contracts
- Number of competitors fall

Characteristics of the Product Life Cycle Stages and Marketing Implications

The PLC describes the four key stages that a product is likely to experience between its launch and its disappearance from the market. The characteristics of the product life cycle stages are discussed below.

1. Introduction Stage

When a product is launched on the market, its sales will begin to grow slowly and profit, if any, will be rather small. This can be attributed to the lead time which is required for marketing efforts to take effect. At this stage, the product is new and untested, which implicates that potential customers may be unwilling or reluctant to purchase it. A second reason for rather low profitability at the introduction stage is that the company is unlikely to be making full use of its production capacity. As a result, it will be unable to benefit from the economies of scale that are associated with higher levels of production. The low profitability does also come from the need to recover development and launch costs. The main priority of the firm at the introduction stage is to generate widespread awareness of the product in its target segment and to stimulate trial. This is especially the case for new-to-the-world products, which are truly innovative by nature. In this case, primary demand will first have to be established. The company should focus its marketing activities on those buyers who are readiest to buy: innovators, which are usually to be found within the higher-income groups. This behaviour was evident for instance when the manufacturers of the first smartphones targeted B2B customers when the products were first introduced to the market.

There are various marketing strategies that can be used for introducing a new product to the market. Two pricing strategies are available. The choice between the two strategies depends on the nature of the product and the level of competition:

2.Growth Stage

If the product meets existing market needs or stimulates previously untapped needs, it will enter the growth stage. In this stage, sales will usually lift off. This point is called the take-off point. Profits are generated as sales revenues increase faster than costs. But competitors will also have had time to assess the product, predict its impact on the market and potentially respond with a similar or improved version of the offering. As a result, the total size of the market tends to grow, and the new competitors can increase their sales by attracting new customers rather than undercutting each other on price. An increase in the number of distribution outlets tends to go in hand with this.

3.Maturity Stage

When a the sales growth of the product slows down, the maturity stage is reached. During this stage, there is a tendency for companies to capture customers from their competitors by undercutting each other on prices and increasing promotional efforts. As competitive rivalry intensifies, the weaker competitors are forced out of the market. This point is known as the shake-out point. Thus, only the strongest players remain to dominate the more stable market. The maturity stage does usually last longer than the previous stages, but also poses the strongest challenges to the marketing: the firm will try to prevent the sales to decline, while maintaining profitability. The problem at this stage is heavy price competition and resulting increased marketing expenditure from all competitors in order to retain brand loyalty.

Certainly, there are some famous brands and products that are still in the maturity stage after thirty years and more. For instance, consider Mars' bars or Coca-Cola. Although these products have changes only very little since their launch, they are still highly successful or even more successful than ever. Other products survive by evolving to meet changing consumer needs.

During the maturity stage, the firm can choose from a number of alternative strategies to ensure the future success of the product. These strategies range from innovating the market (market development) over modifying the product (product development) to altering the marketing mix (marketing innovation). These strategies are discussed in more detail here.

4.Decline Stage

If the characteristics of the product life cycle stages and their marketing implications are understood properly, the product may have made it to the final stage in the PLC: the decline stage. Usually, the firm will have tried to keep the product as long as possible in the maturity stage. However, once the sales of a product start to fall or profitability can no further be maintained, the decline stage is reached. This does often happen as a result of the market entry of substitute products which satisfy customer needs better than the previous product.

PART-A

2 Marks Questions and Answers:

1. Define plant location.

Plant location refers to the choice of the region where men, materials, money, machinery and equipment are brought together for setting up a business or factory. A plant is a place where the cost of the product is kept to low in order to maximize gains.

2. Define product layout.

   If all the processing equipment and machines are arranged according to the sequence of operations of a product, the layout is called product type of layout. In this type of layout, only one product or one type of products is produced in an operating area. This product must be standardized and produced in large quantities in order to justify the product layout.

3. What are the methods of production?

   Job production

   Batch production

   Mass production

4. Define work study.

   "Work study is a generic term for those techniques, method study and work measurement which are used in the examination of human work in all its contexts. And which lead systematically to the investigation of all the factors which affect the efficiency and economy of the situation being reviewed, in order to effect improvement."

5. What do you mean by method study and time study?

   According to ILO, method study is "the systematic recording, analysis and critical examination of existing and proposed ways of doing work and the development and application of easier and more effective method". In short, it is a systematic procedure to analyse the work to eliminate unnecessary operations.

   According to ILO, Time Study means "a technique for determining as accurately as possible from a limited number of observations the time necessary to carry out a given activity at a different standard of performance". In other words, "time study is the art of observing and recording time required to do each detailed element of an individual operation." Practically, it studies the time taken on each element of a job.

6. Explain inventory management.

   Inventories may be defined as the combination of raw materials, work-in-progress, finished goods and other suppliers required for the smooth operation and sales of an sales of Page 53 an organization. Managing the stock at lowest cost without compromising on the production and sales activities is called inventory management.

7. Explain Marketing mix.

   It refers to the combination of four basic elements, viz., product, price, promotion and the place, known as the four P's of marketing.

   Product Mix: It is used to describe the assortment of different product types (product lines) and their varieties (product depth). In addition, different tangible and intangible features of the product also form the product mix.

   Price Mix: Price mix refers to the decisions relating to the price chargedfor the product, service or idea.

   Promotion Mix: Refers to the activities relating to promotion of the product, service or

idea. Place Mix: Place or physical distribution mix refers to the activities that are involved in transferring ownership to consumers at the right time and price.

8. Define product life cycle.

Product life-cycle management (PLM) is the succession of strategies by business management as a product goes through its life-cycle. The conditions in which a product is sold (advertising, saturation) changes over time and must be managed as it moves through its succession of stages.

The concept of product life cycle (PLC) concerns the life of a product in the market with respect to business/commercial costs and sales measures. The product life cycle proceeds through multiple phases, involves many professional disciplines, and requires many skills, tools and processes. PLC management makes the following three assumptions: Products have a limited life and thus every product has a life cycle.

PART-B

1. Define production system and explain types of productions system?
2. Distinguish between product layout and process layout?
3. Explain the principles of good plant layout?
4. Explain factors influencing plant layout decisions of a manager/entrepreneur?
5. Discuss the basic procedure involved in work study, method study and time study?
6. Explain Deming's quality principles?
7. Explain sampling procedure?
8. Explain the need for ABC analysis?
9. Discuss the functions of stores manager?
10. What is meant by product life cycle? What are the market strategies to be followed in each of those stages?
11. Explain the "Functions of marketing management"?

UNIT – 3

HUMAN RESOURCE MANAGEMENT

Human Resource Management: Human resource management is the process of managing the human resources of an organization in tune with the vision of the top management.

FUNCTIONS OF HRM
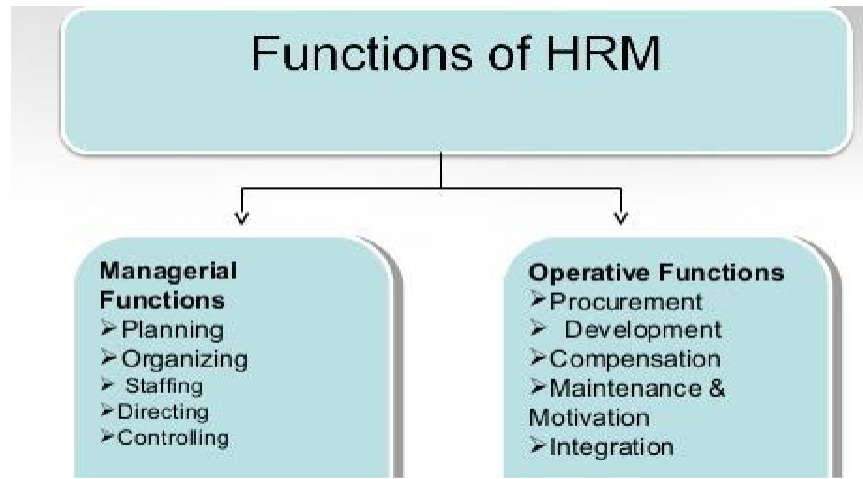
Operative Functions:

The operative functions are those tasks or duties which are specifically entrusted to the human resource or personnel department. These are concerned with employment, development, compensation, integration and maintenance of personnel of the organisation.

The operative functions of human resource or personnel department are discussed below:

1. Employment:

The first operative function of the human resource of personnel department is the employment of proper kind and number of persons necessary to achieve the objectives of the organisation. This involves recruitment, selection, placement, etc. of the personnel.

Before these processes are performed, it is better to determine the manpower requirements both in terms of number and quality of the personnel. Recruitment and selection cover the sources of supply of labour and the devices designed to select the right type of people for various jobs. Induction and placement of personnel for their better performance also come under the employment or procurement function.

2. Development:

Training and development of personnel is a follow up of the employment function. It is a duty of management to train each employee property to develop technical skills for the job for which he has been employed and also to develop him for the higher jobs in the organisation.

Proper development of personnel is necessary to increase their skills in doing their jobs and in satisfying their growth need.

For this purpose, the personnel departments will device appropriate training programs. There are several on- the-job and off-the-job methods available for training purposes. A good training program should include a mixture of both types of methods. It is important to point out that personnel department arranges for training not only of new employees but also of old employees to update their knowledge in the use of latest techniques.

3. Compensation:
This function is concerned with the determination of adequate and equitable remuneration of the employees in the organisation of their contribution to the organisational goals. The personnel can be compensated both in terms of monetary as well as non-monetary rewards.

Factors which must be borne in mind while fixing the remuneration of personnel are their basic needs, requirements of jobs, legal provisions regarding minimum wages, capacity of the organisation to pay, wage level afforded by competitors etc. For fixing the wage levels, the personnel department can make use of certain techniques like job evaluation and performance appraisal.

4. Maintenance (Working Conditions and Welfare):
Merely appointment and training of people is not sufficient; they must be provided with good working, conditions so that they may like their work and workplace and maintain their efficiency. Working conditions certainly influence the motivation and morale of the employees.

These include measures taken for health, safety, and comfort of the workforce. The personnel department also provides for various welfare services which relate to the physical and social well-being of the employees. These may include provision of cafeteria, rest rooms, counseling, group insurance, education for children of employees, recreational facilities, etc.

5. Motivation:
Employees work in the organisation for the satisfaction of their needs. In many of the cases, it is found that they do not contribute towards the organisational goals as much as they can. This happens because employees are not adequately motivated. The human resource manager helps the various departmental managers to design a system of financial and non-financial rewards to motivate the employees.

HUMAN RESOURCE PLANNING (HRP)

Human Resource Planning is a systematic process of forecasting both the prospective demand for and supply of manpower, and employment of skills with the objectives of the organization. It can also be termed as the method of reviewing the manpower necessities to ensure that right kind of skills is made available to the organization.

The main purpose of HRP is to set the goals and objectives of the company. In other words, it is to have the precise number of employees, with their skills matching the requirements of the organization, so that the organization can move towards its goals. Chief objectives of Human Resource Planning are as follows:

- Guarantee ample supply of resources, whenever there is a need for it.
- Make sure that the current manpower in the company is being used properly.
- To foresee the potential requirements of manpower at various skill levels.
- Evaluate excess or scarcity of resources that are available at a given point of time.
- Predict the impact of technological changes on the resources as well as on the kind of jobs they do.
- Manage the resources that are already employed in the organization.
- Ensure that there is a lead time available to pick and train any supplementary human resource.

Need for Human Resource Planning
The need of HRP may arise because of the following reasons:

1. In India, unemployment is a grave concern. Scarcity of manpower and that too with the required skill sets and competence, has given rise for need of Human Resource Planning.
2. It comes handy for smooth and continuous supply of workers when a huge number of employees is retiring, or leaving the company or maybe they are incapable of working due to psychological or physical ailments.
3. There is a need for Human Resource Planning when there is an increase in employee turnover, which is obvious. Some examples of this turnover are promotions, marriages, end of contract, etc.
4. Technological changes lead to a chain of changes in the organization, right from skill sets product methods and administration techniques. These changes lead to an overall change in the number of employees required and with entirely different skill set. It is here that the Human Resource Planning helps the organization deal with the necessary changes.
5. Human Resource Planning is required to meet the requirements of diversification and growth of a company.
6. There is a need for Human Resource Planning in downsizing the resources when there is a shortage of manpower. Similarly, in case of excess resources, it helps in redeploying them in other projects of the company.

Importance of Human Resource Planning
After the need for HRP, it is apt to discuss the importance of it. A few are mentioned below.

- It gives the company the right kind of workforce at the right time frame and in right figures.
- In striking a balance between demand-for and supply-of resources, HRP helps in the optimum usage of resources and also in reducing the labor cost.
- Cautiously forecasting the future helps to supervise manpower in a better way, thus pitfalls can be avoided.

- It helps the organization to develop a succession plan for all its employees. In this way, it creates a way for internal promotions.
- It compels the organization to evaluate the weaknesses and strengths of personnel thereby making the management to take remedial measures.
- The organization as a whole is benefited when it comes to increase in productivity, profit, skills, etc., thus giving an edge over its competitors.

HRP PROCESS
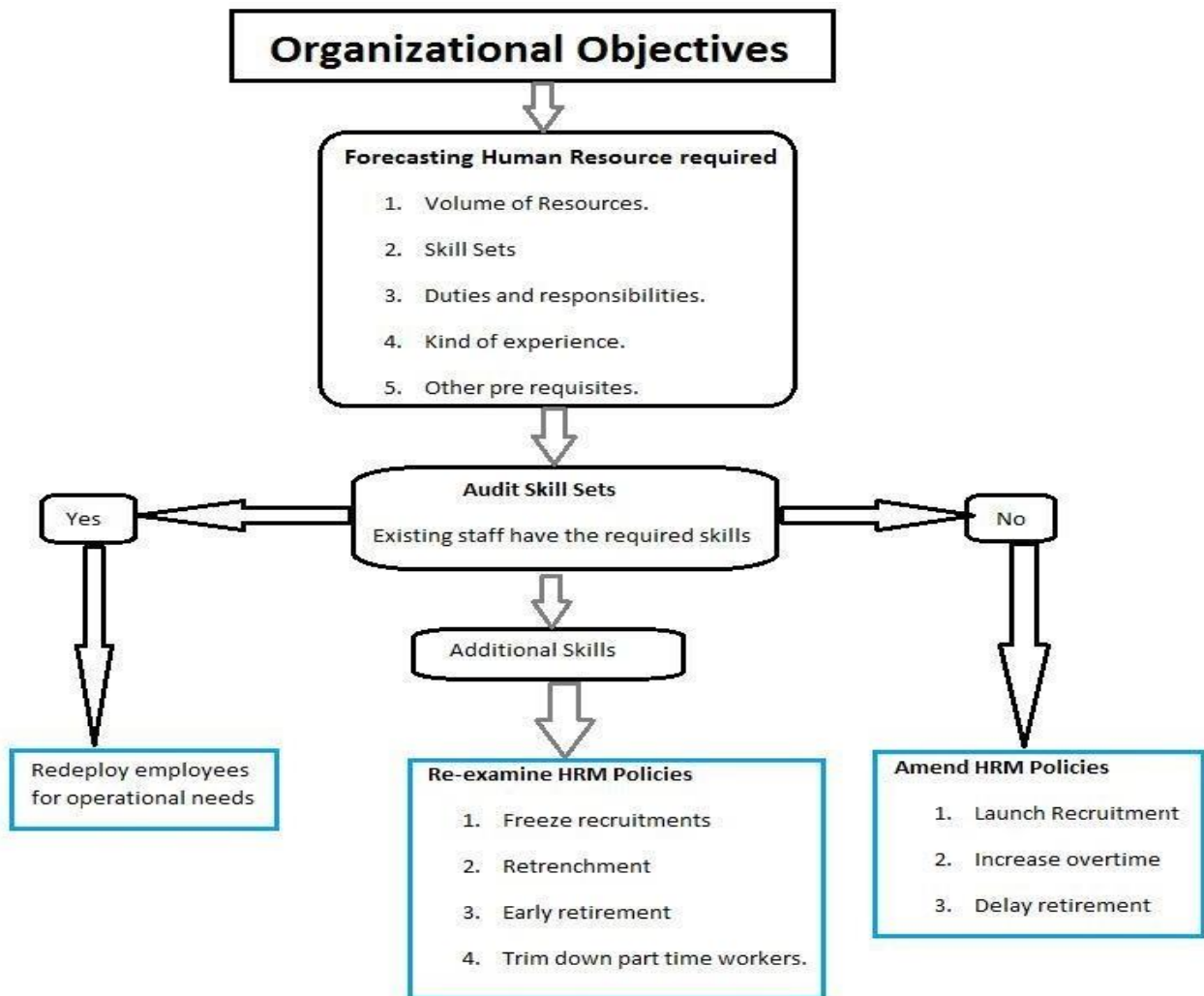
In any Human Resource Planning model there are three key elements which the management should adhere to:

1. **Forecasting recruitment needs**: There are a number of ways in forecasting your business needs, to know the exact number of employees required to run the business. Factors to be

considered are the economical situation of any given country, internal and external factors of an organization and the demand for the products.

2. **Evaluate Supply**: In estimating this, there are two aspects, one is the evaluation of the internal resources and the other is the prospective or external resources. Among the two, external factors require extra care, these include education, unemployment rate and law that is in existence. Evaluating these factors very closely will help the organization in filling the right resources at the right time with the right skill set.

3. **Supply and demand balance**: This element of Human Resource Planning is very important, as striking a balance between these two forces will help the organization in understanding if there is shortage or excess of employees available in a particular group. It also helps in understanding as to the need of full time or part time needs of the organization.

JOB EVALUATION

A **job evaluation** is a systematic way of determining the value/worth of a job in relation to other jobs in an organization. It tries to make a systematic comparison between jobs to assess their relative worth for the purpose of establishing a rational pay structure. By Abhinav yadav Job evaluation needs to be differentiated from job analysis. Job analysis is a systematic way of gathering information about a job. Every job evaluation method requires at least some basic job analysis in order to provide factual information about the jobs concerned. Thus, job evaluation begins with job analysis and ends at that point where the worth of a job is ascertained for achieving pay equity between jobs and different roles.

PROCESS OF JOB EVALUATION

The process of job evaluation involves the following steps:

- **Gaining acceptance**: Before undertaking job evaluation, top management must explain the aims and uses of the programme to managers, emphasizing the benefits. Employees and unions may be consulted, depending on the legal and employee relations environment and company culture. To elaborate the program further, presentations could be made to explain the inputs, process and outputs/benefits of job evaluation.

- **Creating job evaluation committee**: It is not possible for a single person to evaluate all the key jobs in an organization. Often a job evaluation committee consisting of experienced employees, union representatives and HR experts is created to set the ball rolling.

- **Finding the jobs to be evaluated**: Every job need not be evaluated. This may be too taxing and costly. Certain key jobs in each department may be identified. While picking up the jobs, care must be taken to ensure that they represent the type of work performed in that department, at various levels.

- **Analysing and preparing job description**: This requires the preparation of a job description and also an analysis of job specifications for successful performance. See job analysis.

- **Selecting the method of evaluation**: The method of evaluating jobs must be identified, keeping the job factors as well as organisational demands in mind. Selecting a method also

involves consideration of company culture, and the capacity of the compensation and benefits function or job evaluation committee.

