



**NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE**  
**(NAAC Accredited)**  
(Approved by AICTE, Affiliated to APJ Abdul Kalam Technological University,  
Kerala)



## **DEPARTMENT OF MECHANICAL ENGINEERING**

### ***COURSE MATERIALS***



### ***HS210 LIFESKILLS***

#### **VISION OF THE INSTITUTION**

To mould true citizens who are millennium leaders and catalysts of change through excellence in education.

#### **MISSION OF THE INSTITUTION**

**NCERC** is committed to transform itself into a center of excellence in Learning and Research in Engineering and Frontier Technology and to impart quality education to mould technically competent citizens with moral integrity, social commitment and ethical values.

We intend to facilitate our students to assimilate the latest technological know-how and to imbibe discipline, culture and spiritually, and to mould them in to technological giants, dedicated research scientists and intellectual leaders of the country who can spread the beams of light and happiness among the poor and the underprivileged.

#### **ABOUT DEPARTMENT**

- ◆ Established in: 2002
- ◆ Course offered : B.Tech in Mechanical Engineering
- ◆ Approved by AICTE New Delhi and Accredited by NAAC
- ◆ Affiliated to the University of Dr. A P J Abdul Kalam Technological University.

## DEPARTMENT VISION

Producing internationally competitive Mechanical Engineers with social responsibility & sustainable employability through viable strategies as well as competent exposure oriented quality education.

## DEPARTMENT MISSION

1. Imparting high impacted education by providing conducive teaching learning environment.
2. Fostering effective modes of continuous learning process with moral & ethical values.
3. Enhancing leadership qualities with social commitment, professional attitude, unity, team spirit & communication skill.
4. Introducing the present scenario in research & development through collaborative efforts blended with industry & institution.

## PROGRAMME EDUCATIONAL OBJECTIVES

**PEO1:** Graduates shall have strong practical & technical exposures in the field of Mechanical Engineering & will contribute to the society through innovation & enterprise.

**PEO2:** Graduates will have the demonstrated ability to analyze, formulate & solve design engineering / thermal engineering / materials & manufacturing / design issues & real life problems.

**PEO3:** Graduates will be capable of pursuing Mechanical Engineering profession with good communication skills, leadership qualities, team spirit & communication skills.

**PEO4:** Graduates will sustain an appetite for continuous learning by pursuing higher education & research in the allied areas of technology.

## PROGRAM OUTCOMES (POS)

**Engineering Graduates will be able to:**

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

#### PROGRAM SPECIFIC OUTCOMES (PSO)

**PSO1:** graduates able to apply principles of engineering, basic sciences & analytics including multi variant calculus & higher order partial differential equations..

**PSO2:** Graduates able to perform modeling, analyzing, designing & simulating physical systems, components & processes.

**PSO3:** Graduates able to work professionally on mechanical systems, thermal systems & production systems.

#### COURSE OUTCOMES

<b>CO1</b>	Learners are able to remember theories pertaining to communication, creativity, problem solving, moral development and leadership
<b>CO2</b>	Learners are able to comprehend the importance of leadership qualities, code of ethics, team dynamics and of communication.
<b>CO3</b>	Learners are able to apply skills pertaining to presentation, group discussion, technical writing, problem solving, creative and critical thinking and leadership in everyday life
<b>CO4</b>	Learners are able to analyze non-verbal communication cues and leadership roles
<b>CO5</b>	Learners are able to evaluate different perspectives that arise due to an ethical dilemma

#### MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>CO1</b>	-	-	-	-	-	-	-	-	-	<b>3</b>	-	<b>1</b>	-	-	-
<b>CO2</b>	-	<b>3</b>	<b>2</b>	<b>1</b>	-	-	-	-	-	-	-	-	-	-	-
<b>CO3</b>	-	-	-	-	-	-	-	-	<b>3</b>	-	<b>1</b>	-	-	-	-
<b>CO4</b>	-	-	<b>2</b>	-	-	<b>3</b>	<b>2</b>	<b>3</b>	-	-	-	-	-	-	-
<b>CO5</b>	-	-	-	-	-	-	-	-	<b>3</b>	-	-	-	-	-	-

CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Note: H-Highly correlated=3, M-Medium correlated=2, L-Less correlated=1

## SYLLABUS

Course code	Course Name	L-T-P-Credits	Year of Introduction
HS210	LIFE SKILLS	2-0-2	2016
<b>Prerequisite : Nil</b>			
<b>Course Objectives</b> <ul style="list-style-type: none"> <li>To develop communication competence in prospective engineers.</li> <li>To enable them to convey thoughts and ideas with clarity and focus.</li> <li>To develop report writing skills.</li> <li>To equip them to face interview &amp; Group Discussion.</li> <li>To inculcate critical thinking process.</li> <li>To prepare them on problem solving skills.</li> <li>To provide symbolic, verbal, and graphical interpretations of statements in a problem description.</li> <li>To understand team dynamics &amp; effectiveness.</li> <li>To create an awareness on Engineering Ethics and Human Values.</li> <li>To instill Moral and Social Values, Loyalty and also to learn to appreciate the rights of others.</li> <li>To learn leadership qualities and practice them.</li> </ul>			
<b>Syllabus</b> <b>Communication Skill:</b> Introduction to Communication, The Process of Communication, Barriers to Communication, Listening Skills, Writing Skills, Technical Writing, Letter Writing, Job Application, Report Writing, Non-verbal Communication and Body Language, Interview Skills, Group Discussion, Presentation Skills, Technology-based Communication. <b>Critical Thinking &amp; Problem Solving:</b> Creativity, Lateral thinking, Critical thinking, Multiple Intelligence, Problem Solving, Six thinking hats, Mind Mapping & Analytical Thinking. <b>Teamwork:</b> Groups, Teams, Group Vs Teams, Team formation process, Stages of Group, Group Dynamics, Managing Team Performance & Team Conflicts. <b>Ethics, Moral &amp; Professional Values:</b> Human Values, Civic Rights, Engineering Ethics, Engineering as Social Experimentation, Environmental Ethics, Global Issues, Code of Ethics like ASME, ASCE, IEEE. <b>Leadership Skills:</b> Leadership, Levels of Leadership, Making of a leader, Types of leadership, Transactions Vs Transformational Leadership, VUCA Leaders, DART Leadership, Leadership Grid & leadership Formulation.			
<b>Expected outcome</b> The students will be able to <ul style="list-style-type: none"> <li>Communicate effectively.</li> <li>Make effective presentations.</li> <li>Write different types of reports.</li> <li>Face interview &amp; group discussion.</li> <li>Critically think on a particular problem.</li> <li>Solve problems.</li> <li>Work in Group &amp; Teams</li> <li>Handle Engineering Ethics and Human Values.</li> <li>Become an effective leader.</li> </ul>			



**Resource Book:**

*Life Skills for Engineers*, Compiled by ICT Academy of Kerala, McGraw Hill Education (India) Private Ltd., 2016

**References:**

- Barun K. Mitra; (2011), "*Personality Development & Soft Skills*", First Edition; Oxford Publishers.
- Kalyana; (2015) "*Soft Skill for Managers*"; First Edition; Wiley Publishing Ltd.
- Larry James (2016); "*The First Book of Life Skills*"; First Edition; Embassy Books.
- Shalini Verma (2014); "*Development of Life Skills and Professional Practice*"; First Edition; Sultan Chand (G/L) & Company
- John C. Maxwell (2014); "*The 5 Levels of Leadership*", Centre Street, A division of Hachette Book Group Inc.

**Course Plan**

Module	Contents	Hours		Sem. Exam Marks
		L	P	
I	Need for Effective Communication, Levels of communication; Flow of communication; Use of language in communication; Communication networks; Significance of technical communication, Types of barriers; Miscommunication; Noise; Overcoming measures,	2		See evaluation scheme
	Listening as an active skill; Types of Listeners; Listening for general content; Listening to fill up information; Intensive Listening; Listening for specific information; Developing effective listening skills; Barriers to effective listening skills.		2	
	<b>Technical Writing:</b> Differences between technical and literary style, Elements of style; Common Errors, <b>Letter Writing:</b> Formal, informal and demi-official letters; business letters, <b>Job Application:</b> Cover letter, Differences between bio-data, CV and Resume, <b>Report Writing:</b> Basics of Report Writing; Structure of a report, Types of reports.		4	
	<b>Non-verbal Communication and Body Language:</b> Forms of non-verbal communication; Interpreting body-language cues; Kinesics; Proxemics; Chronemics; Effective use of body language	3		
	<b>Interview Skills:</b> Types of Interviews; Ensuring success in job interviews; Appropriate use of non-verbal communication, <b>Group Discussion:</b> Differences between group discussion and debate; Ensuring success in group discussions, <b>Presentation Skills:</b> Oral presentation and public speaking skills; business presentations, <b>Technology-based Communication:</b> Netiquettes; effective e-mail messages; power-point presentation; enhancing editing skills using computer software		4	

II	Need for Creativity in the 21 <sup>st</sup> century, Imagination, Intuition, Experience, Sources of Creativity, Lateral Thinking, Myths of creativity	2	2
	Critical thinking Vs Creative thinking, Functions of Left Brain & Right brain, Convergent & Divergent Thinking, Critical reading & Multiple Intelligence.	2	
	Steps in problem solving, Problem Solving Techniques, Problem Solving through Six Thinking Hats, Mind Mapping, Forced Connections.  Problem Solving strategies, Analytical Thinking and quantitative reasoning expressed in written form, Numeric, symbolic, and graphic reasoning, Solving application problems.	2	
III	Introduction to Groups and Teams, Team Composition, Managing Team Performance, Importance of Group, Stages of Group, Group Cycle, Group thinking, getting acquainted, Clarifying expectations.	3	2
	Group Problem Solving, Achieving Group Consensus.	2	
	Group Dynamics techniques, Group vs Team, Team Dynamics, Teams for enhancing productivity, Building & Managing Successful Virtual Teams, Managing Team Performance & Managing Conflict in Teams.	3	
	Working Together in Teams, Team Decision-Making, Team Culture & Power, Team Leader Development	2	
IV	Morals, Values and Ethics, Integrity, Work Ethic, Service Learning, Civic Virtue, Respect for Others, Living Peacefully.	3	2
	Caring, Sharing, Honesty, Courage, Valuing Time, Cooperation, Commitment, Empathy, Self-Confidence, Character	2	
	Spirituality, Senses of 'Engineering Ethics', variety of moral issues, Types of inquiry, moral dilemmas, moral autonomy, Kohlberg's theory, Gilligan's theory, Consensus and controversy, Models of Professional Roles, Theories about right action, Self-interest, customs and religion, application of ethical theories.	3	
	Engineering as experimentation, engineers as responsible experimenters, Codes of ethics, Balanced outlook on.	3	
	The challenger case study, Multinational corporations, Environmental ethics, computer ethics,	2	

	Weapons development, engineers as managers, consulting engineers, engineers as expert witnesses and advisors, moral leadership, sample code of Ethics like ASME, ASCE, IEEE, Institution of Engineers(India), Indian Institute of Materials Management, Institution of electronics and telecommunication engineers(IETE), India, etc.	3		
V	Introduction, a framework for considering leadership, entrepreneurial and moral leadership, vision, people selection and development, cultural dimensions of leadership, style, followers, crises.	4		
	Growing as a leader, turnaround leadership, gaining control, trust, managing diverse stakeholders, crisis management		2	
	Implications of national culture and multicultural leadership Types of Leadership, Leadership Traits.	2		
	Leadership Styles, VUCA Leadership, DART Leadership, Transactional vs Transformational Leaders, Leadership Grid, Effective Leaders, making of a Leader, Formulate Leadership		2	
<b>END SEMESTER EXAM</b>				

### EVALUATION SCHEME

#### Internal Evaluation

*(Conducted by the College)*

**Total Marks: 100**

#### Part – A

*(To be started after completion of Module 1 and to be completed by 20<sup>th</sup> working day of the semester)*

1. Group Discussion – Create groups of about 10 students each and engage them on a GD on a suitable topic for about 20 minutes. Parameters to be used for evaluation is as follows;

- |       |                        |   |          |
|-------|------------------------|---|----------|
| (i)   | Communication Skills   | – | 10 marks |
| (ii)  | Subject Clarity        | – | 10 marks |
| (iii) | Group Dynamics         | – | 10 marks |
| (iv)  | Behaviors & Mannerisms | – | 10 marks |

*(Marks: 40)*

## QUESTION BANK

**MODULE I**

<b>Q:NO:</b>	<b>QUESTIONS</b>	<b>CO</b>	<b>KL</b>
1	What you mean by communication?	CO1	K2
2	Write down the significance of effective communication.	CO1	K3
3	Explain types of different barriers of communication	CO1	K2
4	Lions Club, in which you are a member, has organized a Cultural Night with the help of the local artists for raising funds to help a social organization which runs an orphanage in your locality. Write a report on the event to be published in a local newspaper.	CO1	K4
5	Media plays an important role in controlling epidemics like 'Covid-19' and raising awareness among the public regarding the precautions to be taken to contain the spread of such infectious diseases. Write a letter to the editor of 'The Indian Express' expressing your views on the responsible role of media in controlling such epidemics.	CO1	K4
6	Read the following advertisement and prepare a letter of application. (Do not give your bio-data). Wanted Mechanical Engineers. Graduate with minimum five years of experience. Good communication skills. Write to: Box No. BEN 985 K, The Indian Express, Cochin-21..	CO1	K4

**MODULE II**

1	Explain creativity and myths of creativity	CO2	K2
2	Differentiate critical thinking and creative thinking.	CO2	K4
3	Discuss steps involved in problem solving	CO2	K2
4	Explain problem solving techniques	CO2	K5
5	What you mean by mind mapping?	CO2	K5
6	Explain Analytical Thinking and quantitative reasoning	CO2	K3
7	Explain Problem Solving through Six Thinking Hats	CO2	K5

**MODULE III**

1	What is the importance of a group?	CO3	K2
2	Explain various stages of group	CO3	K2
3	Write a short note on group cycle and group thinking	CO3	K2
4	Explain different types of group dynamics techniques.	CO3	K3
5	Explain Team leader development in detail.	CO3	K2

**MODULE IV**



1	Briefly explain Morals, Values and Ethics	CO4	K2
2	Write a short note on Caring, Sharing and Honesty .	CO4	K1
3	What are the Senses of 'Engineering Ethics	CO4	K2
4	Write a short note on moral dilemmas	CO4	K3
5	Explain Kohlberg's theory .	CO4	K1
6	Explain Gilligan's theory	CO4	K2
<b>MODULE V</b>			
1	Discuss entrepreneurial and moral leadership .	CO6	K3
2	What you mean by turnaround leadership	CO6	K2
3	Write a short note on crisis management .	CO6	K3
4	Explain different types of leadership.	CO6	K2
5	Differentiate national culture and multicultural leadership	CO6	K3
6	Explain Leadership Traits .	CO6	K2
7	Write a short note on VUCA Leadership and DART Leadership	CO6	K2
8	Differentiate Transactional vs Transformational Leaders.	CO6	K3

### **Module1**

### **THE CONCEPT OF COMMUNICATION**

The word communication originated from the Latin word “communicare” which means “to share”. It is the exchange of information between two persons or more. So communication is a social process. Generally, communication is exchange of ideas in an unstructured manner. The process of communication has four elements.

- Sender
- Message
- Medium
- Receiver

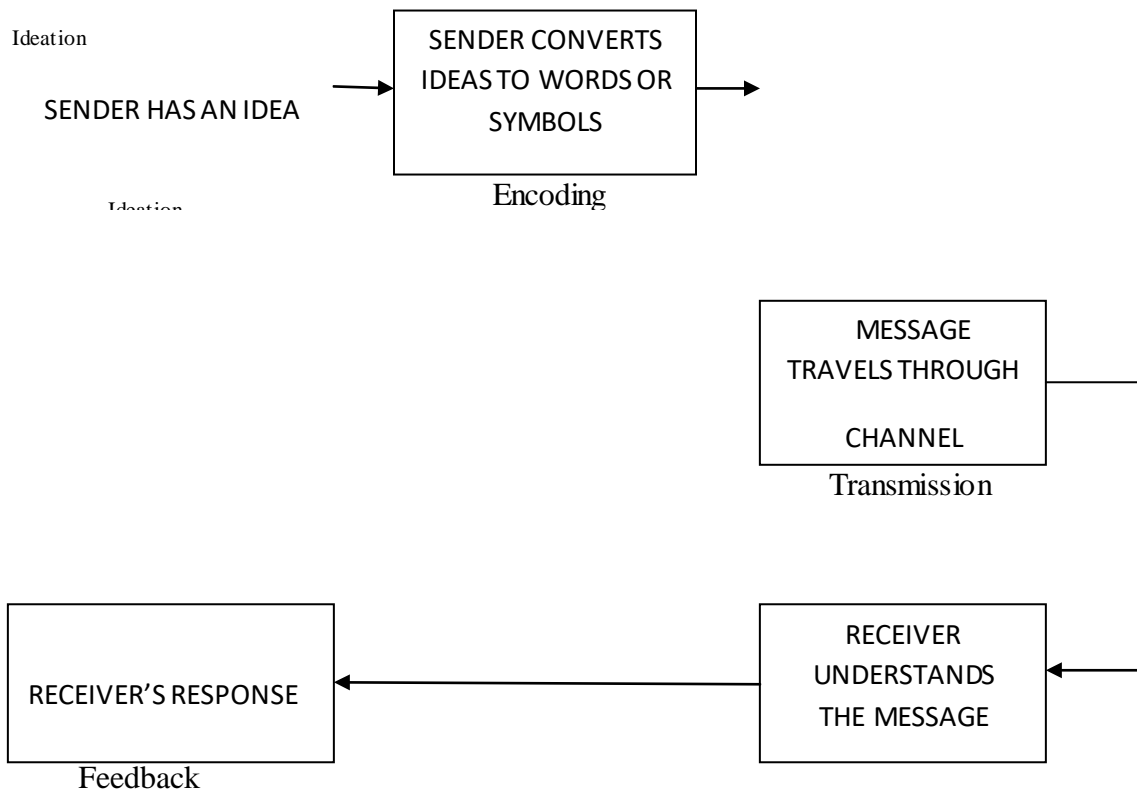
*Sender* is the person who wants to communicate

*Message* is the idea or content of communication

*Medium* is the use of language or symbols for communication

*Receiver* is the person who gets the message.

**The process of communication can be represented as follows**



### **NEED FOR EFFECTIVE COMMUNICATION**

## **1. To Maintain the Social Order**

Communication is important in a society to understand its customs, beliefs, rules and regulations.

## **2. To Help Maintaining Harmonious Relationship with Others**

## **3. To Ensure the Flow of Knowledge from Generation to Generation**

## **4. To Share Love and Care to Develop a Family and Society**

## **5. To Make and Maintain Effective Work Culture**

### **LEVELS OF COMMUNICATION**

#### **1. Intrapersonal Communication**

It is the communication happens within, I e. a person speaks to himself. This takes place when a person thinks something serious to take an important decision, when analyzing a situation, et al.

#### **2. Interpersonal Communication**

It takes place between two persons where exchange of ideas happen. It can be planned or unplanned.

#### **3. Group Communication**

It happens in a group to discuss and finalise an outcome. It can be formal and informal in nature depending on the situation.

#### **4. Public Communication**

It is the communication by a sender to audience. Here, the sender is the leader of the communication process.

#### **5. Mass Communication**

It is the transmission of message to a large audience through print, visual and audio visual media. There will not be a direct contact between the sender and receiver of the communication. Radio, news paper and TV are the media used for the same.

