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Communication and Group Dynamics

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Chapter 1

1. Meaning and Concept of Communication

- **Communication is a process of transferring information from one entity/body to another**
- **Communication processes are sign-mediated interactions between at least two agents which share a repertoire/range of signs and semiotic rules/study of signs or symbols**
- **Communication is commonly defined as “the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs”**

2. Communication process

- **Communication process refers to the**
  - **Creating(encoding),**
  - **transmitting,**
  - **receiving and interpreting(decoding) of messages between a source and a receiver**

Elements of communication

- The elements of communication include the source (sender or communicator), the message, the channel or medium, and the receiver. Some add noise and feedback to the list

- For communication to happen, these four basic components must operate together
- There should be common understanding or idea of the symbols used to channel

Cnt… Elements of communication

1.The source- All communication comes from a source or sender

- **Determining factors for the effectiveness of the activity of the source in the communication process are:- communication skills, Attitudes, Knowledge, Socio-cultural context, Resources(availability of materials, people)**

2. The message-is a symbol or collection of symbol or collection of symbols initiated by a source and capable of interpretation by a receiver

Cnt… Elements of communication

3. The Channel or Medium- Common channels in learning include lectures, chalkboard, radio, books, bulletins, charts, drawings, newspapers, organized tours, personal contacts, handouts, television

4. The Receiver or Audience(destination)- the final link of the communication process is the receiver, the person on whom a behavioral change is required or expected.

Cnt... Elements of communication

5. Feedback- **It is the response a receiver gives to the message received. It is the action-reaction interdependence in communication**

6. Noise- **In any communication there is noise or barriers**

There are three basic communication codes:

- **1. Non-verbal- all intended or unintentional means other than writing or speaking, by which a person sends a message such as facial expression, gestures, appearance**

- **2. Language- either written or spoken words to communicate thoughts and emotions**

Ctd…

- **3. Paralanguage- the verbal elements that go along with spoken language, including such qualities of the voice as tone, pitch/the way of producing word, rate, volume and emphasis.**
- **Paralanguage** includes accent, pitch, volume, speech rate, modulation, and fluency.
- Some researchers also include certain non-vocal phenomena under the heading of paralanguage: *facial expressions, eye movements, hand gestures, and the like.*

Content selection organization of message

- Ideas to be presented have to be selected
  - Ideas have to be tested
  - Support has to be selected
  - The ideas and supports have to be arranged

3. Types of communication

1. **Non-verbal communication-gesture, body language or posture; facial expression and eye contact, object communication such as clothing, hairstyles or even architecture, or symbols and info graphics**

2. **Visual communication- signs, typography/font, drawing, graphic design, illustration/pictures, color and electronic resources. It solely relies on vision**

Contd

3. Oral Communication-Oral communication is a process whereby information is transferred from a sender to receiver usually by a verbal means but visual aid can support the process i.e., discussion, speeches, presentations

- **A widely cited figures, used to emphasize the importance of delivery, is that "*communication is 55% body language, 38% tone of***

Levels of communication

1. **Intrapersonal-**communication within a person, It could be reading or talking to self or thinking

2. **Inter-personal-**communication between two persons or one to one interaction

3. **Small group communication-** group discussion, committee meetings. There is no ideal group size, it depends on the purpose

CTD….Levels of communication

4. Large group communication- one way communication, audiences are challenged to present and give immediate responses. In large group communication there are too many people present

5. Public or mass communication- anonymous/unspecified audience use electronic media, broadcasting film, print media

Ctd….Levels of communication

- **6. Organizational- takes place within an organization which includes the mixture types of communication methods. Communication in organization is a mixture of different communication types such as interpersonal, small group and large group communication. It may take place within an organization that reflecting the**

4. Barriers to communication

1. **Muddled/confused/jumbled messages-**"Please be here about 7:00 tomorrow morning" "Please be here at 7:00 tomorrow morning“
2. **Stereotyping/labeling-Stereotyping causes us to typify/characterize a person, a group, an event or a thing on over simplified conceptions, beliefs, or opinions**
3. **Wrong channel-**"Good morning." An oral channel for this message is highly appropriate