- **Evaluating jobs**: The relative worth of various jobs in an organisation may be determined by applying the job evaluation method. The method may consider the "whole job" by ranking a set of jobs, or by comparing each job to a general level description. Factor-based methods require consideration of the level of various compensable factors (criteria) such as level and breadth of responsibility, knowledge and skill required, complexity, impact, accountability, working conditions, etc. These factor comparisons can be one with or without numerical scoring. If there is numerical scoring, weights can be assigned to each such factor and scores are associated with different levels of each factor, so that a total score is determined for the job. All methods result in an assigned grade level.

Non-analytical Job Evaluation Methods

1. **Ranking Method:**

This is the simplest and an inexpensive job evaluation method, wherein the jobs are ranked from he highest to the lowest on the basis of their importance in the organization. In this method, the overall job is compared with the other set of jobs and then is given a rank on the basis of its content and complexity in performing it.

Here the job is not broken into the factors, an overall analysis of the job is done. The main advantage of the ranking method is, it is very easy to understand and is least expensive. But however it is not free from the limitations, it is subjective in nature due to which employees may feel offended, and also, it may not be fruitful in the case of big organizations.

2. **Job Grading Method:**

Also known a**s Job-Classification Method.** Under this method the job grades or classes are predetermined and then each job is assigned to these and is evaluated accordingly.

For Example Class, I, comprise of the managerial level people under which sub-classification is done on the basis of the job roles such as office manager, department managers, departmental supervisor, etc.

The advantage of this method is that it is less subjective as compared to the raking method and is acceptable to the employees. And also, the entire job is compared against the other jobs and is not broken into factors. The major limitation of this method is that the jobs may differ with respect to their content and the complexity and by placing all under one category the results may be overestimated or underestimated.

Analytical Job Evaluation Methods

1. **Factor-Comparison Method:**

Under this method, the job is evaluated, and the ranks are given on the basis of a series of factors Viz. Mental effort, physical effort, skills required supervisory responsibilities, working conditions, and other relevant factors. These factors are assumed to be constant for each set of jobs. Thus, each job is compared against each other on this basis and is ranked accordingly.The advantage of this method is that it is consistent and less subjective, thus appreciable by all. But however it is the most complex and an expensive method.

2. **Point-Ranking Method:**

Under this method, each job's key factor is identified and then the subfactors are determined. These sub-factors are then assigned the points by its importance.

For example, the key factor to perform a job is skills, and then it can be further classified into sub-factors such as training required, communication skills, social skills, persuasion skills, etc.

The point ranking method is less subjective and is an error free as the rater sees the job from all the perspectives. But however it is a complex method and is time-consuming since the points and wage scale has to be decided for each factor and the sub factors.

RECRUITMENT AND SELECTION

RECRUITMENT

Recruitment (hiring) refers to the overall process of attracting, shortlisting, selecting and appointing suitable candidates for jobs (either permanent or temporary) within an organization.[1] Recruitment can also refer to processes involved in choosing individuals for unpaid roles. Managers, human resource generalists and recruitment specialists may be tasked with carrying out recruitment, but in some cases public-sector employment agencies, commercial recruitment agencies, or specialist search consultancies are used to undertake parts of the

process. Internet-based technologies to support all aspects of recruitment have become widespread.

Job analysis

In situations where multiple new jobs are created and recruited for the first time or vacancies are there or the nature in such documents as job descriptions and job specifications. Often, a company already has job descriptions for existing positions. Where already drawn up, these documents may require review and updating to reflect current requirements. Prior to the recruitment stage, a person specification should be finalized.[3]

Sourcing

Sourcing is the use of one or more strategies to attract or identify candidates to fill job vacancies. It may involve internal and/or external recruitment advertising, using appropriate media, such as job portals,local or national newspapers, social media (such as LinkedIn or RiteSite), business media, specialist recruitment media, professional publications, window advertisements, job centers, or in a variety of ways via the internet.

Alternatively, employers may use recruitment consultancies or agencies to find otherwise scarce candidates—who, in many cases, may be content in the current positions and are not actively looking to move. This initial research for candidates—also called name generation—produces contact information for potential candidates, whom the recruiter can then discreetly contact and screen.

Screening and selection

Various psychological tests can assess a variety of KSAOs, including literacy. Assessments are also available to measure physical ability. Recruiters and agencies may use applicant tracking systems to filter candidates, along with software tools for psychometric testingand performance-based assessment. In many countries, employers are legally mandated to ensure their screening and selection processes meet equal opportunity and ethical standards.

Employers are likely to recognize the value of candidates who encompass soft skills such as interpersonal or team leadership. Many companies, including multinational organizations and those that recruit from a range of nationalities, are also often concerned about whether candidate fits the prevailing company culture. Companies and recruitment agencies are now turning to video screening as a way to notice these skills without the need to invite the candidates in physical. Screening as a practice for hiring has undergone continual change over the years and often organizations are using video to maintain the aforementioned standards they set for themselves and the industry.

SELECTION

The process of identifying the most suitable persons for the organization is called selection. Selection is also called a negative function because at a stage the applications are screened and short-listed based on the selection criteria. The main purpose of selection is to

choose the right person for the right job. The job analysis, job description, and job specifications are carried out before the position is advertised. These provide adequate insight about nature of the job, its description, and its specifications, and further focus on what type of person is to be selected for a given position. These simplify the process of selection

<u>Selection process involves the following stages</u>:

1. Initial screening/Short listing
2. Comprehensive application/bio data screening
3. Aptitude or written rests
4. Group discussion
5. Personal interviews
6. Group discussion
7. Personal interviews
8. Medical examination
9. Employment offer letter

<u>PLACEMENT AND INDUCTION</u>

<u>PLACEMENT</u>

Placement is a process of assigning a specific job to each of the selected candidates. It involves assigning a specific rank and responsibility to an individual. It implies matching the requirements of a job with the qualifications of the candidate.

Significance of Placement

The significances of placement are as follows: -

* It improves employee morale.

* It helps in reducing employee turnover.

* It helps in reducing absenteeism.

* It helps in reducing accident rates.

* It avoids misfit between the candidate and the job.

* It helps the candidate to work as per the predetermined objectives of the organization.

INDUCTION

Once an employee is selected and placed on an appropriate job, the process of familiarizing him with the job and the organization is known as induction.

Induction is the process of receiving and welcoming an employee when he first joins the company and giving him basic information he needs to settle down quickly and happily and stars work.

Objectives
Induction is designed to achieve following objectives: -

* To help the new comer to overcome his shyness and overcome his shyness nervousness in meeting new people in a new environment.

* To give new comer necessary information such as location of a café, rest period etc.

* To build new employee confidence in the organization.

* It helps in reducing labor turnover and absenteeism.

* It reduces confusion and develops healthy relations in the organization.

* To ensure that the new comer do not form false impression and negative attitude towards the organization.

* To develop among the new comer a sense of belonging and loyalty to the organization.

WAGE AND SALARY ADMINISTRATION

Wage and salary administration is a collection of practices and procedures used for planning and distributing company-wide compensation programs for employees. These practices include employees at all levels and are usually handled by the accounting department of a company. Wage and salary administration procedures usually involve activities such as calculating the

number of hours worked in order to determine compensation, administering employment benefits, and answering payroll questions from employees. At the majority of companies and organizations, wages are usually dispersed to all employees on a specific date. The workers in charge of salary administration may also be charged with ensuring that the company adheres to federal and local compensation laws.

Objectives

The main objective of wage and salary administration is to establish and maintain an equitable wage and salary system. This is so because only a properly developed compensation system enables an employer to attract, obtain, retain and motivate people of required calibre and qualification in his/her organisation. These objectives can be seen in more orderly manner from the point of view of the organisation, its individual employees and collectively. There are outlined and discussed subsequently:

Organizational Objectives:
The compensation system should be duly aligned with the organisational need and should also be flexible enough to modification in response to change.

Performance objectives:

1. Enable an organisation to have the quantity and quality of staff it requires.

2. Retain the employees in the organisation.

3. Motivate employees for good performance for further improvement in performance.

4. Maintain equity and fairness in compensation for similar jobs.

Principles of wage and salary administration:
The main principles that govern wage and salary fixation are three:
1. External Equity

2. Internal Equity

3. Individual Worth.

1. External Equity:
This principle acknowledges that factors/variables external to organisation influence levels of compensation in an organisation. These variables are such as demand and supply of labour, the market rate, etc. If these variables are not kept into consideration while fixing wage and salary levels, these may be insufficient to attract and retain employees in the organisation. The

principles of external equity ensure that jobs are fairly compensated in comparison to similar jobs in the labour market.

2. Internal Equity:

Organisations have various jobs which are relative in value term. In other words, the values of various jobs in an organisation are comparative. Within your own Department, pay levels of the teachers (Professor, Reader, and Lecturer) are different as per the perceived or real differences between the values of jobs they perform.

This relative worth of jobs is ascertained by job evaluation. Thus, an ideal compensation system should establish and maintain appropriate differentials based on relative values of jobs. In other words, the compensation system should ensure that more difficult jobs should be paid more.

3. Individual Worth:

According to this principle, an individual should be paid as per his/her performance. Thus, the compensation system, as far as possible, enables the individual to be rewarded according to his contribution to organisation.

Alternatively speaking, this principle ensures that each individual's pay is fair in comparison to others doing the same/similar jobs, i.e., 'equal pay for equal work'. In sum and substance, a sound compensation system should encompass factors like adequacy of wages, social balance, supply and demand, fair comparison, equal pay for equal work and work

TRAINING AND DEVELOPMENT

Training and development

Training: Training is short-term process of utilizing systematic and organized procedure by which the staff acquires specific technical knowledge and functional skills for a definite purpose. The focus of training is the job or task.

Training Needs:

- High turnover among the new recruits

- Increase in wastage of materials

- Increase in the number of rejected units of production

- Increase in the number of customer complaints

- Increase in the accident rate

- Reduced productivity levels

- Increase in machine breakdowns

Methods of Training: There are two methods of training

A. On-the job training

B. Off-the job training

A) <u>On-the job training</u>: It is designed to make the employees immediately productive. It is learning by physically doing the work. The focus here is to provide specific skills in a real situation. These methods include:

1) <u>Job instruction training</u>: This is a method used for such jobs which can be performed with relatively low skill. Here, the trainees systematically acquire skills by following routine instructions in key processes from a qualified instructor.

2) <u>Experiential learning</u>: This is a modern approach to the learning process. This method is more . used for training the senior executives. It is a technique, which empowers the manager-trainee with the freedom of choice to act upon and the capacity to initiate, rather than simply respond, to circumstances.

3) <u>Demonstration</u>: Here, the work procedures are demonstrated to the trainees. Each of the trainees is asked to carry out the work, on a sample basis, based on his/her observation and understanding of the demonstration.

4) <u>Apprentice training</u>: Those who are selected to work in the shop floor are trained as apprentices in the factory for a brief period ranging from three months to one year, depending upon the complexity of the training. Those who show good progress in this training are likely to be absorbed in the same organization. Those who complete apprentice training are likely to get good jobs outside also.

B) <u>Off-the-job training methods</u>: provide a relatively broad idea relating to a given job or task. These are meant for developing an understanding of general principles, providing background knowledge, or generating an awareness of comparative ideas and practice. These methods include:

1) <u>Lectures/talks and class room instructions</u>: These techniques are designed to communicate specific interpersonal, technical, or problem-solving skills. Here, the trainer can maintain a tight control over learning. However, this method restricts the trainee's freedom to develop his/her own approaches to learning.

2) <u>Conferences</u>: Conferences refer to get-together of the experts from different areas of a given topic. These experts present their views based on their work experience and research results. When employees participate in such events they get a feel of the real world. They may also get motivated to perform better.

3) <u>Seminars</u>: Seminars are held periodically by the professional organisations for the benefit of all the practicing managers by taking into consideration the recent advances in a specialized area. Participation in such seminars enables the executives to get exposed to the recent developments in the area of their interest.

4) <u>Team discussions</u>: This technique develops team spirit among the executives from different departments. It also enables them to understand and appreciate each other's problems. It reinforces a feeling of unity among those who work towards common goals.

5) <u>Case study</u>: This is a predominant technique followed even in premier management institutes. This technique helps to provide an understanding of what has gone wrong in a particular case, such as Delhi Cloth Mills (DCM). Similarly, what are the factors

responsible for the success of organizations such as Reliance or Hindustan Lever. Case study technique is a very good method of learning the principles and concepts. However, this method has one weakness. The circumstances you are likely to face in your life may be very different from the cases you have analyzed earlier! Case studies help to enhance the analytical & decision making skills

6) Role-playing: The participants are assigned roles and are asked to react to one another, as they would do in their managerial jobs. These roles are eventually exchanged.

In other words, each participant will get a turn to play all the roles. For instance, the role-playing in a grievance-handling situation involves two players: In the first step, the worker presents his grievance to the personnel manager. In the second step, the worker plays the role of the personnel manager while the personnel manager plays the role of the worker. Role-playing allows participants to understand problems of each other.

Development: Development is an activity aimed at career growth rather than immediate performance. Employee development is the process, which helps him or her to understand and interpret knowledge rather than teaching a specific set of functional skills. Development, therefore, focuses more on employee's personal growth in the near future.

PERFORMANCE APPRAISAL

Performance Appraisal: Performance appraisal is the process of measuring and evaluating the performance or accomplishments, including behaviour, of an employee on the job front for a given period. The purpose is to assess the worth and value of a person to the organization. It is also meant for assessing his/her potential for future development in an objective manner.

Why appraise the performance:

1. To assess the employee's present level of performance

2. To identify the strengths or weaknesses of individual employee

3. To provide feedback to the employee so that he can improve his/her performance

4. To provide an objective basis for rewarding the employees for their performance

5. To motivate those employees who perform

6. To check and punish those employees who fail to perform

7. To identify the gaps in performance, and thus, assess training and development needs

8. To identify the employee's potential to perform

9. To provide a database for evolving succession strategies

Steps in performance Appraisal:

1. Create set up performance standards

2. Mutually set identifiable and measurable

3. Measure present level of performance

4. Compare and appraise present level of performance with standard

5. Discuss the appraisal with employee

6. Identify and initiate the corrective action

Performance Appraisal Methods: Traditional and Modern Methods!

Each method of performance appraisal has its strengths and weaknesses may be suitable for one organisation and non-suitable for another one. As such, there is no single appraisal method accepted and used by all organisations to measure their employees' performance.

All the methods of appraisal devised so far have been classified differently by different authors. While DeCenzo and Robbins'^ have classified appraisal methods into three categories: absolute methods, relative methods and objective methods; Aswathappa has classified these into two categories past-oriented and future-oriented.

Table 28.4 : Methods of Performance Appraisal

Traditional Methods	Modern Methods
1. Ranking method	1. Management by Objectives (MBO)
2. Paired comparison	2. Behaviourally anchored rating scales
3. Grading	3. Assessment centres
4. Forced distribution method	4. 360-degree appraisal
5. Forced choice method	5. Cost accounting method
6. Checklist method	
7. Critical incidents method	
8. Graphic scale method	
9. Essay method	
10. Field review method	
11. Confidential report	

In the discussion that follows, each method under both categories will be described briefly.

Traditional Methods:

Ranking Method:

It is the oldest and simplest formal systematic method of performance appraisal in which employee is compared with all others for the purpose of placing order of worth. The employees are ranked from the highest to the lowest or from the best to the worst.

In doing this the employee who is the highest on the characteristic being measured and also the one who is L lowest, are indicated. Then, the next highest and the next lowest between next highest and lowest until all the employees to be rated have been ranked. Thus, if there are ten employees to be appraised, there will be ten ranks from 1 to 10.

However, the greatest limitations of this appraisal method are that:

(i) It does not tell that how much better or worse one is than another,

(ii) The task of ranking individuals is difficult when a large number of employees are rated, and

(iii) It is very difficult to compare one individual with others having varying behavioural traits. To remedy these defects, the paired comparison method of performance appraisal has been evolved.

Paired Comparison:
In this method, each employee is compared with other employees on one- on one basis, usually based on one trait only. The rater is provided with a bunch of slips each coining pair of names, the rater puts a tick mark against the employee whom he insiders the better of the two. The number of times this employee is compared as better with others determines his or her final ranking.

The number of possible pairs for a given number of employees is ascertained by the following formula:
N (N-1)/2

Where N = the total number of employees to be evaluated. Let this be exemplified with an imaginary example.

If the following five teachers have to be evaluated by the Vice Chanceller of a University:

(K), Mohapatra (M Raul (R), Venkat (V), and Barman (B), the above formula gives 5 (5 -1) / 2 or 10 pairs.

These are:

K with M			
K with R	M with R		
K with V	M with V	R with V	
K with B	M with B	R with B	V with B

Thus, the pairs so ascertained give the maximum possible permutations and combinations. The number of times a worker is considered better makes his/her score. Such scores are determined for each worker and he/she is ranked according to his/her score. One obvious disadvantage of this method is that the method can become unwieldy when large numbers of employees are being compared.

Grading Method:
In this method, certain categories of worth are established in advance and carefully defined. There can be three categories established for employees: outstanding, satisfactory and unsatisfactory. There can be more than three grades. Employee performance is compared with

grade definitions. The employee is, then, allocated to the grade that best describes his or her performance.

Such type of grading is done is Semester pattern of examinations and in the selection of a candidate in the public service sector. One of the major drawbacks of this method is that the rater may rate most of the employees on the higher side of their performance.

Forced Distribution Method:
This method was evolved by Tiffen to eliminate the central tendency of rating most of the employees at a higher end of the scale. The method assumes that employees' performance level confirms to a normal statistical distribution i.e., 10,20,40,20 and 10 per cent. This is useful for rating a large number of employees' job performance and promo ability. It tends to eliminate or reduce bias.

It is also highly simple to understand and easy to apply in appraising the performance of employees in organisations. It suffer from the drawback that improve similarly, no single grade would rise in a ratings.

Forced-Choice Method:
The forced-choice method is developed by J. P. Guilford. It contains a series of groups of statements, and rater rates how effectively a statement describes each individual being evaluated. Common method of forced-choice method contains two statements, both positive and negative.

Examples of positive statements are:
1. Gives good and clear instructions to the subordinates.

2. Can be depended upon to complete any job assigned.

A pair of negative statements may be as follows:
1. Makes promises beyond his limit to keep these.

2. Inclines to favour some employees.

Each statement carries a score or weight, which is not made known to the rater. The human resource section does rating for all sets of statements— both positive and negative. The final rating is done on the basis of all sets of statements. Thus, employee rating in this manner makes the method more objective. The only problem associated with this method is that the actual constructing of several evaluative statements also called 'forced-choice scales', takes a lot of time and effort.

Check-List Method:
The basic purpose of utilizing check-list method is to ease the evaluation burden upon the rater. In this method, a series of statements, i.e., questions with their answers in 'yes' or 'no' are prepared by the HR department (see Figure 28-2). The check-list is, then, presented to the rater

to tick appropriate answers relevant to the appraisee. Each question carries a weight-age in relationship to their importance.

	Yes	No
1. Is regular on the job?	—	—
2. Does maintain discipline well?	—	—
3. Does show consistent behaviour to all students?	—	—
4. Is interested in (teaching) job?	—	—
5. Does ever make mistakes?	—	—
6. Does show favouritism to particular students?	—	—
7. Is willing to help colleagues?	—	—

When the check-list is completed, it is sent to the HR department to prepare the final scores for all appraises based on all questions. While preparing questions an attempt is made to determine the degree of consistency of the rater by asking the same question twice but in a different manner (see, numbers 3 and 6 in Figure 28-2).

