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# HUT 310 MANAGEMENT FOR ENGINEERS

# Module 1 - INTRODUCTION TO MANAGEMENT THEORY

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#### MANAGEMENT

 "Management as a discipline has attracted the attention of academicians and practitioners to a very great extent."

# IMPORTANCE OF MANAGEMENT

- Management is a critical element in the economic growth of the country.
- Management is essential in all organized efforts, be it a business activity or any other activity.
- Management is the dynamic, life giving element in every organization.

#### MANAGEMENT

#### **Definitions**

- According to Mary Parker Follet, Management is the art of getting things done through people.
- According to <u>Harold Koontz</u>, *Management is the art of getting things done through and with the people in formally organized groups*.
- According to <u>Dalton E McFarland</u>, *Management is defined for conceptual*, theoretical, and analytical purposes as that process by which managers create, direct, maintain, and operate purposive organization through systematic, coordinated, co-operative human effort.
- According to George R Terry, Management consists of planning, organizing, actuating and controlling, performed to determine and accomplish the objectives by the use of people and resources.

# **Need For Management**

- Society has large and complex institutions with many people working together.
- The relationship between managers and managed has changed as compared to the older master-servant relation ship making it more complex
- People have greater expectations from their jobs.

"In order to make all these things function properly, people have been trying to evolve some methods and techniques. Such attempts have given the birth of management as a separate discipline"

# Management Functions or Process of Management

"Management process suggests that all the managers in the organization should perform certain functions to get things done by others"

- 1. Forecasting
- 2. Planning
- 3. Organizing
- 4. Staffing
- 5. Directing
- 6. Coordinating
- 7. Controlling
- 8. Decision making

- **Forecasting**: It is necessary preliminary to planning. Forecasting estimates what should be done in future. Forecasting begins with sales forecast, and is followed by production forecast and forecasts for costs finance, purchase, profit/loss etc.
- <u>Planning</u>: It is the conscious determination of the future course of action to achieve the desired results. What to achieve? When to achieve? How to achieve? It includes determination of objectives, setting rules and procedures, determining projects, setting policies and strategies, budgeting etc.
- <u>Organizing</u>: it is the process of dividing work in to convenient tasks or duties, grouping of such duties in the form of positions, and grouping of various positions in to departments and sections and delegating authority to each position so that the work is carried out as planned.
- **Staffing**: Here the Managers/ HR department select, train, place, promote and (retire) qualified people. It is a continuous process.

• <u>Directing</u>: When people are available in the organization, they must know what they are expected to do in the organization. Superior managers fulfill this requirement by communicating to subordinates about their expected behavior. Through directing the actual performance of a subordinate is guided towards company objectives.

Directing includes,

- 1. Giving instructions to subordinates
- 2.Guiding the subordinates to do the work
- 3. Supervising the subordinates to make certain that the work done by them is as per the plans established.

Directing involves the following functions,

- a) Leadership
- b) Communication
- c) Motivation
- d) Supervision

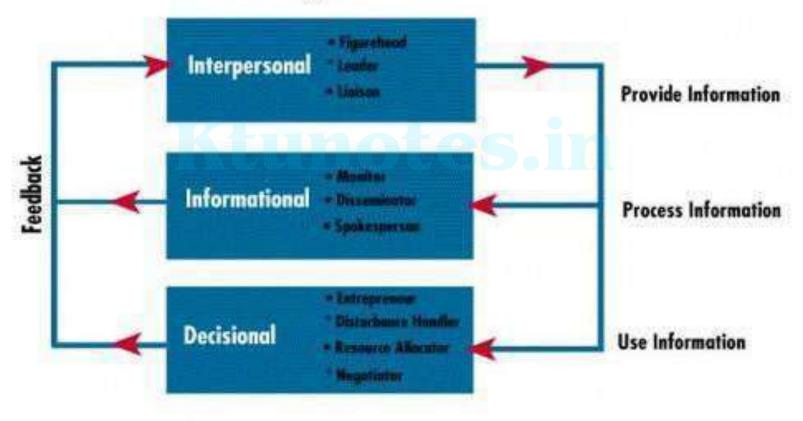
- <u>Leadership</u>: It is the quality of the behavior of a person by which he can inspire confidence and trust in his subordinates, get maximum cooperation from them and guide their activities in organized effort.
- <u>Communication</u>: Communication is the process by which ideas are transmitted, received and understood by others for the purpose of achieving desired results. Communication may be verbal or written.
- <u>Motivation</u>: Inspiring the subordinates to do a work or to achieve company objectives effectively or efficiently.
- Supervision is necessary in order to ensure,
  - 1. That the work is going on as per the plan established
    - 2. That the workers are doing as they were directed