### **CHANNELS OR FLOW OF COMMUNICATION**

Information flows in an organisation both formally and informally. The interaction between different individuals working in a company takes place through different channels. On the basis of direction, communication can be divided into three namely

#### **i)VERTICAL COMMUNICATION**

#### **ii) HORIZONTAL COMMUNICATION**

### iii) **DIAGONAL COMMUNICATION**

#### 1. **Vertical Communication**

It can be divided into two namely **downward** communication and **upward** communication.

##### a. **Downward Communication**

It moves from top to bottom i.e. from superiors to subordinates. The main function of this is providing direction and control.

Eg: communication from a General Manager of a company to Branch Managers. It includes notes, notices, e mails, face to face conversation etc.

##### a. **Upward Communication**

The main purpose of upward communication is to provide feedback on several areas of organisational functioning. It refers to the communication from subordinates to superiors.

Eg: a business report from a Branch Manager to the MD of a company. It promotes better working atmosphere within the organisation.

##### b. **Horizontal Communication**

The main objectives of horizontal communication are developing team work and promoting group behavior within an organisation. It takes place between professional groups or people working on same level. It is less formal and less structured than upward communication.

It can be carried out through informal discussions, management gossips etc.

##### c. **Diagonal Communication**

It is the product of modern changes in the management as a result of the growing need for equality in the organisation. It doesn't have any rigid rule to follow. It happens informally in a formal set up.

##### d. **Grapevine Communication**

It is an informal channel of business communication happens in an informal gathering. It is the most recent trend in corporate world to bring the work force to its maximum.

### **USE OF LANGUAGE IN COMMUNICATION**

Language is a system of human communication (oral or written) involves the use of meaningful words, to be used by certain people belong to the same linguistic community. Even though we use body language, actions or graphics to communicate, language is very important to communicate effectively.

Language expresses **observation, thought, feeling** and **need**. While selecting the language to



**communicate one should be careful about the following,**

- A. The nature of the content whether it is complex or simple.
- B. Background or content
- C. Understand the receiver of the message
- D. The readiness of the receiver
- E. The purpose of the message

**To make communication more effective, the following steps can be followed,**

- A. KISS - Keep It short and Simple
- B. Use concrete and specific language
- C. Use simple words
- D. Deliver the message clearly
- E. Speak positively
- F. Maintain intimacy with the receiver

### **COMMUNICATION NETWORKS**

A communication network represents the pattern of interaction between the different members of an organisation. Communication network is determined by the nature of organisation, number of persons included, flow of communication and the type of information.

#### **1. Vertical Network**

It is the communication happens between superior and subordinate. It is formal in nature and the feedback is fast.

#### **2. Circuit Network**

Messages and feedbacks are sent to and from two persons; not necessarily be superior and subordinate.

#### **3. Chain Network**

This has the downward movement of communication as a chain of commands to the subordinates.

#### **4. Wheel Network**

This is highly centralised. Everyone receives commands form the superior and the feedback is fast.

#### **5. Star Network**

In this all members communicate with each other and it is ideal for team communication.

## **BARRIERS TO COMMUNICATION**

The word barrier means a thing that makes any trouble. There are different barriers to communication process also. We can classify the barriers as follows.

### **1) Physical Barriers**

It includes personal physical barrier and barriers from the surroundings. *Personal barriers* include inability to speak and hear, and hatred towards the subject and the speaker.

*Barriers from the surroundings* include noise, environmental discomfort and insufficiently insulated rooms etc.

### **2) Psychological Barrier**

This is related to the mental stage of an individual. If a person is disturbed or distracted, it prevents the sender or receiver from giving attention to the message. This is termed as psychological barrier.

### **3) Semantic Barrier**

It deals with the study of words, their meanings and use of proper words at apt contexts. Selection of wrong words, wrong sentence formation and ambiguous sentence can make communication ineffective.

### **4) Organisational Barrier**

There are two basic types of communication in every organisation; namely formal and informal. Both are important. Too much informal communication may spoil the professional setup.

### **5) Interpersonal Barrier**

Emotional reactions, positive or negative attitudes of sender and receiver, inattentive listening, wrong timing of message, etc create communication barriers and such can be termed as interpersonal barriers.

### **6) Cultural Barrier**

Language, body language, mannerisms, etc bring cultural barriers since the workplace includes people from mixed cultural backgrounds.

## **MISCOMMUNICATION**

It is the failure to communicate adequately. This can happen due to lack of clarity and failure in getting the message. Improper language use also results in miscommunication. Trying to convey a lot of information in a short span of time, high noise, distractions, language differences, etc are the other reasons.

## **NOISE**

Noise is the external sound which prevents the effective communication. It can be physical or psychological.

**Physical noise** is related to the environment or medium which includes wind, noise of machinery, etc.

**Psychological noise** is related to the mind, which includes thoughts and emotions of the sender or receiver

.

## **NOISE OVERCOMING MEASURES**

1. Detect the source of noise and overcome it. This can be achieved by closing the doors and windows, reducing the speed of fans, switch off the machinery that makes noise, etc.
2. Raise volume
3. Use clear and understandable language
4. Listen actively

## **LISTENING AS AN ACTIVE SKILL**

To make listening a skill and effective, the following methods can be adopted.

1. Avoid talking when the speaker speaks
2. Listen to the speaker carefully.
3. Be empathetic to the speaker
4. Listen to the ideas of the speaker, not just his words.
5. Be careful to non verbal messages including emotions and body language.

## **TYPES OF LISTENERS**

There are majorly 4 types of listeners;

### **1. Detached Listeners**

It is the one who doesn't feel involved in the process of communication. The listener may be bored or inattentive and the body language includes lack of eye contact, yawning, etc.

### **2. Involved Listeners**

The listener is attentive and interested to listen. He/ she keeps eye contact and suitable body language.

### **3. Passive Listeners**

The listener neither contributes actively to the communication process nor tries to understand the message.

### **4. Active Listeners**

The listener fully participates in the communication process and gives maximum attention to the speaker. He has alert posture and eye contact.

## **TYPES OF LISTENING**

### **1. Superficial Listening**

In this type of listening the listener has little awareness of the contents he hears. The listener may ignore the spoken material by thinking that it is not meant for him and the points discussed are not worthy for him.

### **2. Appreciative/ Entertainment Listening**

This is meant for enjoyment purposes. Listening to music and stories, jokes etc. are examples for this.



### **3. Focused Listening/ Listening to Specific Information**

This is listening for specific information. This can be practiced to take decisions on a particular subject. Listening to radio programs, news items etc are examples for this.

### **4. Evaluative Listening**

This type of listening is meant for evaluating somebody or some speech content. The listener analyses and interprets what he has heard and selecting the appropriate information. Examples include talks, classroom lectures etc.

### **5. Attentive Listening**

This is known as the most important listening type. This type of listening demands the complete attention of the listener. This can be seen in GD, meetings and job interviews etc. The listener attends all the spoken materials.

### **6. Empathetic Listening**

Empathetic listening is listening not only to what the speaker is saying but also to how he is saying that. It includes attending the feelings, emotions and state of mind.

The listener has to understand the body language of the speaker also.

### **7. Intensive Listening**

It involves listening for details and appreciating the language form. It helps improving specific knowledge.

## **LISTENING FOR GENERAL CONTENT**

This type of listening aims at getting a general idea of the total spoken material. The listener doesn't pay attention to all the minute points spoken by the speaker. The focus of the listener is to the content words from which he gets the overall idea of what is spoken.

## **DEVELOPING EFFECTIVE LISTENING SKILL**

Listening skill can be developed by following the given methods,

1. **Note Taking** :
- Writing the important points of the spoken material **while** listening to the speaker.
2. **Note Making** :
- Writing the important points of the spoken material **after** listening to the speaker.
3. **Ask Questions** :
- To get the unclear things clearly, ask questions to the speaker.

4. **Maintain Effective Listening Atmosphere**
5. **Prepare the Mind and be away from Psychological and Interpersonal Barriers.**

### **BARRIERS TO EFFECTIVE LISTENING**

Barriers to effective listening include factors such as external noise, unclear presentation, problems related to listening skill, etc.

The major barriers to listening are given below,

1. **Prejudice** :  
The ideas that the listener already has in his mind about the speaker and the topic of the speaker delivers. The listener thinks he knows what will be talked.
2. **Misunderstanding** :  
It happens due to lack of awareness, lack of interpretation skills and inability to listen properly to the speaker.
3. **Interruption** :  
Happens due to constant disturbances from outside. The listener cannot get the full content delivered by the speaker.
4. **Mental Distraction** :  
Happened due to the lack of concentration in listening to the speaker.
5. **Emotional Disturbances** : The listener becomes unable to listen to the speaker due to the disturbance of the mindset of the former.

### **SIGNIFICANCE OF TECHNICAL COMMUNICATION**

1. Technical communication conveys scientific and other technical matters by appropriate diagram, vocabulary, etc.
2. Technical communication is **clear, able to use jargons (technical words), invokes logical thinking and reasoning.**
3. Technical communication

## TECHNICAL WRITING

There are certain **differences between technical writing and general/literary writing** as given below,

<b>TECHNICAL WRITING</b>	<b>GENERAL/LITERARY WRITING</b>
<ul style="list-style-type: none"><li>✓ Followed by experts to convey scientific and technical information using technical vocabulary.</li><li>✓ The primary target is experts</li></ul>	<ul style="list-style-type: none"><li>✓ Involves creative writing to entertain</li><li>✓ General people are the target</li></ul>
<ul style="list-style-type: none"><li>✓ It employs a direct approach to explain facts</li><li>✓ Enhances logical reasoning.</li><li>✓ Objective in nature</li><li>✓ Crisp</li></ul>	<ul style="list-style-type: none"><li>✓ It has all the literary devices to arouse emotions of the reader.</li><li>✓ Enhances imagination</li><li>✓ Subjective in nature</li><li>✓ Elaborate</li><li>✓ Informal in style</li></ul>

- ✓ Formal in style

## ELEMENTS OF STYLE IN TECHNICAL WRITING

### **1. Style in Structure**

Clear flow of logical information is essential in technical communication. The document should be complete and coherent. All the sentences and ideas of the document should lead to the next. A paragraph should have a proper starting and a suitable ending.

The focus must be on the main clause in an individual sentence. For example,

***“The college authorities decided to expand the canteen after getting the students’ feedback.”*** is better than writing ***“After getting the students’ feedback, it was decided by the college authorities to expand the canteen.”***

### **2. Style in Presentation**

- ✓ The presentation and tone of technical communication should focus on the end results and logic.
- ✓ The tone should be neutral and factual.
- ✓ The content should be precise without losing the importance.
- ✓ There should not be ambiguity (multiplicity in meaning) in sentences.

- ✓ The reader should understand what the writer has actually meant.
- ✓ Figures and tables must be clearly captioned to help the reader.
- ✓ Vague statements should be avoided.

### 3. Style in Language

Technical writing should be formal and objective. Pronouns like *you*, *I* and *we* should be avoided. Active voice should be used the maximum. When using the acronyms, expanded version should be used at the first time of use. Spelling and grammar should be checked and edited.

## LETTER WRITING

### Elements of a Letter

1. Heading of the letter containing the writer's address and date.
2. Salutation/ greeting
3. The message/ body
4. Subscription/ closing
5. Signature
6. Address of the recipient

In certain cases, subject and reference are also needed.

According to the contexts, letters can be divided into informal letters, formal letters, business letters and demi official letters.

#### 1. Informal Letter

Informal or personal letters are written to family members and friends. This letter is not rigid in style.

The elements of a personal letter are given below,

- ✓ **Heading:** address and place on the top right corner followed by date in the next line.
- ✓ **Salutation:** Usually "dear" is used.
- ✓ **Body or Text of the Letter:** this is the matter we want to convey.
- ✓ **Subscription or Closing:** Placed on the bottom right corner, just above the signature line. "With love, yours lovingly", etc can be used.

#### 2. Formal Letter

Formal letter is used to correspond with people or organisations that are unknown to us and hold



official positions. It is used to make queries requests and complaints.

**The different elements of formal letter are given below,**

- ✓ **Heading:** address and place on the top right corner followed by date in the next line.
- ✓ **Salutation:** Usually “dear” is used with the surname and title like Mr, Ms, Dr etc.
- ✓ **Body or Text of the Letter:** this is the matter we want to convey. Use clear, concise and formal language.
- ✓ **Subscription or Closing:** Placed on the bottom right corner, just above the signature line. “Yours faithfully, yours sincerely”, etc can be used.

### **3. Business Letter**

A business letter is a formal letter which deals with business matters. It may be sent within or without an organisation. It is primarily informational and doesn't contain any personal comment. A business letter will have subject and reference lines.

Different types of business letter are **sales letters, order letters, resignation letters, business enquiry letters**, etc.

### **4. Demi Official Letter**

Demi official letter is used for correspondence within an organisation. It majorly used by the employees of same rank to remind of or enquire about some information which is already passed. Demi official letters are usually,

- ✓ Personal and friendly in tone
- ✓ Short
- ✓ Not quoted in official communications
- ✓ Not considered as official communication regarding anything.

## **JOB APPLICATION**

A job application is one of the first steps to apply for a job. It is the first contact by a career seeker with an employer. **The components of job application are, a covering letter, CV or Resume, copies of certificates and mark lists, reference letters, etc.**

### **1. Covering Letter**

A covering letter is the letter we send along with resume/CV to show why we apply for the position. It explains our skills and experience in brief, which help the employer to get an overview about us. It is formal in nature.

**There are three types of covering letters,**

#### **1. Application Letter**

It is the letter we write in response to a job advertisement.

#### **2. Prospecting Letter**

It is the letter we write to enquire about the possibility of getting a position in a firm.

#### **3. Networking Letter**

It is used to get assistance or help to find out a job.

## **BIO DATA, RESUME AND CURRICULUM VITAE (CV)**

### **1. Bio Data**

A bio data lists all the details about a person such as age, marital status, nationality, religion and caste, etc. There will not be specific data about skills and achievements of a career seeker.

### **2. Resume**

Resume is a French word which summarises a person's career including experience, educational qualifications, achievements, etc. Only the important skill sets suitable for the particular position is included in resume. A resume is 2 to 4 pages length.

**A resume will have the following components,**

1. A brief profile of the candidate with name, date of birth, address, etc.
2. Experience in reverse chronological order with positions handled and achievements.

3. Educational qualifications in reverse chronological order.
4. Other details including membership details in volunteer or professional organisations etc.

### **3. CV or Curriculum Vitae**

A CV is the detailed history of a candidate's career and education. CV lists every skill, experience, qualification, projects and publications the candidate has had. It helps the recruiter to get the complete idea about a career seeker.

#### **Tips to Create a Good CV or Resume**

1. Use good font and legible font size (E.g. Times New Roman, font size 12).
2. Choose the most suitable template.
3. Don't use too many colours, bold and italic letters.
4. Have a consistent system of headings and sub headings.
5. The updated contact information of the job seeker should be given clearly.
6. Avoid spelling and grammatical mistakes.
7. Be truthful always.

### **REPORT WRITING**

A report is a document that presents descriptions, information, analyses or opinions about a subject or problem in a systematic manner after conducting a research. A report can be written, documentary or film. Even oral report is also there. It is usually submitted to a superior authority. A report includes descriptions of sequence of events, evaluation of situations and facts, discussions of results, recommendations and conclusions. A report should be clear, unbiased and truthful.

#### **Features of a Report**

1. Reports are formal in nature in every aspect.
2. Reports have definite structure.
3. Data are presented in charts and tables.

#### **Types of Reports**

1. Project Report

2.SeminarReport

3.AnnualReport

4.AuditReport

5.InvestigationReport

6. Progress Report, etc.

### **Basics of Report Writing**

Report writing has the following stages,

#### **1. Defining the Requirement**

The purpose of the report (whether descriptive, analytical, etc) must be clarified. Identifying the target audience is very important.

#### **2. Researching the Topic**

The data for research must be examined carefully, which helps in deciding the direction of research. Information for research can be collected from books, newspapers, internet, etc.

#### **3. Analyse/Evaluate/ Understand the Information**

Use logic, critical and creative thinking to make the report a sensible and legible one.

#### **4. Organise the Report**

Decide the structure of the report depending on the requirements and the information available.

#### **5. Write the Report**

The report can be written in this stage using the structure which is already decided.

#### **Structure of Report**

The basic structure of a report follows the **IMRaD** model. The **IMRaD** model stands for,

**Introduction** : The basic reason why the research is carried out.

**Methods** :

How was the study done, what were the conditions and who participated, etc.

**Results** :



How was the question answered the validation methods of hypothesis.

## **Discussion**

What do the results say, any further question, etc.

Based on the length of report, a report will have some sections like title page, table of contents, abstract, introduction, summary and conclusions, recommendations, discussion and appendix.

## **Tips to write a Good Report**

1. Have a plan. Work from an outline and be careful to include every point.
2. Organise the report into sections by giving clear and consistent headings and subheadings.
3. Avoid using technical terms as far as possible.
4. Format the report and correct the spelling and grammatical mistakes.
5. Don't write long sentences.
6. Use active voice as far as possible.
7. Be concise.
8. Cite the sources where the references and information taken from.
9. Avoid plagiarism (copying from others).

## **NON VERBAL COMMUNICATION AND BODY LANGUAGE**

Exchange of information among humans can be had even without using words. Various other forms are used for communication exchange and they fall under non verbal communication.

### **Forms of Non verbal Communication**

Some of the non verbal communications are deliberate, natural, idiosyncratic and some are related to the culture a person belongs to.

#### **1. Forms of Non verbal Communication Using Body Language**

It discusses sending messages by body or face during communication. These types of movements may be intentional or unintentional. Body language has the following forms,

- A) The sitting or standing posture of the communicators. If in good posture, means

interested, else the opposite.

- B) Body movements, facial expressions, etc show whether the person has interest or not.

## 2. Non verbal Communication Using Para Language

Para linguistic features involve the aspects of oral communication other than language and words used by the speaker.

It includes speed of speaking, volume of the speaker, pause and silence, etc. The speed of speaking and volume of the speaker should be optimum. Pause and silence should be given as and when they are required.

## 3. Non verbal Communication through Object Language

Material possessions, physical appearance, the brand a person uses, etc. tells about him.

The clothes and the way people wear, cars, and gadgets people use are also telling about the personality of a person.

## 4. Other Modes of Non verbal Communication

Emoticons we use in messages, emails, etc. tell about the emotions and mindsets of people. Similarly, arriving late to a function and an important meeting, ignoring the presence of someone, remembering an important person of our choice, etc. are coming under this.

## Kinesics

Kinesics is the study of how body movements, actions and expressions play as a form of non verbal communication. There are **five types of kinesics** as given below.

1. **Emblems**: They are gestures used in place of words. For example, the gesture to stop the vehicle or ask for a lift.
2. **Illustrations**: They are the gestures to illustrate or reinforce what has already been discussed or said.
3. **Affective Displays**: They are body or facial movements to display emotions or affective state. Example is showing our anger or happiness in different ways.
4. **Regulators**: They are non verbal signs used to regulate the flow of speech. Example can be raising the finger to intervene a speech.
5. **Adapters**: They are the forms of non verbal communication which

happens unknowingly by the listener. Biting the nails, changing the postures due to lack of interest, etc are examples.

### **Proxemics**

It is the study of how people use space while communicating. How close or distant people stand, whether people touch or not, how the space between the persons is utilized, etc come under this. The space we need as a person is called personal space. The magnitude of this space depends on factors like culture and tradition, social norms, situations, personality traits, etc.

### **Chronemics**

It is the study of the role of time in communication. The manners how we utilise time while communicating gives ideas about the speaker and are included in non verbal communication. The utilisation of time while communicating is different from each country. Certain people are rigid and stick on to time while others keep a fluid approach.