However, one of the disadvantages of the check-list method is that it is difficult to assemble, analyse and weigh a number of statements about employee characteristics and contributions From a cost stand point also, this method may be inefficient particularly if there are a number of job categories in the organisation, because a check-list of questions must be prepared for each category of job. It will involve a lot of money, time and efforts.

Critical Incidents Method:
In this method, the rater focuses his or her attention on those key or critical behaviours that make the difference between performing a job in a noteworthy manner (effectively or ineffectively). There are three steps involved in appraising employees using this method.

First, a list of noteworthy (good or bad) on-the-job behaviour of specific incidents is prepared. Second, a group of experts then assigns weightage or score to these incidents, depending upon their degree of desirability to perform a job. Third, finally a check-list indicating incidents that describe workers as "good" or "bad" is constructed. Then, the check-list is given to the rater for evaluating the workers.

The basic idea behind this rating is to apprise the workers who can perform their jobs effectively in critical situations. This is so because most people work alike in normal situation. The strength of critical incident method is that it focuses on behaviours and, thus, judge's performance rather than personalities.

Its drawbacks are to regularly write down the critical incidents which become time-consuming and burdensome for evaluators, i.e., managers. Generally, negative incidents are positive ones. It is rater's inference that determines which incidents are critical to job performance. Hence, the method is subject to all the limitations relating to subjective judgments.

Graphic Rating Scale Method:

The graphic rating scale is one of the most popular and simplest techniques for appraising performance. It is also known as linear rating scale. In this method, the printed appraisal form is used to appraise each employee.

The form lists traits (such as quality and reliability) and a range of job performance characteristics (from unsatisfactory to outstanding) for each trait. The rating is done on the basis of points on the continuum. The common practice is to follow five points scale.

The rater rates each appraisee by checking the score that best describes his or her performance for each trait all assigned values for the traits are then totaled. Figure 28-3 shows a typical graphic rating scale.

Fig. 28.3: Sample of Graphic Rating Scale Items and Format

Performance Factor	Performance Rating				
Quality of work is the accuracy, skill, and completeness of work.	☐ Consistently unsatisfactory	☐ Occasionally unsatisfactory	☐ Consistently satisfactory	☐ Sometimes superior	☐ Consistently superior
Quantity of work is the volume of work done in a normal workday.	☐ Consistently unsatisfactory	☐ Consistently unsatisfactory	☐ Consistently satisfactory	☐ Sometimes superior	☐ Consistently superior

Performance Factor	Performance Rating				
Job knowledge is information pertinent to the job that an individual should have for satisfactory job performance.	☐ Poorly informed about work duties	☐ Occasionally unsatisfactory	☐ Can answer most questions about the job	☐ Understands all phases of the job	☐ Has complete mastery of all phases of the job
Dependability in following directions and company policies without supervision.	☐ Required constant supervision	☐ Requires occasional follow-up	☐ Usually can be counted on	☐ Requires very little supervision	☐ Requires absolute minimum of supervision

This method is good for measuring various job behaviours of an employee. However, it is also subjected to rater's bias while rating employee's behaviour at job. Occurrence of ambiguity in design- mg the graphic scale results in bias in appraising employee's performance.

Essay Method:
Essay method is the simplest one among various appraisal methods available. In this method, the rater writes a narrative description on an employee's strengths, weaknesses, past performance, potential and suggestions for improvement. Its positive point is that it is simple in use. It does not require complex formats and extensive/specific training to complete it.

However, essay method, like other methods, is not free from drawbacks. In the absence of any prescribed structure, the essays are likely to vary widely in terms of length and content. And, of course, the quality of appraisal depends more upon rater's writing skill than the appraiser's actual level of performance.

Moreover, because the essays are descriptive, the method provides only qualitative information about the employee. In the absence of quantitative data, the evaluation suffers from subjectivity problem. Nonetheless, the essay method is a good start and is beneficial also if used in conjunction with other appraisal methods.

Field Review Method:
When there is a reason to suspect rater's biasedness or his or her rating appears to be quite higher than others, these are neutralised with the help of a review process. The review process is usually conducted by the personnel officer in the HR department.

The review process involves the following activities:
(a) Identify areas of inter-rater disagreement.

(b) Help the group arrive at a consensus.

(c) Ensure that each rater conceives of the standard similarity.

However, the process is a time-consuming one. The supervisors generally resent what they consider the staff interference. Hence, the method is not widely used.

Confidential Report:
It is the traditional way of appraising employees mainly in the Government Departments. Evaluation is made by the immediate boss or supervisor for giving effect to promotion and transfer. Usually a structured format is devised to collect information on employee's strength weakness, intelligence, attitude, character, attendance, discipline, etc. report.

Modern Methods:

Management by Objectives (MBO):

Most of the traditional methods of performance appraisal are subject to the antagonistic judgments of the raters. It was to overcome this problem; Peter F. Drucker propounded a new concept, namely, management by objectives (MBO) way back in 1954 in his book.

The Practice of management. The concept of MBO as was conceived by Drucker, can be described as a "process whereby the superior and subordinate managers of an organization jointly identify its common goals, define each individual's major areas of responsibility in terms of results expected of him and use these measures as guides for operating the unit and assessing the contribution of each its members".

In other words, stripped to its essentials, MBO requires the manager to goals with each employee and then periodically discuss his or her progress toward these goals.

In fact, MBO is not only a method of performance evaluation. It is viewed by the Practicing managers and pedagogues as a philosophy of managerial practice because .t .s a method by wh.ch managers and subordinates plan, organise, communicate, control and debate.

An MBO programme consists of four main steps: goal setting, performance standard, comparison, and periodic review. In goal-setting, goals are set which each individual, s to attain. The superior and subordinate jointly establish these goals. The goals refer to the desired outcome to be achieved by each individual employee.

In performance standards, the standards are set for the employees as per the previously arranged time period. When the employees start performing their jobs, they come to know what is to be done, what has been done, and what remains to be done.

In the third step the actual level of goals attained are compared with the goals agreed upon. This enables the evaluator to find out the reasons variation between the actual and standard performance of the employees. Such a comparison helps devise training needs for increasing employees' performance it can also explore the conditions having their bearings on employees' performance but over which the employees have no control.

Finally, in the periodic review step, corrective measure is initiated when actual performance deviates from the slandered established in the first step-goal-setting stage. Consistent with the MBO philosophy periodic progress reviews are conducted in a constructive rather than punitive manner.

The purpose of conducting reviews is not to degrade the performer but to aid in his/her future performance. From a motivational point of view, this would be representative of McGregor's theories.

Figure 28.4 present the MBO method of performance appraisal presently used by an engineering giant i.e., Larsen and Turbro Limited.

CONFIDENTIAL PA Form: 2B	NAME	EMP. P. S. No.	CADRE	GROUP	DEPT.

EXECUTIVES &
SUPERVISORS

LARSEN & TOUBRO LIMITED
HUMAN RESOURCE DEVELOPMENT—PERFORMANCE APPRAISAL SYSTEM
PERFORMANCE ANALYSIS AND REVIEW
APRIL ... TO MARCH .....

		NAME	DATE	SIGNATURE
EMPLOYEE				
IMMEDIATE. SUPERIOR				
NEXT SUPERIOR	1. 2.			
PERSONNEL/HRD DEPT.				

A PERFORMANCE REVIEW AGAINST OBJECTIVES		**B1** By Immediate Superior				

A1	By Employee		Outstanding	V. Good	Good	Adequate	Inadequate
AGREED OBJECTIVES & TARGETS (Not more than five)	RESULTS ACHIEVED						
1.							
2.							
3.							
4.							
5.							

A2 SELF REVIEW (By Employee)

SIGNIFICANT CONTRIBUTORS (JOB OR PROFESSION RELATED–NOT COVERED ABOVE)

IMPORTANT FACTORS FACILITATING PERFORMANCE
IMPORTANT FACTORS HINDERING PERFORMANCE

B2 PERFORMANCE AGAINST OBJECTIVES (By Immediate Superior)
OUTSTANDING   V. GOOD   GOOD   ADEQUATE   INADEQUATE (Contd..

C	Appraisal of Critical Attributes (By Immediate Superior)		OUTSTANDING	V.GOOD	GOOD	ADEQUATE	INADEQUATE
C1		**Critical Attributes**					
1.	INNOVATIVENESS	Ability to think new and better ways of doing things that result in introduction of new ideas or improvements of the systems and operations.					
2.	INITIATIVE	Ability to determine and initiate actions that result in improved handiling of jobs, without waiting to be told.					
3.	INTERPERSONAL & TEAM RELATIONSHIP	Ability to interact effectively with people at all levels to gain their confidence and respect and work in a collaborative and participative manner.					
4.	RESOURCEFULNESS	Ability to muster resources to achieve desired results and devise ways and means of solving problems in difficult situations.					
5.	COMMUNICATION SKILLS	Ability to convey thoughts and feelings clearly both through oral as well as written expressions for better understanding.					

Specific role related attributes (Identified in the beginning of the year)

6.							
7.							

C2	Areas of Strengths & Improvements (By Immediate Superior)

MAJOR STRENGTHS

AREAS OF IMPROVEMENTS

C3	Potential Areas for Growth (By Immediate Superior)

D	Recommendations for Training & Development (By Immediate Superior)

D1	IN- COMPANY TRAINING PROGRAMMES

Description	Code	Description	Code
1.		2.	

D2	OTHER TRAINING PROGRAMMES

1.		2.	

D3	SPECIFIC DEVELOPMENT PLANS

Proposed Action (Tick as applicable)	Details of Actions Required

☐ Job Rotation ☐ Job Enlargement ☐ Special Assignment
☐ Deputation to Other Dept. ☐ Other (Please Specify)

E	Comments by Next Superior (S)

E1	On Specific Development Plans Stated Above in D3
E2	Overall Observations:

F	For Use by Personnel/HRD Co-ordinator

Fig. 28.4 : MBO Method of Performance Appraisal at Larsen and Toubro Limited

Limitation of MBO:
MBO is not a panacea, cure for all organisational problems.

As with other methods, it also suffers from some limitations as catalogued below:
(i) Setting Un-measurable Objectives:
One of the problems MBO suffers from is unclear and un-measurable objectives set for attainment. An objective such as "will do a better job of training" is useless as it is un-measurable. Instead, "well have four subordinates promoted during the year" is a clear and measurable objective.

(ii) Time-consuming:
The activities involved in an MBO programme such as setting goals, measuring progress, and providing feedback can take a great deal of time.

(iii) Tug of War:
Setting objectives with the subordinates sometimes turns into a tug of war in the sense that the manager pushes for higher quotas and the subordinates push for lower ones. As such, goals so set are likely to be unrealistic.

(iv) Lack of Trust:
MBO is likely to be ineffective in an environment where management has little trust in its employees. Or say, management makes decisions autocratically and relies heavily on external controls.

Behaviourally Anchored Rating Scales (BARS):
The problem of judgmental performance evaluation inherent in the traditional methods of performance evaluation led to some organisations to go for objective evaluation by developing a technique known as "Behaviourally Anchored Rating Scales (BARS)" around 1960s. BARS are descriptions of various degrees of behaviour with regard to a specific performance dimension.

It combines the benefits of narratives, critical incidents, and quantified ratings by anchoring a quantified scale with specific behavioural examples of good or poor performance. The proponents of BARS claim that it offers better and more equitable appraisals than do the other techniques of performance appraisal we discussed so far.

Developing BARS typically involves five steps:
1. Generating Critical Incidents:
Critical incidents (or say, behaviours) are those which are essential for the performance of the job effectively Persons who are knowledgeable of the job in question (jobholders and/or supervisors) are asked to describe specific critical incidents of effective and ineffective

performance. These critical incidents may be described in a few short sentences or phrases using the terminology.

2. Developing Performance Dimensions:
The critical incidents are then clustered into a smaller set of performance dimensions, usually five to ten. Each cluster, or say, dimension is then defined.

3. Reallocating Incidents:
Various critical incidents are reallocated dimensions by another group of people who also know the job in question. Various critical incidents so reallocated to original dimensions are clustered into various categories, with each cluster showing similar critical incidents. Those critical incidents are retained which meet 50 to 80% of agreement with the cluster as classified in step 2.

4. Scaling Incidents:
The same second group as in step 3 rates the behaviour described in each incident in terms of effectiveness or ineffectiveness on the appropriate dimension by using seven to nine points scale. Then, average effectiveness ratings for each incident are determined to decide which incidents will be included in the final anchored scales.

5. Developing Final BARS Instrument:
A subset of the incidents (usually six or seven per cluster) is used as a behavioural anchor for the final performance dimensions. Finally, a BARS instrument with vertical scales is drawn to be used for performance appraisal, as in Figure 27-5.

How BARS is developed can be exemplified with an example of grocery checkout clerks working in a large grocery chain.

A number of critical incidents involved in checking out of grocery can be clustered into seven performance dimensions:

1. Knowledge and Judgment

2. Conscientiousness

3. Skill in Human Relations

4. Skill in Operation of Register

5. Skill in Bagging

6. Organisational Ability of Check stand Work

7. Skill in Monetary Transactions

8. Observational Ability

Now, a BARS for one of these performance dimensions, namely, "knowledge and judgment" can be developed, as in Figure 28-5. Notice how the typical BARS is behaviourally anchored with specific critical incidents.
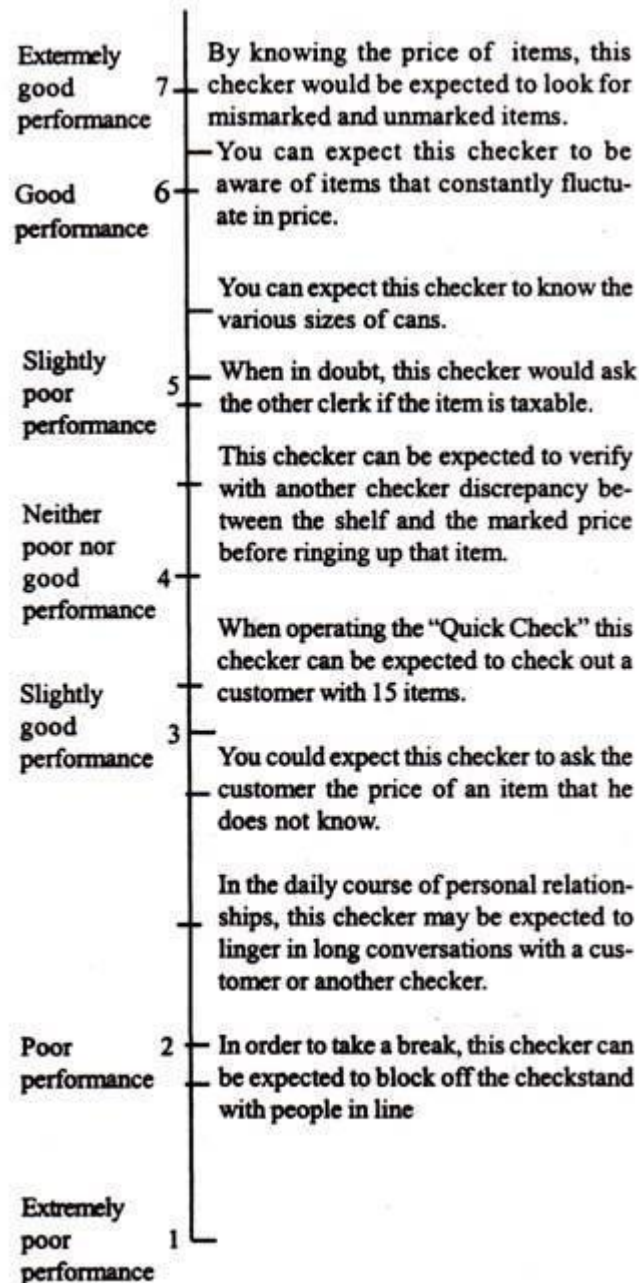
Extremely good performance	7	By knowing the price of items, this checker would be expected to look for mismarked and unmarked items.
Good performance	6	You can expect this checker to be aware of items that constantly fluctuate in price.
		You can expect this checker to know the various sizes of cans.
Slightly poor performance	5	When in doubt, this checker would ask the other clerk if the item is taxable.
Neither poor nor good performance	4	This checker can be expected to verify with another checker discrepancy between the shelf and the marked price before ringing up that item.
		When operating the "Quick Check" this checker can be expected to check out a customer with 15 items.
Slightly good performance	3	You could expect this checker to ask the customer the price of an item that he does not know.
		In the daily course of personal relationships, this checker may be expected to linger in long conversations with a customer or another checker.
Poor performance	2	In order to take a break, this checker can be expected to block off the checkstand with people in line
Extremely poor performance	1	

Fig. 28.5 : BARS for Appraising of a Grocery Checker's Job

BARS method of performance appraisal is considered better than the traditional ones because it provides advantages like a more accurate gauge, clearer standards, better feedback, and consistency in evaluation. However, BARS is not free from limitations.

The research on BARS indicates that it too suffers from distortions inherent in most rating scales. The research study concluded that "it is clear that research on BARS to date does not support the

high promise regarding scale independence In short, while BARS may outperform conventional rating techniques, it is clear that they are not a panacea for obtaining high interrater reliability"

Assessment Centres:

The introduction of the concept of assessment centres as a method of performance method is traced back in 1930s in the Germany used to appraise its army officers. The concept gradually spread to the US and the UK in 1940s and to the Britain in 1960s.

The concept, then, traversed from the army to business arena during 1960s. The concept of assessment centre is, of course, of a recent origin in India. In India, Crompton Greaves, Eicher, Hindustan Lever and Modi Xerox have adopted this technique of performance evaluation.

In business field, assessment centres are mainly used for evaluating executive or supervisory potential. By definition, an assessment centre is a central location where managers come together to participate in well-designed simulated exercises. They are assessed by senior managers supplemented by the psychologists and the HR specialists for 2-3 days.

Assessee is asked to participate in in-basket exercises, work groups, simulations, and role playing which are essential for successful performance of actual job. Having recorded the assessee's behaviour the raters meet to discuss their pooled information and observations and, based on it, they give their assessment about the assesee. At the end of the process, feedback in terms of strengths and weaknesses is also provided to the assesees.

The distinct advantages the assessment centres provide include more accurate evaluation, minimum biasedness, right selection and promotion of executives, and so on. Nonetheless, the technique of assessment centres is also plagued by certain limitations and problems. The technique is relatively costly and time consuming, causes suffocation to the solid performers, discourages to the poor performers (rejected), breeds unhealthy competition among the assessees, and bears adverse effects on those not selected for assessment.

360 – Degree Appraisal:

Yet another method used to appraise the employee's performance is 360 – degree appraisal. This method was first developed and formally used by General Electric Company of USA in 1992. Then, it travelled to other countries including India. In India, companies like Reliance Industries, Wipro Corporation, Infosys Technologies, Thermax, Thomas Cook etc., have been using this method for appraising the performance of their employees. This feedback based method is generally used for ascertaining training and development requirements, rather than for pay increases.

Under 360 – degree appraisal, performance information such as employee's skills, abilities and behaviours, is collected "all around" an employee, i.e., from his/her supervisors, subordinates, peers and even customers and clients.