   Writing "GOOD MORNING!" on a chalkboard in the machine shed is less effective than a warm oral greeting. A birthday card to an employee's spouse/wife/husband is more sincere than a request to the employee to say "Happy Birthday" to the spouse. Simple rules for selection of a channel cause more problems than they solve

CTD…Barriers to Communication

4. Language-Words are not reality.
Words as the sender understands them are combined with the perceptions of those words by the receiver

5. Lack of feedback-Feedback is the mirror of communication. It is the receiver sending back to the sender the message as perceived. Without feedback, communication is one-way

CTD……..Barriers to communication

6. Poor listening skills: Listening is difficult. A typical speaker says about 125 words per minute. The solution is to be an active rather than passive listener. One important listening skill is to be prepared to listen

7. Interruptions: The interruptions may be due to something more pressing, rudeness/impoliteness, lack of privacy for discussion, a drop-in visitor, an emergency, or even the

CTD…Barriers to Communication

- **8. Physical destructions- Physical distractions are the physical things that get in the way of communication. Examples of such things include the telephone, a pick-up truck door, a desk, an uncomfortable meeting place, and noise.**

The 5 purposes of communication

- **To learn**: acquire knowledge of others, world, and yourself
- **To Relate**: to form relationships, interact.
- **To Help**: offer assistance, listening to problems
- **To influence**: strengthen or change others' attitudes
- **To play**: enjoy experience e.g.; gossiping

ctd

- **Communication** service in decision making and control of a system as a whole in its efforts to adopt its environment.

Persons who are in leadership positions and have to hold a team together, often communicates to the members of their team with the objective of motivating them to make their best efforts.

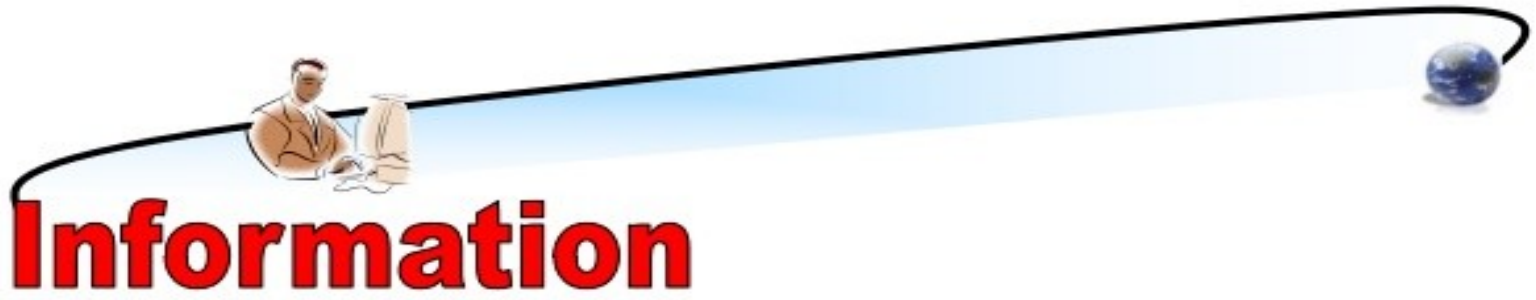
Ctd.....

- **The main functions of communication are information and persuasion.** Other functions are aspects of these broad functions.
- **Information consists** of facts, figures and data arranged as per the different purposes
- **It doesn't include emotion that is just for reaction. *Example: stock market report, a user manual, a***

Information

- **Modern management believes** in keeping employees well informed about the company's aims, plans, progress and prospects, working and service conditions,
- training and promotion opportunities, benefits available to them, handouts, announcements, through organized channels like the notice board, manual and instruction sheet, bulletins, pamphlets, mass media etc

Ctd



The conduct of business is based on the given information containing data. Information reduces the uncertainty about the situation or the environment in which we find ourselves, it moves in all directions in the organization; it may be given orally or in writing

Persuasion

The persuader needs knowledge of the background and the present attitudes/views of the people in order to use the right appeals and reasons.