### **Effective Use of Body Language**

Body language can be used in the following ways,

#### **1. To Feel Confident**

Be in a relaxed posture with straight back and shoulders relaxed. Make good eye contact. Don't sit on the edge of the chair. If standing, keep hands open by placing legs slight apart. Handshake should be firm.

#### **2. To Get Collaboration**

Let the speaker know that you are listening. This can be done by facing the speaker, keeping eye contact and leaning forward. Uncrossing the hands and nodding at regular intervals are appreciable. Avoid doing other things while you are engaged in conversation.

#### **3. Use Effective Hand Movements**

Hand movements help to attract the attention of the receiver of the message. It also helps in coordination of thoughts and stimulates brain.

#### **4. To Influence People**

Have a genuine smile which helps us to make an effective and impressive communication. It shows our warmth and approachability.

## **INTERVIEW SKILLS**

The broad meaning of interview is a formal consultation or a meeting to obtain information. We can also assume that, interview means a discussion between a recruiter and an applicant to understand whether or not the latter can be given a job.

**There are different types of interviews as follow,**

### **1. Preliminary Interview**

It is the starting stage of a more detailed interview, in which initial screening will be done. It helps to save time by eliminating the unsuitable candidates,

### **2. Standardised Interview**

In this stage, pattern of questions will be decided before the proceedings. Time will be allowed to prepare.

### **3. Depth Interview**

This is semi structured type by which an interviewee will be examined in depth. Background, knowledge, personality traits, etc will be understood in this type of interview.

### **4. Stress Interview**

This is used to understand how the interviewee reacts to the pressure situations. The interviewer checks whether the interviewee gets nervous, irritated or angry when provoked.

### **5. Technical Interview**

This type of interview is used to assess the knowledge, technical competence and proficiency. Behavioral aspects and communication skills are secondary here.

### **6. Personal / HR Interview**

In this interview, the behavioral aspects and attitude of the candidate is checked. The EQ of the candidate will be checked more than his knowledge.

## **Ensuring Success in Job Interviews**

Basic steps to ensure success in job interviews can be broadly classified into three.

### **1. Preparing**

This stage tells about the pre interview stages.

- ✓ **Learn about the firm** from internet, reports, etc. Also refer to the website and annual reports if available of the company.
- ✓ **Understand the job requirement.** We should find out the requirement of the position and the skill sets required. We can use social networks for the same. Also find the nature of the job, pay scale, scope for career advancement, etc.

Prepare the CV with maximum care.

- ✓ Rehearse with mock interviews.
- ✓ If the interview is technical, revise what you have already studied.
- ✓ Dress well to impress and feel comfortable in the dress.
- ✓ Leave for the venue early.

### **2. Performing**

- ✓ Arrive early
- ✓ Maintain etiquette while entering and inside the interview hall.
- ✓ Adopt appropriate posture while sitting or standing.
- ✓ Be attentive and listen carefully to the questions.
- ✓ While answering, be natural and confident. Be audible and clear.
- ✓ Do not respond to the questions without thinking.
- ✓ Avoid negative talks. Don't criticise your previous bosses or any other.

- ✓ Always be truthful and pleasant.
- ✓ Thank each member before leaving the interview hall.

### **3. Follow up**

- ✓ Send a thanking letter to the firm for giving opportunity to attend the interview.
- ✓ Learn from the mistakes that you have.

### **Appropriate use of Non verbal Communication in Job Interviews**

- ✓ Dress well and in appropriate manner.
- ✓ Avoid pungent perfumes.
- ✓ Take a folder in which every document should be arranged properly.
- ✓ Keep smiling and be enthusiastic.
- ✓ Have a firm handshake with the interviewer.
- ✓ When greeting the interview board, smile and keep eye contact.
- ✓ Maintain confident posture.
- ✓ Speak confidently with optimum volume,
- ✓ Don't argue with the board members.
- ✓ Make sure that you close the door gently and do not leave it ajar or slam.

### **GROUP DISCUSSION**

Discussions can be within persons both formally and informally. Informal discussions can be seen in restaurants, college canteen and bus stops. Formal discussions can be seen in an office setup, official meetings and in interview sessions.

Discussion is actually a group talk to club various view points. **GROUP DISCUSSION** is a communicative situation that allows its participants to express views and opinions to other speakers. It is a systematic and purposeful interactive oral process. Ideas, views and opinions are exchanging with each other in this.

The abilities of the participants are checked thoroughly in a GD. A job seeker may have to participate in a selection GD to get a job. The importance of GD has increased nowadays. It helps the recruiter to understand

#### **a) Problem solving skills**

- b) Decision making skills
- c) Personality assessment
- d) Negotiation skills
- e) Cooperative mentality
- f) Team work and team mentality etc.

By checking all these factors an interviewer can select the best candidates from the group. It may be a better understanding level of one's personality.

### **Differences between Debate and GD**

- ✓ Debate is a formal method of argument in which the speakers take a particular stand and remain in it till the end while GD aims at reaching a consensus.
- ✓ The aim of debate is to win while that of GD is exchange of ideas.
- ✓ Defending and attacking are the norms in debate while listening, reasoning and opinion sharing are the practices in GD.
- ✓ Debates are conducted to judge the communication skills while GD is conducted to judge the personality.

### **Ensuring Success in GD**

- ✓ Maintain comfortable sitting posture which displays confidence.
- ✓ Be respectful to others' opinions.
- ✓ If possible, be the one to start the discussion.
- ✓ Bring the discussion back on track if the discussion deviates.
- ✓ Be mindful of body language and eye contact.
- ✓ Speak loud and clear.



## **PRESENTATION SKILLS**

A presenter should be able to convince the target audience about the relevance of his idea, product, work or proposal. The most popular mode of presentation is oral presentation by using charts, slides, etc. Other forms of presentations include webinars, seminars, posters, brochures, etc.

### **Types of Presentations**

Presentations can be classified as follow, according to the content.

- 1. Informative**
- 2. Instructional**
- 3. Arousing**
- 4. Persuasive**
- 5. DecisionMaking**

### **Elements of a Successful Presentation**

All the ingredients given under have to be worked together to make a presentation successful. The six key elements can be identified as,

#### **1. Preparation**

It is the first critical element of presentation. Decide the manner and method of presentation to present the content successfully. The presenter should be well learned about the topic to answer any doubt asked by the listener.

### **Mode of Presentation**

The most suitable mode of presentation should be selected once the topic is finalised. The most popular and suitable is oral presentation. All the supporting materials for presentation must be ready with the presenter. Calculations should be there on the duration of presentation.

#### **2. Audience**

The mode of presentation depends on the target audience. The speaker should know about the audience and the content and tone should be apt to the audience.

#### **3. Language and Delivery**

The choice of words must be in tone with the subject matter and the capacity of the audience. Avoid difficult and technical words. The speaker should control the speed of presentation. The audience should be treated well.

#### **4. Non verbal Communication**

Ideas are not conveyed by words alone. The gestures, postures, voice modulation, etc are also very important. The speaker should be able to understand the non verbal cues shown by the audience to improve his presentation. Keeping eye contact ensures connectedness.

#### **5. Feedback**

The presenter should obtain feedback from the audience during and after presentation. The feedback we had can be used to improve presentation skills in future.

#### **Tips for Public Speaking**

- ✓ Know yourself. Understand your strength and weaknesses.
- ✓ Learn the subject matter thoroughly.
- ✓ Practice in front of a camera or mirror.
- ✓ Focus on the right manner of presentation; be careful about the words and sentences you use.
- ✓ Dress well to impress the audience.
- ✓ Use pause and silence effectively.
- ✓ Listen carefully to other presentations. Understand the audience.
- ✓ Never argue with the audience.
- ✓ End the presentation with a suitable summing up.

### **TECHNOLOGY BASED COMMUNICATION**

Recently, communication has gone through drastic changes. Social media, presentation software and other platforms are used even for high end presentations. Different aspects of technology based communication are given below.

#### **Netiquettes**

Etiquette refers to a generally accepted and unwritten code of polite behavior in society. The word **netiquette** is the combination of **network** and **etiquette**. It is the etiquette we should display in our online interactions. Good netiquette is an indicator of professionalism.

## **The Core Rules of Netiquette**

### **1. Remember the Human**

Understand that we are interacting with humans and not with machines. Consider the other end has humans.

### **2. Adhere to the Same Standard of Behaviour online that you follow in Real Life.**

Never do anything illegal. If there is any ethical dilemma, follow the same level of activity that you may engage in real life.

### **3. Know Where You are in Cyberspace**

Be familiar with the expected standard of behaviour in the community you are interacting with.

### **4. Respect other People's Time**

Do not disturb other people with unnecessary interventions. If you are posting something and sending a mail, make sure that you are not disturbing others. Do not post the same things repeatedly.

### **5. Make Yourself Look Good online.**

Always use good language and spelling. Don't use abusive language and don't use all in CAPS.

### **6. Share Expert Knowledge**

If you have expertise with something, share it with others. There are forums and blogs to share your knowledge. Make sure that you don't violate any copyright.

### **7. Help Keep Flame Wars Under Control**

Flaming usually happens in social media. It involves exchanging offensive and profane messages. Deliberate flaming which seeks to aggravate certain controversial points in discussion is called trolling.

### **8. Respect Other People's Privacy**

Don't access other people's social media profiles and email accounts. Don't pass on other people's data to third parties without consent.

### **9. Don't Abuse Your Power**

As system administrator, group admins or even as a person with superior programming skills, you should not misuse your power.

## **10. Be Forgiving of Other People's Mistakes**

Be tolerant with other people's mistakes. If you want to correct someone, that can be done by sending a private e mail message.

### **Effective E Mail Communications**

E mail is the most widely used medium of communication in business and academic fields. **The advantages of using e mails** are,

1. Speed :  
Reaches the recipient almost instantly.
2. Can be sent to multiple recipients on a single click.
3. A variety of files can be attached.
4. Easy access from anywhere in the world.
5. Inexpensive; most personal e mail ID's are free.
6. It can be sent even to a person who is hard to reach.

**To maintain effectiveness in e mail communications, the following measures can be taken,**

- ✓ Mention the subject correctly and never send an e mail without subject.
- ✓ Use simple and clear language.
- ✓ Use good formatting without using all CAPS.

- ✓ Type small paragraphs.
- ✓ Use bold, italics, etc to highlight the important points.

## **Power Point Presentation**

Microsoft power point is one of the most popular slide show programs today.

**The basic structure of slide show is given below.**

### **1. Introductory Slides**

They include the title, overview and introduction to the topic.

### **2. Content of the Presentation**

These slides include the main body of the presentation.

### **3. Concluding Slides**

These include the results, conclusion, discussions, references and thank you slides.

The purpose of slide show is to support the presentation and not to detract from it. The can use the slides to attract the audience and he is always the important factor in a presentation and not the slides. Slides should be used to,

\*support communication

- \* make the presentation better
- \* give an overview of the presentation
- \* deliver the visual data which cannot be explained in words.

**While making a presentation, the following are very important.**

- ✓ Plan the presentation
- ✓ Ensure the clarity and visibility of slides
- ✓ Align the text to the left.
- ✓ Present the content in a structured manner
- ✓ Use a consistent theme without too much graphics
- ✓ Use dark text on a light background.
- ✓ Use good fonts

- ✓ Use slide numbers
- ✓ Before presentation, ensure that the slides work properly.

**Don'ts**

- ✓ Don't use slides as substitute for saying.
- ✓ Don't paste entire paragraph of the reference text to the slides. Don't put full sentences on the slide, only the key points are needed.
- ✓ Don't use too much animation.
- ✓ Don't add sound effects unless they are necessary.

## **MODULE 2**

### **NEED FOR CREATIVITY IN THE 21<sup>ST</sup> CENTURY**

Our economy was dependent on agriculture in the past. Men needed only physical strength, knowledge of a trade, obedience to orders and hard work. But in the present century, the global economic conditions have gone through drastic changes and those mentioned earlier were not sufficient enough to be successful in a career. A job applicant must be result oriented, self motivated, skillful interpersonally and in many other fields.

Most of us think that creativity is only for artists and writers. But in truth, being creative means “breaking out of established patterns to look at things in a different way”.

**The skills required in the 21<sup>st</sup> century can be brought under 3 different categories broadly, such as,**

**1.Learning Skills:**criticalthinking,creativethinking,collaborating and communicating are included in this.

**2.Literacy Skills:** information literacy, technology literacy and media literacy are included.

**3.Life Skills:** flexibility, initiative, social skills, productivity and leadership come under this.

### **IMAGINATION, INTUITION AND EXPERIENCE**

#### **Imagination**

Imagination is the ability to see the impossible or unreal. To do something in a different way, we often rely upon imagination. In creativity, we need to focus on ideas which might be possible. Imagination requires less actual knowledge and it relies rarely on facts.

#### **Intuition**

Intuition is the ability to know something without using reasoning or rational thinking. It is knowledge that we never consciously know that we had. All the experiences we receive store in our mind without our attention. It is believed that these stored experiences will help us in problematic situations. The sub conscious mind helps us connecting the stored information and provides solutions for the problems we face.



Intuition represents non linear thinking where the mind makes a jump from the known and predictable to the unknown and unpredictable. Intuition can be systematically developed and trained.

### **Experience**

Experience is the source from which we acquire knowledge. Our brain develops databases through different experiences and knowledge is increased by our experiences. People with more experience are usually more creative. People who are more experienced are intellectually curious, comfortable with expressing and experiencing emotions and willing to try new things.

### **CREATIVITY**

Creativity is the skill of producing something new and valuable; be it a product, an idea, a concept, a process or a solution to a problem. It involves the ability to acquire knowledge, break it down and rearrange it in a different manner to generate something new and valuable.

A creative person is able to use the existing knowledge in new ways to search for all the possible solutions to the problems he confronts with. Creative feelings cannot always be expressed in words.

**According to Abraham Maslow, there are three types or levels of creativity as given below.**

- 1. Primary Creativity:** It is from this level that new and fundamental ideas arise. It is most often expressed in arts and literature. It is more spontaneous and child like and is not concerned with the utility of the work. The importance here is for the self expression only.
- 2. Secondary Creativity :** Secondary creativity develops from the already existing ideas. The level and thought and planning associated with secondary creativity is higher.
- 3. Integrated Creativity :** This is the level of creativity which brings great achievement in all fields like arts, literature, science or business. It combines the elements of primary and secondary creativity.

**According to Margaret Boden,** creativity is a fundamental feature of our intelligence and can be learned by systematic procedures and methods. **The three kinds of creativity according to Margaret Borden,** are given below.

- 1. Combinatorial Creativity** : Known ideas
- 2. Exploratory Creativity** : New ideas are made by making new words by combining or coining two words like infotainment (information

+ entertainment).

- 3. Transformational Creativity** : This is the deepest kind of creativity where new ideas emerge by changing the structured concepts. All the conventional structures will be broken in this type of creativity.

#### **In short, creativity is**

- ✓ A basic capability of the human brain.
- ✓ A skill which can be learned and improved.
- ✓ The product of disciplined thinking.
- ✓ The result of being open to experiences and thinking about them.
- ✓ A process that involves trial and error. Creative people learn from experiences.

#### **Sources of Creativity**

Creativity is expressed in many different ways and situations. **It is widely accepted that creativity is a product of the interplay of three components – knowledge, creative thinking skills and motivation.**

#### **Knowledge**

We must have enough knowledge in the domain concerned to approach a problem creatively. We should have deep knowledge in our area of interest and a general awareness about other branches, so that only we can contribute something to the world by introducing innovative things. For example; an engineer who is interested in nature can concentrate in making new products by following the principle bio mimicry.

#### **Creative Thinking Skills**

The manner in which our intellect processes a problem, question or information and arrives at a conclusion can be called “thought process”. The more fine tuned our thinking skills are, the better our creativity becomes. **Generally, creative thinkers are,**

- ✓ Unafraid to try new things
- ✓ Accepting and giving constructive criticism
- ✓ Patient enough to persist through failures.
- ✓ Interested in synergy

There are three main aspects of intelligence which are important for creative thinking. They are, synthetic, analytical and practical.

## **Motivation**

Motivation is the most important component of creativity. Motivation can be two types.

### **Intrinsic Motivation**

Motivation which arises within oneself can be called intrinsic motivation. There is no external reward or fear of punishment involved. Some factors that motivate us intrinsically are acceptance by our colleagues and friends, curiosity, independence, power, social contact and social status.

### **Extrinsic Motivation**

Motivation that arises from the promise of a reward or fear of punishment is called extrinsic motivation. It arises from outside factors. Some extrinsic motivators are money, promotion, bonuses, fear of punishment, deadlines, etc.

Intrinsic motivation promotes creativity more than extrinsic motivation. People always perform better when they enjoy something rather than being forced.

## **LATERAL THINKING**

Lateral thinking is a term coined by Edward de Bono. It represents a way of problem solving by an indirect and non sequential method using reasoning. It is a process that starts with the generation of new ideas. The logical continuity of steps to reach and solve a problem is not important here. **The two main aspects of lateral thinking are,**

1. Freeing our thought process from old ideas.
2. Stimulating the creation of new ideas.

**According to Edward de Bono, 4 types of thinking tools are used for lateral thinking, and are,**

1. Idea generating tools to break routine thinking patterns.
2. Focus tools to identify new focus areas or ideas.
3. Harvest tools to create more value from the ideas generated.
4. Treatment tools to consider real world constraints and opportunities.

## **MYTHS OF CREATIVITY**

Myths are widely held but false belief or idea and are evolved as means to explain the phenomena which are difficult to understand. **According to David Burkus, the myths are,**

1. **The Eureka Myth**

We often think that creative ideas should come to us in a flash, which is in a Eureka moment. The creative process often takes a certain amount of time from the inception of idea to its incubation phase where the sub conscious mind links the existing knowledge.

## **2. The Breed Myth**

The common belief that outstandingly creative persons belong to a particular personality type or have particular genetic predisposition is called the breed myth.

## **3. The Originality Myth**

The idea that any creative work must be wholly original and depart from whatever has been done before is called the originality myth. According to this myth, an idea should be entirely unique and based on its creator's genius.

## **4. The Expert Myth**

Most of the people believe that only experts in a particular field can be creative. Even though knowledge is important, those who understand the situation and solutions can be more creative. People are creatively the best at their younger ages.

## **5. The Incentive Myth**

This myth says that offering more payments or incentives make people work more creatively. Incentives provide extrinsic motivation to get the things done. Actually intrinsic motivation should make people more creative.

## **6. The Lone Creator Myth**

This myth believes that creativity is a one man show, that is, creativity is the result of a single person's efforts. Most of the inspirational stories we hear belong to this myth. In truth, everything comes as a result of teamwork.

## **7. The Brainstorming Myth**

It is believed that the easiest and most effective way to be more creative is to come with large number of ideas and select the best from it by filtering the unwanted and unsuitable ones.

## **8. The Cohesive Myth**

Friendly and cheerful teams can be more creative than others. This is the essence of the cohesive myth.

## **9. The Constraints Myth**

Those who belong to the constraint myth believe that creativity flows only when there is absolute

freedom. Still then, there are no evidences that constraints hamper creativity.

### 10. The Mousetrap Myth

The name of this myth came from the saying “*build a better mousetrap, and the world will beat a path to your door*”. It implies that any good idea will be immediately accepted and popularised.

#### CRITICAL THINKING

Critical thinking is clear, rational and disciplined thinking where the thinker is open to recognise and raise the efficiency of thought process. It is a tool to improve one’s thinking capacity. Critical thinkers analyse, unify and evaluate what is heard, seen or read by them.

#### CRITICAL THINKING VERSUS CREATIVE THINKING

The main differences between critical and creative thinking are given below.