In other worlds, in 360-degree feedback appraisal system, an employee is appraised by his supervisor, subordinates, peers, and customers with whom he interacts in the course of his job performance. All these appraisers provide information or feedback on an employee by completing survey questionnaires designed for this purpose.

All information so gathered is then compiled through the computerized system to prepare individualized reports. These reports are presented to me employees being rated. They then meet me appraiser—be it one's superior, subordinates or peers—and share the information they feel as pertinent and useful for developing a self-improvement plan.

In 360 – degree feedback, performance appraisal being based on feedback "all around", an employee is likely to be more correct and realistic. Nonetheless, like other traditional methods, this method is also subject to suffer from the subjectivity on the part of the appraiser. For example, while supervisor may penalise the employee by providing negative feedback, a peer, being influenced by 'give and take feeling' may give a rave review on his/her colleague.

Cost Accounting Method:

This method evaluates an employee's performance from the monetary benefits the employee yields to his/her organisation. This is ascertained by establishing a relationship between the costs involved in retaining the employee, and the benefits an organisation derives from Him/her.

While evaluating an employee's performance under this method, the following factors are also taken into consideration:

1. Unit wise average value of production or service.

2. Quality of product produced or service rendered.

3. Overhead cost incurred.

4. Accidents, damages, errors, spoilage, wastage caused through unusual wear and tear.

5. Human relationship with others.

6. Cost of the time supervisor spent in appraising the employee.

EMPLOYEES GRIEVANCES

Definition: Employee Grievance

Employee grievance refers to the dissatisfaction of an employee with what he expects from the company and its management. A company or employer is expected to provide an employee with a safe working environment, realistic job preview, adequate compensation, respect etc. However, employee grievance is caused when there is a gap between what the employee expects and what he receives from the employer.

Employee grievances may or may not be justified. However, they need to be tackled adequately because they not only lower the motivation and performance of the employee but also affects the work environment. Employee grievances if left unchecked can lead to large disputes within the company. Any company must have a proper channel for employee grievance redressal.

Employee Grievance should be handled in a proper and well defined manner. If an employee reports a matter related to a policy or something he or she is not happy with or wants to complaint against, a framework defined in policy should be used.

Typical Steps in Employee Grievance Handling:

1. Employee grievance should be submitted in a proper channel

2. The supervisor of the employee should be informed and spoken to

3. A review committee should examine the grievance for its validity and against the company's policy

4. Resolution should be provided if the grievance is valid

5. If the employee grievance is not resolved there should be a further body where it can be appealed.

Causes of Grievances:
Grievances may occur due to a number of reasons:
1. Economic:
Employees may demand for individual wage adjustments. They may feel that they are paid less when compared to others. For example, late bonus, payments, adjustments to overtime pay, perceived inequalities in treatment, claims for equal pay, and appeals against performance-related pay awards.

2. Work environment:
It may be undesirable or unsatisfactory conditions of work. For example, light, space, heat, or poor physical conditions of workplace, defective tools and equipment, poor quality of material, unfair rules, and lack of recognition.

3. Supervision:
It may be objections to the general methods of supervision related to the attitudes of the supervisor towards the employee such as perceived notions of bias, favouritism, nepotism, caste affiliations and regional feelings.

4. Organizational change:
Any change in the organizational policies can result in grievances. For example, the implementation of revised company policies or new working practices.

5. Employee relations:

Employees are unable to adjust with their colleagues, suffer from feelings of neglect and victimization and become an object of ridicule and humiliation, or other inter- employee disputes.

6. Miscellaneous:
These may be issues relating to certain violations in respect of promotions, safety methods, transfer, disciplinary rules, fines, granting leaves, medical facilities, etc.

Effects of Grievance:
Grievances, if not identified and redressed, may adversely affect workers, managers, and the organization.

The effects are the following:
1. On the production:
a. Low quality of production

b. Low productivity

c. Increase in the wastage of material, spoilage/leakage of machinery

d. Increase in the cost of production per unit

2. On the employees:
a. Increase in the rate of absenteeism and turnover

b. Reduction in the level of commitment, sincerity and punctuality

c. Increase in the incidence of accidents

d. Reduction in the level of employee morale.

3. On the managers:
a. Strained superior-subordinate relations.

b. Increase in the degree of supervision and control.

c. Increase in indiscipline cases

d. Increase in unrest and thereby machinery to maintain industrial peace

Need for a Formal Procedure to Handle Grievances:
A grievance handling system serves as an outlet for employee frustrations, discontents, and gripes like a pressure release value on a steam boiler. Employees do not have to keep their frustrations bottled up until eventually discontent causes explosion.

The existence of an effective grievance procedure reduces the need of arbitrary action by supervisors because supervisors know that the employees are able to protect such behavior and make protests to be heard by higher management. The very fact that employees have a right to be heard and are actually heard helps to improve morale. In view of all these, every organization should have a clear-cut procedure for grievance handling.

PART-A

2Marks Questions:

1. What is HRM

A. HRM is a process of making the efficient and effective use of human resources so that the set goals are achieved. Let us also consider some important definitions of HRM. According to Flippo "Personnel management, or say, human resource management is the planning, organizing, directing and controlling of the procurement, development, compensation, integration, maintenance, and separation of human resources to the end that individual, organizational and social objectives are accomplished".

2. What is Training and Development

A. This function of human resource management helps the employees to acquire skills and knowledge to perform their jobs effectively. Training an development programs are organized for both new and existing employees. Employees are prepared for higher level responsibilities through training and development.

3. What is Recruitment

A. Recruitment of candidates is the function preceding the selection, which brings the pool of prospective candidates for the organization so that the management can select the right candidate from this pool

4. What is Selection

A. Employee Selection is the process of putting right men on right job. It is a procedure of matching organizational requirements with the skills and qualifications of people. Effective selection can be done only when there is effective matching. By selecting best candidate for the required job, the organization will get quality performance of employees.

5. What is HRP

A. Human resource is the most important asset of an organization. Human resources planning are the important managerial function. It ensures the right type of people, in the right number, at the right time and place, who are trained and motivated to do the right kind of work at the right time. The enterprise will estimate its manpower requirements and then find out the sources from which the needs will be met. If required manpower is not available then the work will suffer. Developing countries are suffering from the shortage of trained managers.

6. What is Job Analysis

A. Job Analysis is a systematic exploration, study and recording the responsibilities, duties, skills, accountabilities, work environment and ability requirements of a specific job. It also involves determining the relative importance of the duties, responsibilities and physical and emotional skills for a given job. All these factors identify what a job demands and what an employee must possess to perform a job productively.

7. What is a Career Planning and Development

A. It is a sequence of positions occupied in a persons lifetime. Career development is the series of activities or the on-going/lifelong process of developing one's career. Career development usually refers to managing one's career in an intra-organizational or inter-organizational scenario.

8. What is Job-Description

A. Job Description is the detailed information about duties, responsibilities nature of work, chain of command, reporting relationships, job title etc

9. What is Job-Specification

A   Job Specification is the sum of candidates qualifications, skills, knowledge, abilities, experience required to perform a particular job.

10. What is the difference between Training and Development?

A. Training is short-term process of utilizing systematic and organized

Procedure by which the staff acquires specific technical knowledge and

Functional skills for a definite purpose. The focus of training is the job or task.

Development is an activity aimed at career growth rather than immediate performance.

PART-B

1. What is HRM? Explain the Functions of HRM?
2. What is HRP? Explain the process of HRP?
3. What is Recruitment? Explain the factors affecting Recruitment.
4. What are the different Sources of Recruitment.
5. Explain in detail the various Training Methods.
6. Explain in detail the various Development Methods.
7. What is Career Planning and Development? Explain the stages in Career Development.

UNIT – 4

STRATEGIC MANAGEMENT

STRATEGIC MANAGEMENT

Strategic management is defined as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable the organization to achieve its objectives." Generally, strategic management is not only related to a single specialization but covers cross-functional or overall organization.

Strategic management is a comprehensive area that covers almost all the functional areas of the organization. It is an umbrella concept of management that comprises all such functional areas as marketing, finance & account, human resource, and production & operation into a top level management discipline. Therefore, strategic management has an importance in the organizational success and failure than any specific functional areas.

- Strategic management deals with organizational level and top level issues whereas functional or operational level management deals with the specific areas of the business.
- Top-level managers such as Chairman, Managing Director, and corporate level planners involve more in strategic management process.
- Strategic management relates to setting vision, mission, objectives, and strategies that can be the guideline to design functional strategies in other functional areas
- Therefore, it is top-level management that paves the way for other functional or operational management in an organization

Definition:

"The determination of the basic long-term goals & objectives of an enterprise and the adoption of the course of action and the allocation of resources necessary for carrying out these goals".

BY - **Chandler**

ISION

Vision statement provides direction and inspiration for organizational goal setting. Vision is **where you see yourself at the end of the horizon** OR milestone therein. It is a **single statement dream** OR aspiration. Typically a vision has the flavors of 'Being Most admired', 'Among the top league', 'Being known for innovation', 'being largest and greatest' and so on.

Typically 'most profitable', 'Cheapest' etc. don't figure in vision statement. Unlike goals, vision is not SMART. It **does not have mathematics** OR timelines attached to it.

Vision is **a symbol, and a cause** to which we want to bond the stakeholders, (mostly employees and sometime share-holders). As they say, the people work best, when they are working for a cause, than for a goal. Vision provides them that cause.

Vision **is long-term statement and typically generic & grand.** Therefore a vision statement does not change unless the company is getting into a totally different kind of business.

Vision **should never carry the 'how'** part. For example ' To be the most admired brand in Aviation Industry' is a fine vision statement, which can be spoiled by extending it to' To be the most admired brand in the Aviation Industry by providing world-class in-flight services'. The reason for not including 'how' that 'how' is may keep on changing with time.

Challenges related to Vision Statement:

Putting-up a vision is not a challenge. The problem is to make employees engaged with it. Many a time, terms like vision, mission and strategy become more a subject of scorn than being looked up-to. This is primarily because leaders may not be able to make a connect between the vision/mission and people's every day work. Too often, employees see a gap between the vision, mission and their goals & priorities. Even if there is a valid/tactical reason for this mis-match, it is not explained.

Horizon of Vision:

Vision should be the horizon of 5-10 years. If it is less than that, it becomes tactical. If it is of a horizon of 20+ years (say), it becomes difficult for the strategy to relate to the vision.

Features of a good vision statement:

- Easy to read and understand.
- Compact and Crisp to leave something to people's imagination.
- Gives the destination and not the road-map.
- Is meaningful and not too open ended and far-fetched.
- Excite people and make them get goose-bumps.
- Provides a motivating force, even in hard times.
- Is perceived as achievable and at the same time is challenging and compelling, stretching us beyond what is comfortable.

Vision is a dream/aspiration, fine-tuned to reality:

The Entire process starting from Vision down to the business objectives, is highly iterative. The question is from where should we start. We strongly recommend that vision and mission statement should be made first without being colored by constraints, capabilities and

environment. This can said akin to the vision of armed forces, that's 'Safe and Secure country from external threats'. This vision is a non-negotiable and it drives the organization to find ways and means to achieve their vision, by overcoming constraints on capabilities and resources. Vision should be a stake in the ground, a position, a dream, which should be prudent, but should be non-negotiable barring few rare circumstances.

MISSION

Mission of an organization is the purpose for which the organization is. Mission is again a single statement, and carries the statement in verb. Mission in one way is the road to achieve the vision. For **example**, for a luxury products company, the vision could be 'To be among most admired luxury brands in the world' and mission could be 'To add style to the lives'

A good mission statement will be :

- **Clear and Crisp:** While there are different views, We strongly recommend that mission should only provide what, and not 'how and when'. We would prefer the mission of 'Making People meet their career' to 'Making people meet their career through effective career counseling and education'. A mission statement without 'how & when' element leaves a creative space with the organization to enable them take-up wider strategic choices.
- Have to have a **very visible linkage** to the business goals and strategy: For **example** you cannot have a mission (for a home furnishing company) of 'Bringing Style to People's lives' while your strategy asks for mass product and selling. Its better that either you start selling high-end products to high value customers, OR change your mission statement to 'Help people build homes'.
- **Should not be same as the mission** of a competing organization. It should touch upon how its purpose it unique.

Mission follows the Vision:

The Entire process starting from Vision down to the business objectives, is highly iterative. The question is from where should be start. I strongly recommend that mission should follow the vision. This is because the purpose of the organization could change to achieve their vision.
For example, to achieve the vision of an Insurance company 'To be the most trusted Insurance Company', the mission could be first 'making people financially secure' as their emphasis is on Traditional Insurance product. At a later stage the company can make its mission as 'Making money work for the people' when they also include the non-traditional unit linked investment products.

GOALS AND STRATEGY

It is the process by which strategy & policies are put into actions through the development of programs, budgets & procedures. This process might involve changes within the overall culture, structure and/or management system of the entire organization.

i) **Programs:**

It is a statement of the activities or steps needed to accomplish a single-use plan. It makes the strategy action oriented. It may involve restructuring the corporation, changing the company's internal culture or beginning a new research effort.

ii) **Budgets:**

A budget is a statement of a corporations program in terms of dollars. Used in planning & control, a budget lists the detailed cost of each program. The budget thus not only serves as a detailed plan of the new strategy in action, but also specifies through proforma financial statements the expected impact on the firm's financial future

iii) **Procedures:**

Procedures, sometimes termed Standard Operating Procedures (SOP) are a system of sequential steps or techniques that describe in detail how a particular task or job is to be done. They typically detail the various activities that must be carried out in order to complete

a) Evaluation & Control

After the strategy is implemented it is vital to continually measure and evaluate progress so that changes can be made if needed to keep the overall plan on track. This is known as the control phase of the strategic planning process. While it may be necessary to develop systems to allow for monitoring progress, it is well worth the effort. This is also where performance standards should be set so that performance may be measured and leadership can make adjustments as needed to ensure success.

Evaluation and control consists of the following steps:

i)   Define parameters to be measured
ii)   Define target values for those parameters
iii)   Perform measurements
iv)   Compare measured results to the pre-defined standard
v)   Make necessary changes

CORPORATE PLANNING PROCESS

Features of Corporate Planning:

We can define corporate planning as follows:

Corporate planning is a total system of planning which involves the determination of the objectives for the company as a whole and for each department of the it; formulation of strategies for the attainment of these objectives (all this being done against the background of SWOT analysis); conversion of strategies into tactical plans (or operational plans); implementation of tactical plans and a review of the progress of tactical plans against the corporate planning objectives.

Process of Corporate Planning:

Major steps involved in corporate planning are as follows:

(i) Environmental Analysis and Diagnosis:

The first steps (which is, in fact, the background step), involved in corporate planning is environmental analysis and diagnosis. (A detailed account of this step is attempted subsequently, in the discussion about corporate planning).

(ii) Determination of Objectives:

All planning starts with a determination of the objectives for the plan; and corporate planning is no exception to this generality. In corporate planning, after environmental analysis and diagnosis, the planners determine objectives for the company as a whole and for each department of it; which become the beginning point of corporate planning.

All objectives of corporate planning must represent an integrated or coordinated system of objectives. In order to make corporate planning a realistic approach to attaining objectives; objective setting for corporate planning is done in the light of environmental analysis and diagnosis.

(iii) Strategy Formulation:

Strategy formulation is the core aspect of corporate planning. Strategy is, in fact, the weapon of the planner devised for attaining objectives of corporate planning. It is easier to set objectives; it is difficult to realize them. Strategies facilitate the attainment of objectives.

There is no doubt about it that success of strategies is the success of corporate planning; and vice-versa. Strategy formulation is also done in the light of environmental analysis and diagnosis.

(iv) Development of Tactical Plans:

Strategies are translated into action plans called tactical plans or operational plans. Tactical plans are necessary for implementation of strategies leading to the attainment of corporate planning objectives. For example, if the strategy of a company is to develop the skills and talents of manpower for realizing objectives; then designing of suitable training programmes would amount to making tactical plans.

Corporate planning and strategy formulation have a long-term perspective; while tactical plans have a short-term perspective, as the latter are to be implemented immediately, in the usual course of organisational life.

(v) Implementation of Tactical Plans:

Mere paper planning is no planning; unless and until it is put into practice. As such, tactical plans are put into a process of implementation, just at the right time, as decided by management. For implementation purposes, necessary communications are made to the operating staffing; who are also provided with necessary facilities to implement the tactical plans.

(vi) Follow-Up-Action:

After the tactical plans have been put into practice; a review of progress is done i.e. an examination of what results are following from the implementation of the plan and what feedback action is necessary, for the betterment of the corporate planning process.

The following chart depicts the corporate planning process:
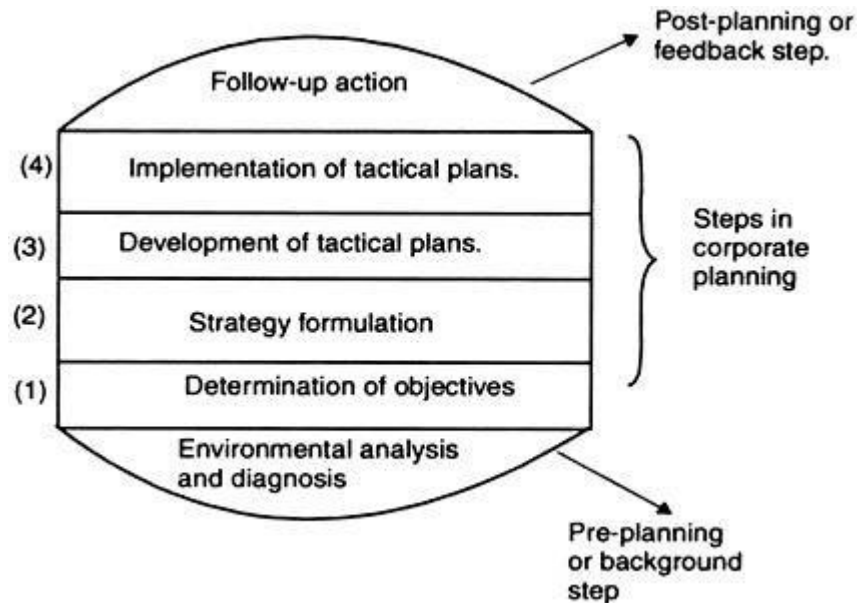
ENVIRONMENTAL SCANNING

Environmental scanning is a process of gathering, analyzing, and dispensing information for tactical or strategic purposes. The environmental scanning process entails obtaining both factual and subjective information on the business environments in which a company is operating or considering entering

DEFINITION

Monitoring and interpreting sweep of social, political, economic, ecological, and technological events to spot budding trends that could eventually impact industry.