5. Organizational communication

Communication about workplace **practices helps achieve the *desired outcomes* for the employee and the organization in a variety of ways**

- **Top-down communication**
  - **from management to employees**
- **Bottom-up communication**
  - **from employees to the management**
  - **provides information about employee needs,**
  - **Provides values, perceptions and**

- **information and persuasion are the main functions of communication, while the other** functions are *aspects of these broad functions.*

Functions of Horizontal communication

- **Communication among the same status is known as the horizontal communication.**
- **It is also known a lateral communication**
- **Exchange of information**
- **Discussions**
- **Coordination**
- **Conflict resolution**
- **Problem solving**
- **Advices**
- **Social and emotional support**

Ctd....

- **Horizontal communication; Impatience/displeasure of lack of skill in instructing may become a barrier in on the job training communication**
- **A supervisor or mentor must have the ability to instruct.**
- **The managers, supervisors and leaders should make the subordinations and team mates feel that they belong to the organization and fulfills their need for recognition**

6. Communication Models

Shannon's Model of the Communication Process

- Shannon's (1948) model of the communication process is, in important ways, the beginning of the modern field.
- It provided, for the first time, a general model of the communication process that could be treated as the common ground of such diverse disciplines as journalism, rhetoric, linguistics, and speech and hearing sciences.

Ctd

- It remains one of the first things most students learn about communication when they take an introductory communication class

- Indeed, it is one of only a handful of theoretical statements about the communication process that can be found in introductory textbooks in both mass communication and interpersonal communication.

eight discrete components communication process

- The **communication channel** is is a wired or wireless medium through which the signal (information) travel from source(transmitter) to the destination(reciever) OR
- The communication channel is a wired or wireless medium that is used to send the signal from the source(transmitter) to the destination(reciever)

1. An information source

- Presumably/most likely a person who creates a message
- Sources
- Encoding

2. The message

- It is about the symbol that both the sender sent the information source and the receiver received to the destination
- May be verbal or non verbal

3. A transmitter

- For Shannon's immediate purpose a telephone instrument that captures an audio signal, converts it into an electronic signal, and amplifies it for transmission through the telephone network

4. The signal

- It flows through a channel. There may be multiple parallel signals, as is the case in face-to-face interaction where sound and gesture involve different signal systems that depend on different channels and modes of transmission
- There may be multiple serial signals, with sound and/or gesture turned into electronic signals, radio waves, or words and pictures in a book.

5. A carrier or channel

- It is represented by the small unlabeled box in the middle of the model
- The most commonly used channels include air, light, electricity, radio waves, paper, and postal systems
- Note that there may be multiple channels associated with the multiple layers of transmission

6. Noise

- It is in the form of secondary signals that obscure or confuse the signal carried
- **Given Shannon's** focus on telephone transmission, carriers, and reception, it should not be surprising that noise is restricted to noise that obscures or obliterates some portion of the signal within the channel
- This is a fairly restrictive notion of noise, by current standards, and a somewhat misleading one.

7. A receiver

- **In Shannon's conception, the receiving telephone instrument**
- In face to face communication a set of **ears (sound)** and eyes (gesture)
- In television, several layers of receiver, including an **antenna and a television set.**

8. A destination

- **Presumably**/doubtless a person who consumes and processes the message
- **the person on whom a behavioral change is required or expected**
- Who may provide the feedback or mirror of the message

7. Interpersonal Communication

- Most **interpersonal** skills can be grouped under one of **four** main forms of **communication**: verbal, listening, written and non-verbal **communication**.
- **Non-verbal Interpersonal skills include:**

- Gestures
- Eye-contact
- Body language

8. Mass communication

- **Wilbur Schramm** was the Mass Communications Founding Father. **Wilbur Schramm** is considered the father of Communication studies. His ground breaking work laid the foundation for our modern study in the field.
- **Mass communication** is a process in which a person, group of people, or an organization sends a message through a channel of **communication** to a large group of anonymous and heterogeneous people and organizations.
- Channels of **communication** include broadcast television, radio, social media, and print.