- <u>Coordinating</u>: Means achieving harmony of individual effort towards the accomplishment of company objectives. Make plans to regulate the activities and communication of subordinates on the job. Informal relationships within the organization always tend to facilitate coordination
- <u>Controlling</u>: Controlling involves identification of actual results, comparison of actual results with expected results as set by planning process, identification of deviation between the two, if any and taking of corrective action so that actual results match with expected results.
  - 1.Set standards
  - 2.Measure Job performance
  - 3. Take corrective action

- <u>Decision Making</u>: It is the process by which a course of action is consciously chosen from a available alternatives for the purpose of achieving desired results.
- An out standing quality of a successful manager is his ability to make sound and logical decisions.

#### MANAGERICAL ROLES

### The Managerial Roles



" Indicates significant role for the supervisor

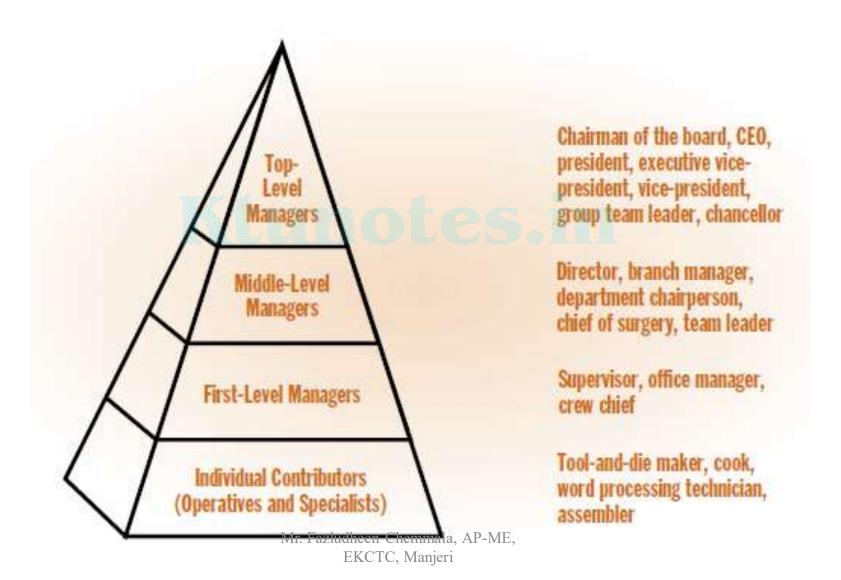
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#### MANAGERICAL ROLES

Managerial roles refer to managerial activities. This can be grouped in to three.

- Interpersonal Role
  - The figure head role: perform ceremonial and social duties
  - The Leader Role
  - The Liaison Role: with outsiders
- Informational Role
  - The recipient Role: receiving information about the operation of an enterprise
  - The disseminator Role: passing information to subordinates
  - The spokesperson Role: transmitting information to outside
- Decision Role
  - The entrepreneurial Role
  - *The disturbance handler Role*
  - The resource allocator Role
  - The negotiator Role

#### LEVELS OF MANAGERS



#### TOP-LEVELMANAGERS

- Most people who enter the field of management aspire to become **top-level managers**—**managers at the top one or two levels** in an organization.
- Top-level managers are empowered to make major decisions affecting the present and future of the firm.
- Only a top-level manager, for example, would have the authority to purchase another company, initiate a new product line, or hire hundreds of employees.
- Top-level managers are the people who give the organization its general direction; they decide where it is going and how it will get there.
- The terms *executive* and top-level manager can be used interchangeably.