PURPOSE

Raise consciousness of managers about potential developments that could

➔ Have important impact on industry conditions

➔ Pose new opportunities and threats

TYPES OF ENVIRONMENTAL SCANNING

Ad-hoc scanning - Short term, infrequent examinations usually initiated by a crisis

Regular scanning - Studies done on a regular schedule (e.g. once a year)

Continuous scanning(also called continuous learning) - continuous structured data collection and processing on a broad range of environmental factors

Environmental scanning usually refers just to the macro environment, but it can also include industry, competitor analysis, marketing research (consumer analysis), new product development (product innovations) or the company's internal environment.
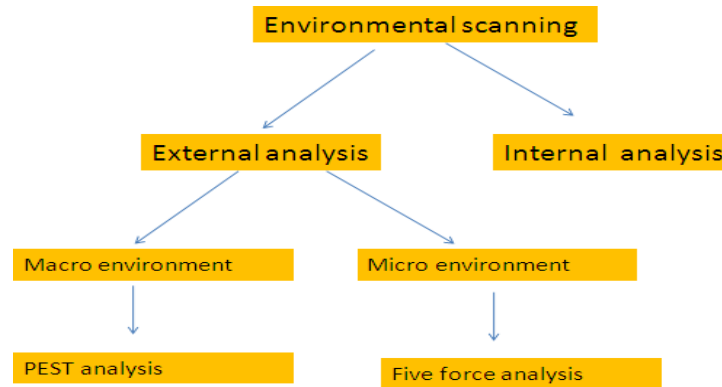
A scan of the external macro-environment in which the firm operates can be expressed in terms of the following factors:

Political

Economic

Social

Technological

The acronym **PEST** (or sometimes rearranged as "STEP") is used to describe a framework for the analysis of these macro environmental factors.

Political Factors :-Political factors include government regulations and legal issues and define both formal and informal rules under which the firm must operate. Some examples include:

> ➤ tax policy

> ➤ employment laws

> ➤ environmental regulations

> ➤ trade restrictions and tariffs

> ➤ political stability

Economic Factors :-Economic factors affect the purchasing power of potential customers and the firm's cost of capital. The following are examples of factors in the macro economy:

- ➢ economic growth

- ➢ interest rates

- ➢ exchange rates

- ➢ inflation rate

Social Factors

Social factors include the demographic and cultural aspects of the external macroenvironment. These factors affect customer needs and the size of potential markets. Some social factors include:

- ➢ health consciousness

- ➢ population growth rate

- ➢ age distribution

- ➢ emphasis on safety

Technological Factors :-Technological factors can lower barriers to entry, reduce minimum efficient production levels, and influence outsourcing decisions. Some technological factors include:

- ➢ R&D activity

- ➢ Automation

- ➢ technology incentives

- ➢ rate of technological change

SWOT ANALYSIS

	HELPFUL (Positive Impact)	HARMFUL (Negative Impact)
Internal	**Strengths** may include: • Characteristics of the organization that will help it achieve successful outcome or reach goals • Resources, capabilities that will contribute to success	**Weaknesses** may include: • Characteristics of the organization that might hinder successful outcome / reaching goals • Absences of strengths • "Flip sides" of strengths • Things to avoid when executing program • Factors contributing to past failures • What other organizations might do better than yours • "Achilles Heels"
External	**Opportunities** may include: • Environmental factors that might influence/contribute to successful outcome • Unfulfilled / open niches not served by other programs (unmet customer need) • Upcoming changes to status quo (regulatory, political, social, etc.) • Chances made possible by unique strengths / eliminating weaknesses (?)	**Threats** may include: • Environmental factors that might prevent successful outcome • Upcoming changes to status quo (regulatory, political, social, etc.) • Factors: Political, Economic, Socio-cultural, Technological
	• Factors: Political, Economic, Socio-cultural, Technological	

STRATEGY FORMULATION

Formulation

Formulation of strategy involves analyzing the environment in which the organization operates, then making a series of strategic decisions about how the organization will compete. Formulation ends with a series of goals or objectives and measures for the organization to pursue. Environmental analysis includes the:

- Remote external environment, including the political, economic, social, technological and regulatory landscape;
- Industry environment, such as the competitive behavior of rival organizations, the bargaining power of buyers/customers and suppliers, threats from new entrants to the industry, and the ability of buyers to substitute products; and

- Internal environment, regarding the strengths and weaknesses of the organization's resources (i.e., its people, processes and IT systems).[11]

Strategic decisions are based on insight from the environmental assessment and are responses to strategic questions about how the organization will compete, such as:

- What is the organization's business?
- Who is the target customer for the organization's products and services?
- Where are the customers and how do they buy? What is considered "value" to the customer?
- Which businesses, products and services should be included or excluded from the portfolio of offerings?
- What is the geographic scope of the business?
- What differentiates the company from its competitors in the eyes of customers and other stakeholders?
- Which skills and capabilities should be developed within the firm?
- What are the important opportunities and risks for the organization?
- How can the firm grow, through both its base business and new business?
- How can the firm generate more value for investors?

Corporate Level Strategy

Corporate level strategy occupies the highest level of strategic decision-making and covers actions dealing with the objective of the firm, acquisition and allocation of resources and coordination of strategies of various SBUs for optimal performance. Top management of the organization makes such decisions. The nature of strategic decisions tends to be value-oriented, conceptual and less concrete than decisions at the business or functional level.
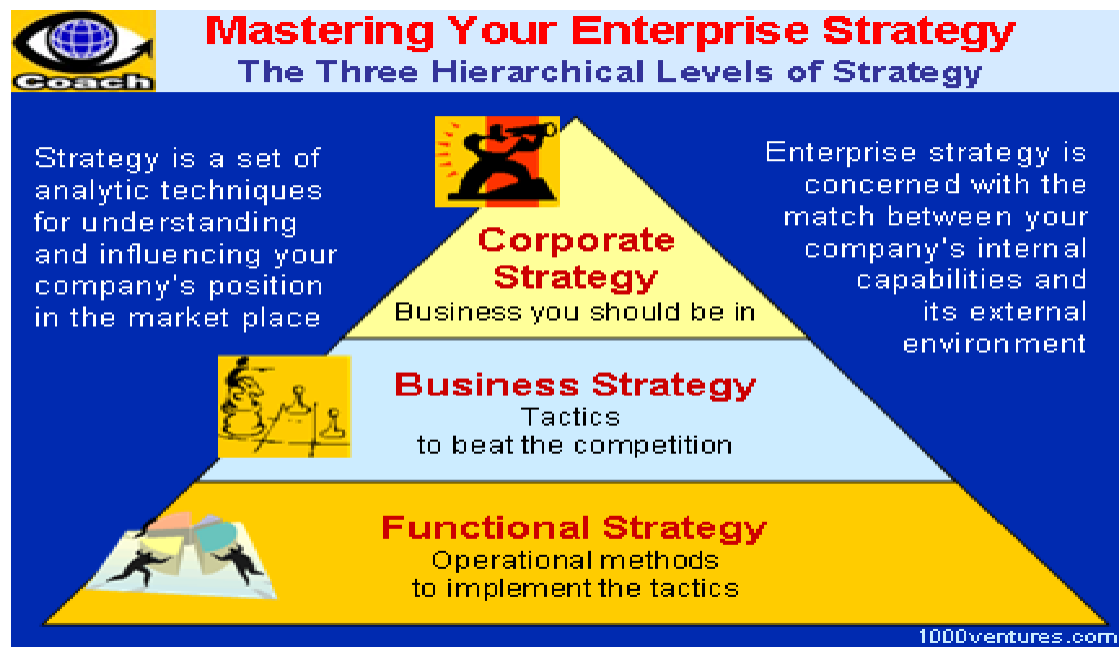
Business-Level Strategy.

Business-level strategy is – applicable in those organizations, which have different businesses- and each business is treated as strategic business unit (SBU). The fundamental concept in SBU is to identify the discrete independent product/market segments served by an organization. Since each product/market segment has a distinct environment, a SBU is created for each such segment. For example, Reliance Industries Limited operates in textile fabrics, yarns, fibers, and a variety of petrochemical products. For each product group, the nature of market in terms of customers, competition, and marketing channel differs.

There-fore, it requires different strategies for its different product groups. Thus, where SBU concept is applied, each SBU sets its own strategies to make the best use of its resources (its strategic advantages) given the environment it faces. At such a level, strategy is a comprehensive plan providing objectives for SBUs, allocation of re-sources among functional areas and coordination between them for making optimal contribution to the achievement of corporate-level objectives. Such strategies operate within the overall strategies of the organization. The corporate strategy sets the long-term objectives of the firm and the broad constraints and policies within which a SBU operates. The corporate level will help the SBU define its scope of operations and also limit or enhance the SBUs operations by the resources the corporate level assigns to it. There is a difference between corporate-level and business-level strategies.

For example, Andrews says that in an organization of any size or diversity, corporate strategy usually applies to the whole enterprise, while business strategy, less comprehensive, defines the choice of product or service and market of individual business within the firm. In other words, business strategy relates to the 'how' and corporate strategy to the 'what'. Corporate strategy defines the business in which a company will compete preferably in a way that focuses resources to convert distinctive competence into competitive advantage.'

Corporate strategy is not the sum total of business strategies of the corporation but it deals with different subject matter.

While the corporation is concerned with and has impact on business strategy, the former is concerned with the shape and balancing of growth and renewal rather than in market execution.

Functional-Level Strategy.

Functional strategy, as is suggested by the title, relates to a single functional operation and the activities involved therein. Decisions at this level within the organization are often described as tactical. Such decisions are guided and constrained by some overall strategic considerations. Functional strategy deals with relatively restricted plan providing objectives for specific function, allocation of resources among different operations within that functional area and coordi-nation between them for optimal contribution to the achievement of the SBU and corporate-level objectives. Below the functional-level strategy, there may be operations level strategies as each function may be dividend into several sub functions. For example, marketing

strategy, a functional strategy, can be subdivided into promotion, sales, distribution, <u>pricing</u> <u>strategies</u> with each sub function strategy contributing to functional strategy.

STRATEGY IMPLEMENTATION

Definition

The <u>activity</u> performed according to a <u>plan</u> in <u>order</u> to <u>achieve</u> an overall <u>goal</u>. For example, strategic implementation within a <u>business</u> <u>context</u> might involve <u>developing</u> and then <u>executing</u> a new <u>marketing</u> <u>plan</u> to help increase <u>sales</u> of the <u>company's</u> <u>products</u> to <u>consumers</u>.

4.1.TYPES OF STRATEGIES

STRATEGY	DEFINITION
FORWARD INTEGRATION	Gaining ownership or increased control over distributors or retailers
BACKWARD INTEGRATION	Seeking ownership or increased control of a firm's suppliers
HORIZONAL INTEGRATION	Seeking ownership or increased control over competitors
MARKET PENETRATION	Seeking increased market share for present products or services in present markets through greater marketing efforts
MARKET DEVELOPMENT	Introducing present products or services into new geographic area
PRODUCT DEVELOPMENT	Seeking increased sales by improving present products jor services or developing new ones
RELATED DIVERSIFICATION	Adding new but related products or services
UNRELATED DIVERSIFICATION	Adding New, Unrelated products or services
RETRENCHMENT	Regrouping through cost and asset reduction to reverse declining sales and profit
DIVESTITURE	Selling a division or part of an organization
LIQUIDATION	Selling all of a company's assets, in parts, for their tangible worth

OFFENSIVE STRATEGY

A <u>corporate</u> <u>strategy</u> consisting of attempting to pursue <u>changes</u> within its <u>industry</u>. The <u>companies</u> involved in offensive competitive <u>strategies</u> typically invest in <u>technology</u> and <u>research</u> & <u>development</u> in hopes of staying head of their <u>competition</u>. Companies also use this type of strategy when seeking to <u>acquire</u> other companies.

Direct Competition

A classic example of an offensive business strategy is direct, head-to-head competition. This type of direct competition could take the form of selling a product similar to a competitor's at a lower price or highlighting quality differences between one product and another. This type of offensive strategy can lead to destructive price wars that ultimately harm both organizations, however.

Aggressive Marketing

Direct competition strategies often involve an element of aggressive marketing. For example, one competitor might openly point out flaws in another competitor's product or service as a way to dissuade customers from doing business with the competitor. Such advertisements could be done with an objective price comparison or a more aggressive form of derision. Companies must be careful when using overly aggressive advertisements directed at competitors, as some customers may find these advertisements to be in poor taste.

DEFENSIVE STRATEGY

Defensive strategies are only used by market leaders in strategic management. If your small-business has reached a market-leading position, you may need to use such strategies. The goal of these strategies is to hold onto your position as the market leader, fighting off competitors who try to take away your market share. Because firms tend to target market leaders, this will not be an easy task, but fortunately you have multiple strategies to choose from.

Position Defense

The position defense is the simplest defensive strategy. It simply involves trying to hold your current position in the market. To do this, you simply continue to invest in your current markets and attempt to build your brand name and customer loyalty. The problem with this strategy is that it can make you a target for new entrants to the market.

Mobile Defense

The mobile defense involves making constant changes to your business so that it is difficult for competitors to compete with you. This can involve introducing new products, entering new markets or simply making changes to existing products. This constant moving between strategies requires a flexible business that can adjust to change.

Flanking Defense

When a firm uses the flanking defense, it defends its market share by diversifying into new markets and niche segments. The idea behind the strategy is that if you lose your market share in the existing market you can make up for it in these new markets. The danger of the flanking defense is that it can stretch your resources thin and pull attention away from your main focus.

Counter-Offensive Defense

The counter-offensive defense is a retaliatory strategy. When a competitor attacks your business, you strike back with your own attack. For instance, if you operate a bakery that only produces

gluten-free products and a competitor who produces regular bread also begins producing gluten-free products, you could hit back at it by introducing regular bread products.

Contraction Defense

The contraction defense is the least desirable defense because it involves retreating from markets. If you don't believe you can successfully defend those markets,however, then it can be the best option. This allows you to redeploy your resources into other areas. For example, imagine that you manufacture two products: liquid soap and bar soap. If you find that you can no longer compete in the bar soap market, then it makes sense to retreat from that market and focus on liquid soaps.

4.9.STATEGY EVALUATION

Strategy Evaluation and Control constitutes the final phase of strategic management.

Strategic evaluation operates at two levels:

- **Strategic Level** – wherein we are concerned more with the consistency of strategy with the environment.
- **Operational Level** – where in effort is directed at assessing how well the organization is pursuing a given strategy.

Purpose of Strategic Evaluation

The purpose of strategic evaluation is to evaluate the effectiveness of strategy in achieving organizational objectives.

Definition

Strategic evaluation and control could be defined as the process of determining the effectiveness of a given strategy in achieving the organizational objectives and taking corrective action wherever required.

Nature of Strategic Evaluation

- Nature of the strategic evaluation and control process is to test the effectiveness of strategy.
- During the two proceedings phases of the strategic management process, the strategists formulate the strategy to achieve a set of objectives and then implement the strategy.
- There has to be a way of finding out whether the strategy being implemented will guide the organization towards its intended objectives.

Importance of strategic Evaluation

- Strategic evaluation helps to keep a check on the validity of a strategic choice.

- An ongoing process of evaluation would, in fact, provide feedback on the continued relevance of the strategic choice made during the formulation phase.

Participants in Strategic Evaluation

- Shareholders
- Board of Directors
- Chief Executives
- Profit-centre heads
- Financial controllers
- Company secretaries
- External and Internal Auditors
- Audit and executive committees
- Corporate planning staff or department
- Middle-level managers

Barriers in Evaluation

- Limits of control
- Difficulties in measurement
- Resistance to evaluation
- Rely on short-term implication of activities

Strategic Control

The types of strategic controls are:
- Premise control
- Implementation control
- Strategic surveillance

PART-A

1. Define Corporate Planning.

   Corporate planning is the act of creating a long-term plan to improve your business. A corporate plan examines a business's internal capabilities and lays out strategies for how to use those capabilities to improve the company and meet goals.

2. What is Vision?

   A vision statement describes what a company desires to achieve in the long-run, generally in a time frame of five to ten years, or sometimes even longer. It depicts a vision of what the company will look like in the future and sets a defined direction for the planning and execution of corporate-level strategies.

3. What is Mission? Give an Example.

   Mission of an organization is the purpose for which the organization is. Mission is again a single statement, and carries the statement in verb. Mission in one way is the road to achieve the vision.
   For example, for a luxury products company, the vision could be 'To be among most admired luxury brands in the world' and mission could be 'To add style to the lives'

4. What is Strategy?

   Strategy is an action that managers take to attain one or more of the organization's goals. Strategy can also be defined as "A general direction set for the company and its various components to achieve a desired state in the future. Strategy results from the detailed strategic planning process".

5. Define Environmental Scanning.

   Environmental scanning is the process of gathering information about events and their relationships within an organization's internal and external environments. The basic purpose of environmental scanning is to help management determine the future direction of the organization.

6. List out elements of Internal Environment.

   (1) Value System, (2) Mission and Objectives, (3) Organisation Structure, (4) Corporate Culture and Style of Functioning of Top Management, (5) Quality of Human Resources, (6) Labour Unions, and (7) Physical Resources and Technological Capabilities.

7. List out elements of External Environment.

   Economic,
   Sociocultural,
   Political,
   Legal,
   Technical, and environmental considerations.

8. Write Rules of Network Construction.

   Rules of Network construction in Operation Research
   The length of an arrow has no significance. The event numbered 1 is the start event and an event with highest number is the end event. Before an activity can be undertaken, all activities proceeding it must be completed.

9. What is SWOT Analysis?

   SWOT analysis (strengths, weaknesses, opportunities and threats analysis) is a framework for identifying and analyzing the internal and external factors that can have an impact on the viability of a project, product, place or person.

10. What is BCG Matrix?

BCG matrix is a framework created by Boston Consulting Group to evaluate the strategic position of the business brand portfolio and its potential. It classifies business portfolio into four categories based on industry attractiveness (growth rate of that industry) and competitive position (relative market share).

PART-B

1. What is "SWOT" analysis? How do you carry it for a technical educational institute?
2. What is corporate planning? Explain the process of corporate planning?
3. Discuss the process of strategy formulation and implementation?
4. Explain various generic strategy alternatives in corporate planning?
5. Explain the significance of project management.
6. Distinguish PERT And CPM.
7. Explain the procedure of Crashing of a Network.
8. What is Environmental Scanning. Explain its Elements

CONTEMPORARY MANAGEMENT PRACTICES

A **management information system** (**MIS**) is an <u>information system</u> used for <u>decision-making</u>, and for the coordination, control, analysis, and visualization of information in an organization; especially in a <u>company</u>.

The study of management information systems examines people and technology in an organizational context.

In a corporate setting, the ultimate goal of the use of a management information system is to increase the value and profits of the business

While it can be contested that the history of management information systems date as far back as companies using ledgers to keep track of accounting, the modern history of MIS can be divided into five eras originally identified by <u>Kenneth C. Laudon</u> and Jane Laudon in their seminal textbook Management Information Systems.

Terminology

The terms management information systems (MIS), <u>information system (IS)</u> , <u>enterprise resource planning (ERP)</u>, <u>computer science</u>, <u>electrical computer engineering</u>, and <u>information technology management</u> (IT) are often confused. MIS is a hierarchical subset of information systems. MIS are more organization-focused narrowing in on leveraging information technology to increase business value. Computer science is more software-focused dealing with the applications that may be used in MIS.[6] Electrical computer engineering is product-focused mainly dealing with the architecture behind computer systems. ERP software is a subset of MIS and IT management refers to the technical management of an IT department which may include MIS.

1. **MANAGEMENT**: Management has been define in process or activities that describe what managers do in the operation for their organization plan, organize, initiate and control operations. They plan by setting strategies and goals and selecting the best course of action to achieve the goals. They organize the necessary tasks for the operational plan, set these tasks up into homogenous groups and assign authority delegation; they control the performance standards and avoiding deviation from standard.