Types of mass communication

- Advertising
- Journalism
- Public relations
- Social media
- Audio media
- Convergence/emerging digital age
- Film and television
- Photography

functions of mass

- The **four functions of mass communications** are: surveillance, correlation, cultural transmission and entertainment.
- In many ways, the **four functions of mass communication** are still relevant and transferable to contemporary **media**.

Characteristics of Mass Communication

- **Large number of audiences**: The most important characteristic of mass communication is that its audiences are relatively large.
- **Heterogeneous audiences**: The audiences of mass communication are not only large in number but also heterogeneous and anonymous in nature.

❑ **audience?**

- the group of spectators at a public event; listeners or viewers collectively, as in attendance at a theater or concert: The **audience** was respectful of the speaker's opinion. the persons reached by a book, radio or television broadcast, etc.; public: Some works of music have a wide and varied **audience**.

Mass audience

- **Mass audience** represents almost all segments of the society. The Specialized **Audience** refers to the special interest groups in the society.
- The Interactive **Audience** consists of those who have control over the **communication** process in a society.
- They may be newspapers journalists or Radio or TV broadcasters.

New media

- **New media** are forms of **media** that are computational and rely on computers for redistribution.
- Some **examples of new media** are computer animations, computer games, human-computer interfaces, interactive computer installations, websites, and virtual worlds.
- In late 2017, the "**New**" **New Media** represents **digital platforms** that are equal to magazines, newspapers, radio and television. They are consumed on cell phones, laptops, desktops and tablets, and they often contain the same information as the traditional **media**, although it may be delivered in a different style.

Ctd…

- **Folk culture** refers to the unifying expressive components of everyday life as enacted by localized, tradition-bound groups.
- Earlier conceptualizations of **folk culture** focused primarily on traditions practiced by small foot, homogeneous, rural groups living in relative isolation from other groups.

Ctd….

Active listening

- Active listening is a technique that is used in counseling, training, and solving disputes or conflicts. It requires that the listener fully concentrate, understand, respond and then remember what is being said.
- This is opposed to other listening techniques like reflective listening and empathic listening. Reflective listening is where the listener repeats back to the speaker what they have just heard to confirm understanding of both parties

Ctd…

- **Empathic listening** is about giving people an outlet for their emotions before being able to be more open, sharing experiences and being able to accept new perspectives on the troubled topic that is the reason of emotional suffering.
- Listening skills may establish flow rather than closed mindedness, negative emotions include stress, anger and frustration.

Ctd….

Appreciative listening

- **It** is a type of listening behavior where the listener seeks certain information which they will appreciate, and meet his/her needs and goals. One uses appreciative listening when listening to music, poetry or the stirring words of a speech.
- It involves listening to music that one enjoys, people the listener likes to listen to because of their style and the choices the listener make in the films and television he/she watches, radio programmes and plays and musicals in the theatre.
- Unlike informative listening or relationship listening, appreciative listening does not rely on the message from the speaker it is how one responds as a listener.

Ctd..

Informational listening

- The process of **informational listening** focuses on the ability of an individual to understand a speaker's message
- It is a huge part of everyday life, and failing to understand the concept of informational listening can be very detrimental to one's quality of life and to their contribution to society
- Much of the listening people engage in on a regular basis falls under the blanket of listening for information.
- In the office, people listen to their superiors for instructions about what they are to do.
- At school, students listen to teachers for information that they are expected to understand for quizzes and tests. In all areas of life, informational listening plays a huge role in human communication

Ctd..

Reflective listening

- It is a communication strategy involving two key steps: seeking to understand a speaker's idea, then offering the idea back to the speaker, to confirm the idea has been understood correctly.
- It attempts to "reconstruct what the client is thinking and feeling and to relay this understanding back to the client“
- Reflective listening is a more specific strategy than the more general methods of active listening
- It arose from Carl Rogers' school of client-centered therapy in counseling theory. Empathy is at the center of Rogers' approach

Ctd…Reflective listening

- Dalmar Fisher, an associate professor at Boston College, developed a model for Reflective Listening that includes the following elements:
- **Focusing upon the conversation** by reducing or eliminating any kind of distraction
- **Genuinely embracing the speaker's** perspective without necessarily agreeing with it. By engaging in a non-judgmental and empathetic approach, listeners encourage the others to speak freely