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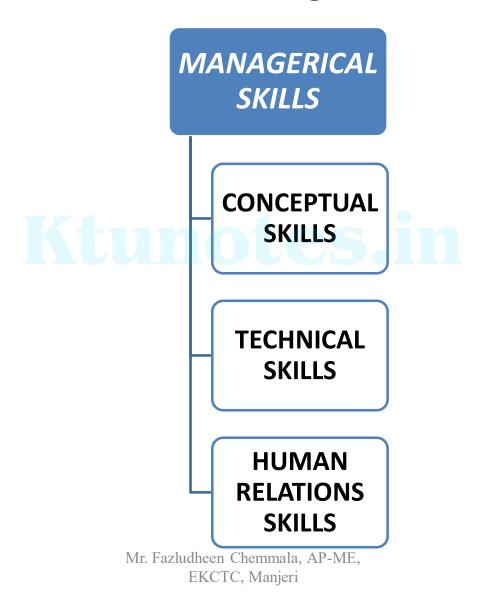
#### MIDDLE-LEVELMANAGERS

- Middle-level managers are managers who are neither executives nor first-level supervisors, but who serve as a link between the two groups.
- Middle-level managers conduct most of the coordination activities within the firm, and they disseminate information to upper and lower levels.
- The jobs of middle-level managers vary substantially in terms of responsibility and income. A branch manager in a large firm might be responsible for over 100 workers. In contrast, a general supervisor in a small manufacturing firm might have 20 people reporting to him or her.
- Other important tasks for many middle-level managers include helping the company undertake profitable new ventures and finding creative ways to reach goals.
- Quite often the middle-level manager conducts research on the Internet to gather ideas for new ventures.

#### FIRST-LEVELMANAGERS

- Managers who supervise operatives are referred to as **first-level managers**, **first-line managers**, **or supervisors**.
- Historically, first level managers were promoted from production or clerical positions into supervisory positions. Rarely did they have formal education beyond high school.
- A dramatic shift has taken place in recent years, however. Many of today's first level managers are career school graduates who are familiar with modern management techniques.
- The current emphasis on productivity and quality has elevated the status of many supervisors.

# SKILLS REQUIRED



#### **CONCEPTUAL SKILL**

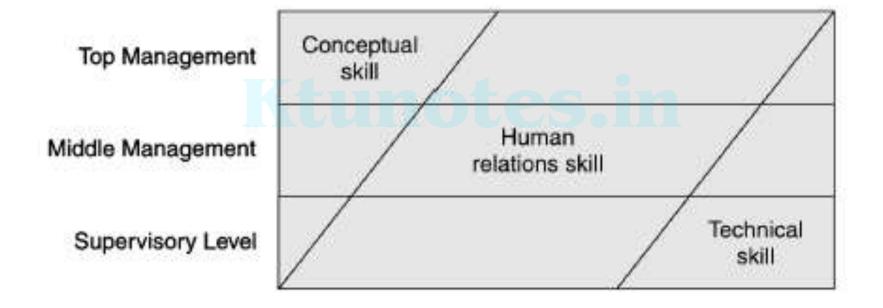
The *conceptual skill* refers to the ability of a manager to take a broad and farsighted view of the organisation and its future, his ability to think in abstract, his ability to analyse the forces working in a situation, his creative and innovative ability and his ability to assess the environment and the changes taking place in it. In short, it is his ability to conceptualise the environment, the organisation, and his own job, so that he can set appropriate goals for his organisation, for himself and for his team. This skill seems to increase in importance as a manager moves up to higher positions of responsibility in the organisation.