##### Based on the Characteristics of Thought Process

CRITICAL THINKING	CREATIVE THINKING
Mostly linear	Often non linear
Selective (works by elimination)	Generative (generates new possibilities)
Converges towards single answer	Moves away from a single answer
Looks for correct answer	Looks for possibilities
Remains objective and logical	Suspends judgements

##### Based on Skills Used

CRITICAL THINKING	CREATIVE THINKING
Comparison, classification, sequencing, cause/effect/ patterning, analogies, deductive and inductive reasoning, forecasting, planning, hypothesising and criticising.	Flexibility, originality, fluency, elaboration, brain storming, modification, imagery, associative thinking, attribute listing, metaphorical thinking and forced relationships.

## **FUNCTIONS OF LEFT BRAIN AND RIGHT BRAIN**

The human brain is divided into two hemispheres; the right and left hemispheres, which are connected by a band of tissue called corpus callosum. The left side of the brain controls the right side of the body and vice versa. The two hemispheres are associated with different types of cognitive functions. The left brain is associated with rational, sequential thinking and the right brain is with intuitive and non linear thinking. In every individual, one side is more dominant. The brain functions more efficiently when both the hemispheres are equally active.

**The functions of left and right hemispheres of the brain are given below.**

<b>LEFT BRAIN</b>	<b>RIGHT BRAIN</b>
1. Responsible for the 3R's(Reading, wRiting and aRithmetic)	1. The sensory, spatial and synthesising part.
2. Information processed linearly. Arranges pieces of data logically before reaching to conclusions (from parts to whole).	2. Information processed holistically. Proceeds from the answer to the details (from whole to parts)
3. Controls feelings and emphasizes logic.	3. Acknowledging feelings and emotions.
4. Tasks are processed sequentially. Completes tasks in order. Responds well to schedules and lists. Comfortable with planning and structuring.	4. Tasks are processed randomly. Not systematic and changes from one task to the other.
5. Skillful numbers.	5. Skillful
6. Logical. It sees cause and effect. Looks for logical conclusions when confronting with too many issues.	6. Intuitive. Sees correspondences and similarities.

7. Prefers validated and quantified data.	7. Prefers elusive and uncertain ideas.
8. Skillful at seeing differences and dissimilarities. Works by contrast.	8
9. Highly verbal. Responds better to verbal instructions.	9 well to visual/graphical instructions.
10. Responsible jolliness	10 Emotive and pessimistic.

### **CONVERGENT AND DIVERGENT THINKING**

**Convergent thinking** refers to the ability of a person to arrive at a single and the most appropriate and often correct answer to a question. The questions in this case do not demand much creativity. The emphasis here is on speed, accuracy, logic, etc. The answers come out of divergent thinking can be right or wrong. It is a good problem solving tool. Critical thinking is an example for convergent thinking.

**Divergent thinking** is the opposite of convergent thinking. It is a thought process works by generating and exploring different alternatives for a single problem. The thought process is non linear and spontaneous. Creative thinking is an example for this. Divergent thinking is associated with personality traits such as curiosity, persistence and openness to risks.

### **CRITICAL READING**

In simple, critical reading is reading between the lines. A critical reader approaches the reading material with an analytical outlook. The critical reader actively considers the content of the write up and tries to find out the purpose of writing, the style of the author and writing style, etc.

#### **How to Read Critically**

Critical reading is the starting point for good writing. A combination of the following approaches will help us improve reading comprehension and consequently writing skills. They are,

##### **1. Previewing**

Previewing helps defining our expectations from the reading material. It takes place before reading the text. It includes the questions we ask ourselves, like *what am I looking for from the text? What do the title, subtitles and structure of the document tell me about the text? What do I know about the author?*

##### **2. Annotating**



Annotating means making notes at the margins of the text. This may help us for future reference.

### **3. Summarising**

It is shortening the overall content of the text. We identify the main ideas of the given material.

### **4. Analysing**

The total text will be analysed by the reader in this step.

### **5. Re reading**

Critical cannot be completed in a single reading. At least three readings are necessary to find and understand the exact meaning of the text.

### **6. Responding**

It tells about giving our own critique for the text. This can be practiced by writing a short note on what we have read.

## **THEORY OF MULTIPLE INTELLIGENCES**

The theory of multiple intelligences was proposed by Dr Howard Gardner, in 1983. According to Gardner, there are **eight different intelligences** which individuals may have in varying degrees. They are as given below.

### **1. Logical Mathematical Intelligence**

Prefers working with numbers, logic, patterns, mathematics and abstract thoughts.

### **2. Linguistic Intelligence**

Comfortable with words, language and linguistics.

### **3. Musical Intelligence**

Skillful in music, tones and rhythms.

### **4. Spatial Intelligence**

Has aptitude for images, visualisation and understanding special relationships.

### **5. Bodily Kinesthetic Intelligence**

Excellent body awareness, control over movements, balance, effective communication through body language.

### **6. Interpersonal Intelligence**

Keen sense of empathy, capability for team work, mediation and inter personal communication is included in this.

## **7. Intrapersonal Intelligence**

Highly self aware, interested in higher truths, rich inner life, etc are coming under it.

## **8. Naturalist Intelligence**

Deals with appreciation and respect for all life forms, ability to draw inspiration from the Nature, conscious of one's relationship with Nature, etc.

## **PROBLEM SOLVING**

Problems are obstacles thrown in front of us to hamper our progress. These problems must be solved and overcome. Problems can arise in personal, professional and social contexts. Some problems can be solved alone, some can be by collective thought and some by using computers.

**Problem solving refers to any activity or group of activities that seek to resolve problems or find a solution to solve the problems, by proceeding in an orderly fashion.**

### **Steps in Problem Solving**

Problem solving requires a number of different thinking styles. Some problems require critical thinking while others need creative thinking styles. There is a problem solving cycle which has been identified by **Bransford** and **Stein** and is known as the **IDEAL model**.

**The steps in IDEAL model are,**

#### **1. Identification of Problems and Opportunities**

This is the first step which involves actively looking to the problems and not just responding to them. The problems must be stated clearly so that the subsequent steps are easier.

#### **2. Definition of Goals**

Defining the goals of the solution is important to decide the direction of the problem solving process. There must be clear understanding of what the requirement is. The constraints, various interests, etc must be taken for consideration in this step.

#### **3. Exploration of Possible Strategies**

This stage needs a considerable amount of iteration. There are several methods like formal and informal for the generation of alternatives. The goals, constraints and interests must be constantly re analysed with respect to the strategy we adopt for problem solving. Every possible strategy must be tried before we take a decision.

#### **4. Anticipation of Outcomes and Action**

Every possible outcome must be analysed after deciding a strategy. The already fixed strategy may

have to be modified or even discarded. Inappropriate assumptions which were made earlier can be rectified in this stage.

## **5. Learning through Retrospection**

This is the key for all the possible and further progress. It helps to understand the mistake we made and learn from the past experiences. This helps in adopting the most suitable strategy in future.

### **Problem Solving through Six Thinking Hats**

The Six Thinking Hats method was put forward by Edward de Bono. This method helps us analyse and structure our thought process.

According to de Bono, we are capable of different thinking styles. These styles are represented by imaginary hats, each hat with different colour. By mentally wearing and switching hats, it is easier to move from one thinking style to another. The six thinking hats are given below.

#### **1. The White Hat**

It is the hat of facts and data. When wearing a mental white hat, we must focus on analysing the available data and infer the information from them.

**E.g.** *There are **hundred varieties** of animals in this zoo.*

#### **2. The Red Hat**

It is the hat of feelings and emotions. When wearing a red mental hat, we are free to focus on insights, anxieties, feelings, etc.

**E.g.** *I **feel worried** about their safety.*

#### **3. The Blue Hat**

It is the hat of process control. When wearing the blue hat, it is about the thought process itself that we think- whether are we approaching the problem in the right way, what are all the ground rules and whether the current thinking is productive. The blue hat initiates the discussion, controls its flow and sums it up to provide the bigger picture.

**E.g.** ***How are we planning** to market this product?*

#### **4. The Yellow Hat**

It is the hat of optimism and positivity. We take a logically optimistic view of the problem when we wear a yellow hat. The benefits, feasibility, positive assets, etc are evaluated in this.

**E.g. *Such low product cost will raise profit.***

#### **5. The Green Hat**

It is the hat of creativity. We can think and act creatively. We are encouraged to go beyond the limits we set for ourselves. Out of the box solutions come from green hat thinking.

**E.g. *If we can pack this product as a new budget option, we can attract more customers.***

#### **6. The Black Hat**

It is the hat of caution and critical thinking. We can reflect on how an idea wouldn't work in the current context. The black hat is important for decision making, but it should be used moderately.

**E.g. *With such low price, we cannot assure quality.***

Putting on and taking off each hat, mentally helps us to switch from one type of thinking to another. All the six hats are important and they act as tools to strengthen critical thinking and the ability to solve every problem effectively. These hats help us perform well in a team towards a common goal.

#### **Advantages of Six Thinking Hats**

1. Saves time in meetings
2. Eliminates personality conflicts in meetings
3. Helps to separate each aspect of problems, i.e. emotions, facts, etc.
4. Improves performance of individuals and teams
5. Helps in preparing for changes
6. Improves clarity and conciseness in communication.
7. Parallel thought is encouraged.

## **MIND MAPPING**

The term “mind map” was coined by Tony Buzan in 1970s. Mind mapping is a method of pictorially representing information and exploring new ideas and concepts. It represents the hierarchy/ interrelationships of new ideas and concepts in the form of a picture or network. It is a spider diagram which “maps” information.

A mind map usually has a central theme which is written prominently or drawn as an image at the centre of a blank page. Major ideas related to the central theme are placed around the central idea and are represented by words, phrases or pictures and connected to the central idea. Each major idea has smaller ideas, and those are placed in branched or hierarchical structures. Connections among these can be had with lines, arrows, etc. Use of colours, images, etc. adds effectiveness.

### **Uses of Mind Mapping**

- ✓ Mind maps are used by many companies like IBM, Walt Disney, Microsoft, etc.
- ✓ Mind maps are used for business presentations.
- ✓ It promotes creative and critical thinking processes.
- ✓ It can be used for educational purposes like taking classes, taking down notes, etc.
- ✓ It can be used for training purposes.

### **Rules for Mind Mapping**

- ✓ Start at the centre of a blank page and place the central idea there.
- ✓ Use a picture to represent the central idea, if possible.
- ✓ Use colours.
- ✓ Make the branches curved rather than using straight lines.
- ✓ There should be only one keyword per line.
- ✓ Images can be used.
- ✓ Develop your own style of mind mapping, if needed.

### **Advantages of Mind Mapping**

- ✓ Both hemispheres of brain become active participants as mind maps have verbal and visual components.
- ✓ The storage and retrieval of information become easier for the brain.

- ✓ New information can be added easily into the mind map.
- ✓ Promotes creative thinking.
- ✓ Helps in concentrating on single and central idea.
- ✓ Helps in condensing large amount of information into single sheet of paper.

### **FORCED CONNECTIONS**

Forced connections or forced association is an entertaining and radical way of generating new ideas. Forced connections help individuals and groups to breakout the thought patterns that we may get fixed with. In this method, **the group members are expected to derive or force a connection between the problem at hand and a random object or picture.** The members can connect any attribute of the object/ picture to the problem, which promotes divergent thinking.

**When the brain considers two different items, it will try to find the possible connections between them. This is the basis of forced connection method.**

### **PROBLEM SOLVING STRATEGIES**

**A problem solving strategy is a series of steps that a problem solver adopts to solve the problems.** The steps are usually closely connected. Experts use different strategies for problem solving. **Effective strategies have 4 to 15 steps.**

#### **Polya's 4 Step Method for Problem Solving**

According to George Polya, there are 4 essential principles of problem solving which are characterised by the following questions in each step.

##### **1. Understand the Problem**

- ✓ Do you understand all the words in the problem?
- ✓ Can you re state the question in your own words?
- ✓ What do you need to find out?
- ✓ Is there a picture/ sketch you can draw?
- ✓ Is the given information sufficient for the solution?
- ✓ If not, what other information is required?

##### **2. Devise a Plan**

There may be many ways to solve a problem correctly. A plan identifies the best strategy that can be used for problem solving. Some of the strategies are,

✓ Look for patterns

- ✓ Draw a diagram
- ✓ Make a table
- ✓ Break into sub problems
- ✓ Do a similar and simpler problem
- ✓ Guess an answer and check
- ✓ Write down equations
- ✓ Consider special cases
- ✓ Work backwards
- ✓ Be ingenious

### **3. Execute the Plan**

Act according to the strategy planned out in the previous stage. Make sure that there is accurate record of what you did.

### **4. Look Back**

Reexamine the answers that you have obtained. It helps in improving our problem solving skills.

### **Common Problem Solving Strategies**

#### **✓ Abstraction**

Modeling the system and solving at that level before moving on to actual system.

#### **✓ Analogy**

Using a solution that works for a similar problem.

#### **✓ Brainstorming**

A group activity involving suggesting a large number of solutions and refining them until an optimum solution is found.

#### **✓ Divide and Conquer**

Breaking a larger problem into simpler sub problems.

#### **✓ Hypothesis Testing**

Assuming a possible solution beforehand and trying to prove or disprove the assumption.

#### **✓ Lateral Thinking**

Approaching solutions indirectly and creatively.

✓ **Means Ends Analysis**

Choosing an action each step to move closer to the goal.

✓ **Method of Focal Objects**

Combining characteristics of different objects into something new.

✓ **Morphological Analysis**

The output and interrelationship of the entire system is considered.

✓ **Reduction**

See whether the problem can be reduced with existing solutions.

✓ **Research**

Collect existing ideas used for similar problems and use for the solution of the present problem.

✓ **Root Cause Analysis**

Identifying the basic cause of a problem.

✓ **Trial and Error**

Testing possible solutions repeatedly until the right one is found.

**ANALYTICAL THINKING** Systematic problem solving strategies will help us solving the mathematical problems very easily. Analytical and logical thinking belong to the category of systematic problem solving. In these two, we interconnect the facts given in a problem and the required outcome.

**QUANTITATIVE REASONING – STRATEGIES**

Problem solving strategies can be used based on the type of problem we confront with, information given, accuracy of the expected result, etc. They involve translating the representation of mathematical problem, making educated guesses, pattern searches, using simplifications and so on. Some of the strategies are given below.

**Translate from Verbal to Numeric Form.**

This strategy can be used effectively for word problems. The information given in word form is written in the form of an expression. The problem is understood in the language of mathematics to model it mathematically.

***Example:** the minimum charge for an autorikshaw is Rupees 20 for the first two kilometers. Every additional kilometer costs Rupees 4. If I paid Rupees 32 to come to college, how far away is my home?*



If the distance is  $d, 20+4(d-2) = 32$

### **Translate from Verbal to Graphical Form.**

In this strategy, Information given in the problem is represented in the form of a picture. This can be either a sketch like, conceptual or schematic diagram. Maximum care should be there to draw the diagram. Drawing makes it easier to analyse the data and to identify the solution method.

### **Translate from Numeric/Algebraic to Graphical Form**

The problems that are stated in numeric or algebraic form can be understood and solved better if converted to graphical form. This is especially useful when the problems involve coordinates.

### **Translate from Graphic to Numeric/Algebraic to Form**

If the question is given in the form of a picture, it can sometimes be translated into numeric/algebraic form that can be handled more easily.

## **MODULE 3**

### **INTRODUCTION TO GROUPS**

**A group is a collection of individuals connected by and within a social relationship.** The members of the group interact with one another and also with the group as a whole. There will be a purpose of existence of every group. Group members identify the purpose of the group and bond together. Communication and interaction among group members will be according to formal or informal set of rules and norms. When individuals have common goals, common sentiments and greater interactions, they tend to develop attitudes towards each other and consequently they form different groups.

#### **Characteristics of a Group**

- ✓ Frequent interaction which includes interpersonal communication and relationship interaction.
- ✓ Interdependence among the members and mutual influence.
- ✓ Hierarchy, leadership and pattern of rules and norms.
- ✓ Common objectives, common beliefs and common expectations regarding outcomes.
- ✓ Cohesiveness and unity among members.

#### **Importance of Group**

Different groups are formed for different purposes. The importance of forming groups is given below.

### **Importance of Formal Groups**

- ✓ To accomplish complex and independent tasks those are beyond the capabilities of individuals.
- ✓ To create new ideas
- ✓ To coordinate interdepartmental efforts
- ✓ To solve complex problems requiring varied information and perceptive.
- ✓ To implement action plans.
- ✓ To socialize and train new comers

### **Importance of informal Groups**

- ✓ To fill in the gaps of manager's abilities
- ✓ To solve work problems
- ✓ To have better coordination
- ✓ To channel communication
- ✓ To have better relations

### **Stages of Group Formation**

There are many stage theories of group development. The most well known theory is that of **Tuckman** and **Jensen**, which propounds five stages of group formation and is based on the development of internal relations of group members. The five stages of group development are **Forming, Storming, Norming, Performing and Adjourning.**

#### **1. Forming**

This is the first stage in which entry of the new members and orientations to them happen. The members get to know each other. There will be some confusion among the members about the purpose and objective of the group. Discovering the purpose of the group, what is considered as acceptable, etc. are learned in this stage.

#### **2. Storming**

This stage is characterised by the inevitable conflicts arise in the group. Disagreements on roles, goals and procedures often lead to dissatisfaction. The group members identify that the task at hand are more complicated than expected. The groups will be divided into subgroups. The conflicts

among the subgroups will be settled towards the end. Unresolved conflicts after this stage leads to dispersing of the group.

### **3. Norming**

The members will reach the expectation level of others and recognize the individual differences. The group begins to organize itself, resolve problems, sharing responsibilities and arriving at consensus. Group members will develop mutual trust and a sense of identity. At the end of this stage, a group structure and a hierarchy will be emerged. Group will become focused on the mission.

### **4. Performing**

The group becomes fully functional and matured. The focus in this stage will be on solving any issue through collective work and sharing responsibilities. Members of the group are aware of the drawbacks and weaknesses and try to compensate them. The entire team work is used to accomplish the goal. Peak performance usually occurs towards the end of the stage.

### **5. Adjourning**

Once the common objectives are accomplished, the group often adjourns or ends. Some groups may continue inactively, others may have a planned ending while some other groups naturally end.

#### **Group Thinking**

Group thinking is a psychological phenomenon that occurs within a group of people in which the desire for harmony or conformity in the group results in an irrational or dysfunctional decision making. Group members try to minimize conflict and reach a consensus by actively suppressing dissenting viewpoints and by isolating themselves from outside influences, without critical evaluation of alternative viewpoints.

Group thinking requires individuals to avoid raising controversial issues or alternative solutions, and there is loss of individual creativity, uniqueness and independent thinking.

#### **Getting Acquainted**

Relationship among group members is the most important factor to determine and create group dynamics. A good initial process of getting familiarized with each other promotes team effectiveness. The new members of the group will meet the existing members and vice versa. The

activities that help the members to acquaint with each other can be called **ice breakers**.

**Advantages of ice breakers are given below.**

- ✓ Members get to know each other better and faster
- ✓ Team spirit is generated
- ✓ Members will learn to listen actively
- ✓ Differences are easily forgotten and a good rapport is created
- ✓ Energy and enthusiasm get increased
- ✓ Promotes synergy

### **Clarifying Expectations**

Expectation is a feeling or belief about how good someone or something would turn out to be. It includes how a person will behave, how things are going to happen, what is going to be the result, etc. it is necessary to avoid expecting high, as over expectation leads to disappointment if things will not happen as per the expectations.