Ctd…Reflective listening

- **Mirroring the mood** of the speaker, reflecting the emotional state with words and nonverbal communication. This requires the listener to quiet his mind and focus fully upon the mood of the speaker
- This mood will become apparent not just in the words used but in the tone of voice, posture and other nonverbal cues given by the speaker. The listener will look for congruence between words and mood

Ctd.. Reflective listening

- Summarizing what the speaker said, using the speaker's own words rather than merely paraphrasing words and phrases, thereby mirroring the essential concept of the speaker
- Responding to the speaker's specific point, without digressing to other subjects
- Repeating the procedure for each subject, and switching the roles of speaker and listener, if necessary
- During the reflective listening approach, both client and therapist embrace the technique of thoughtful silence, rather than to engage in idle chatter

Ctd..

Workplace listening

- It is a type of active listening that is generally employed in a professional environment. Listening skills are imperative for career success, organizational effectiveness, and worker satisfaction.
- Workplace listening includes understanding the listening process (i.e. perception, interpretation, evaluation, and action) and its barriers that hamper the flow of that process. Like other skills, there are specific techniques for improving workplace listening effectiveness.
- Moreover, it is imperative to become aware of the role of nonverbal communication in communicating in the workplace, as understanding messages wholly entails more than simple verbal messages.

five key active listening techniques you can use to help you become a more effective listener

- Pay Attention. Give the speaker your undivided attention, and acknowledge the message
- Show That You're Listening
- Provide Feedback
- Defer/accept Judgment
- Respond Appropriately

- **A good listener** is attentive. They **make good** eye contact, don't interrupt what the other person is saying and show an interest in what is being communicated
- A **good listener** does not look over the shoulder of the person that's speaking, waiting for someone more interesting to come along.

Make the shift from speaker to listener

- One person is the **Speaker** and the other is the **Listener**. There are three main rules for the **speaker**: 1. The **speaker** should speak for him or herself, don't mind read. Mind reading is when you tell someone what he or she is thinking, feeling, or wanting. hear a person out before you react
- **Effective listening** is actively absorbing the information given to you by a speaker, showing that you are listening and interested, and providing feedback to the speaker so that he or she knows the message was received.

10. Non-verbal Communication

- One of the most frequently quoted statistics on **nonverbal communication** is that 93% of all daily **communication is nonverbal**.
- **A widely cited figures** found that 7% of any message is conveyed through words, 38% through certain vocal elements, and 55% through **non-verbal** elements (facial expressions, gestures, posture, etc)

Types of Nonverbal Communication

- Eye contact
- Facial expressions
- Gestures
- Posture and body orientation
- Body Language
- Space and Distance
- Proximity
- Para-linguistic

Ctd…

- **Paralanguage-** the verbal elements that go along with spoken language, including such qualities of the voice as tone, pitch/the way of producing word, rate, volume and emphasis
- **Facial Expressions-** Without a doubt, the most common—and telling—nonverbal means of communication is through facial expressions
- **Body Movements-** Body movements, or kinesics, include common practices like hand gestures or nodding

Ctd…

- **Proxemics** is a theory of **non-verbal communication** that explains how people perceive and use space to achieve **communication** goals. **Proxemics** is one of five **non-verbal communication** theories, the others being semiotics (sign language), kinesics (body language), haptics (touch) and chronemics (time)
- **Proxemics** is the study of how people use and perceive the physical space around them. The space between the sender and the receiver of a message influences the way the message is interpreted. In addition, the perception and use of space varies significantly across cultures and different settings within cultures.

Ctd…

- **What Are Vocal Qualities?**
- Volume
- Rate
- Pitch
- Fluency/confidence
- Articulation/voicing
- Tone
- It may not surprise you that genetic factors influence vocal **quality**:
- After all, **voice** qualities are largely **determined** by the size and shape of your larynx, neck, throat and facial structures all **determined** by genetics
- On average, the male larynx is about 20 percent larger than that of the female.