#### TECHNICAL SKILL

The *technical skill* is the manager's understanding of the nature of job that people under him have to perform. It refers to a person's knowledge and proficiency in any type of process or technique. In a production department, this would mean an understanding of the technicalities of the process of production. Whereas this type of skill and competence seems to be more important at the lower levels of management, its relative importance as a part of the managerial role diminishes as the manager moves to higher positions. In higher functional positions, such as the position of a marketing manager or production manager, the conceptual component, related to these functional areas becomes more important and the technical component becomes less important.

#### **HUMAN RELATIONS SKILL**

Human relations skill is the ability to interact effectively with people at all levels. This skill develops in the manager sufficient ability (a) to recognise the feelings and sentiments of others; (b) to judge the possible reactions to, and outcomes of various courses of action he may undertake; and (c) to examine his own concepts and values which may enable him to develop more useful attitudes about himself. This type of skill remains consistently important for managers at all levels.



# EVOLUTION OF MANAGEMENT THOUGHTS

• CLASSICAL MANAGEMENT THEORIES

• NEO-CLASSICAL MANAGEMENT THEORIES

MODERN MANAGEMENT THEORIES

#### **CLASSICAL THEORIES**

- F.W Taylor's SCIENTIFIC MANAGEMENT THEORY.
- Henry Fayol's ADMINISTRATIVE MANAGEMENT THEORY.
- Max Weber's BUREAUCRACY THEORY.

# F. W Taylor's SCIENTIFIC MANAGEMENT THEORY

- 1. Time and Motion study.
- 2. Differential Payment.
- 3. Drastic Reorganization of supervision.
- 4. Scientific Recruitment and Training.
- 5. Intimate friendly cooperation between management and workers.

# F. W Taylor's SCIENTIFIC MANAGEMENT THEORY

- 1. Science, not rule of thumb.
- 2. Harmony, not discord.
- 3. Cooperation, not individualism.
- 4. Maximum output, not restricted output.
- 5. Specialization, not generalization.
- 6. Scientific selection, training and development of persons, not on personal judgment.

# Henry Fayol's ADMINISTRATIVE MANAGEMENT THEORY

- 1. Division of work.
- 2. Authority and Responsibility.
- 3. Discipline.
- 4. Unity of Command.
- 5. Unity of Direction.
- 6. Subordination of Individual Interest to General Interest.
- 7. Remuneration.
- 8. Centralization.
- 9. Scalar Chain.
- 10. Order.
- 11. Equity.
- 12. Stability of tenure of personnel.
- 13. Initiative.
- 14. Esprit de Corps.

#### Max Weber's BUREAUCRACY THEORY

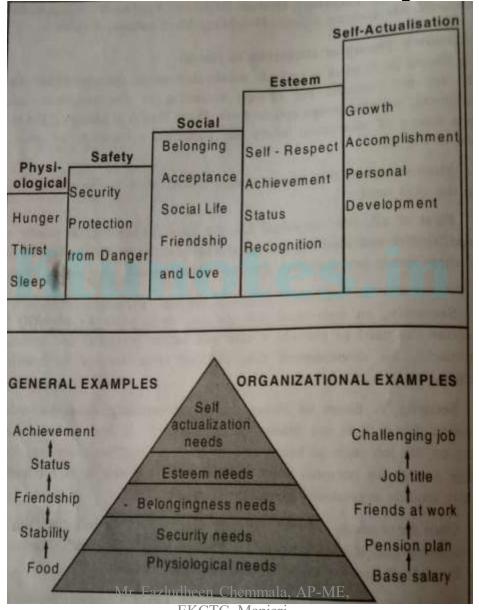
- 1. There is insistence in following standard rules.
- 2. There is a systematic division of work.
- 3. Principle of hierarchy is followed.
- 4. It is necessary for the individual to have knowledge of and training in the application of rules.
- 5. Administrative acts, decisions and rules are recorded in writing.
- 6. There is rational personnel administration.