While forming a group, the members should be clarified about the possible outcomes and expectations, to avoid disappointment. Leaders of the group should spend some time for this. The objectives of the group are to be made clear to the new members.

### **Group Problem Solving**

There are different steps involved in group problem solving as given below.

1. Define
2. Analyse
3. Set Criteria for Solution
4. Generate all Possible Solutions
5. Evaluate and Select the Best Solution
6. Implement

#### **1. Define the Problem**

There should not be any confusion about the task at hand. The team leader must be able to summarize the problem in a single sentence.

#### **2. Analyse the Problem**

While analyzing the problem, the following points can be discussed by the team/group members.

- ✓ Is it true that the problem exists?
- ✓ How serious the problem is?
- ✓ What are the root causes of the problem?
- ✓ Have there been previous attempts to solve the problem?
- ✓ Do we have sufficient data to generate the solution?
- ✓ What is the deadline for the solution?
- ✓ Do we have enough experts among us?

### **3. Set Criteria for Solution**

Some of the criteria can be,

- ✓ The solution should be workable
- ✓ The solution should be economical
- ✓ The solution should address the cause of the problem
- ✓ The solution should not result in side effects

### **4. Generate all Possible Solutions**

This is the brainstorming session where all the members bring their ideas to solve the problem. **It is important that the solutions are not evaluated at this point.** The members can ask questions and clarify the various aspects. The focus here is to generate as many solutions as possible.

### **5. Evaluate and Select the Best Solution**

In this process, each solution is critically evaluated for its merits and completeness. The following questions can be used to find the potential solution.

- ✓ What is the exact nature of each solution?
- ✓ Is it possible to implement this with our current resources and workforce?
- ✓ Is it economical in the long run?
- ✓ Does the solution address the root cause of the problem?
- ✓ How well does it meet our criteria?
- ✓ Will this bring any side effect?
- ✓ Would a combination of result work better?

A consensus has to be reached by the group members at the end of this process.

## **6. Implement**

It includes the following steps.

1. Decide the modus operandi (way of operation)
2. Allot individual tasks to team members, based on their expertise/strength
3. If necessary and possible, assign tasks to people outside the group
4. Decide on how to assess the effectiveness of the solution
5. Decide a timeframe
6. Execute

### **Achieving Group Consensus**

Consensus is a general agreement or a collective opinion. Achieving group consensus helps effective decision making. It helps the team to see the solution to a problem from all the possible angles. The team members discuss the subject until each member agrees to the decision. Everyone will come to the positive side of agreeing even though different opinions will be there. Achieving group consensus is easier with teams of professionals.

### **Group Dynamics**

Group dynamics refers to the complex interplay of various interactive forces between members of a group. It influences the attitude of members of a group, group performance and its long time survival. It can be synonymously called as group processes.

### **Group Dynamics Techniques**

- 1. Brainstorming**
- 2. Multi voting**

Multi voting is a fast method to select the most relevant and popular ideas from a list with the least

difficulty and least chances of conflict. **The steps involved in multi voting are,**

- ✓ Number each idea
- ✓ Combine similar items if the group agrees and renumber them
- ✓ Each member votes multiple times and his ideas will be written on a paper
- ✓ Lists are collected and consolidated
- ✓ Ideas with maximum votes are identified.

### **3. Nominal Group Technique (NGT)**

NGT involves the following steps,

- ✓ Moderator states and clarifies the problem
- ✓ Each member thinks independently about the problem and silently writes his ideas on a paper
- ✓ Moderator asks for ideas and writes those on a board to make them visible to the others in the group.
- ✓ Each recorded idea will be evaluated
- ✓ Each member votes for 5 ideas the he thinks the best
- ✓ The moderator adds scores of the votes.
- ✓ The ideas that are ranked high are chosen.

### **4. Decision Grid**

In this method, options are listed as rows and factors to be considered as columns. Scores are given for each option/ factor and scores are added. We can understand the relative importance of each factor.

If there are numerous factors to be considered, the decision grid will be given on pair wise, i.e. only two alternatives will be given from which a single solution is given as voting.

## **INTRODUCTION TO TEAMS**

A team is a small group of individuals work together to achieve a specific and common goal. Not all small groups operate as teams. Members of a team usually have complementary skills and therefore a high degree of interdependence will be there. If a football team is taken for example, each player of the team will have own role and contribution towards the success of the team and the

performance of the team will be better than that of the individuals. Better coordination, harmony and sense of commitment create synergy in teamwork. A team in action has the capacity for self governing and self managing. Teams develop through five stages,

1. Forming
2. Storming
3. Norming
4. Performing
5. Adjourning

### **Team Composition**

Depending on the attributes of the individual team members, teams can be of

#### **1. Homogenous Composition**

Homogenous team is a team in which team members share almost the same attributes such as skill, intellect, education, personal, demographic traits, etc.

Depending on the roles assigned to the team members, **an ideal team should be composed of the following.**

1. Creator who generates new ideas
2. Promoter who takes the ideas forward
3. Analyst who evaluates various options available
4. Organizer who puts together the structure
5. Producer who follows through the plan.
6. Controller who sets the standards and ensures compliance
7. Upholder who represents and champions the team outside
8. Advisor who constantly seeks more information and gives insights

### **DIFFERENT TYPES OF TEAMS**

#### **1. Problem Solving Teams**

It is a team which is constituted to focus on a specific issue. Such teams get dispersed once the objective is achieved.

#### **2. Self Managed Teams**

It is a team in which the members are empowered to make informed decisions. In addition to the



executive power, each team member usually has a unique skill set.

### 3. Functional Teams

It is a team in which the members are brought together by similar function. Members in this group will have more or less the same skill set and these skills are combined to achieve more efficiency.

### 4. Cross Functional Teams

In this, members with different functional expertise are brought together to form a team. For example, if the objective is to launch a new product, members from finance, technical, marketing, etc are brought together to form a cross functional team. Better interdepartmental coordination and creative solutions will be the result.

### 5. Virtual Teams

In a virtual team, members are distributed across several geographic locations. The communication among the team members will be digital rather than face to face.

## GROUPS VERSUS TEAMS

	<del>Individual contributions</del> <b>GROUP</b>	<del>Synergie contribution</del> <b>TEAM</b>
1		
2	Random skills	Complementary skills
3	Works towards common goal	Total commitment to common goals
4	Little sense of ownership among members because they are not much involved in planning the goals	Great sense of ownership because the members have helped in establishing the common goals
5	Little scope for creativity	Opportunity for creativity
6	Individual responsibility	Collective responsibility
7	Diverse culture	Shared culture
8	Shared interest	Mutually agreed interest
9	Conflicts are common	Lesser chance for conflicts
10	Accountable to group leader	Mutual accountability
11	More focus on individual rewards	More focus on shared rewards

1		
1 2	Less interdependence	High interdependence
1 3	Leader controls the group	Leader acts as facilitator
1 4	Lesser coordination, lesser task orientation and lesser collaboration	Greater coordination, task orientation and better collaboration
1 5	Lesser familiarity among members	Greater familiarity among members
1 6	Limited awareness about the skills and tasks of other members	Greater awareness about the roles, weaknesses and strengths of other members
1 7	Cautious approach and limited trust	Candid approach and higher level of trust
1 8	Lesser chances of appreciating others' efforts	Greater appreciation from team members
1 9	More concerned with challenges faced by the individual	More concerned with challenges faced by the team
2 0	Roles and tasks are often fixed	Roles and tasks are rotated as and when required
2 1	Members think that they are brought together for administrative Convenience	Members are aware that individual goals are best achieved through mutual support and working towards team goals

## **TEAM DYNAMICS**

Team dynamics are the unconscious, psychological forces that influence the direction of behaviour and performance of a team. Team dynamics are created by the nature of the work of the team, the personalities within the team and their working relationships with other people and the environment in which the team works.

Team dynamics can be good when they improve overall team performance and get the best out of individual team members. They can also be bad when they cause unproductive conflict,

demotivation and prevent the team from achieving its goals.

### **DECISION MAKING IN TEAMS & GROUPS**

Following are the common methods for a team to arrive at a decision or select a solution from various alternatives possible.

1. **Group consensus:** Members coming to a general agreement
2. **Majority vote:** Opinion of the majority of members is accepted.
3. **Expert Decision:** An expert or expert committee takes the decision for all.
4. **Decision by Authority:** The leader takes the best solution.

### **BUILDING AND MANAGING SUCCESSFUL VIRTUAL TEAMS**

A virtual team is constituted by people working together remotely by connected together by digital channels of communication. E mails, phones, teleconferencing, software, etc are used as tools for the same.

**Advantages of virtual teams are,**

1. Getting the best person for the role, irrespective of where they stay.
2. People working in different time zones can ensure 24x7 support.
3. Team members have greater flexibility and can have better work life balance.
4. Women have more opportunities as they can work from home.

**Factors in Building and Managing Successful Virtual Teams Include**

#### **1. New Perspectives in Human Resource Management**

Virtual employees feel less towards the organisation than the in house employees do. So the management should be careful to foster communication among the team members. Also the team members should be asked to express opinions and update them with all the recent and relevant information.

#### **2. A Strong Support Mechanism**

Most of the virtual team members work alone and it is a disadvantage when requires help from colleagues. To tackle this, a reliable support network should be effectively maintained. They should be given with communication media also.

#### **3. Better Information Management Systems**

Details of work assignments, scheduling and sequencing of tasks within a project, workload

tracking, etc have greater significance in virtual context.

Management should make sure that the information flow up and down the organisation including the virtual teams also.

#### **4. Coaching, Learning and Development**

Initial coaching and training of virtual team members should be done properly at the beginning itself. Remote training programmes can be organized once the members start working as virtual team members. Online seminars, virtual classes, group discussions, etc can be arranged on regular basis.

#### **5. Effective Leadership**

The leadership must be able to handle the complexities of managing a virtual team of talents tasks, etc.

#### **6. Access to Electronic and Collaborative Technologies**

As the virtual team members won't get chance to meet with each other, share the documents and think together, keeping in touch with the updated online tools is mandatory. Some of the online applications are Squiggle (video), Dropbox (file sharing), Google docs (document management), Skitch (screen shot sharing), Trello (project and task management), etc.

#### **7. Changing the Organisational Culture**

Remote employees, virtual and cross functional teams, work from home, etc are becoming popular. This tends to influence the organizational mindset. Managers should be able to accept the changes in the organizational culture in this regard.

### **MANAGING TEAM PERFORMANCE**

It can be used to help and fine tune that are already performing well. It is based on a new model of teamwork and an instrument which can measure team performance. Understanding and subsequently discussing a team's performance is important in managing team performance. To work effectively, teams must regularly and objectively review their "teamwork". In addition to concentrating on their short term outputs, team members must examine work processes to ensure that the team is working creatively, that the team is effectively promoting itself to others, and so on.

Successfully managing team performance starts by identifying where the team is performing well and where it needs further development. The Team Performance Profile Questionnaire and associated analysis gives team members an objective assessment of how the team is doing. It provides opportunities to compare the various viewpoints of team members and outsiders and relate them to the team vision and purpose. The diagnosis of the problems is essential. Once we know what is wrong, it is usually easy to fix it.

**While measuring the team performance, the following have to be looked.**

- ✓ Individual performance
- ✓ Individual's contribution to the team performance
- ✓ Performance of the entire team

### **MANAGING CONFLICT IN TEAMS**

Conflicts in teams aren't always disadvantageous. **Conflicts can benefit teams as follows.**

- ✓ Conflicts encourage the expression of new ideas which can lead to new and better ways of doing business.
- ✓ Conflicts can also expose weaknesses in operational procedures and policies.
- ✓ Conflicts highlight challenges that have the potential to turn into chronic problems if ignored.

**Conflict becomes negative when,**

- ✓ Disagreements are ignored and/or allowed to develop into hostilities.
- ✓ Communication becomes unprofessional.

Managing conflict effectively can be a delicate task, but there are a number of **techniques and policies** that can be implemented to help you keep things under control as given below.

- 1. Train the staff to resolve conflicts in a professional manner without the intervention of management.**

Ensure that each team member knows the protocol for resolving differences with each other in particular situations. **The first step in resolving most conflicts is an informal,**

**one-to-one meeting between the parties involved. Discuss the problem from both points of view, suggest solutions and agree on a course of action.** If no resolution is made, record the substance of the discussion and make the manager aware of the problem.

**2. Intervene and act as an objective third party in the dispute.**

**Bring the two parties together and mediate a discussion.** Ask each team member to **explain his/her challenge and the reasons why a resolution was not reached** during the earlier meeting between the two parties. If the situation warrants, **suggest alternative solutions that might be agreeable to both parties and the team as a whole.** If one side is in the wrong according to company rules and procedures, make that judgement and enforce it, but be sure to explain your decision in an objective and constructive manner so that future challenges of a similar nature do not arise. If a resolution cannot be determined at this stage of the conflict, refer it to the team for open discussion.

**3. Call a team meeting and explain the problem from the point of view of an objective third-party.**

Allow each of the two team members engaged in the conflict to add to your description of the situation. Ask each member of the team to contribute their thoughts on the situation with a brief and objective statement, with team goals and company policies and procedures as their primary frame of reference. Come to a group decision and be sure that each team member understands how and why the team has come to this decision. Record all developments during the meeting and file it for future reference. Doing so can help resolve future disputes and documents employees who frequently find themselves in situations of conflict.

### **WORKING TOGETHER IN TEAMS**

Teamwork is the concept of people working together as a team for a specific purpose under the same value. Greater interpersonal skills are necessary to be in a team. **Team work aims at sharing responsibilities, open communications, improving the working environment, relieving stress, reducing errors, etc.**

When working together in team, it promotes effectiveness and enthusiasm of a professional. It aims at reducing the risks and promotes synergy.

## **TEAM CULTURE**

**Team culture is the set of underlying rules and beliefs, usually unrecognized, that determine how everyone in your practice interacts with each other and with the clients.** New team members gradually absorb the culture of a team, without being taught, usually without even noticing.

Maintaining team culture is important for team formation, operation and continuance.

**Tuckman and Jensen found a hierarchy of drivers for team performance; they are,**

- ✓ effective communications
- ✓ Trust, respect, and credibility
- ✓ Overall team performance
- ✓ Interesting and stimulating work.

**Westby and Ford proposed four functions of team culture; they are,**

- ✓ Sharing patterns of interpretation and perception
- ✓ Sharing patterns of feelings and values
- ✓ Defining who is a member
- ✓ Prescribing behaviour.

Teams create their own language, jargon, and stories which are used to describe and demonstrate the values, beliefs, and perspective of the team.

Team culture may be identified through the dimensions of a team goal, leadership and followership, commitment, motivation, trust, and power.

## **TEAM POWER**

Team power is a measurement of the collective strength of a team. Team power can be best used to solve any complicated problem and it helps improving the synergy of the members of the team.

## **TEAM LEADER DEVELOPMENT**

Leader development is defined as the “expansion of a person’s capacity to be effective in leadership roles and processes”. These roles and processes are ones that aid in setting direction, creating alignment and maintaining commitment in groups of people sharing common work. Most organizational leadership research and educational programs have focused on developing individual-based knowledge, skills, and abilities associated with formal leadership roles.

There are **three types of intrapersonal competencies related to leader development**; they are,

1. **Self Awareness** (emotional awareness, confidence, and accurate self image)
2. **Self Regulation**
3. **Self Motivation** (commitment, initiative, and optimism)

**Leadership can be developed by the following methods,**

### **1. Formal Training**

Organizations often offer formal training programs to their leaders. Traditional styles provide leaders with required knowledge and skills in a particular area by utilizing coursework, practice, with rehearsals, and feedback. This traditional lecture based classroom training is useful, however, the limitations include the leader’s ability to transfer the information from a training environment to a work setting.

### **2. Developmental Job Assignments**

Formal training organizations should assign leaders to be with developmental jobs that target the newly acquired skills. **A job that is developmental is one in which leaders learn, undergo personal change, and gain leadership skills resulting from the roles, responsibilities and tasks involved in that job.** Developmental job assignments are one of the most effective forms of leader development.

### **3. Three Hundred and Sixty Degree (360°) Feedback**

It is a necessary component of leader development which allows leaders to **maximize learning opportunities from their current assignment. It systematically provides the leader with perceptions of his or her performance from a full circle of viewpoints including subordinates, peers, superiors** and the leader’s own self.



## **MODULE 4**

### **MORALS/ MORALITY**

Morals/ morality is concerned with **the principles of right and wrong in human behaviour**, mostly based on one's conscience. A thought, word or action is considered to be morally good if it agrees with the general perception of what is right and what is wrong. Most of the moral principles are teachings of wise men, religious leaders, etc.

Morals of a particular society may be different from another society. There will be differences according to time, place, religion, ideologies, etc. However, morals always stand for goodness and it promotes acceptable behaviour of individuals.

### **VALUES**

Values are principles that reflect one's judgements of what is important in life. They help us promoting our well being. Values are more concerned with what is morally right. Personal values may be different from individuals to individuals. Some values may have priority over others depending up on the need level.

### **ETHICS**

The word ethics is derived from the Greek word "ethos". Ethics is the set of codes of conduct or moral principles with which behaviour can be analysed as good or bad or right or wrong. It teaches the well disciplined behaviour and how to act according to the situations. Ethics is based on logic and reason. Often morals and values contribute to ethics. Therefore we can state that **morals + values = ethics**.

### **INTEGRITY**

Integrity is a character trait that reflects a person's degree of honesty, adherence to moral principles and a complete harmony of one's thought speech and action. A person of integrity will be guided by morality and has consistency in character. He/ she will do what is right every time.

**The types of integrity are given below.**

#### **1. Professional Integrity**

It deals with the willingness to do the right thing in one's profession.

#### **2. Political Integrity**

It deals with the mindset of politicians once they are elected by the people. They should work according to the promises they made during elections.

### **3. Academic Integrity**

Any academic endeavour must be pure and away from plagiarism. People in academic community should stick on to truthful information. A student who copies an assignment, a researcher who fabricate data, a writer who doesn't acknowledge his sources, etc lack academic integrity.

### **4. Integrity in Daily Transactions**

There will be incidents in our life in which there will be options to do the right thing or to do what benefits us. As responsible persons of integrity, we should do right always.

## **WORK ETHICS**

Work ethics can be defined as a set of standards of behaviour or codes of conduct based on a set of values, in the workplace. Medical ethics, engineering ethics are examples. A strong set of work ethics promotes the well being of employees, organisational effectiveness and advancement of society.

**The basic elements of a well formed code of work ethics in an organisation are given below.**

#### **1. Integrity and Loyalty**

Integrity at workplace means the quality of being honest and morally upright, always willing to do the right thing and adhering to the code of ethics, policies and procedure of the firm.

#### **2. Professionalism**

Competence, good judgement and polite behaviour of a trained man who can deliver the best of him every time, are together called professionalism. A professional is consistent and he is ready to take responsibilities. He will have superior problem solving and leadership skills.

#### **3. Respect and Care**

Respect is valuing a person for his professional expertise. Respect should be given to each and everyone of the group irrespective of the position, gender, ethnicity, nationality, etc.

Caring is showing genuine compassion and concern for others, helping them in need, being kind, considerate and grateful.

#### **4. Cooperation**

It is necessary for everyone to cooperate to meet deadlines. To achieve the organisational objectives, being cooperative is very helpful.

## 5. Fairness

The management should make sure that fairness is ensured. Justice should be there to treat everyone equally well. Rules should not be biased.

## 6. Trustworthiness

It is the extent to which someone's actions can be relied on in the absence of control.