Vocalization

- **Vocalization**, any sound produced through the action of an animal's respiratory system and used in communication
- **Vocal sound**, which **is** virtually limited to frogs, crocodilians and geckos, birds, and mammals, **is** sometimes the dominant form of communication.
- **Reading** educators use the term **vocalization** to describe **readers** who hear words when they read. Vocalizers are **readers** who read with their mouths—they say and hear the words as they read
- **Vocalizing** slows your **reading** down considerably and is a habit you should break if you intend to become a speed **reader**.

11. Internet based communication

- In much of the world, the **Internet** is becoming the primary medium for **communication** in business. **Internet communication** tools save money in a variety of ways
- **Web-based communication** is defined as the sharing of information, words or ideas over a network of computers known as the **Internet**.
- Email is an example of **web-based communication**. Online webinars are an example of **web-based communication**

Ctd…..

- With **internet communication**, employees can effortlessly **communicate** with one another at anytime from anywhere in the world.
- This is because effective **communication** is important in increasing productivity as it directly impacts the behavior of the employees and how they perform.

Ctd….

- **What is advantage and disadvantage of internet?**

- Sending an email is much cheaper then phoning, or sending normal letters. Beside a lot of **advantages**, **Internet** has some **disadvantages** too
- First of **disadvantages** is that people who spend too much time sitting in the front of computer can easily gets ill.
- Radiation emitted by computer's screen is harmful to eyes.

Ctd…

- **Instant messaging** (IM) technology is a type of online chat that offers real-time text transmission over the Internet.
- There are many popular **Instant Messaging** software applications that have little to no interoperability. **Examples**: of this include, AOL **Instant** Messenger, Yahoo! Messenger, ICQ, and Skype.

Ctd…

- Non-IM types of chat include multicast transmission, usually referred to as "chat rooms", where participants might be anonymous or might be previously known to each other (for example collaborators on a project that is using chat to facilitate communication).
- Instant messaging systems tend to facilitate connections between specified known users (often using a contact list also known as a "buddy list" or "friend list").
- Depending on the IM protocol, the technical architecture can be peer-to-peer (direct point-to-point transmission) or client-server (an Instant message service center retransmits messages from the sender to the communication device).

Ctd…

- **Instant messaging** or IM for short, is the exchange of text messages through a video conferencing software application in real-time. These **instant messaging** allow the workers to communicate amongst themselves very easily and conveniently without the need to keep an access to a separate inbox
- internet telephony-The term "**internet telephony**" (also known as IP telephony or VoIP telephony) refers to making telephone calls via a computer network.

Ctd…..

VoIP - Voice over Internet Protocol?

- **VoIP** specifically refers to sending voice traffic over an IP (**Internet** Protocol) network
- IP **telephony** refers to any "telephone" type service carried over IP - this could include faxing. **VoIP** is voice over IP only. Sometimes **telephony** also includes text messaging
- **Voice over Internet Protocol** is a category of hardware and software that enables people to use the Internet as the transmission medium for telephone calls by sending voice data in packets using IP rather than by traditional circuit transmissions of the PSTN.

Ctd…

- **PSTN** or Public Switched **Telephone** Network is simply or most commonly known as a '**telephone line**‘
- **PSTN** uses an old technology whereby circuit-switched copper **phone lines** are used to transmit analogue voice data.
- It is the basic service that you have at home and in a small business
- A **PSTN** lets users make landline telephone calls to one another
- A **PSTN** is made up of switches at centralized points on a network that function as nodes to enable communication between two points on the network
- A call is placed after being routed through multiple switches
- Ultimately, voice signals are able to travel over the connected phone lines.

Ctd…

- # More flexibility. One of **advantages of video** call is that it gives you more flexibility.
- It avoids the participants having to spend time travelling to meet each other
- Saves travel costs. The participants in different locations are able to work on the same electronic document
- A common **problem** encountered **during video** conferences or webinars is a poor network connection or a lack of bandwidth. Four indications of this include: freezing the **video**, failing to screen-share, a long delay, or choppy audio

Ctd….