The decision-making is a fundamental prerequisite of each of the foregoing process, the job of MIS is facilitating decisions necessary for planning, organizing and controlling the work and functions of the business so that specified goals of business are achieved.

2. **INFORMATION:** Data must be distinguished from information and the distinction is clear and important for present purpose. Data are facts and figures that are not currently being used in a decision-making process and usually are taken from the historical records that are recorded and filled without immediate intent to retrieve for decision-making.

Information consists of data that have been retrieved, processed or otherwise used for information or interference purpose, argument or as a basis forecasting or decision-making regarding any business unit. Information is knowledge that one derives from facts for effective functioning of systems placed in the right context with the purpose of reducing uncertainty regarding the alternative courses of action as they are based on description and measurement of attributes of various entities associated with the enterprise.

3. **SYSTEM:** The system can be described as a set of elements joined together for a common objective. A subsystem is a part of a larger system with which one is concerned. All systems for our purpose the organization is the system and the parts (divisions, departments, functions, unit etc) are the subsystem.

BASIC CONCEPTS OF MIS

1. MATERIALS REQUIREMENT PLANNING

2. JUSI – IN – TIME

3. TOTAL QUALITY MANAGEMENT

4. SIX SIGMA

5. CAPABILITY MATURITY MODELS

6. SUPPLY CHAIN MANAGEMENT

7. ENTERPRISE RESOURCE PLANNING

8. PERFORMANCE MANAGEMENT

9. BUSINESS PROCESS OUTSOURCING

10. BUSINESS PROCESS RE-ENGINEERING

11. BENCH MARKING

12. BALANCE SCORE CARD

MATERIALS REQUIREMENT PLANNING

Material requirements planning (**MRP**) is a production planning, scheduling, and inventory control system used to manage manufacturing processes. Most MRP systems are software-based, but it is possible to conduct MRP by hand as well.

An MRP system is intended to simultaneously meet three objectives:

- Ensure materials are available for production and products are available for delivery to customers.
- Maintain the lowest possible material and product levels in store

- Plan manufacturing activities, delivery schedules and purchasing activities.

HISTORY

Prior to MRP, and before computers dominated industry, reorder point (ROP)/reorder-quantity (ROQ) type methods like EOQ (economic order quantity) had been used in manufacturing and inventory management.[1]

- MRP was created initially to supply the Polaris program then, in 1964, as a response to the Toyota Manufacturing Program, Joseph Orlicky developed material requirements planning (MRP). The first company to use MRP was Black & Decker in 1964, with Dick Alban as project leader. Orlicky's 1975 book Material Requirements Planning has the subtitle The New Way of Life in Production and Inventory Management. By 1975, MRP was implemented in 700 companies. This number had grown to about 8,000 by 1981.

- In 1983, Oliver Wight developed MRP into manufacturing resource planning (MRP II). In the 1980s, Joe Orlicky's MRP evolved into Oliver Wight's manufacturing resource planning (MRP II) which brings master scheduling, rough-cut capacity planning, capacity requirements planning, S&OP in 1983 and other concepts to classical MRP. By 1989, about one third of the software industry was MRP II software sold to American industry ($1.2 billion worth of software).

The scope of MRP in manufacturing

Dependent demand vs independent demand

Independent demand is demand originating outside the plant or production system, while dependent demand is demand for components. The bill of materials (BOM) specifies the relationship between the end product (independent demand) and the components (dependent demand). MRP takes as input the information contained in the BOM.[5] [6]

The basic functions of an MRP system include: inventory control, bill of material processing, and elementary scheduling. MRP helps organizations to maintain low inventory levels. It is used to plan manufacturing, purchasing and delivering activities.

"Manufacturing organizations, whatever their products, face the same daily practical problem - that customers want products to be available in a shorter time than it takes to make them. This means that some level of planning is required."

Companies need to control the types and quantities of materials they purchase, plan which products are to be produced and in what quantities and ensure that they are able to meet current and future customer demand, all at the lowest possible cost. Making a bad decision in any of these areas will make the company lose money. A few examples are given below:

- If a company purchases insufficient quantities of an item used in manufacturing (or the wrong item) it may be unable to meet contract obligations to supply products on time.
- If a company purchases excessive quantities of an item, money is wasted - the excess quantity ties up cash while it remains as stock that might never be used at all.
- Beginning production of an order at the wrong time can cause customer deadlines to be missed.

MRP is a tool to deal with these problems. It provides answers for several questions:

- What items are required?
- How many are required?
- When are they required?...

MRP can be applied both to items that are purchased from outside suppliers and to sub-assemblies, produced internally, that are components of more complex items.

JUST – IN – TIME

Just-in-time (**JIT**) **manufacturing**, also known as **just-in-time production** or the <u>Toyota Production System</u> (TPS), is a methodology aimed primarily at reducing times within production system as well as response times from suppliers and to customers. Its origin and development was in Japan, largely in the 1960s and 1970s and particularly at Toyota.

WHAT IS JIT?

- JIT is a manufacturing philosophy involving an integrated set of procedures/activities designed to achieve a volume of production using minimal inventories.
- A highly coordinated processing system in which goods move through the system, and services are performed, just as they need.

HOW IT WORKS?
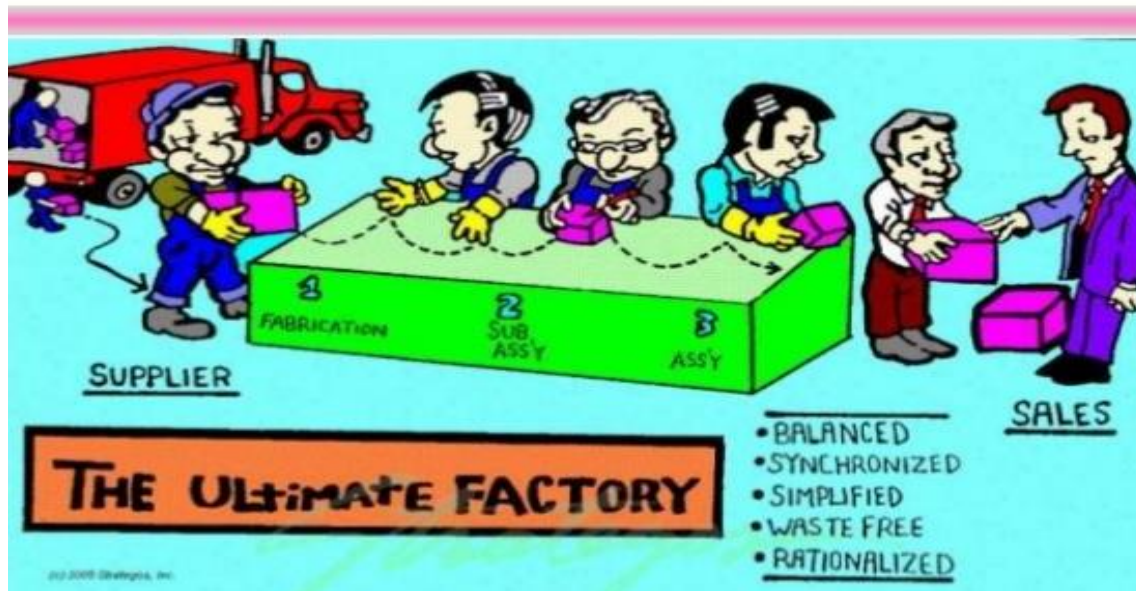
HISTORY

- *Evolved in Japan after World War II, as a result of their diminishing market share in the auto industry.*
- *Founded by **Taiichi Ohno**, a vice president of Toyota.*
- *Basically implemented in Toyota plant 1950, well established after 1970.*

FOLLOWERS

- *Adopted by General Electrical in the USA in the 1980.*
- *Some companies referred JIT with different names:*

i. **TOYOTA** – *'Toyota System'*
ii. **IBM** – *'Continuous flow manufacturing'*
iii. **GE**- *'Management by sight'*
iv. **HEWLETT- PACKARD**- *'stockless production & repetitive manufacturing system'*

7 WASTES

1) Waste of over production
2) Waste of waiting
3) Waste of transportation
4) Waste of Underutilization of Employees
5) Waste of *Inventory*
6) Waste of motion
7) Waste of making defective products
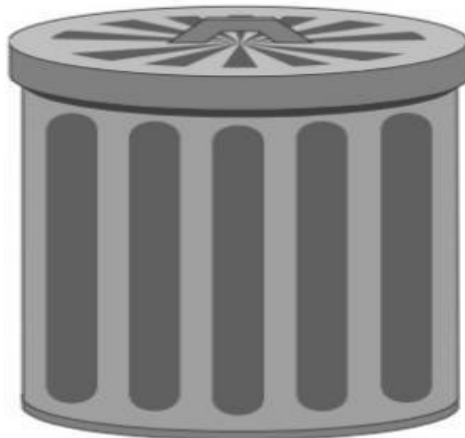
Introduction

Competition is getting harder and becoming global. Companies now have to be more responsive, offer a better product and keep improving. Total quality management (TQM) increases customer satisfaction by boosting quality. It does this by motivating the workforce and improving the way the company operates. In an increasingly competitive market, firms with a continuous improvement culture and external focus are more likely to survive and prosp. TQM is considered an important catalyst in this context.

What is Total Quality Management ?

TQM is an approach to improving the effectiveness and flexibilities of business as a whole. It is essentially a way of organizing and involving the whole organization, every department, every activity and every single person at every level. TQM ensures that the management adopts a strategic overview of the quality and focuses on prevention rather than inspection.

Objectives of TQM

- Meeting the customer's requirements is the primary objective and the key to organizational survival and growth.

- The second objective of TQM is continuous improvement of quality. The management should stimulate the employees in becoming increasingly competent and creative.

- Third, TQM aims at developing the relationship of openness and trust among the employees at all levels in the organisation.

Significance of TQM

The importance of TQM lies in the fact that it encourages innovation, makes the organization adaptable to change, motivates people for better quality, and integrates the business arising out of a common purpose and all these provide the organization with a valuable and distinctive competitive edge.

Elements of TQM

- **Be customer focused**

  It requires the company to check customers' attitudes regularly and includes the idea of internal customers as well as external ones.

- **Do it right the first time**

  This means avoiding rework, i.e., cutting the amount of defective work.

- **Constantly improve**

  Continuous improvement allows the company gradually to get better.

- **Quality is an attitude**

  Every one has to be committed to quality. That means changing the attitude of the entire workforce, and altering the way the company operates.

- **Telling staff what is going on**

  This involves improved communication. Typically, it includes team briefing.

SIX SIGMA

In the **late-1980's** Motorola extended the Six Sigma methods to its **critical business processes**, and significantly Six Sigma became a formalized in-house 'branded' name for a **performance improvement methodology**, i.e. beyond purely 'defect reduction.'

In **1991** Motorola certified its **first 'Black Belt' Six Sigma experts**, which indicates the beginnings of the **formalization of the accredited training of Six Sigma methods.**

In **1995**, **Six Sigma** became well known after **Mr. Jack Welch** made it a central focus of his business strategy at **General Electric**, and today it is used in different sectors of industry.
(**General Electric**, or **GE**, is an American multinational conglomerate corporation incorporated in New York)

By the year **2000**, Six Sigma was effectively established as an **industry in its own right, involving the training, consultancy and implementation of Six Sigma methodology.**

Definition

- **Six Sigma** seeks to improve the quality of process outputs by identifying and removing the causes of defects.
- **Six Sigma** approach is a collection of managerial and statistical concept and techniques that focuses on reducing variation in processes and preventing deficiencies in product.
- The concept of Variation states "NO two items will be perfectly identical."

Father of Six Sigma

Sir Bill Smith
" the Father of six sigma"

The Characteristics of Six Sigma

➤Statistical Quality Control

Six Sigma is clearly derived from the Greek letter σ (Sigma) from the Greek alphabet, which is used to denote Standard Deviation in Statistics. Standard Deviation is used to measure variance, which is an important tool for measuring non-conformance as far as the quality of the output is concerned.

➤Methodical Approach

The Six Sigma is not merely a quality improvement strategy in theory, as it features a well defined methodical approach of application in DMAIC and DMADV which can be used to improve the quality of production. DMAIC is an acronym for Design-Measure-Analyze-Improve-Control. The alternative method DMADV stands for Design-Measure-Analyze-Design-Verify.
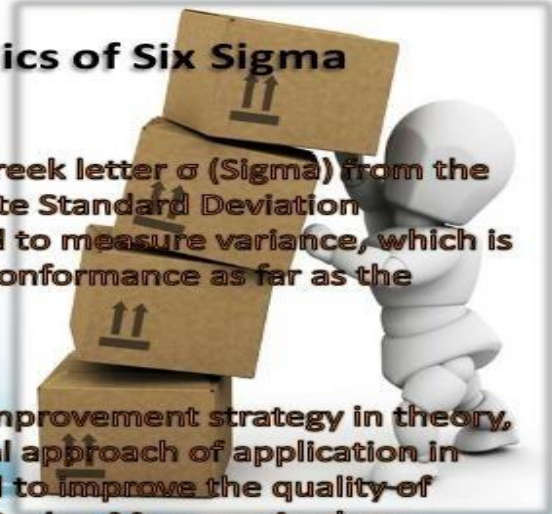
Fact and Data Based Approach

The statistical and methodical aspects of Six Sigma show the scientific basis of the technique. This accentuates an important aspect of Six Sigma that it is fact and data based.

Project and Objective Based Focus

The Six Sigma process is implemented for an organization's project tailored to its specifications and requirement. The process is flexed to suit the requirements and conditions in which a project is operating to get the best results.

Apart from that, the Six Sigma is also objective based. The management needs some incentive to invest in the Six Sigma process. It is aimed to enhance profitability and to generate financial.

Six Sigma Objectives

✓ Overall Business Improvement

Six Sigma methodology focuses on business improvement. Beyond reducing the number of defects present in any given number of products.

✓ Remedy Defects/Variability

Any business seeking improved numbers must reduce the number of defective products or services it produces. Defective products can harm customer satisfaction levels.

✓ Reduce Costs

Reduced costs equal increased profits. A company implementing Six Sigma principles has to look to reduce costs wherever it possibly can--without reducing quality.

✓ Improve Cycle Time

Any reduction in the amount of time it takes to produce a product or perform a service means money saved, both in maintenance costs and personnel wages. Additionally, customer satisfaction improves when both retailers and end users receive products sooner than expected. The company that can get a product to its customer faster may win her business.

✓ **Increase Customer Satisfaction**

Customer satisfaction depends upon successful resolution of all Six Sigma's other objectives. But customer satisfaction is an objective all its own.

Levels of Six Sigma

	Six Sigma Level	% Accuracy	DPMO
Virtual Perfection	6	99.9997%	3.4
	5	99.98%	233
	4	99.4%	6210
Good	3.5	97.7%	22,700
	3	93.3%	66,807
Improvement Needed	2	69.1%	308,537

Methodologies

Six Sigma projects follow two project methodologies :

1. DMAIC
2. DMADV

These methodologies, composed of five phases.
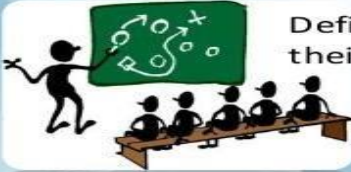
1.Define

Define the system, the voice of the customer and their requirements, and the project goals, specifically.

2.Measure

Measure key aspects of the current process and collect relevant data.

3.Analyze

Analyze the data to investigate and verify cause-and effect relationships. Determine what the relationships are, and attempt to ensure that all factors have been considered. Seek out root cause of the defect under investigation.

4.Improve

Improve or optimize the current process based upon data analysis using techniques such as design of experiments, poka yoke or mistake *proofing*, and standard work to create a new, future state process. Set up pilot runs to establish process capability.

5.Control

Control the future state process to ensure that any deviations from target are corrected before they result in defects. Implement control systems such as statistical process control, production boards, visual workplaces, and continuously monitor the process.

2. DMADV

DMADV project methodology has Five phase:

1. Define
2. Measure
3. Analyze
4. Design
5. Verify

1. Define :

Define design goals that are consistent with customer demands and the enterprise strategy.

2. Measure

Measure and identify CTQs (characteristics that are Critical To Quality), product capabilities, production process capability, and risks.

3. Analyze

Analyze to develop and design alternatives.

4. Design

Design an improved alternative, best suited per analysis in the previous step

5. Verify

Verify the design, set up pilot runs, implement the production process and hand it over to the process owner(s).

What is CMM?

- CMM: Capability Maturity Model
- Also called as SEI-CMM
- Developed by the Software Engineering Institute (SEI) of the Carnegie Mellon University
- Framework that describes the key elements of an effective software process.

Process Maturity Concepts

- Software Process
  - set of activities, methods, practices, and transformations that people use to develop and maintain software and the associated products (e.g., project plans, design documents, code, test cases, user manuals)
- Software Process Capability
  - describes the range of expected results that can be achieved by following a software process
  - means of predicting the most likely outcomes to be expected from the next software project the organization undertakes

Process Maturity Concepts

- Software Process Performance
  - actual results achieved by following a software process
- Software Process Maturity
  - extent to which a specific process is explicitly defined, managed, measured, controlled and effective
  - implies potential growth in capability
  - indicates richness of process and consistency with which it is applied in projects throughout the organization

What are the CMM Levels?
(The five levels of software process maturity)

Maturity level indicates level of process capability:

- Initial
- Repeatable
- Defined
- Managed
- Optimizing

Level 1: Initial

- Initial : The software process is characterized as **ad hoc**, and occasionally even chaotic.
- Few processes are defined, and success depends on individual effort.
  - At this level, frequently have difficulty making commitments that the staff can meet with an orderly process
  - Products developed are often over budget and schedule
  - Wide variations in cost, schedule, functionality and quality targets
  - Capability is a characteristic of the individuals, not of the organization

Level 2: Repeatable

� **Basic process management** processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on projects with similar applications.
  - ✖ Realistic project commitments based on results observed on previous projects
  - ✖ Software project standards are defined and faithfully followed
  - ✖ Processes may differ between projects
  - ✖ Process is disciplined
  - ✖ earlier successes can be repeated

Level 4: Managed

ℬ Detailed measures of the software process and product quality are collected. Both the software process and products are quantitatively understood and controlled.
  - ℬ Narrowing the variation in process performance to fall within acceptable quantitative bounds
  - ℬ When known limits are exceeded, corrective action can be taken
  - ℬ Quantifiable and predictable
    - ℬ predict trends in process and product quality

Level 5: Optimizing

ꝗ Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.
ꝗ Goal is to prevent the occurrence of defects
  - ꝗ Causal analysis
ꝗ Data on process effectiveness used for cost benefit analysis of new technologies and proposed process changes

SUPPLY CHAIN MANAGEMENT

In <u>commerce</u>, **supply-chain management** (**SCM**), the management of the flow of <u>goods</u> and services, involves the movement and storage of <u>raw materials</u>, of <u>work-in-process inventory</u>, and of finished goods from point of origin to point of consumption. Interconnected or interlinked networks, channels and node <u>businesses</u> combine in the provision of <u>products</u> and <u>services</u> required by end customers in a <u>supply chain</u>.Supply-chain management has been defined as the "design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally." SCM practice draws heavily from the areas of <u>industrial engineering</u>, <u>systems engineering</u>, <u>operations management</u>, <u>logistics</u>, <u>procurement</u>, <u>information technology</u>, and marketing <u>[6]</u> and strives for an integrated approach. Marketing channels play an important role in supply chain management. Current research in supply chain management is concerned with topics related to <u>sustainability</u> and <u>risk management</u>, among others. Some suggest that the "people dimension" of SCM, ethical issues, internal integration, transparency/visibility, and human capital/talent management are topics that have, so far, been underrepresented on the research agenda

Successful SCM requires a change from managing individual functions to integrating activities into key supply-chain processes. In an example scenario, a purchasing department places orders as its requirements become known. The marketing department, responding to customer demand, communicates with several distributors and retailers as it attempts to determine ways to satisfy this demand. Information shared between supply chain partners can only be fully leveraged through <u>process integration</u>.