## SERVICE LEARNING

Service learning is a structured learning approach that incorporates community service along with formal instruction and explicit learning objectives. It involves identifying the concerns of the community, addressing them using the technical knowledge and reflecting on the experience. It is a part of experiential learning. **Through service learning, a student is able to,**

- ✓ Understand the relevance and the context in which service is provided.
- ✓ Reflect on the experience the service offers and its impact on academics
- ✓ Develop social awareness and civic skills
- ✓ Address the concerns of the society

## CIVIC VIRTUES

Civic virtues are moral duties or standards of righteous behaviour of an individual as a responsible member of the community and an integral part of the environment.

They are habits of citizens that contribute to the welfare of society.

Volunteering in community initiatives, voting in elections, attending important meetings, etc are some of the activities a person may do. Civic virtues are categorized as follow,

### 1. Civic Knowledge

A citizen must be aware of his rights, duties and responsibilities. He should know The Constitution of India and be aware of the responsibilities of the government.

### 2. Self Restraint

In democratic setup, we have limited government and it ensures equal rights and freedom for all of us. The citizens should control or restrain ourselves from untoward activities to maintain safety and law and order.

### **3. Self Assertion**

Self assertion comes from self esteem. We must respect ourselves and our rights. If a government acts against the rules and esteem of the people, it is the duty of the citizens to abolish the government.

### **4. Self Reliance**

It is a virtue to support oneself. A citizen should be careful not to be a burden to the society.

## **IMPORTANT CIVIC VIRTUES ARE GIVEN BELOW.**

### **1. RESPECT FOR OTHERS**

A man should respect himself first to get respect from others, i.e. self respect is very important. Respect for others include acknowledge the importance of other persons, their view points and rights. It is a positive feeling of appreciation for other people as human beings. Respect should be given irrespective of the position, job, ethnicity, gender, social and financial statuses, etc.

### **2. LIVING PEACEFULLY**

A society is a peaceful society where wars and conflicts are minimal or nonexistent. Peaceful living enhances the quality of life. **Principles of peaceful living include the following.**

- ✓ Respecting others and appreciating the differences
- ✓ Forgiving others
- ✓ Not interfering in other's matters unless it is necessary
- ✓ Giving credit for other's works
- ✓ Adapting to the circumstances you cannot change
- ✓ Engage yourself constantly in good deeds
- ✓ Ensuring the basic needs of everyone without exploiting the resources
- ✓ Nurture love for all living beings in this world.

### **3. CARING AND SHARING**

**Caring** is expressing concern about others, their feelings and well being. Caring shouldn't be limited to one's family and friends. Caring should be given to neighbors, colleagues, with whom we deal with in our daily life, etc. Caring for environment and Nature should be there as it is the necessity of time.

**Sharing** of knowledge, facilities, goods, experiences, etc lead to the growth of society. The act of

sharing should come voluntarily and without compulsion. It leads to peaceful living.

#### **4. HONESTY**

Honesty is the trait of adhering to truth even when it is inconvenient and unpopular. **In a workplace, honesty may be,**

- ✓ Stating the facts clearly without dilution, distortion or exaggeration
- ✓ Not hiding or withholding the fact or truth for selfish reasons
- ✓ Refraining from deceiving the customers
- ✓ Not resorting to bribes and nepotism
- ✓ Maintaining confidentiality and intellectual honesty
- ✓ Being straight forward, loyal and trustworthy in all relations
- ✓ Seeking truth before deciding and acting.

#### **5. COURAGE**

Courage is not the absence of fear. It is the ability to face fear and do something in spite of being afraid. It is the willingness to confront with pain, agony and uncertainty for something that we believe in. **Courage may be seen in these situations,**

##### **1. Courage as a Part of Duty**

This will be seen in a firefighter who saves people from a building which caught fire, a soldier who fights in the border, etc. These positions are synonymous to courage.

##### **2. Courage to Face Physical Challenges**

Some people are engaged in very dangerous and adventurous sport item or activities by risking their lives to get the thrill.

##### **3. Courage in a Social Context**

To challenge injustice, to fight against discrimination, to protest against ill treatment, to fight for freedom, etc. this courage is necessary.

##### **4. Intellectual Courage**

It says about the courage to seek and speak truth even if it upsets the prevailing beliefs.

## 6. VALUING TIME

Today, people find difficulty to manage time. There are some ways to utilise the time effectively as given below.

- ✓ Be aware that time is a perishable resource
- ✓ Get your priorities right
- ✓ Be punctual
- ✓ Plan in advance
- ✓ Get rid of delaying

## 7. COOPERATION

Cooperation is the process of individuals or individual organisations working together synergistically towards the completion of common objectives without surrendering the individual freedom.

It can be a joint action or a process of working together consciously for common benefit and is a continuous process. **The pooling of complementary skills, gathering more ideas, enhanced man power, greater resources, minimum utilisation of time, etc are the advantages of cooperation.** Cooperation among different departments of a firm ensures better output, quality and efficiency.

## 8. COMMITMENT

The quality of holding on to a cause that one believes in, even in difficulties and setbacks, with great attitude. In an organisation, **commitment often refers to the dedication** of an employee to his job and to the organisational goals by following the ethical principles.

**Allen and Meyer** proposed a three component model for organisational commitment, namely

### 1. Affective Commitment

Affective commitment happens when an employee loves his job and is aligned with the organisational goals and values. It is commitment due to affection and contributes to job satisfaction.

## 2. Continuance Commitment

Continuance Commitment happens when the employee is driven by the fear of the possible losses he could incur by leaving the company. The losses may be financial, career oriented or societal.

## 3. Normative Commitment

Normative commitment happens when the employee feels obligated or duty bound to stay with the organisation even if he is unhappy. This commitment may arise out of reasons like relations with the coworkers, personal beliefs about loyalty, etc.

**There are 5 rules to enhance organisational commitment. They are,**

- ✓ Commitment to people – first values
- ✓ Clarify and communicate the mission of the organisation.
- ✓ Guarantee the organisational justice
- ✓ Create a sense of community
- ✓ Support employee development

## 9. EMPATHY

Empathy is the ability and willingness to imagine oneself in another's place and see things in their perspective. It is about putting oneself in the other person's shoe. A person who empathizes with others will feel, understand and accept their emotions, motives and concerns. **Empathy in the workplace leads to,**

- ✓ Better teamwork
- ✓ Better understanding of what motivates others
- ✓ Better appreciation of customer needs
- ✓ Better understanding of public perception of the company

## 10. CONFIDENCE

Confidence is the quality of believing in oneself and one's abilities. **Confidence encompasses two separate traits; 1. Self esteem 2. Self efficacy**

**Self esteem** is one's innate sense of self worth. It reflects the individual's evaluation of his/ her worth and value.

**Self efficacy** is the belief in one's own capacity to perform, accomplish specific tasks and reach the goal.

**Presence of confident employees in the workplace leads to the following,**

- ✓ Open sharing and expressing of opinions by the employees
- ✓ Setting of higher goals for the employees and organisation.
- ✓ Lesser tendency to complain
- ✓ Openness to change
- ✓ Better overall performance

**Ways to Improve Confidence**

- ✓ Be conscious about the present moment
- ✓ Believe that you always have choices and make conscious decisions
- ✓ Accept new challenges
- ✓ Practice resilience
- ✓ Learn to say NO to bad things
- ✓ Practice positive self talk
- ✓ Conquer fear by doing what you fear to do
- ✓ Don't hesitate to ask for help, if needed.

## **11. SPIRITUALITY**

Spirituality is a broad concept involving a sense of connection to a higher transcendental reality and a quest for ultimate truth and meaning of life. Spiritual practices like meditation and prayer are meant to focus on one's inner life rather than going after material possessions. Spiritual thinking includes the thoughts on the following,

- ✓ Why are we here?
- ✓ What happens to us after death?
- ✓ Do things happen for a reason?



Spirituality believes that some questions in the universe cannot be answered by an average thinking hence a higher level of thinking is important and that is called spiritual thinking. Such thoughts are promoted by every religion. **Still then, spiritual thought is not only confined to religious thinking but it encompasses humanistic values like love, compassion, tolerance, harmony, etc.**

## **SENSES OF ENGINEERING ETHICS**

Engineering ethics has different senses and each one referring to different aspects.

- 1. Engineering ethics as synonymous with morality in engineering** (Normative sense).
- 2. Engineering ethics as an enquiry into desirable ethical practices in engineering** (Normative sense).
- 3. Engineering ethics as followed by specific individuals or groups without recommending right action** (Descriptive sense).

**In the first normative sense**, engineering ethics is about understanding the moral values as well as responsibilities and rights to be followed by engineers.

**The second normative sense involves** examining specific moral problems as well as morally correct decisions and policies in an engineering context.

**In the descriptive sense**, engineering ethics refers to an empirical research into what specific individuals or groups believe as moral.

## **VARIETY OF MORAL ISSUES**

Moral issues faced by an engineer can be broadly classified into micro level issues and macro level issues.

### **1. Micro Issues**

This refers to the moral implications of decisions and practices by individual engineers as well as organisations while pursuing their objectives. It affects the firm and its employees only.

### **2. Macro Issues**

These issues are global and affect the entire humanity. It includes social issues as well.

## **Some Moral Issues Related to Engineering**

### **1. Problems Concerning Safety**

Probable reasons for this may be compromising quality, use of cheap components, lack of maintenance, incompetence, corruption, etc.

### **2. Problems Concerning the Environment**

Includes lack of proper waste disposal methods and environmental awareness.

### **3. Problems Concerning Product Safety**

Includes profit motive without morals, unreliable suppliers, bad design, etc.

### **4. Problems Concerning Transparency about Possible Hazards**

Fear of taking responsibility, profit motive without morals, etc. are included.

### **5. Problems Concerning Exploitation of Scarce Resources**

Profit motive, inadequate laws, etc. are included.

## **MORAL DILEMMAS**

Moral dilemmas are the situations in which two or more moral situations come together in which the professional feels difficulty to select the best out of them. Selecting more options to follow a certain action is not possible and that's the reason why one feels this situation.

## **MORAL AUTONOMY**

Moral autonomy is the capacity to think rationally and decide what is right instead of simply following a set of rules. It is about making decisions based on moral concern by reasoning rather than blindly following others. **Moral autonomy is about the following,**

- ✓ Moral concern
- ✓ Going through different perspectives of an ethical issue
- ✓ Application of reasoning
- ✓ Making decisions without the influence of others
- ✓ Acting boldly on the decision taken

## TYPES OF ENQUIRY

Enquiries in engineering ethics fall under three categories namely,

### 1. Normative Enquiries

Normative questions deal with what ought to be done. It is about identifying the values and practices that are morally right and ought to guide the decision makers. **Example of normative question:** - *what are the values that should guide a person working in genetic engineering?*

### 2. Conceptual Enquiries

These enquiries throw light into the meaning of concepts, Values, principles and issues encountered in engineering ethics.

**Example:** - *what differentiates a bribe from an acceptable gift?*

### 3. Factual

These enquiries provide information regarding the moral practices of an engineer, an organisation or even a society without judging their moral rightness. This can also apply to questions regarding the facts about a moral problem related to engineering.

**Example:** - *What caused the first Tesla Model S (self drive car) crash in May 2016?*

## KOHLBERG'S THEORY OF MORAL DEVELOPMENT

Lawrence Kohlberg proposed a stage theory of moral development. In this, he identified six stages in the gradual progression of individuals' concept of right and wrong. The six stages are grouped into three levels as given below.

	LEVEL	STAGE	ORIENTATION
<b>I</b>	Pre conventional	1	Obedience & Punishment
		2	Individualism & Exchange
<b>II</b>	Conventional	3	Good Boy – Good Girl Law &
		4	Social Order
<b>III</b>	Post Conventional	5	Social Contract Universal Ethical
		6	Principles

## **Level I: Pre Conventional Morality**

### **Stage 1: Obedience and Punishment**

This is the first stage of moral development usually found in small children. A small number of adults never grow out of this stage. A child in this stage assumes that it should obey all the rules made by the authority, without question. Parents, teachers, etc. are seen as authority figures. The child's sense of right and wrong is determined by what gets punished and what doesn't.

### **Stage 2: Individualism and Exchange**

At this stage, children become self absorbed and egotistical. Though they acknowledge individual points of view, actions are judged on the basis of how they serve individual needs. A child at this stage believes he or she is generous but is in fact self absorbed. **He or she is likely to expect a reward for every non selfish act and will do a favor to get a favor. Here disobedience and wrong doing are avoided in self interest.**

## **Level II: Conventional Morality**

### **Stage 3: Good Boy – Good Girl Orientation**

Usually this stage occurs when children enter their teens where they see the approval of peers as very important. **Importance will be for nice behaviour and conformity.** Nice behaviour includes good intentions, sympathy, empathy, love and trust for others in any interpersonal relationship. They expect to live up to the expectation levels.

### **Stage 4: Law and Social Order**

At this stage, people become concerned with society as a whole. **Emphasize will be on maintaining the social order.** Following the law, discharging one's duties, respecting authority, etc. are considered important as they help maintaining the social order. Moral judgement will be based on views taking into account the impact on society as a whole. Written law is of the most important here. Majority of adults do not grow beyond this stage.

## **Level III: Post Conventional Morality Stage 5: Social Contract**

People at this stage are aware of the importance of maintaining the social order but not at the expense of individual rights. They know that rigid laws must be changed for the welfare of the people. They value differing opinions, contrasting beliefs and diverse values. Laws must be formed by the society only through consensus. People at this stage believe that a good society

should function for the welfare of all.

### **Stage 6: Universal Ethical Principles**

This is the highest level of moral reasoning according to Kohlberg. Here moral reasoning is based on conscience, abstract reasoning and an evolved sense of justice that go beyond rules and laws. Very few people who have higher ethical principles reach this stage. Dignity and value of humanity are given priority to social customs and written laws. The principles of justice are universal and are applicable to everyone. For an example, *a law framed by a majority through a democratic procedure is not morally right if it hurts a minority or even a single individual*. People at this stage will have no self interest.

### **GILLIGAN'S THEORY OF MORAL DEVELOPMENT**

Carol Gilligan was a student of Kohlberg and her theory is founded on the inadequacy of Kohlberg's theory to explain female psychology of moral development.

Gilligan's theory was based on **care** and **contextual reasoning**. She argued that **the moral sense of female revolves around the ethics of care and compassion** and women give more importance to relationships than men do. Gilligan's theory **proposes three stages and unlike Kohlberg's theory, the transition to higher stages is due to increased self awareness rather than cognitive development**.

### **Care Based Morality & Justice Based Morality**

Gilligan proposed the **Stages of the Ethics of Care** theory, which addresses what makes actions right or wrong. Gilligan's theory focused on both care based morality and justice based morality.

**Care Based Morality** is based on the following principles:

- ✓ Emphasizes interconnectedness and universality.
- ✓ Acting justly means avoiding violence and helping those in need.
- ✓ Care based morality is thought to be more common in girls because of their connections to their mothers.
- ✓ Because girls remain connected to their mothers, they are less inclined to worry about issues of fairness.

**Justice Based Morality** is based on the following principles:

- Views the world as being composed of autonomous individuals who interact with another.

- Acting justly means avoiding inequality.
- Is thought to be more common in boys because of their need to differentiate between themselves and their mothers.
- Because they are separated from their mothers, boys become more concerned with the concept of inequality.

Researchers have found a tendency for males to adopt the justice perspective and for females to be more likely than males to adopt the caring perspective.

## **CONSENSUS AND CONTROVERSY**

**Consensus** refers to **agreement** and **controversy** refers to **disagreement**.

While exercising moral autonomy, individuals may differ in their decisions. Each may have different perspectives about morality and particular moral issues. There may be occasions in which the moral reasoning of one person will be in conflict with that of the other. During such occasions, each will resort to his moral autonomy which leads to controversy. Here, to avoid conflicts, everyone should discuss matter and reach a consensus.

## **MODELS OF PROFESSIONAL ROLES**

Engineering is a profession which applies scientific principles for the betterment of individuals and the society.

**Engineers often identify themselves with some of the roles given below.**

### **1. Saviour**

Engineer assumes the role of someone who saves the society from all its evils. He may use technology to save them from poverty and ill health. By using appropriate and advanced technology, efficiency and effectiveness can be ensured in all activities related to social planning which intern results in material prosperity and happiness.

### **2. Guardian**

An engineer can play a crucial role in determining the needs of the society. He can guide and regulate the technological advancement keeping in mind the best interest and welfare of the common man

### **3. Bureaucratic Servant**

Here the role of engineer is confined to the development of engineering solutions to the problems handed to them by the organisation. The management decides what to develop and the engineer assigned the technical side of the problem. His duty is to come up with concrete engineering

solutions.

#### **4. Social Servant**

In this role, the engineer looks up to the society as his master. He constantly listens to the aspirations of the society and acts to fulfill those needs.

#### **5. Social Enabler and Catalyst**

In this role, an engineer doesn't single handedly decide what is good for the society, nor does he simply goes by the directions of the society. Instead he assists the management to make informed decisions based on the best interests of the society.

He helps the society to understand its needs. Here management makes the decisions. But the engineer plays a vital role in the process by way of guidance to society as well as management by making them aware of the impact of technical advancement on people and environment. He helps transform the society and acts as a catalyst for technological growth.

#### **6. Game Player**

These engineers do not see themselves as masters or servants. They are motivated by the economic and technological challenges at any given time. They play by the current economic game rules, getting excited by the profession and deriving satisfaction from winning in a competitive role.

### **THEORIES OF RIGHT ACTION**

Principles of right action may be used to guide human beings in their lives. These principles are used to decide whether a particular action is right or wrong. The theory of right action is an investigation and an attempt to answer the questions like "what ought I do?" or "what is the right thing to do?". The theory of right action helps answering these questions and by identifying a set of principles that may be used to determine right actions.

#### **Consequentialist Theories**

**Consequentialism is the view that morality of an action is solely a function of the goodness or badness of its outcomes.** Consequentialist theories are otherwise called **teleological theories**, origin of the term from a Greek word "telos" which means end, since the end result is considered the only criterion for moral judgement.

These theories are about good intentions than following any rigid rule but there are dilemmas like "being good to whom?" and "best consequences to whom?". Various categories of consequentialist theories are given below.

### **1. Ethical Egoism**

This theory takes the view that an action is morally right if its consequence is good for the agent performing the action. In other words, it is always moral to do something if it promotes one's own good or self interest regardless of its impacts on others.

### **2. Ethical Altruism**

This takes the view that an action is morally right if its consequence is good for individuals other than the agent who performs the action. It is something like self sacrifice. Here the moral value of an action solely depends on the impact on others regardless of its effect on oneself.

### **3. Utilitarianism**

It holds the view that right actions are those that maximize total utility, that is, the greatest good for greatest number. Instead of self promotion or self sacrifice, this approach makes a cost benefit analysis of consequences affected by all parties concerned and choosing an action that results in maximum happiness of all.

### **Non Consequentialist Theories**

#### **Virtue Theory/Virtue Ethics**

Virtue theory/Virtue ethics recognizes the virtue of mind and character as the most important elements of ethics and moral philosophy. Individual's virtues are emphasized rather than doing one's duty or acting to bring about good consequences.

#### **Duty or Deontological Theories**

Deontological (duty based theories) are of the view that morality of an action is solely dependent on the quality of the action.

### **SELF INTEREST**

Engineers are human beings with desires and ambitions and they are also tempted to act according to their own interest. A healthy amount of self interest is essential for survival but if it increases, professional ego will be the result.

An engineer without self interest and self esteem may easily be tempted to unethical behaviour.



## **ENGINEERING AS SOCIAL EXPERIMENTATION**

Earlier the development of a society was analysed by the education of the people, their financial welfare, etc. Now the development of a society and nation can be easily assessed by the technical advancement. Engineers are responsible for the development in this regard.

While developing the technology, an engineer should fore see the impact on the following.

