

UNDERSTANDING

144 030
M32

OF

IT19
F12024108

I.C.T

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ICT : INFORMATION AND COMMUNICATION TECHNOLOGY

DEFINE ICT :- ICT is the technology required for information processing in particular, the use of electronic computer, communication devices and software applications to convert, store, protect, process, transmit and retrieve information from anywhere, any time.

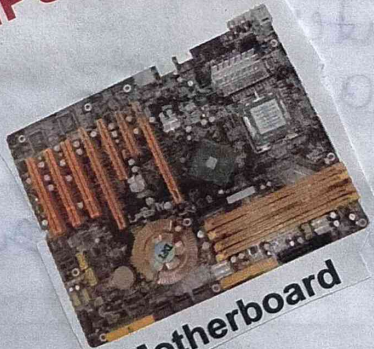
INFORMATION :- Information refers to the knowledge obtained from reading, investigation, study or research. Information is knowledge and help us to fulfill our daily task.

COMMUNICATION :- Communication is important to gain knowledge. It is an act of transmitting message. It is a process of whereby big information is exchanged between individuals by using sign, & symbols etc.

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TEST : INFORMATION AND COMMUNICATION TECHNOLOGY

COMPUTER UNIT



Motherboard

TECHNOLOGY := Technology is vital in communication. Technology is the use of scientific knowledge, experience and resources to create processes/products that fulfill human needs.

IMPORTANCE OF ICT :=

following are the importance of ICT :-

- i) Increased motivation.
- ii) Get higher quality output.
- iii) Learn independently.
- iv) Denied the traditional methods.
- v) Can more work with the use of ICT.

1. INCREASE MOTIVATION :- ICT can play

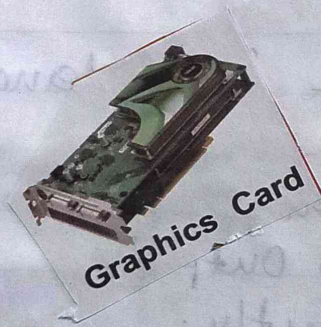
an important role in motivating learners and encouraging them to engage in learning within & beyond the class room. ICT motivates learners in many ways. Increase motivation is the major importance of ICT.

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TECHNOLOGY :-

is the use of scientific knowledge, experience and resources to create process products that fulfill human needs.

IMPORTANCE OF ICT :-



Following are the importance of ICT :-

- 1. Increased motivation
- 2. Higher quality of work
- 3. Increased productivity
- 4. Reduced the traditional methods
- 5. Can work with the use of ICT.

1. INCREASE MOTIVATION :- ICT can play

an important role in motivating learners and encouraging them to engage in learning. Within & beyond the classroom, ICT motivates learners in many ways. There is the importance of ICT.

2. GET HIGHER QUALITY OUTPUT :-

A good example of ICT being used imaginatively to create high quality output is where pupils in a geography lesson and used Powerpoint to create animated presentation.

3. LEARN INDEPENDENTLY :- It is a

common place for schools & colleges to use the internet as a research tool to allow students to find their own information.

4. DENIED THE TRADITIONAL METHODS :-

The use of specialist hardware & software by learners involved in art project.

They use digital cameras to capture original images that are used as the basis for painting or digitally to create new & interesting effects.

The use of digital technology allows students to experiment with traditional technique.

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GET HIGHER QUALITY OUTPUT :

A good example of ICT being used
imaginatively to create high quality
output is when pupils in a
primary lesson are used to
create animated presentations

LEARN INDEPENDENTLY :

Common place for schools to
use the internet as a research tool
allows students to find their own info

DEINED THE TRADITIONAL METHODS :



Ink Jet Printer

the use of specialist software
by learners involved in art project
They use digital cameras to capture
original images that are used as
backdrops for printing or digitally
create new & interesting effects
The use of digital technology in
students' experimentation with
traditional techniques.

TOOLS OF ICT

There are many ICT tools that is useful for education. The way I classify the tools is based on its uses & functions.

INTERACTIVE WHITE BOARD :- Students can use it to have a fresh mind before they can get involve with white board. Teacher can control the board from his/her table.

EDUCATIONAL GAMES :- Students can use it to have a fresh mind before starting the day or after a long play. Brain testing games etc.

INTERNET :- Students can get useful information by the help of Internet from any one website.