#### **NEO - CLASSICAL THEORIES**

- HUMAN RELATION THEORY by Elton Mayo
   OR BEHAVIOURAL MANAGEMENT
   THEORY (Hawthorne Experiments)
  - Illumination Experiments
  - Relay Assembly test room
  - Interviewing Programme
  - Bank wiring test room

#### **NEO - CLASSICAL THEORIES**

- BEHAVIOURAL SCIENCE THEORY or MOTIVATIONAL THEORY
  - Maslow's Need Hierarchy Theory
  - McGregor's Theory X and Theory Y



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- Maslow stated that people are motivated to achieve certain needs and that some needs take precedence over others.
  - Our most basic need is for physical survival, and this will be the first thing that motivates our behavior. Once that level is fulfilled the next level up is what motivates us, and so on.
- 1. Physiological needs These are biological requirements for human survival, e.g. air, food, drink, shelter, clothing, warmth, sex, sleep.

  If these needs are not satisfied the human body cannot function optimally. Maslow considered physiological needs the most important as all the other

until

these

needs

are

met.

secondary

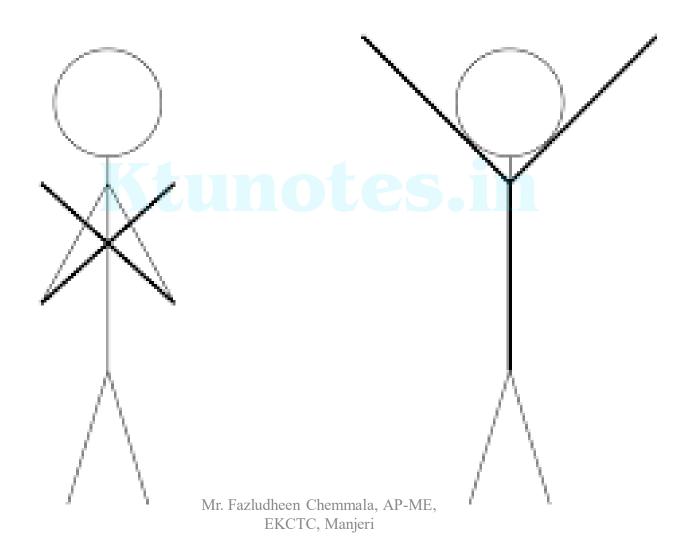
needs

become

- 2. <u>Safety needs</u> Once an individual's physiological needs are satisfied, the needs for security and safety become salient. People want to experience order, predictability and control in their lives. These needs can be fulfilled by the family and society (e.g. police, schools, business and medical care).
  - For example, emotional security, financial security (e.g. employment, social welfare), law and order, freedom from fear, social stability, property, health and wellbeing (e.g. safety against accidents and injury).

- 3. <u>Love and belongingness needs</u> after physiological and safety needs have been fulfilled, the third level of human needs is social and involves feelings of belongingness. Belongingness, refers to a human emotional need for interpersonal relationships, affiliating, connectedness, and being part of a group.
  - Examples of belongingness needs include friendship, intimacy, trust, and acceptance, receiving and giving affection, and love.
- 4. <u>Esteem needs</u> are the fourth level in Maslow's hierarchy and include self-worth, accomplishment and respect. Maslow classified esteem needs into two categories: (i) esteem for oneself (dignity, achievement, mastery, independence) and (ii) the desire for reputation or respect from others (e.g., status, prestige).
  - Maslow indicated that the need for respect or reputation is most important for children and adolescents and precedes real self-esteem or dignity.
- 5. <u>Self-actualization needs</u> are the highest level in Maslow's hierarchy, and refer to the realization of a person's potential, self-fulfillment, seeking personal growth and peak experiences. Maslow (1943) describes this level as the desire to accomplish everything that one can, to become the most that one can be.