- ✓ The end user
- ✓ The social fabric in terms of relationships, work, cultural exchange, etc.
- ✓ The health of people in the long run.
- ✓ The distribution of wealth

**There are some similarities between engineering as experimentation and standard experimentation as given below.**

- ✓ One cannot be sure about all the outcomes of both the cases
- ✓ Gaining of knowledge by constant monitoring is crucial to both.

**There are some differences between engineering as experimentation and standard experimentation as given below.**

- ✓ In standard experiments, there will be a control group which serves as a reference and an experimental group on which the experiment is conducted. In engineering as experimentation, there is no such control group.
- ✓ In standard experiments, consent of the human subject is mandatory. But in engineering as experimentation, the people must be informed and no consent is required.

## **ENGINEERS AS RESPONSIBLE EXPERIMENTERS**

There is a great responsibility of engineers to guide and make the people aware of the technical advancements, risks and updated information. **The essential characteristics of an engineer, as a responsible social experimenter are given below.**

### **1. Conscientiousness**

It is about being careful, thoughtful and vigilant with commitment to values and sensitivity to

moral issues. Conscientious engineers think above the narrow self interest and profit motive.

## **2. Comprehensive Perspective**

It is getting the big picture and fully understanding the moral context of one's work. Getting the complete information about anything is very important in this regard.

## **3. Moral Autonomy**

It is the capacity to reflect and self impose the moral law rather than passively adopting the social, religious and professional conventions. If an engineer goes by the moral views of his company even if his conscience is against them, he is deceiving his moral autonomy.

## **4. Accountability**

It is the moral obligation of the engineer to account for his actions, decisions and responsibilities.

## **CODES OF ETHICS**

A professional association is a nonprofit organisation that offers membership to practitioners of a particular profession. It provides organized platform for the professionals and helps them increasing the skills. The members in such organisations are expected to meet certain criteria and also to adhere to rules and regulations, i.e. **codes of ethics**.

The codes of ethics serve as guidelines for all the members of the organisation. **Some of the features common to most of these codes are given below.**

- ✓ Protection of public safety, health and welfare
- ✓ Actively discouraging bribery and plagiarism
- ✓ Practicing no discrimination
- ✓ Dissemination of clear and correct information
- ✓ Protecting confidentiality of employer
- ✓ Maintaining dignity

## **BALANCED OUTLOOK ON LAW**

Legislation or laws have very important role in a society. They help in the appropriate use of technology and provide frameworks for engineers to operate. Absence or too much legislation will result in chaos and the growth of technology will be retarded. So law makers and engineers should

resort to maintaining the balance in enforcement of legislation and laws.

## **MULTINATIONAL CORPORATIONS**

A multinational corporation (MNC) is an enterprise operating in more than one country and managed from the home country. Usually any enterprise that gets a quarter of its revenue from operations outside its home country is considered as an MNC. Most MNC's belong to developed countries but operate in developing countries like India.

**The advantages MNC's enjoy when doing business in developing countries are given below.**

- ✓ Cheap resources
- ✓ Cheap labour
- ✓ Favourable tax arrangement
- ✓ Unexplored market

**The advantages the host country receives are as follow.**

- ✓ Fresh jobs
- ✓ Transfer of advanced technology
- ✓ Better products and services
- ✓ Higher pay packages
- ✓ Economic growth
- ✓ Transfer of skills

## **ENVIRONMENTAL ETHICS**

Environmental ethics is the branch of ethics which deals with the relationship between humans and the environment including other forms of life. It also gives importance to non living and non human things as well.

**Environmental ethics deals with many issues like the following.**

- ✓ Utilisation of natural resources
- ✓ Destruction of forests
- ✓ Pollution
- ✓ Harm to animals

## **Environmental Ethics and Engineer**

Health and public safety should be the chief concern of any practicing engineer. An engineer should be careful enough to work for the sustainable development of the environment. **Engineers are expected to**

- ✓ Develop understanding and awareness about environmental sustainability and related issues.
- ✓ Ask for expert help in need to work for the upliftment of environment.
- ✓ Apply professional judgement in matters concerning environment
- ✓ Integrate environmental planning and management into the projects.
- ✓ Actively work to promote and propagate understanding of the environment and sustainability.

## **COMPUTER ETHICS**

Computer ethics is the branch of applied ethics that addresses the ethical and moral issues that are aggravated, transformed or created by computer technology. It makes appropriate ethical guidelines to make use of computer technology effectively.

**Ethical issues in computing can be,**

- ✓ Using computers for unethical purposes like hacking, privacy and copyright violations, etc.
- ✓ Problems arising out of use of computers of ethical purposes. These include possible job loss due to computerization, environmental damage due to improper disposal of computer and computer parts, health issues like computer vision syndrome, etc.
- ✓ Artificial intelligence and ethical problems.

## **The Ten Commandments of Computer Ethics**

1. Don't use a computer to harm other people.
2. Don't interfere with other people's computer work.
3. Don't snoop around in other people's computer files.
4. Don't use a computer to steal.
5. Don't use a computer to bear false witness.
6. Don't copy or use proprietary software for which you have not paid.

7. Don't use other people's computer resources without authorization or proper compensation.
8. Don't appropriate other people's intellectual output.
9. Think about the social consequences of the program you are writing or the system you are designing.
10. Always use a computer in ways that considers and respect the fellow humans.

### **WEAPONS DEVELOPMENT**

It discusses developing weapons for the war purposes. An engineer's conscience may not support making something which results in the killing of people, but can be justified if the weapons are developed for the safety of the nation and its people.

### **ENGINEERS AS MANAGERS**

There are several reasons why an engineer moves into managerial positions. Some of the reasons are as follow,

- ✓ A well planned career move
- ✓ As a reward for good work as an engineer
- ✓ As part of regular organisational promotion

It is the duty of the manager to set ethical rules and principles for his subordinates.

#### **A manager has to do the following,**

- ✓ Communicate the ground rules clearly to his team.
- ✓ Instruct the subordinates to move away from unethical activities.
- ✓ Exemplify ethical principles through his actions and words.
- ✓ Find ways for problem resolutions.

#### **An engineer has to acquire certain qualities to be successful managers. Like,**

- ✓ Skill of delegating tasks to others.
- ✓ Foster motivation among others.
- ✓ Try to remove all the barriers.
- ✓ Maintain good relationship with everyone.

- ✓ Concentrate on the customer
- ✓ Seek advice when needed
- ✓ Avoid favoritism.

## **CONSULTING ENGINEERS**

Consulting engineers are engineers who work independently for different employers. They do not have a regular salary but are free to choose the projects that employers may offer to them. A consultant too has several ethical issues to take care of.

**Responsibilities about safety of the project, confidentiality** (keeping the secrets of a firm), **advertisement and self promotion, etc are some important points a consultant should follow.**

## **ENGINEERS AS EXPERT WITNESSES**

In certain cases expert engineers may be required to appear before the judicial bodies as expert witnesses. They may be asked to give testimony at informal pre hearings, formal judicial proceedings and enquiry commissions. Witnesses in such proceedings are of two types, **fact witnesses and expert witnesses.**

**Fact witnesses are those who give testimony to the actual events,** i.e. what they have actually seen, heard and understood. They are not allowed to express their opinions.

**Expert witnesses are allowed and expected to express opinions about matters within their area of expertise.** It is believed that the expert witness has considerable knowledge about a particular subject than the common man has.

**The main functions of expert witnesses are given below.**

- ✓ Give opinions about matters within their area of expertise.
- ✓ Interpret relevant technical information for those who don't have it.
- ✓ Act as neutral and impartial servants of the body they appear before.
- ✓ Apply the expertise to the process which is ongoing.

## **ENGINEERS AS ADVISORS**

Engineers may be called upon as advisors on the matters related to technology, development, etc. they may be called by **government and semi government and local bodies, private firms, companies and individuals.**

Before giving advice, engineers must study the things and situations very thoroughly. They must follow the code of ethics of the profession and consider the public safety and health. The economic feasibility, technical aspects, etc to be studied. The advice provided must be unbiased.

## **SAMPLE CODE OF ETHICS**

### **1. ASME (American Society of Mechanical Engineers)**

- 
- (2) being honest and impartial, and serving with fidelity their clients (including their employers) and the public; and
  - (3) striving to increase the competence and prestige of the engineering profession.

#### **The Fundamental Canons**

Engineers shall

- (1) hold paramount the safety, health and welfare of the public in the performance of their professional duties.
- (2) perform services only in the areas of their competence; they shall build their professional reputation on the merit of their services and shall not compete unfairly with others.
- (3) continue their professional development throughout their careers and shall provide opportunities for the professional and ethical development of those engineers under their supervision.
- (4) act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest or the appearance of conflicts of interest.
- (5) respect the proprietary information and intellectual property rights of others, including charitable organizations and professional societies in the engineering field.
- (6) associate only with reputable persons or organizations.
- (7) issue public statements only in an objective and truthful manner and shall avoid any conduct which brings discredit upon the profession.
- (8) consider environmental impact and sustainable development in the performance of their professional duties.
- (9) not seek ethical sanction against another engineer unless there is good reason to do so under the relevant codes, policies and procedures governing that engineer's ethical conduct.
- (10) Engineers who are members of the Society shall endeavor to abide by the Constitution, By-Laws and Policies of the Society, and they shall disclose knowledge of any matter involving another member's alleged violation of this Code of Ethics or the Society's Conflicts of Interest Policy in a prompt, complete and truthful manner to the chair of the Ethics Committee.



## 2. ASCE (American Society of Civil Engineers)

American Society of Civil Engineers

### Fundamental Principles

Engineers uphold and advance the integrity, honor, and dignity of the engineering profession by:

- (1) using their knowledge and skill for the enhancement of human welfare and the environment;
- (2) being honest and impartial and serving with fidelity the public, their employers and clients;
- (3) striving to increase the competence and prestige of the engineering profession; and
- (4) supporting the professional and technical societies of their disciplines.

### Fundamental Canons

Engineers shall

- (1) hold paramount the safety, health, and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.
- (2) perform services only in areas of their competence.
- (3) issue public statements only in an objective and truthful manner.
- (4) act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.
- (5) build their professional reputation on the merit of their services and shall not compete unfairly with others.
- (6) act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with zero tolerance for bribery, fraud, and corruption.
- (7) continue their professional development throughout their careers, and
- (8) shall provide opportunities for the professional development of those engineers under their supervision.



### **3. IEEE (Institute of Electrical and Electronics Engineers)**

The code of ethics of IEI is based on the values of truth, honesty, justice, trustworthiness, respect and safeguard of human life and welfare, competence and accountability.

## MODULE 5

### LEADERSHIP

Leadership is the ability to lead or guide people towards the accomplishment of a common goal. Leadership involves the following.

- ✓ Vision
- ✓ Ability to convince others
- ✓ Ability to inspire others
- ✓ Providing knowledge and strategy
- ✓ Coordinating and guiding
- ✓ Balancing the interests of everyone
- ✓ Being resilient at times of crises

According to John C. Maxwell, a leader is **one who knows the way, goes the way and shows the way**. Leaders lead people by their influence and charisma rather than authority.

### FRAMEWORK TO ANALYSE LEADERSHIP



**Fig. 9.1.** A framework for analyzing leadership.  
Adapted from EP Hollander : Leadership Dynamics: Practical Guide to Effective Relationships

**The leadership framework consists of three elements – leader, follower and the situation.**

#### 1. The Leader

The traits of the leader, his expertise and his societal/ organisational positions are the key factors.

## **2. Followers**

The shared values, norms and extent of bonding between the followers influence how they perform as a group and how they respond to their leader

## **3. Situation**

Nature of the goal to be attained, the level of stress, the stakes and the general environment make each situation unique. The interaction between leader and followers depend largely on the situation.

## **PEOPLE DEVELOPMENT**

In the development stage, leaders try their best to develop new leaders to maintain the momentum of good performance of the organisation. The leaders inspire the members to rise up to their maximum potential by influencing their lives. The overall effectiveness of the organisation gets increased if the new leaders are emerged. This is about identifying the leadership material and finding out the strengths and weaknesses.

## **CULTURAL DIMENSIONS OF LEADERSHIP**

Leadership in organizations is dictated and determined according to a variety of reasons and factors including personality, cultural, country and regional aspects. Among the various factors, the cultural dimension of leadership is often not highlighted. However, with globalization and the advent of tighter integration and interconnectedness, there is a need to study how leadership is determined by cultural factors and cultural exchanges between the West and the East play out when determining how leaders behave.

With globalization, leaders and managers in the East have learnt to adopt a more democratic style of leadership as opposed to the authoritarian leadership that was hitherto practiced. Further, leaders in the West have begun to understand that the way things are done in the East is radically different from the way they are done in the East and hence they need to be cognizant of these differing approaches to management.

**the cultural dimensions of leadership can be based on the following.**

### **Leadership in the East and the West**

The pioneering work of the Dutch psychologist, Geert Hofstede is often cited and quoted to emphasize the differences in leadership between the west and the east that are determined by cultural reasons. For instance, culture plays a very important role in

determining the leaders' actions especially where the decision-making, attitudes towards diversity and treatment of people down the hierarchies are concerned. **It is the case that leaders in the East tend to be authoritarian in their decision making styles as opposed to democratic and consensual in the West.**

Further, **leaders in the East tend to view diversity by masculine behavior. In contrast, diversity is practiced actively in the West and the leaders in many Western companies often do more than what is required by the law in these cases.**

Next, **the attitude towards those lower down in the hierarchy in the West is more accommodative and conciliatory whereas in the East, leaders at the top tend to view their subordinates according to strict classifications of seniority conditioned by cultural factors.** These are some of the differences in leadership between the East and the West as presented by Hofstede in his work.

**In short, leaders in the East and those in the West are different in their cultures in three aspects namely,**

- 1. Decision making styles**
- 2. Diversity**
- 3. Attitude towards subordinates**

## **GROWING AS A LEADER**

Corporations, governments, universities and global development organizations alike have a shortage of quality leaders. However, more than ever before, the need for globally minded leaders is at an all time high. While leadership is not something that is developed overnight, it is a skill that can be developed. The following tips are proven to help you grow as a globally minded leader.

### **1. Write down Your Goals**

Research has found that if you write down your goals, even if you never look at them again, you have a much higher likelihood of achieving them. You have to document your dream position, the skills you want to develop, and even the things you want to do from a personal standpoint.

### **2. Develop Your Grit**

More than any other skill, Grit is the best predictor of success. By becoming aware of your “grittiness”, and learning how to strengthen it, you will be more likely to succeed in all walks of life.

### **3. Find Your Purpose Pattern**

Your purpose is the foundation of your ability to be effective in your role, and will continue to fuel your growth. Understanding your “why” will help you to be more effective in your current and future roles.

### **4. Always Be Learning**

Everybody has skills worth developing. It might be in something technical, like the latest technology; it might be in soft skills, like cross culture communication; or it might be in more effective use of tools, like Excel training. Similar to your goals, write a list of the skills you need, prioritize them, and then start learning them.

### **5. Start Using a Career Coach Today**

This point is little counter intuitive at first. The best time to start looking for a new job is when you're in the love with the one you have. For the same reason, by the time you are unhappy with your job, you've waited too long to find a career coach. Career coaches don't require much time and they don't have to be expensive. You don't even need to pay for one. A career coach can be anybody that you meet with somewhat regularly, at least once a quarter, to talk about your current job, your career path, and ways to continue growing.

### **6. Get International Experience**

The importance of international experience in the 21st century global economy cannot be overstated, and indeed, is frequently mentioned in research about leadership development. If you want to grow as a leader, you need international exposure.

### **7. Work with a Mentor**

In addition to a coach, you should work with a mentor, too. Whether you find a mentor through work, an online tool, or in your professional network, research proves that mentors can help you be higher performing. Most importantly, they can help you learn faster from your successes and failures.

## 8. Engage in Skilled Volunteering

Nothing accelerates development more than experience, and skill based volunteering is proven to have transformative benefits. In addition to making you healthier and happier, it is also proven to help you develop skills and grow as a leader, especially if done internationally. Increasingly, companies are looking for leaders with global exposure, so using your skills in foreign settings can prove your capacity to lead in global and resource constrained environments.

### **GAINING CONTROL AS A LEADER**

Being a great leader is not an easy task. A good leader has to achieve the respect from his subordinates and colleagues in all levels. Some leaders really are autocratic in nature while others stand with the members of the team even in adverse situations. Gaining control over the team by the leader is a challenging task.

Control is about making sure that a leader's orders are carried out, exactly the way they are prescribed. Controlling doesn't mean that maintaining tight control of your team.

**The characteristics the great leaders should have to control the team are given below.**

**Positive Vision:** They should have a powerful positive vision of what they are creating for both team and organization.

**Focused Strategically:** They are focused on strategic actions and turning the vision into reality and only spend limited time on minute operational details.

**They Trust People:** Trust is your most valuable asset. Great leaders delegate authority to enable team members to make decisions and get things done.

**Recognize and Value People:** When things go right, they recognize those who are responsible.

**Responsibility:** When things do not go right, they take responsibility to ensure the problem gets corrected and the mistake doesn't happen again.

**Expect Growth:** Great leaders expect team members to grow, so they can add even more value to the team.

**Accept Mistakes:** Great leaders know that if they value innovation and continuous improvement, there are going to be mistakes. Congratulate people for trying something new, even if it didn't work, and move on.

**Confidence and Self Esteem:** Great leaders truly believe that if something does not go well, they have confidence to lead the team to success.

The greatest leaders are all highly trusted. To be a great leader, one should have a compelling vision, rock solid strategy, excellent communication skills, innovative insight and a skilled team, but if people don't trust you, you will never get the results you want. Leaders who inspire trust garner better output, morale, retention, innovation, loyalty and revenue, while mistrust fosters skepticism, frustration, low productivity, lost sales and turnover. Trust affects a leader's impact and the company's bottom line more than any other single thing.

One of the biggest mistakes a leader can make is to assume that others trust him simply by virtue of his title. Trust is not a benefit that comes packaged with the nameplate on your door. It must be earned and it takes time. As a leader, you are trusted only to the degree that people believe in your ability, consistency, integrity and commitment to deliver. The good news is that you can earn trust over time, by building and maintaining eight key strengths given below.

1. **Clarity:** *People trust the clear and mistrust or distrust the ambiguous.* Be clear about your mission, purpose, expectations and daily activities. When a leader is clear about expectations, he will likely get what he wants.
2. **Compassion:** *People put faith in those who care beyond themselves.* Think beyond yourself and never underestimate the power of another person. People are often skeptical about whether someone really has their best interests in mind.
3. **Character:** *People notice those who do what is right ahead of what is easy.* Leaders who have built this pillar consistently do what needs to be done when it needs to be done. It is the work of life to do what is right rather than what is easy.
4. **Contribution:** *Few things build trust quicker than actual results.* At the end of the day, people need to see outcomes. You can have compassion and character, but

**Genuinely Care:** Great leaders genuinely care about the success of their team members, personally and professionally, as well as the team as a whole.

without the results you promised, people won't trust you. Be a contributor who delivers real results.