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Tools of ICT

There are many ICT tools that is useful for the education. The way of the tools is based on the use of functions.

INTERACTIVE WHITE BOARD :- Students can use it to have a fresh mind before the lesson. It involves in getting involved in the control the board. Teaching in this way is more effective.



EDUCATIONAL SOFTWARE :- It is a program that is used to teach the students. It is a long program that is used to teach the students. It is a long program that is used to teach the students.

INTERNET :- Students can get useful information by the help of internet from any one website.

COMPUTER

FUNDAMENTAL

COMPUTER :-

Computer is an electronic device/machine that gives us desired results after processing the data feed into it.

STEPS OF WORKING OF COMPUTER SYSTEM

- Accept and store input data.
- Process the same data
- Output the processed results in the form of information.

So Computer can be abbreviated as .

C	→	Common
O	→	Operating
M	→	Machine
P	→	Particularly
U	→	Used for
T	→	Trade
E	→	Education
R	→	Research

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COMPUTER

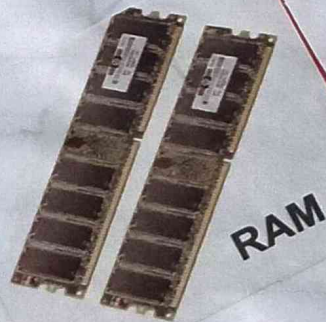
FUNDAMENTAL

COMPUTER :-

Computer is an electronic device that gives us desired results of processing the data fed into it.

STEPS OF WORKING OF COMPUTER

- Accept and store input data
- Process the data
- Output the processed results in form of information



COMPUTER

COMPONENTS OF COMPUTER :-

- 1 Input Unit
- 2 CPU :- Central processing unit
 - memory unit
 - control unit
 - ALU
3. Output.

1. INPUT UNIT :- All those devices of computer system with help of which we can enter data into computer.
eg:- Keyboard, mouse, light pen, etc

2. CPU :- Central Processing Unit

A) MEMORY :- Memory is storage unit & it has two types.

i) Primary Memory / Internal Memory :- RAM, ROM

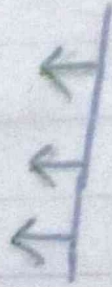
ii) Secondary Memory / External Memory :- Hard disk

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COMPONENTS OF COMPUTER

Input Unit
CPU - Central Processing Unit
Output Unit

Memory Unit
Control Unit
ALU



Floppy Disk 3.5" M O Drive

M O Disk

B) ALU (Arithmetic & Logic Unit)

It contains two sub sections.

i) Arithmetic Section :- (+, -, *, ÷)

ii) Logic Section :- (Comparison, matching, searching etc)

c) CONTROL UNIT :- It controls the transfer of data & information between various units.

3. OUTPUT UNIT :- The output unit allows the computer system to supply the information, obtained data processing to the outside world in human acceptable (readable) form.

Examples :-

- a) Monitor.
- b) Speakers.
- c) Printer.
- d) Plotters.
- e) Multimedia Projector.

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Internal Hard Disk

CHARACTERISTICS OF COMPUTER

Following are the characteristics of Computers. They are given below:-

1. High Speed.
2. Accuracy.
3. Diligence.
4. Versatility.
5. Automatic.
6. Memory.

1. **HIGH SPEED** :- A computer is a very fast device. It can perform in a few seconds.

2. **ACCURACY** :- Computers are very accurate. Computers perform calculations with 100% accuracy. Error may occur due to data inconsistency or inaccuracy.

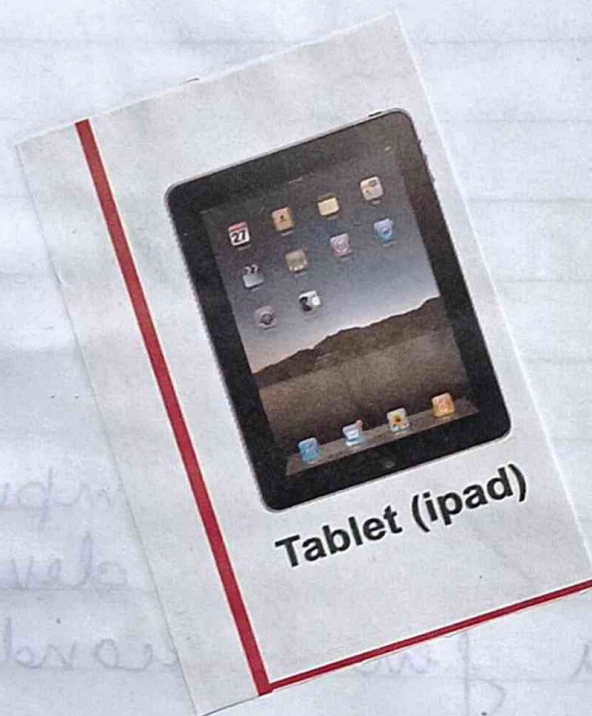
3. **DILIGENCE** :- A computer is free from monotony, tiredness and lack of concentration. It can continuously work for hours, without tiring.