Supply-chain business-process integration involves collaborative work between buyers and suppliers, joint product development, common systems, and shared information. According to Lambert and Cooper (2000), operating an integrated supply chain requires a continuous information flow. However, in many companies, management has concluded that optimizing product flows cannot be accomplished without implementing a process approach. The key supply-chain processes stated by Lambert (2004) are:

- <u>Customer relationship management</u>
- Customer service management
- Demand management style
- <u>Order fulfillment</u>
- Manufacturing flow management
- Supplier relationship management
- Product development and commercialization
- Returns management

Much has been written about <u>demand management</u>.Best-in-class companies have similar characteristics, which include the following:

- Internal and external collaboration
- Initiatives to reduce lead time
- Tighter feedback from customer and market demand
- Customer-level forecasting

One could suggest other critical supply business processes that combine these processes stated by Lambert, such as:

Customer service management process

Customer relationship management concerns the relationship between an organization and its customers. Customer service is the source of customer information. It also provides the customer with real-time information on scheduling and product availability through interfaces with the company's production and distribution operations. Successful organizations use the following steps to build customer relationships:

- determine mutually satisfying goals for organization and customers
- establish and maintain customer rapport
- induce positive feelings in the organization and the customers

Procurement process

Strategic plans are drawn up with suppliers to support the manufacturing flow management process and the development of new products. In firms whose operations extend globally, sourcing may be managed on a global basis. The desired outcome is a relationship where both parties benefit and a reduction in the time required for the product's design and development. The purchasing function may also develop rapid communication systems, such as electronic data interchange (EDI) and Internet linkage, to convey possible requirements more rapidly. Activities related to obtaining products and materials from outside suppliers involve resource planning, supply sourcing, negotiation, order placement, inbound transportation, storage, handling, and quality assurance, many of which include the responsibility to coordinate with suppliers on matters of scheduling, supply continuity (inventory), hedging, and research into new sources or programs. Procurement has recently been recognized as a core source of value, driven largely by the increasing trends to outsource products and services, and the changes in the global ecosystem requiring stronger relationships between buyers and sellers.[27]

Product development and commercialization

Here, customers and suppliers must be integrated into the product development process in order to reduce the time to market. As product life cycles shorten, the appropriate products must be developed and successfully launched with ever-shorter time schedules in order for firms to remain competitive. According to Lambert and Cooper (2000), managers of the product development and commercialization process must:

1. coordinate with customer relationship management to identify customer-articulated needs;
2. select materials and suppliers in conjunction with procurement; and

3. develop production technology in manufacturing flow to manufacture and integrate into the best supply chain flow for the given combination of product and markets.

Integration of suppliers into the new product development process was shown to have a major impact on product target cost, quality, delivery, and market share. Tapping into suppliers as a source of innovation requires an extensive process characterized by development of technology sharing, but also involves managing intellectual[28] property issues.

Manufacturing flow management process

The manufacturing process produces and supplies products to the distribution channels based on past forecasts. Manufacturing processes must be flexible in order to respond to market changes and must accommodate mass customization. Orders are processes operating on a just-in-time (JIT) basis in minimum lot sizes. Changes in the manufacturing flow process lead to shorter cycle times, meaning improved responsiveness and efficiency in meeting customer demand. This process manages activities related to planning, scheduling, and supporting manufacturing operations, such as work-in-process storage, handling, transportation, and time phasing of components, inventory at manufacturing sites, and maximum flexibility in the coordination of geographical and final assemblies postponement of physical distribution operations.

Physical distribution

This concerns the movement of a finished product or service to customers. In physical distribution, the customer is the final destination of a marketing channel, and the availability of the product or service is a vital part of each channel participant's marketing effort. It is also through the physical distribution process that the time and space of customer service become an integral part of marketing. Thus it links a marketing channel with its customers (i.e., it links manufacturers, wholesalers, and retailers).

Outsourcing/partnerships

This includes not just the outsourcing of the procurement of materials and components, but also the outsourcing of services that traditionally have been provided in-house. The logic of this trend is that the company will increasingly focus on those activities in the value chain in which it has a distinctive advantage and outsource everything else. This movement has been particularly evident in logistics, where the provision of transport, storage, and inventory control is increasingly subcontracted to specialists or logistics partners. Also, managing and controlling this network of partners and suppliers requires a blend of central and local involvement: strategic decisions are taken centrally, while the monitoring and control of supplier performance and day-to-day liaison with logistics partners are best managed locally.

Performance measurement

Experts found a strong relationship from the largest arcs of supplier and customer integration to market share and profitability. Taking advantage of supplier capabilities and emphasizing a long-term supply chain perspective in customer relationships can both be correlated with a firm's performance. As logistics competency becomes a critical

factor in creating and maintaining competitive advantage, measuring logistics performance becomes increasingly important, because the difference between profitable and unprofitable operations becomes narrower.

A.T. Kearney Consultants (1985) noted that firms engaging in comprehensive performance measurement realized improvements in overall productivity. According to experts[according to whom?], internal measures are generally collected and analyzed by the firm, including cost, customer service, productivity, asset measurement, and quality. External performance is measured through customer perception measures and "best practice" benchmarking.

Warehousing management

To reduce a company's cost and expenses, warehousing management is concerned with storage, reducing manpower cost, dispatching authority with on time delivery, loading & unloading facilities with proper area, inventory management system etc.

Workflow management

Integrating suppliers and customers tightly into a workflow (or business process) and thereby achieving an efficient and effective supply chain is a key goal of workflow management.

ENTERPRISE RESOURCE PLANNING

Enterprise resource planning (**ERP**) is the integrated management of core business processes, often in real-time and mediated by software and technology.

ERP is usually referred to as a category of business-management software — typically a suite of integrated applications—that an organization can use to collect, store, manage, and interpret data from these many businessactivities.

ERP provides an integrated and continuously updated view of core business processes using common databases maintained by a database management system. ERP systems track business resources—cash, raw materials, production capacity—and the status of business commitments: orders, purchase orders, and payroll. The applications that make up the system share data across

various departments (manufacturing, purchasing, sales, accounting, etc.) that provide the data.[1] ERP facilitates information flow between all business functions and manages connections to outside stakeholders.[2]

Enterprise system software is a multibillion-dollar industry that produces components supporting a variety of business functions. IT investments have become the largest category of capital expenditure in United States-based businesses over the past[which?] decade. Though early ERP systems focused on large enterprises, smaller enterprises increasingly use ERP systems.[3]

The ERP system integrates varied organizational systems and facilitates error-free transactions and production, thereby enhancing the organization's efficiency. However, developing an ERP system differs from traditional system development.[4] ERP systems run on a variety of computer hardware and network configurations, typically using a database as an information repository

ORIGIN

The Gartner Group first used the abbreviation ERP in the 1990s[6][7] to extend upon the capabilities of material requirements planning (MRP), and the later manufacturing resource planning (MRP II),[8][9] as well as computer-integrated manufacturing. Without replacing these terms, ERP came to represent a larger whole that reflected the evolution of application integration beyond manufacturing.[10]

Not all ERP packages developed from a manufacturing core; ERP vendors variously began assembling their packages with finance-and-accounting, maintenance, and human-resource components. By the mid-1990s ERP systems addressed all core enterprise functions. Governments and non–profit organizations also began to use ERP systems

CHARACTERISTICS

ERP systems typically include the following characteristics:

- An integrated system
- Operates in (or near) real time
- A common database that supports all the applications
- A consistent look and feel across modules
- Installation of the system with elaborate application/data integration by the Information Technology (IT) department, provided the implementation is not done in small steps[20]
- Deployment options include: on-premises, cloud hosted, or SaaS

FUNCTIONAL AREAS

An ERP system covers the following common functional areas. In many ERP systems, these are called and grouped together as ERP modules:

- Finance & Accounting: General Ledger, Fixed Assets, payables including vouchering, matching and payment, receivables Cash Management and collections, cash management, Financial Consolidation
- Management Accounting: Budgeting, Costing, cost management, activity based costing
- Human resources: Recruiting, training, rostering, payroll, benefits, retirement and pension plans, diversity management, retirement, separation
- Manufacturing: Engineering, bill of materials, work orders, scheduling, capacity, workflow management, quality control, manufacturing process, manufacturing projects, manufacturing flow, product life cycle management
- Order Processing: Order to cash, order entry, credit checking, pricing, available to promise, inventory, shipping, sales analysis and reporting, sales commissioning.
- Supply chain management: Supply chain planning, supplier scheduling, product configurator, order to cash, purchasing, inventory, claim processing, warehousing (receiving, putaway, picking and packing).
- Project management: Project planning, resource planning, project costing, work breakdown structure, billing, time and expense, performance units, activity management
- Customer relationship management: Sales and marketing, commissions, service, customer contact, call center support — CRM systems are not always considered part of ERP systems but rather Business Support systems (BSS).
- Data services : Various "self–service" interfaces for customers, suppliers and/or employees

PERFORMANCE MANAGEMENT
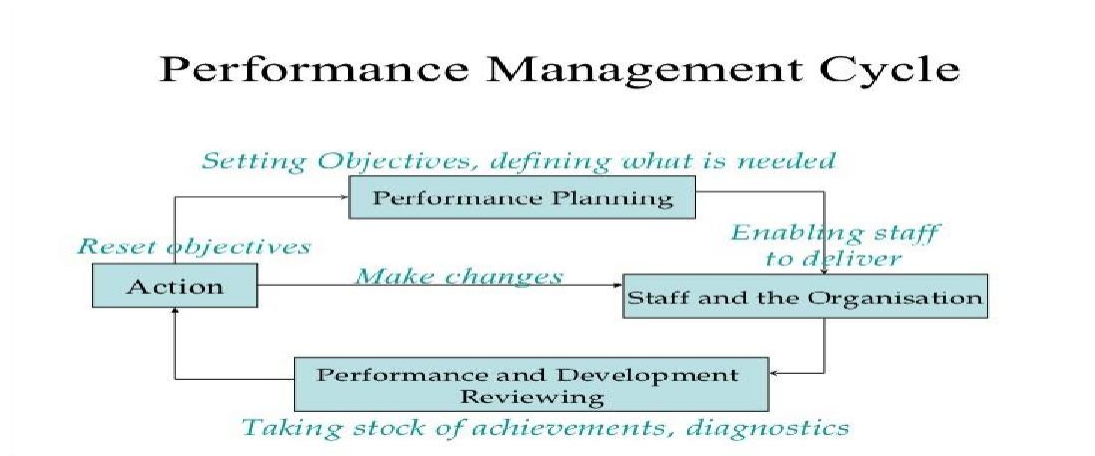
What Is "Good Performance"

- More than just activities, effort, good intentions, or results
  - Working hard and staying busy are not necessarily high performance
  - Attending training sessions and studying hard does not necessarily lead to good performance
  - Strong commitment may not lead to good performance
  - Even accomplishing some goals may not be high performance

Annual Plans Should Create Performance Standards for Each Department

- These should translate into performance goals for each worker
  - Quantity
  - Quality
  - Time
  - Cost

Performance management

Definition:

Employee performance management is the process of involving employees in accomplishing your agency's mission and goals.

Employee performance management includes: planning work and setting goals, monitoring performance, developing capacity, reviewing performance, and rewarding good work.
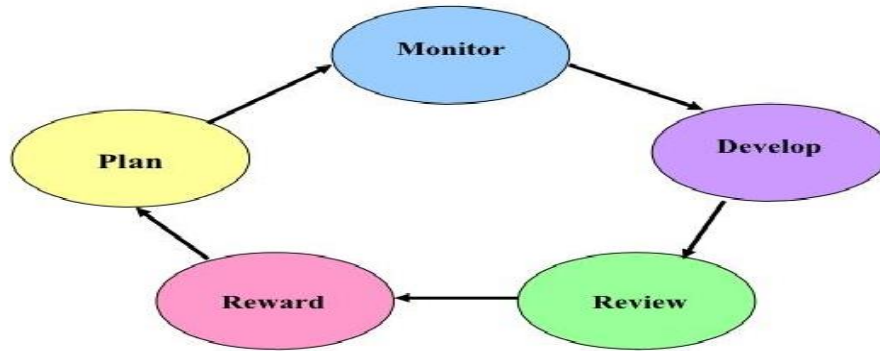
Managing performance for ...

Accountability

Performance target setting and outcome/results review

AND / OR

Stages of performance management

Stage 1 – Individual Performance Planning

Stage 1 – Planning
- Work goals
- Competencies
- Learning
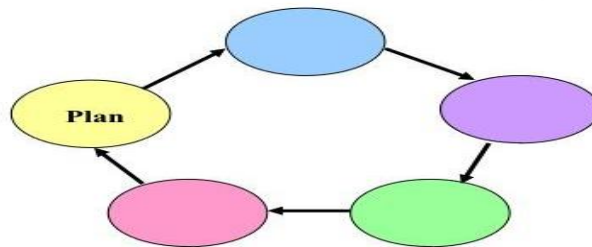
Performance planning at the start of the year and then periodically is the core of the performance management process. The performance plan should be a written document.

BUSINESS PROCESS OUTSOURCING

What is BPO

BPO is the process of hiring another company to handle business activities for you.

Business process outsourcing (BPO) is a subset of outsourcing that involves the contracting of the operations and responsibilities of specific business functions (or processes) such as payroll, customer service, accounting, data recording and much more to a third-party service provider.

Business Process Outsourcing

Why does a company outsource ?

Not all companies, especially the smaller one, have the cost expertise needed to manage a complex network of the activity they need. For eg. many bank don't have expertise to manage a complex network of ATMs.

Outsourcing enables an enterprises to concentrate its time and efforts on its key function.

Companies need not invest money in creating and maintaining system non core activities.

When the predictability of the process/service is not important.

When there is limited opportunity for the firm to distinguish itself competitively through a particular process/service.

BPO Categories

◆ It is often divided into two categories :

- **Back Office Outsourcing** which includes internal business functions such as billing or purchasing.

- **Front Office Outsourcing** which includes customer-related services such as marketing or tech support.

Key Terms of BPO

Offshore	BPO that is contracted outside a company's own country.
Onshore	BPO that is contracted with the company's own country.
Nearshore	BPO that is contracted to a company's neighboring country.

Different types of BPO Services

Customer Interaction Services	Back Office Transaction	IT/Software Operations	Finance/Accounting Services	HR Services	Knowledge Services
Customer Service Voice/E-mail	Check, Credit/Debit Card Processing	Requirements	Billing Services	Payroll Services	Data Analytics
Marketing Services	Collections & Receivables	Application Development	Account Payables	Healthcare Administration	Data Mining
Telesales	Direct & Indirect Procurement	Application Testing	Account Receivables	Hiring & Recruitment	Data/Knowledge Management
Order Processing	Transport Administration	Packaged Application Outsourcing	General Accounting	Workforce Training	Voice of Customer Feedback
Customer support	Logistics & Dispatch	Implementation Services	Auditing & Compliance	Retirement Benefits	
Warranty Administration	Warehouse management	IT Helpdesk			
Customer Feedback					

BPO Service Examples

1. Customer Support Services

›› Customers calling to check on their order status.
›› Customers calling to check for information on products and services.
›› Customers calling to verify their account status.
›› Customers calling to check their reservation status etc.

2. Technical Support Services

›› Customers calling to resolve a problem with their home PC.
›› Customers calling to understand how to dial up to their ISP.
›› Customers calling with a problem with their software or hardware.
›› Customers calling to resolve other problems with their products.

BPO Service Examples

3. Telemarketing Services

›› Outbound calling to sell wireless services for a telecom provider.
›› Outbound calling to retail households to sell leisure holidays.
›› outbound calling to existing customers to sell a new rate card for a mobile service provider.
›› outbound calling to sell credit or debit cards etc.

4. Employee IT Help-desk Services

›› System problem resolutions related to desktop
›› Notebooks, OS, connectivity etc.
›› Office productivity tools support including browsers and mail.
›› New service requests.
›› IT operational issues.
›› product usage queries etc.

BPO Service Examples

5. Insurance Processing

›› New Business / Promotion:
Inbound/outbound sales, Initial Setup, Case Management, Underwriting, Risk assessment, Policy issuance etc.
›› Policy Maintenance / Management:
Record Changes like Name, Beneficiary, Nominee, Address; Collateral verification, Surrender Audits Accounts Receivable, Accounting, Claim Overpayment, Customer care service via voice/email etc.

6. Data Entry Services / Data Processing Services

›› Data entry from Paper/Books with highest accuracy and quick.
›› Data entry from Image file in any format .
›› Business Transaction Data entry like sales / purchase / payroll.
›› Data entry of E-Books / Electronic Books.
›› Receipt and Bill Data Entry etc.

BPO Service Examples

7. Book Keeping and Accounting Services

›› General Ledger
›› Accounts Receivables and Accounts Payable
›› Financial Statements
›› Bank Reconciliation
›› Assets / Equipment Ledgers etc.

8. Internet / Online / Web Research

›› Internet Search.
›› Product Research & Market Research.
›› Survey, Analysis.
›› Web and Mailing list research etc.

BPO Almost Everywhere

BPO appears to be an all inclusive term that covers everything:

››› Medical transcription
››› Animation
››› Power point presentations
››› Equity research
››› Contract research
››› Call centres
››› Collections
››› IT Help desk
››› Internet chat
››› Customer service
››› Transaction processing
››› Travel bookings
››› Accounting
››› etc. etc. etc.

Organizational Changes For BPO Success

BPO- Industry Segment

Everyone industry is into outsourcing:

››› Banks

››› Insurance

››› Asset management

››› Manufacturing

››› Healthcare and Pharma

››› IT

››› Telecom

››› Travel agencies

››› Airlines

››› Governments

Advantage and Disadvantage of BPO

Advantages

- Productivity Improvements
- Cost Savings
- Improved HR
- Focus on Core Business Competency
- Improve Service Level
- Reengineer Business Process
- Access to world class capabilities
- Higher level of service with lower cost

Disadvantages

- Knowledge Disappears and is Transferred to the Outsourcing Partner
- Poor Quality Control
- Restoring Operations is Complicated
- Lack of Loyal Employees
- Reduction in Strategic Alignment
- Political and religious instability

Outsourcing in India

BPO	ITES	KPO
Business Process Outsourcing	Information technology Enabled service	Knowledge Process Outsourcing

Introduction

- In today's ever-changing world, the only thing that doesn't change is 'change' itself. In a world increasingly driven by the three Cs: Customer, Competition and Change,
- companies are on the lookout for new solutions for their business problems[4]. Recently, some of the more successful business corporations in the world seem to have hit upon an incredible solution: **Business Process Reengineering (BPR).**
- Some of the recent headlines in the popular press read, *"Wal-Mart reduces restocking time from six weeks*
- *to thirty-six hours."" Hewlett Packard's assembly time for server computers touches new low- four minutes."*
- *The reason behind these success stories: Business* Process Reengineering!