## McGregor's Theory X and Theory Y



## McGregor's Theory X and Theory Y

#### THEORY X

- Dislike their work.
- Avoid responsibility and need constant direction.
- Have to be controlled, forced and threatened to deliver work.
- Need to be supervised at every step.
- Have no incentive to work or ambition, and therefore need to be enticed by rewards to achieve goals

#### THEORY Y

- Happy to work on their own initiative.
- More involved in decision making.
- Self-motivated to complete their tasks.
- Enjoy taking ownership of their work.
- Seek and accept responsibility, and need little direction.
- View work as fulfilling and challenging.
- Solve problems creatively and imaginatively

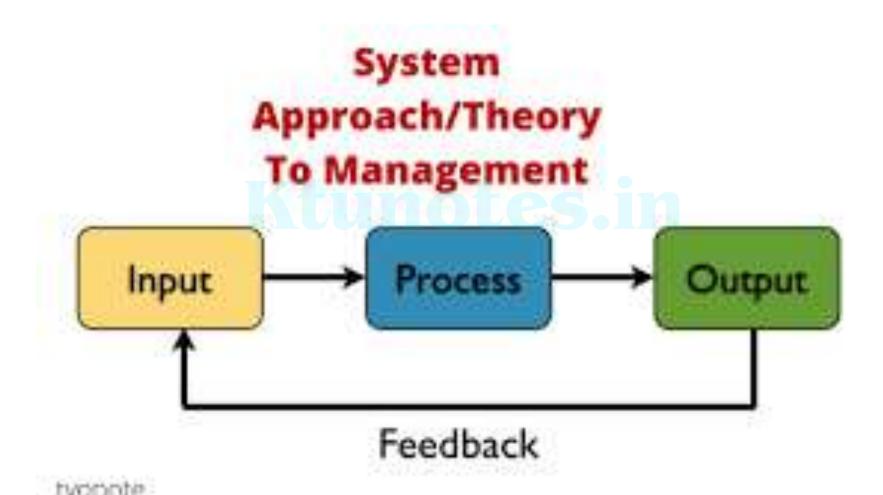
- QUANTITATIVE APPROACH
- SYSTEMS APPROACH
- CONTINGENCY APPROACH

### • QUANTITATIVE APPROACH

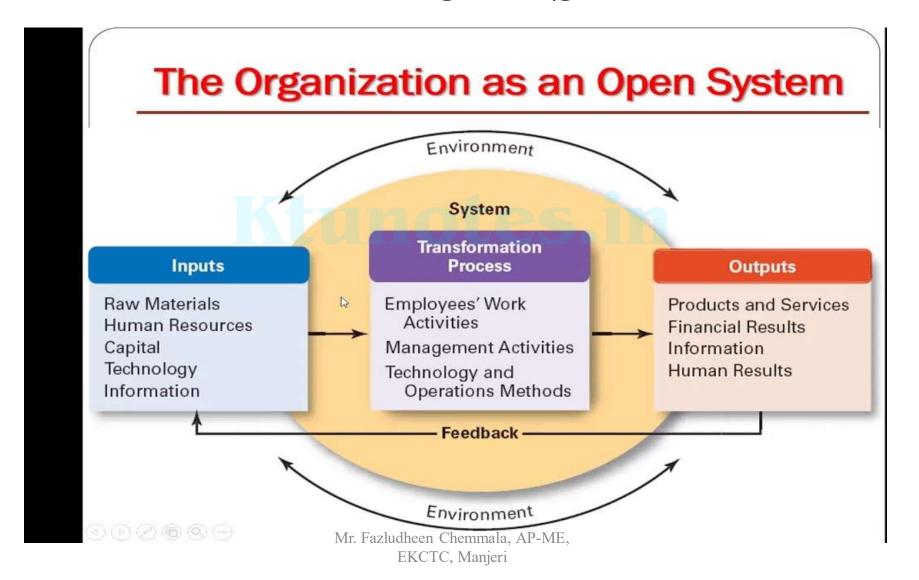
- Provides managers with a scientific basis for solving problems and making decisions.
- It uses a wide array of mathematical and statistical techniques.
- The primary strength of management science is that it enables managers to solve problems that are so complex they cannot be solved by common sense alone.
- A weakness of management science is that the answers it produces are often less precise than they appear.