- Quantifiable **benefits** include reduced travel expenses and increased productivity.
- Even more impactful **benefits of videoconferencing** include improved communication and better business relationships
- Greater meeting efficiency and enhanced employee satisfaction
- It helps to improve communication and re-establish relationships.
- During **a video conference** you get to see the body language and facial expressions of the participants. This leads to a more **effective** and faster collaboration

Ctd…..

- **disadvantages of video-conferencing?**

- Lack of Personal Connection. Some customers may feel that video conferencing takes away from the personal touch provided by in-person meetings
- Time Zone Differences
- Unreliable Technology
- Too Much Required Training
- Too Expensive

Ctd….

- **SMS (short message service)** is a text messaging service component of most telephone, Internet, and mobile device systems
- **SMS** stands for Short Message Service and is the most widely used type of text messaging
- With a **SMS**, you can send a message of up to 160 characters to another device
- Longer messages are normally split up into multiple messages
- As for the actual transmission of a **SMS**, the text message from the sending mobile device is stored in a central SMC, which then forwards the message **to** the desired destination

Ctd..

Multimedia Messaging Service

- MMS stands for **multimedia messaging service**.
- It is an enhanced version of SMS (Short Message Service) which supports multimedia messages.
- MMS provides a standard way to send and receive multimedia messages which includes images, graphics, audio files, video clips, rich text etc, E.g., Imo, telegram, messenger, Instagram etc

Ctd…..

- **What is the full form of CCTV?**
- Closed Circuit Television (**CCTV**) also known as video surveillance
- It is a system where all the elements like video camera, display monitors, recording devices are directly connected.
- **OK**: Olla Kalla or Oll Korrect
- **OK** (also spelled as okay, **ok**, or **O.K.**) is a word used to denote acceptance, agreement, approval, or acknowledgment
- **OK** expand as Olla Kalla. It is a Greek word which means All correct.

Ctd….

- **Wireless communication** enables the whole population to connect with a global audience.
- Mobile phones and tablets are proliferating at a significant rate allowing people in rural and poor areas to have
  the **communication** tools they need to improve their lives
- **Wireless** technology facilitates

Ctd…

- **advantages of wireless communication?**
- **Wireless communication** involves transfer of information without any physical connection between **two** or more points
- Because of this absence of any 'physical infrastructure', **wireless communication** has certain **advantages**
- This would often include collapsing distance or space.

Ctd…

- **disadvantages of wireless communication?**

- Following are **the disadvantages of Wireless Communication**:
  ➡**Wireless** signals can be easily hacked and hence it will hamper privacy
- To avoid this, security algorithms (AES, WEP, WAP2) and modulation techniques (FHSS, DSSS) are employed in **wireless** networks.
  ➡**The** earlier **wireless** networks were slower.

Ctd….

Advanced Encryption Standard

- AES stands for **Advanced Encryption Standard**, which is the norm used worldwide to encrypt data
- Wired Equivalent Privacy (**WEP**) is a security protocol, specified in the IEEE Wireless Fidelity (Wi-Fi) standard, 802.11b, that is designed to provide a wireless local area network (WLAN) with a level of security and privacy comparable to what is usually expected of a wired LAN
- **WEP** stands for Wired Equivalent Privacy, and **WPA** stands for Wireless Protected Access. WPA2 is the second version of the **WPA** standard. Using some encryption is always better than using none, but **WEP** is the least secure of these standards, and you should not use it if you can avoid it.

Ctd…..

- **FHSS and DSSS**, which stand for Frequency Hopping Spread Spectrum and Direct Sequence Spread Spectrum, are two spread spectrum techniques
- The main difference is in how they spread the data into the wider bandwidth
- **FHSS** utilizes frequency hopping while **DSSS** utilizes pseudo noise to modify the phase of the signal
- **Frequency-hopping spread spectrum** (FHSS) is a method of transmitting radio signals by rapidly changing the carrier frequency among many distinct frequencies occupying a large spectral band
- The changes are controlled by a code known to both transmitter and receiver.

THE END!

GOOD LUCKY