What is reengineering?

- **"Reengineering is the *fundamental rethinking and radical redesign of business processes to achieve* dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed".**
- BPR advocates that enterprises go back to the basics and reexamine their very roots. It doesn't believe in small improvements. Rather it aims at total reinvention.
- BPR focuses on processes and not on tasks, jobs or people.

What to reengineer? :

- "A business process is a series of steps designed to produce a product or a service. It includes all the activities that deliver particular results for a given Customer(external or internal)".
- Talking about the importance of processes just as companies have organization charts, they should also have what are called *process maps to give a picture of how work flows through the company.*

Why Reengineer?

- Historical 'reality' for organizations:
  — High level of demand: organizations are order takers
  — Management (and IT!) focus — efficiency and control of operations
- Modern 'reality' since 1990s:
  — Hyper-competiveness
  — Globalization
  — Very demanding customers
  — Management and IT focus: Innovation, responsiveness/speed, quality and service.

BPR Principles

- Organize around outcomes, not tasks.
- Have those who use the output of the process perform the process.
- Subsume information-processing work into the real work that produces the information.
- Treat geographically dispersed resources as though they were centralized.
- Link parallel activities instead of integrating their results.
- Put decision points where the work is performed and build controls into the process.
- Capture information once and at the source.

BENCH MARKING

What is Benchmarking?

◆ At its simplest, benchmarking means:

"Improving ourselves by learning from others."

WHAT IS BENCHMARKING?

❖ Benchmarking is the process of improving performance by continuously identifying, understanding, and adapting outstanding practices found inside and outside the organization.

YOUR TEXT HERE

Co. D   Client   Company C   Company B   Company A

Cement Industry

Mining Industry

Company P   Company R   Company S

Company T   Company U

Benchmarking Definition:

Benchmarking is the practice of being humble enough to admit that someone else is better at something and wise enough to try and learn how to match and even surpass them at it."

American Productivity and Quality Center-1988

BENCHMARKING FEATURES

◆ Benchmarking has three main features:

Continuous method of measuring and comparing a firm's business processes against those of another firm.

Discover performance gaps between one's own processes and those of leading firms.

Incorporate leading firm's processes into one's own strategy to fill the gaps and improve performance.
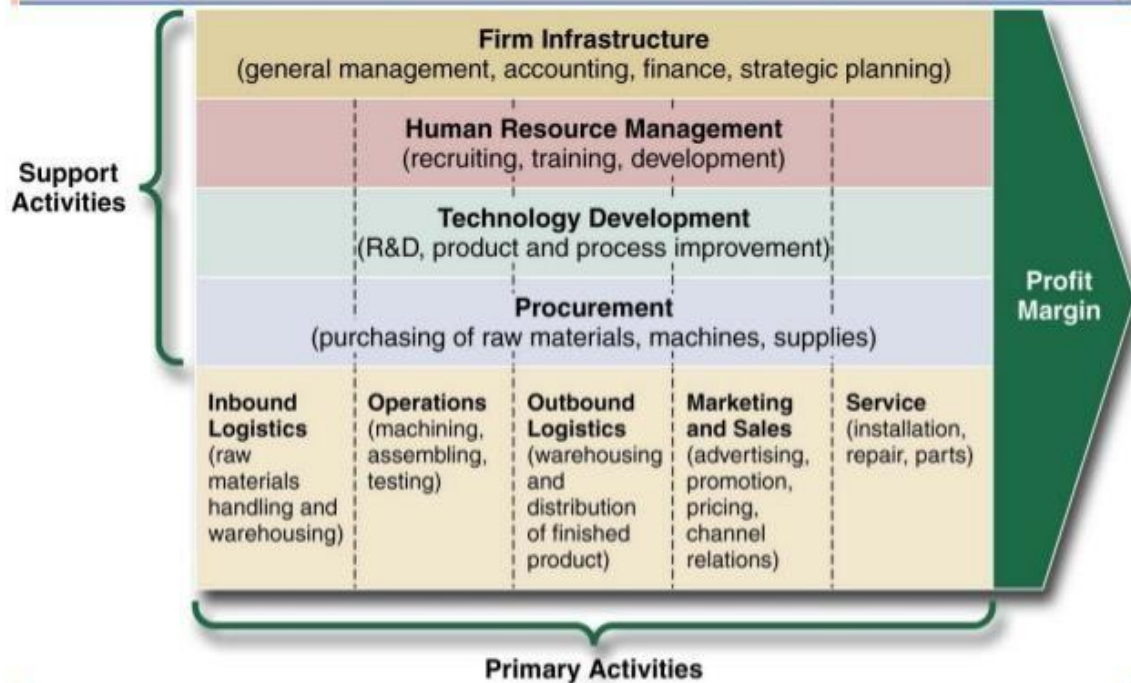
Benchmark

- A benchmark is an organization recognized for its exemplary operational performance.
- There are many benchmarks in the world including:

Toyota for	Processes
Intel for	Design
Motorola for	Training
Scandinavian Airlines for	Service
Honda for	Rapid product development

What to Benchmark?

Identifying Resources and Capabilities That Can Add Value

Support Activities	Firm Infrastructure (general management, accounting, finance, strategic planning)				
	Human Resource Management (recruiting, training, development)				
	Technology Development (R&D, product and process improvement)				
	Procurement (purchasing of raw materials, machines, supplies)				
	Inbound Logistics (raw materials handling and warehousing)	Operations (machining, assembling, testing)	Outbound Logistics (warehousing and distribution of finished product)	Marketing and Sales (advertising, promotion, pricing, channel relations)	Service (installation, repair, parts)

Profit Margin

Primary Activities

Why Benchmarking?

▶ Traditional performance improvement trends seem not to be sufficient for the highly competitive markets. In other words external environment and market conditions change rapidly

▶ Customers' expectations are highly liquid and are driven by standards set by best performer. Any product or service just below these standards may not catch the eyes of customer.

▶ Prevents the "Re-inventing the wheel".

Dr. Zargari

Why Benchmarking?

➤ **Benchmarking gives us the chance of gaining:**

- ❖ Better Awareness of Ourselves (Us)
  - What we are doing
  - How we are doing it
  - How well we are doing it
- ❖ Better Awareness of the Best (Them)
  - What they are doing
  - How they are doing it
  - How well they are doing it

THREE MAJOR ADVANTAGES OF BENCHMARKING

Product and Process Improvement:

By implementing benchmarking activity, organizations can improve their operation process
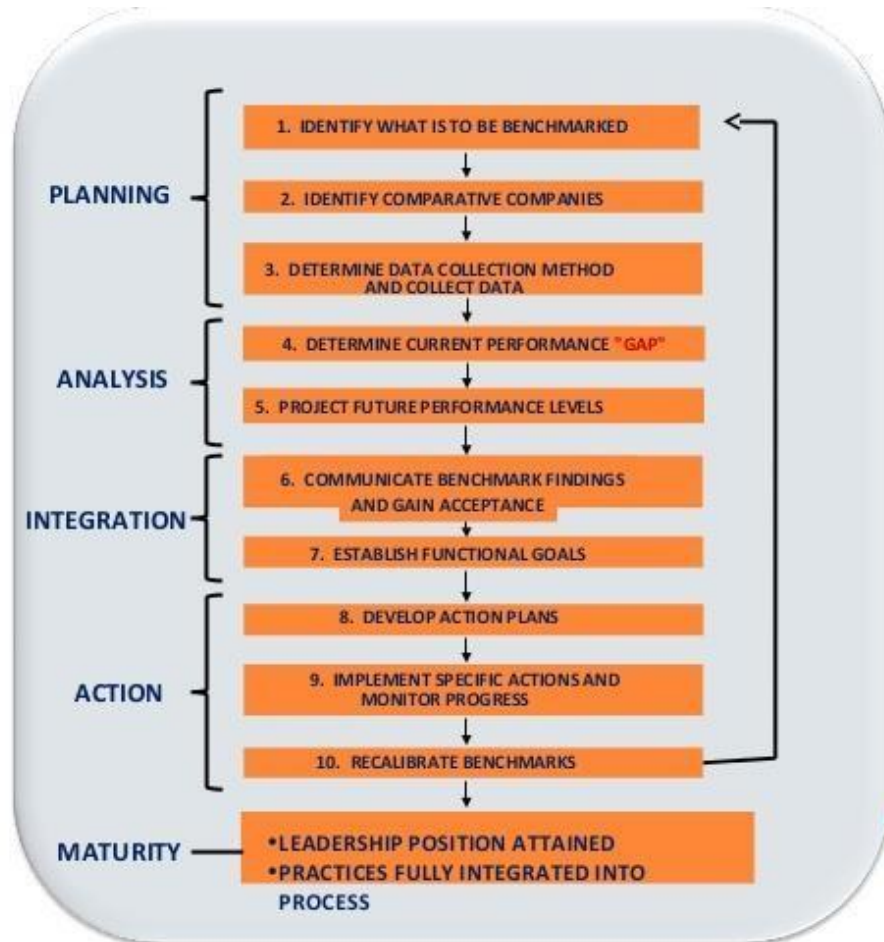
Time & Cost Reduction:

Bench marking is time and cost efficient because it involves imitation and adaptation rather than pure invention.

Competitive Strategy

By implementing benchmarking activity, organizations can improve their operation process.

A BENCHMARKING PROCESS

PLANNING
1. IDENTIFY WHAT IS TO BE BENCHMARKED
2. IDENTIFY COMPARATIVE COMPANIES
3. DETERMINE DATA COLLECTION METHOD AND COLLECT DATA

ANALYSIS
4. DETERMINE CURRENT PERFORMANCE "GAP"
5. PROJECT FUTURE PERFORMANCE LEVELS

INTEGRATION
6. COMMUNICATE BENCHMARK FINDINGS AND GAIN ACCEPTANCE
7. ESTABLISH FUNCTIONAL GOALS

ACTION
8. DEVELOP ACTION PLANS
9. IMPLEMENT SPECIFIC ACTIONS AND MONITOR PROGRESS
10. RECALIBRATE BENCHMARKS

MATURITY
• LEADERSHIP POSITION ATTAINED
• PRACTICES FULLY INTEGRATED INTO PROCESS

<u>BALANCE SCORE CARD</u>

What is a Balanced Scorecard?

The Balanced Scorecard is a strategic planning and management system used to align business activities to the vision and strategy of the organization by monitoring performance against strategic goals.
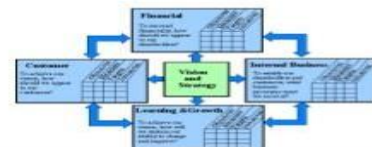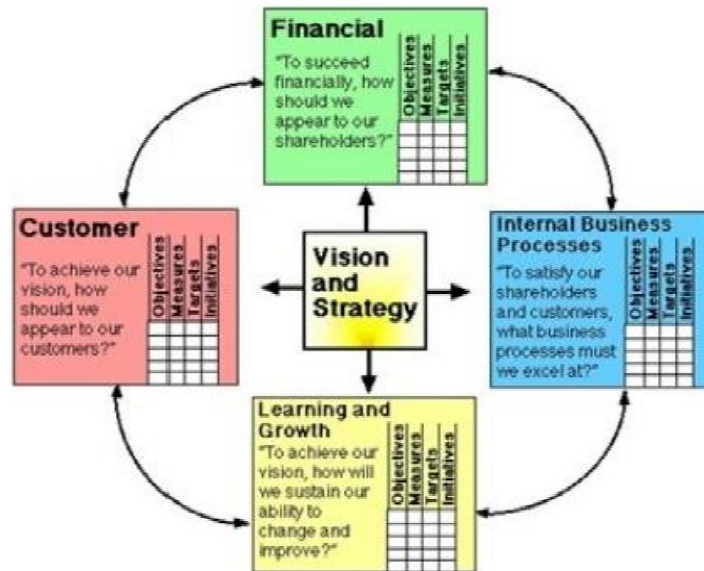
Balanced Scorecard Concept

- Was first published in 1992 by Kaplan and Norton, a book followed in 1996.
- Traditional performance measurement that only focus on external accounting data are obsolete.
- The approach is to provide 'balance' to the financial perspective.

Why Use a Balanced Scorecard?

- Improve organizational performance by measuring what matters
- Increase focus on strategy and results
- Align organization strategy with workers on a day-to-day basis
- Focus on the drivers key to future performance
- Improve communication of the organization's Vision and Strategy
- Prioritize Projects / Initiatives

4 Original Business Perspectives

- The Balanced Scorecard model suggests that we view the organization from 4 perspectives.

- Then Develop metrics, collect data and analyze it relative to each of these perspectives

Adapted from *The Balanced Scorecard* by Kaplan & Norton

4 Business Perspectives Questions

- **Financial**
  - *What must we do to create sustainable economic value?*
- **Internal Business Process**
  - *To satisfy our stakeholders, what must be our levels of productivity, efficiency, and quality?*
- **Learning and Growth**
  - *How does our employee performance management system, including feedback to employees, support high performance?*
- **Customer**
  - *What do our customers require from us and how are we doing according to those requirements?*

Department Level Scorecard Example

Balanced Scorecard Measurements

Perspective	Generic Measurements
Financial	Return of Capital Employed, Economic value added, Sales growth, Cash flow
Customer	Customer satisfaction, retention, acquisition, profitability, market share
Internal business process	Includes measurements along the internal value chain for: Innovation - measures of how well the company identifies the customers' future needs. Operations - measures of quality, cycle time, and costs. Post sales service - measures for warranty, repair and treatment of defects and returns.
Learning and growth	Includes measurements for: People - employee retention, training, skills, morale. Systems - measure of availability of critical real time information needed for front line employees.

Balanced Scorecard Strategy Map
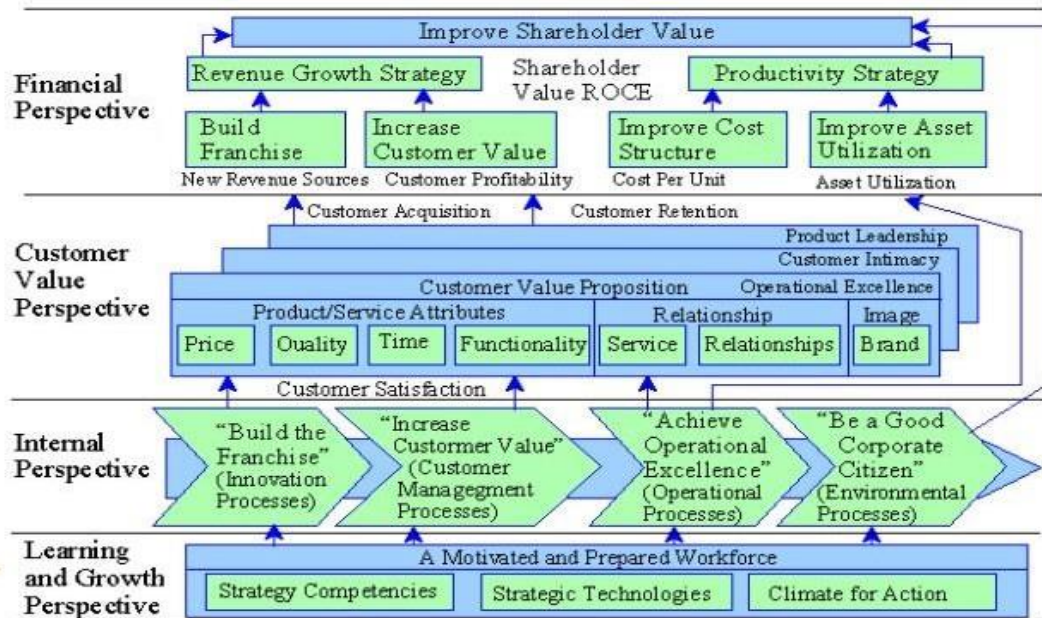
Scorecard Potential Pitfalls & Criticisms

Scorecard Potential Pitfalls & Criticisms

- **Lack of a well Defined Strategy**
  - The balanced scorecard relies on a well defined strategy and understanding of linkages between strategic objections and metrics. Without this foundation the implementation could fail.
- **Too much focus on the lagging measures**
  - Focusing on only the lagging measures may cause a lack of priority or opportunity for the leading measures.
- **Use of Generic Metrics**
  - Don't just copy metrics from another firm. Identify the measures that apply to your strategy and competitive position .
- **Self-serving managers**
  - Managers whose goal is to achieve a desired result in order to obtain a bonus or other self reward.

PART-A

2Marks Question and Answers:

1. What is the need of MIS?

   A management information system (MIS) is an information system used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization; especially in a company.

   The study of management information systems examines people and technology in an organizational context. In a corporate setting, the ultimate goal of the use of a management information system is to increase the value and profits of the business

2. What are the objectives of MRP?

   Material requirements planning (MRP) is a production planning, scheduling, and inventory control system used to manage manufacturing processes. Most MRP systems are software-based, but it is possible to conduct MRP by hand as well.

   An MRP system is intended to simultaneously meet three objectives:
   - ✓ Ensure materials are available for production and products are available for delivery to customers.
   - ✓ Maintain the lowest possible material and product levels in store
   - ✓ Plan manufacturing activities, delivery schedules and purchasing activities.

3. JIT introduced in which country?

   Just-in-time (JIT) manufacturing, also known as just-in-time production or the Toyota Production System (TPS), is a methodology aimed primarily at reducing times within production system as well as response times from suppliers and to customers. Its origin and development was in Japan, largely in the 1960s and 1970s and particularly at Toyota.

4. Advantages of TQM.

   Total Quality management is defined as a continuous effort by the management as well as employees of a particular organization to ensure long term customer loyalty and customer

satisfaction. Remember, one happy and satisfied customer brings ten new customers along with him whereas one disappointed individual will spread bad word of mouth and spoil several of your existing as well as potential customers.

5. Discuss about six sigma.

   Six Sigma is a business management strategy which aims at improving the quality of processes by minimizing and eventually removing the errors and variations. The concept of Six Sigma was introduced by Motorola in 1986, but was popularized by Jack Welch who incorporated the strategy in his business processes at General Electric. The concept of Six Sigma came into existence when one of Motorola's senior executives complained of Motorola's bad quality. Bill Smith eventually formulated the methodology in 1986.

6. What is mean by supply chain management?

   Supply Chain Strategies are the critical backbone to Business Organizations today. Effective Market coverage, Availability of Products at locations that hold the key to revenue recognition depends upon the effectiveness of Supply Chain Strategy rolled out. Very simply stated, when a product is introduced in the market and advertised, the entire market in the country and all the sales counters need to have the product where the customer can buy and take delivery.

7. Explain the importance of BPO.

   In recent years, the term Business Process Outsourcing or BPO has gained prominence and the trend of outsourcing back office operations to centers in India and Philippines along with other countries in Asia has taken center stage. Often, we come across projections that show a greater growth in BPO with more western firms outsourcing to the Asian and other countries.

PART-B

1. Explain briefly about six sigma and capacity maturity models?
2. Explain about the contemporary management practices taking place in Indian business model?
3. What is performance management? Explain its importance?
4. What is bench marking? Explain the process of bench marking?
5. Explain about Balance scored card?

All THE BEST