#### • SYSTEMS APPROACH

- The systems approach to management is more a perspective for viewing problems than a school of thought.
- It is based on the concept that an organization is a system, or an entity of interrelated parts.
- If you adjust one part of the system, other parts will be affected automatically.
- The organization transforms inputs into outputs and supplies them to the outside world. If these outputs are perceived as valuable, the organization will survive and prosper.
- The feedback loop indicates that acceptance of the outputs by society gives the organization new inputs for revitalization and expansion.



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### SYSTEMS APPROACH

**ADVANTAGES** 

**DISADVANTAGES** 

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### CONTINGENCY APPROACH

- Also known as SITUATIONAL APPROACH TO MANAGMEMENT.
- The contingency approach to management emphasizes that there is no one best way to manage people or work.
- A method that leads to high productivity or morale in one situation may not achieve the same results in another.
- Common sense also contributes heavily to the contingency approach.
- Experienced managers know that not all people and situations respond identically to identical situations.
- The strength of the contingency approach is that it encourages managers to examine individual and situational differences before deciding on a course of action. Its major problem is that it is often used as an excuse for not acquiring formal knowledge about management.

- A **Professional manager** is an invaluable asset to the firm. His primary job is directing employees and coordinating various activities of the firm. For this, he needs communication, technical, conceptual and human skills.
  - Envisioning Goals
  - Managing Growth
  - Improving and Maintaining Efficiency
  - Innovation
  - Looking out for the competition
  - Leadership
  - Change Management
  - Choosing correct Information Technology

### **Envisioning Goals**

The first and most important task of any manager is providing a direction to the organization. This entails mapping out their visions and missions. This is one task the manager must not delegate, but perform himself. Defining the company's objectives helps unify the employees and gets them working towards a common goal.

### Managing Growth

One of the main roles and responsibilities of the manager is to manage the growth and ensure the survival of the firm. There are both internal and external factors that are a threat to this growth and survival of the firm. Internal factors (such as choosing the right technology, hiring the correct people, etc.) are mostly in the firm's control. External factors (government policy, economic conditions, etc.) pose a concern the manager must deal with.

### > Improving and Maintaining Efficiency

The manager has many roles and responsibilities regarding the efficiency of the firm. Firstly he must ensure that the firm is efficient, i.e. resources are not being wasted. And then this efficiency has to be effectively maintained.

#### > Innovation

It is the task of the manager to be innovative in his job. He must find new and creative solutions to the problems faced by the firm. Innovation not only means having new ideas but also cultivating and implementing them. This is one of the on-going jobs of a professional manager.

### **Looking out for the competition**

A manager has to plan and prepare for the competition in the market. He must never be caught unaware, he must prepare for new and/or increased competition.

### > Leadership

The quality of the leadership usually dictates the future of a firm. Hence the manager must also be a good leader. He should be able to inspire and motivate people to work towards the goals of the company. A leader leads from the front, and the manager must also possess exceptional qualities and work ethic that his team members can learn from.

### Change Management

In any company or organization, change is a given. The manager has to be the agent of change in such cases. It is his roles and responsibilities to ensure the process of change is smooth and uneventful for the company.

### Choosing correct Information Technology

This is a problem that all managers of today's era are facing. There are so many choices available in the market for various IT processes.