5. **Competency:** *People have confidence in those who stay fresh, relevant and capable.* The humble and teachable person keeps learning new ways of doing things and stays current on ideas and trends. According to one study, the key competency of a successful new MBA is not a specific skill but rather the ability to learn amid chaos. Arrogance prevents you from growing and they compromise others' confidence in you. There is always more to learn, so make a habit of reading, learning and listening to fresh information.
6. **Connection:** *People want to follow, buy from and be around friends.* Trust is all about relationships, and relationships are best built by establishing genuine connection. Ask questions, listen and above all, show gratitude. It's the primary trait of truly talented connectors. Grateful people are not entitled, they do not complain, and they do not gossip. Develop the trait of gratitude, and you will be a magnet.
7. **Commitment:** *People believe in those who stand through adversity.* People trusted General Patton, Martin Luther King, Jr., Mohandas Gandhi, Jesus, and George Washington because they saw commitment and sacrifice for the greater good. Commitment builds trust.
8. **Consistency:** *In every area of life, it's the little things done consistently that make the big difference.* If I am overweight, it is because I have eaten too many calories over time, not because I ate too much

## MANAGING DIVERSE STAKEHOLDERS

**Stakeholders are the groups without whose support the organization would cease to exist. A corporate stakeholder can affect or be affected by the actions of a business as a whole.**

**Stakeholder management includes the processes required to identify people, groups or organisations that could impact or be impacted by the project.**

To manage the stakeholders in your job and in your projects, we have to mark out their positions on a stakeholder map.

The next stage is to plan your communication so that you can win them around to support your projects. Stakeholder planning is the process by which you do this.



**To manage the stakeholders effectively, we may follow the given steps.**

**1. Update the Worksheet with Power/Interest Grid Information**

Based on the stake holder map you created, enter the stakeholders' names, their influence and interest in your job or project and your current assessment of where they stand with respect to it.

**2. Plan Your Approach to Stakeholder Management**

The amount of time you should allocate to manage stakeholders depends on the size and difficulty of your projects and goals, the time available for communication and the amount of help you need to achieve the results you want.

Think through the help you need, the amount of time that will be taken to manage this and the time you will need for communication. Help with the project could include sponsorship of the project, advice and expert input, reviews of material to increase quality, etc.

**3. Think Through What You Want From Each Stakeholder**

Next, work through your list of stakeholders thinking through the levels of support you want from them and the roles you would like them to play. Think through the actions you would like them to perform.

**4. Identify the Messages You Need to Convey**

Next, identify the messages that you need to convey to your stakeholders to persuade them to support you and engage with your projects or goals. Typical messages will show the benefits to the person or organization of what you are doing, and will focus on key performance drivers like increasing profitability or delivering real improvements.

**5. Identify Actions and Communications**

Finally, work out what you need to do to win and manage the support of these stakeholders. With the time and resource you have available, identify how you will manage the communication to and the input from your stakeholders.

Focusing on the high power/high interest stakeholders first and the low interest/low power stakeholders last, devise a practical plan that communicates with people as effectively as possible and that communicates the right amount of information in a way that neither under nor over communicates.

## CRISIS MANAGEMENT

Crisis management is the process by which an organization deals with a major event that threatens to harm the organization, its stakeholders or the public. The study of crisis management originated with the large scale industrial and environmental disasters in the 1980s. It is considered to be the most important process in public relations.

**Three elements are common to a crisis**, namely

- (1) A threat to the organization
- (2) The element of surprise
- (3) A short decision time.

Crisis is a process of transformation where the old system can no longer be maintained. Therefore, the **fourth defining quality is the need for change**. Crisis management involves dealing with threats before, during and after they have occurred.

## LEADERSHIP TRAITS

Trait approach is one of the earliest attempts to study leadership. Traits are the personal attributes or characteristics people possess. **The key traits that form the personality or character of a person are,**

1. **Openness to Experience**
2. **Conscientiousness**
3. **Extroversion**
4. **Agreeableness**

It is difficult to identify a unique set of traits of leadership because each situation is unique. A person rises to leadership in a particular circumstance that promotes the trait he has. Nevertheless, **there are certain traits consistently found in leaders of all times, they are, Influence, Results, Control and Support.**

**According to Ralph Stodgill, the major traits and skills for a leader are as given below.**

Traits	Skills
✓ Adaptable to situations	✓ Clever
✓ Alert to social environment	✓ Creative

<ul style="list-style-type: none"> <li>✓ Ambitious and achievement oriented</li> <li>✓ Assertive and decisive</li> </ul>	<ul style="list-style-type: none"> <li>✓ Diplomatic and tactful</li> <li>✓ Fluent in speaking</li> </ul>
<ul style="list-style-type: none"> <li>✓ Cooperative and dependable</li> <li>✓ Dominant to influence others</li> <li>✓ Energetic</li> <li>✓ Tolerant of stress</li> <li>✓ Willing to assume responsibility</li> </ul>	<ul style="list-style-type: none"> <li>✓ Administrative skills</li> <li>✓ Social skills</li> </ul>

## **LEADERSHIP STYLES**

There are six styles of leadership according to Daniel Coleman. Any leader can combine any of these styles to suit the situation to be the best leader.

### **1. Authoritative Style**

The authoritative leader mobilizes his team towards the goal and expects others to follow his orders. This style is suitable to deal with problem people. This style won't work out when the employees are more skillful than the leaders.

### **2. Affiliative Style**

Here the leader is more concerned with the feelings and needs of the employees rather than meeting the deadlines. People are valued by the leader and a sense of belongingness is created. This style works the best when the employees feel stress, but may result in mediocre performance only.

### **3. Coaching Style**

This style concentrates on continuous personal development. The leader assigns challenging tasks to the employees, coaches them to resolve the issues and empowers them to face challenges in future. Failures will be tolerated more and this style works the best with the enthusiastic employees who like personal development. Here the leader believes in the potential of the followers.

### **4. Coercive Style**

This style demands immediate compliance. Obeying orders without any question is the style adopted here and it is the least effective style of leadership. It makes the organisation less effective and this style may affect the morale of the employees.

## **5. Democratic Style**

This type of leader takes decisions based on consensus and works in collaboration with the team members. The leader acts like a team member and considers the ideas suggested by every member of the team. Conflict management becomes easier and organisational flexibility will be increased. This style is the best when the organisation needs harmony among the employees and needs to get fresh ideas from everyone.

## **6. Pace setting Style**

A pace setting leader sets high standards of leadership. He demands excellence and urges the employees to complete their tasks faster and better manner every time. This style works the best when the employees are already settled and motivated.

## **TYPES OF LEADERSHIP**

### **1. VUCA Leadership**

VUCA is acronym for Volatility, Uncertainty, Complexity and Ambiguity. It was coined by the US Army to describe the world after the Cold War.

#### **VUCA Means,**

Volatility-A high rate of change

Uncertainty-Lack of clarity about the present and the future Complexity

Multiple factors impacting key decisions Ambiguity

-Lack of clarity about meaning and events

#### **Volatility**

If the situation is volatile, it means things are changing too fast. A leader who takes decisions about stable situations only may feel it difficult to take decisions when a sudden change happens.

A good leader should have the capacity to take decisions even in adverse situations.

#### **Uncertainty**

In this situation, the leader is uncertain of his actions and their consequences. This happens due to imperfect or insufficient data.

## **Complexity**

It is the condition in which the leader faces multiple factors, each one autonomous and interdependent. Such situations results in stagnation of judgement. Decision making will be difficult.

## **Ambiguity**

If a situation has more than one interpretations, that will result in ambiguity. Ambiguity is a situation in which a difficulty to explain will exist due to multiplicity.

In a VUCA world, the leaders need 1) Learning agility 2) Intellect to deal with complexity 3) Values for guidance though uncertainty 4) Emotions to relate to others  
5) Drive for relentless pursuit of goals.

## **2. Transactional Leadership**

It is the type of leadership in which the leader maintains relation with the followers through a series of transactions involving rewards and punishments. Employees are rewarded for good performance and punished for poor performance. This style is formal and bureaucratic in nature. The followers are motivated by their own self interest. **The main features of transactional leadership are**

### **a) Contingent Reward**

This involves exchange of rewards for effort, promising pay hike or promotion for good performance. Here psychological or materialistic rewards are given.

### **b) Management by Exception**

This involves enhancing the existing organisational culture or maintaining the status quo rather than going for radical changes. The leader watches out the deviation from the established procedures or standard practices and takes corrective action as and when it is required. He intervenes only if the standards are not met.

## **3. Transformational Leadership**

It is the kind of leadership in which the leader transforms the thinking of the followers by instilling in them a sense of mission and excitement. The leader relies on his/ her personality, energy and charisma rather than authoritative power. He encourages to take risks and to think out of the box. This style is not formal but intellectually stimulating.

**The three main features of transformational leadership are,**

**a) Inspiring Vision**

The leader inspires the followers to achieve anything and to look beyond their self interest. Vision, mission and goals of the organisation are expressed in simple and inspiring terms.

**b) Intellectual Stimulation**

The leader motivates the employees to generate and bring out the best solutions by challenging them intellectually.

**c) Individual Concern**

The leader accepts the differences among the employees and treats everyone accordingly. He acts as a coach to everyone. He understands what motivates each and gains the trust and devotion of the employees by giving them personal attention.

**Differences between Transactional and Transformational Leaderships**

**(Transactional Leaderships Vs Transformational Leaderships)**

<b>Transactional Leadership</b>	<b>Transformational Leadership</b>
<p>✓ Suitable for a <b>settled environment</b> where efficiency is improved.</p>	<p>✓ Suitable during <b>troubled times</b> where innovation and changed are needed.</p>
<p>✓ Works well when the <b>emotional level of the employees is not high.</b></p>	<p>✓ <b>It appeals to the emotions</b> of the employees</p>
<p>✓ Formal and bureaucratic.</p>	<p>✓ Informal and charismatic.</p>
<p>✓ Only one leader will be there.</p>	<p>✓ There can be more than one leader.</p>
<p>✓ Employs <b>planning and execution</b> to maintain status quo.</p>	<p>✓ Stimulates and promotes <b>innovation.</b></p>
<p>✓ Employs <b>rewards and punishments</b></p>	<p>✓ Employs <b>influence and intellectual</b></p>

using authority and position.	<b>stimulation</b> using charisma.
✓ Reactive	✓ Proactive

#### **4. Entrepreneurial Leadership**

Entrepreneurial leadership is organizing a group of people to achieve a common goal using proactive entrepreneurial behavior by optimising risk, innovating to take advantage of opportunities, taking personal responsibility and managing change within a dynamic environment for the benefit of an organisation.

The best leaders empower their employees to act on their vision for the organization. The entrepreneurial leader executes through inspiration and aligns relationships to achieve common goals.

An entrepreneurial leader will proactively identify opportunities to gain advantage through creativity, innovation and market understanding and hold them responsible to deliver what customers need via the effective management of risk to optimise outcomes for both the organization and the customer.

#### **5. Moral Leadership**

Moral leadership is a very different kind of leadership. Rather than aspiring to being followed, moral leaders aim to serve. Instead of showcasing their own skills, moral leaders tend to develop the capacities of others. A moral leader is always characterized by a deep sense of ethics and is driven by core ideals (such as justice) and is motivated by the pursuit of a higher purpose.

Moral Leadership is also about particular capacities and skills. First of all, moral leaders know how to manage themselves, how to control their egos and how to act with nobility and rectitude. They are visionary and affect personal change. Moral leaders also have a highly developed sense of emotional intelligence and master key social skills. They work to overcome obstacles and are skilled at the art of consultation. They build consensus, navigate diversity and establish unity. Moral leaders are the conscience (i.e. moral compass) of an enterprise or organization and the glue that holds it together.

#### **6. Turnaround Leadership**

A turnaround is a fast and dramatic change in the performance for the betterment of an organisation. Leaders or executives who are assigned with this task are called turnaround leaders.

**There are two types of turnaround leadership namely,**

- 1. Devoted to save the organisation from a crisis situation or avoiding a forthcoming crisis.**
- 2. Devoted to save the organisation in the crisis, staying back with the firm to identify the root causes of crisis.**

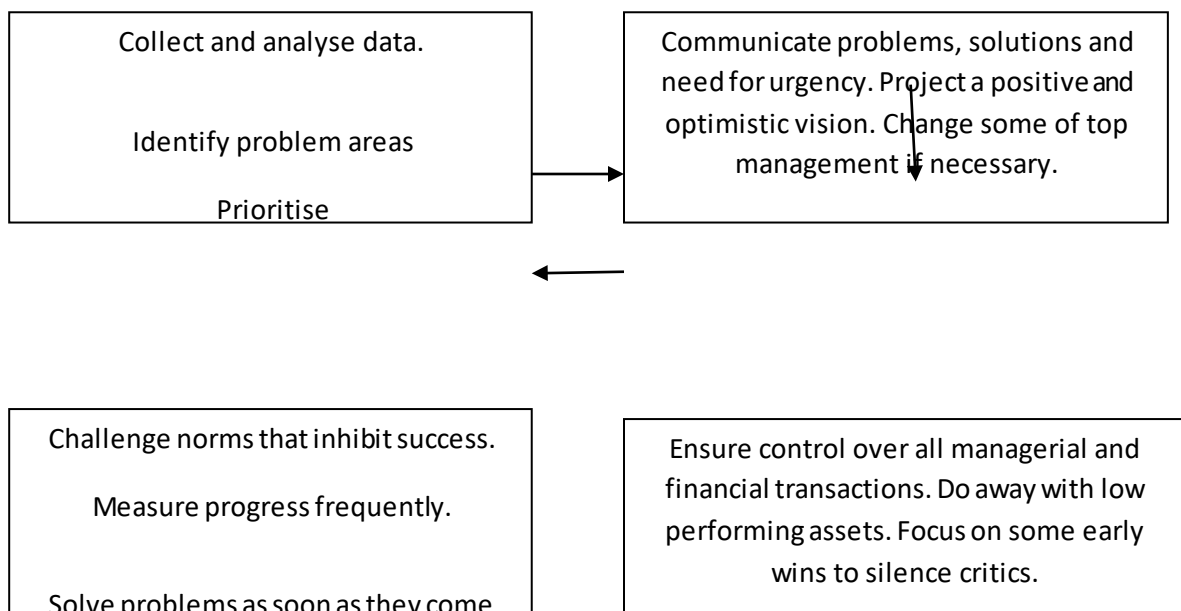
The second type is necessary.

### **Qualities of a Turnaround Leader**

- ✓ Ability to analyze data and identify the critical points
- ✓ Ability to negotiate and convince
- ✓ Ability to take fast decisions
- ✓ Ability to gain respect
- ✓ A sense of urgency
- ✓ Willingness to neglect resistance
- ✓ Willingness to lead from the front

### **Strategies for Turnaround Leadership**

Usual strategies for turnaround leadership are setting deadlines, pushing people hard, cutting costs, etc. A turnaround leader must take the following actions.





## LEADERSHIP GRID

Leadership grid or managerial grid is a behavioral leadership model developed by Blake and Mouton. It categorizes leaders into one of 81 possible types based on the following two behavioral dimensions.

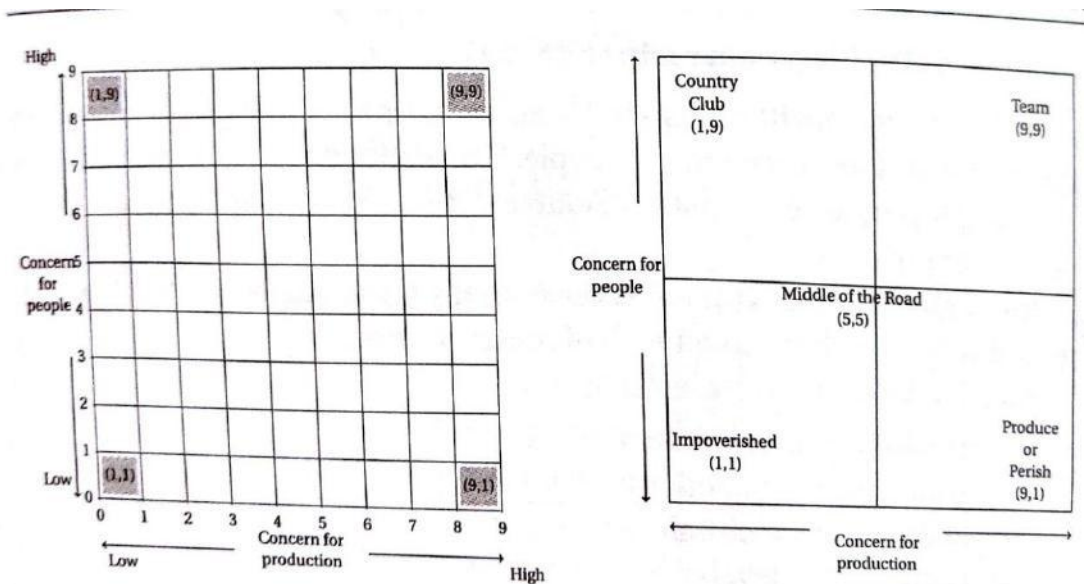
### 1. Concern for People

It is about the leader's nature to develop relationship with the employees.

The leader cares for the employees the maximum and relationship is the important aspect for the leader than results.

### 2. Concern for Production

Here, the leader is concerned about results and improving productivity rather than being concerned about the employees.



Each cell in the grid represents a unique combination of the leader's task orientation and people orientation.

### Impoverished Leadership Style (1, 1)

Leaders of this style have low concern for both production and people. They are indifferent towards achieving organisational goals and also towards employees. They move away from responsibilities and prefer low visibility. Their concern is only to

preserve their own position. This kind of leadership will result in **dissatisfaction among the employees, inefficiency, disharmony and high turnover rate.**

### **Country Club Leadership (1, 9)**

This is an accommodating style that gives maximum emphasis to the comfort and feelings of the employees. The leader hopes to improve organisational effectiveness by taking too much care of the needs of the employees. The leader pays little attention to get results. This leads to friendly team members, harmony in workplace, inefficiency and low productivity.

### **Produce or Perish Leadership (9, 1)**

This is an authoritarian style of leadership based on control with high emphasis on production and low concern for people. The leader dictates, dominates and treats employees as resources. He expects following the rules and delivery of results. People can become rebellious as the result of pressurization. **Such leadership results in,**

- 1. Short lived performance and productivity**
- 2. Low employee morale**
- 3. High conflict and attrition rate.**

### **Middle of the Road Leadership (5, 5)**

Leaders of this style compromise on each concern and try to maintain a balance of the concerns. It is the best to maintain the status quo. These leaders stand by the opinion of the majority and choose the popular decision. This style neither inspires high performance nor adequately meets the needs of the people. Excellence cannot be assured due to continuous compromises. **This style of performance results in**

- 1. Average performance**
- 2. Lack of excellence and challenge**
- 3. No sense of achievement**

### **Team Leadership Style (9, 9)**

This is the best and most effective style of leadership. This style is called “sound” leadership style. These leaders are committed to achieve the goals of the organisation

and at the same time concerned about the needs and necessities of the team members. They believe in getting results through teamwork in a pleasant and harmonious work environment. These leaders are good at communicating the vision of the employer and promote and motivate the members to achieve the goals. **This style results in the following.**

- 1. Greater awareness about organisational objectives among employees.**
- 2. Greater motivation and challenge.**
- 3. Good team work and higher level of satisfaction.**
- 4. Increased efficiency**
- 5. Higher levels of production.**

## **EFFECTIVE LEADERS**

An effective leader is the one who follows the best leadership style. He should be able to understand and motivate his team and be a role model for them. The **important personality traits of effective leaders** are given below.

### **1. Dominance**

The effective leader should have **willingness** to take responsibilities even in adverse situations. He should be **extrovert** and be **able to communicate fluently and effectively** to the team members and to the customers. He should have **confidence about his team.**

### **2. Conscientiousness**

The effective leader should be **result oriented** and should work according to the vision and rules of the organisation. He should be an **initiator of good movements.** **High energy level** should be maintained to motivate others.

### **3. Social Tendency**

This includes all the social skills like, **willingness for attentive listening, expression of love and affection, low interest for fame and name, empathy, etc.**

### **4. Internal Locus Control**

This tells about **being optimistic about the team members, hardworking attitude, patience, etc.**