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CHARACTERISTICS OF COMPUTERS

Following are the characteristics of computers given below:

- Speed
- Accuracy
- Storage
- Flexibility
- Automation
- Reliability



Speed

Accuracy

Storage

4. **VERSATILITY** :- versatility is the most wonderful thing about the computer. In other words a computer is capable of performing almost any task, if the task can be reduced to a series of logical steps.

5. **AUTOMATIC** :- computers are automatic machines because once started they carry on, until the job is finished, without any human assistance. Computer being machines cannot start themselves.

6. **MEMORY** :- A computer can store & recall any amount of information because of its secondary storage capability. Every piece of information can be retained as long as desired by the user.

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OTHER COMPUTER C



Palmtop Computer



External Modem

FUNCTION OF COMPUTER

Computers operate through these four functions:-

INPUT :- It is used to read the data to be processed and the program which processes the data.
eg - Keyboard, mouse, touch screen.

OUTPUT :- Just like input devices, these are the instruments which interpret between humans & computers & control the communication.

PROCESSING :- It interprets the instruction & commands given in an algorithm & carries them out accurately.

STORAGE :- It is used to store the data & the program.

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FUNCTION OF COMPUTER

computers operate through three functions:-

INPUT

It is used to feed the data to be processed and the program which processes the data. Keyboard, mouse, touch screen etc.

OUTPUT

It is used to display the results of the processing. Monitor, printer, speaker etc.



PROCESSING

It is used to perform the operations on the data. CPU, ALU, CU etc.

STORAGE

It is used to store the data and programs. Hard disk, SSD, RAM etc.

INPUT DEVICES

An input device is an electromechanical device, which accept data from the outside world, and translate them into a form, which the computer can interpret. These can into the following categories :-

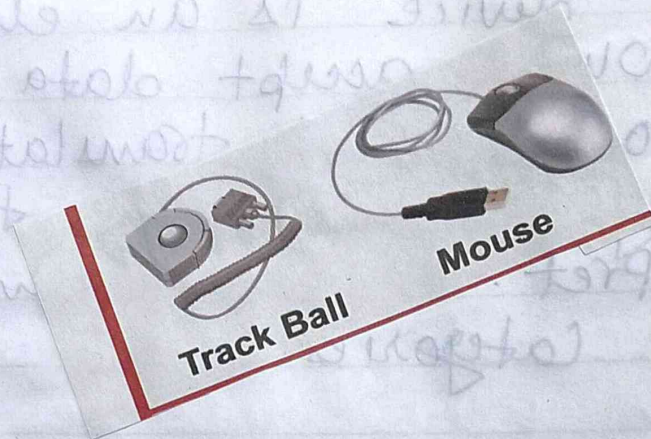
KEYBOARD :- It is a typewriter-like device, which contains keys to feed information into the computer. Standard keyboard with 83-84 keys, & enhanced keyboard with 104+ keys.

TYPES OF KEYBOARD

- A) Main Part / keyboard :- Contain typing key (A-Z), (0-9) etc.
- B) Numeric Keys :- Contain keys (0-9),
(+, -, ×, ÷)
Arrow keys (→, ←, ↓, ↑)
- C) Function Keys :- F₁ to F₁₂.

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INPUT DEVICES



2. MOUSE :- Computer mouse is a device which resembles an actual mouse. This hand-held device allows you to control your computer without typing instructions from the keyboard.

✓ The abbreviation of Mouse are:

M → manually.
O → operated.
U → user.
S → selection.
E → equipment.

3. JOYSTICK :- These devices are used with game software. It helps in executing the actions like firing a gun, turning a car to any direction.

4. LIGHT PEN :- Light Pen is similar to a mouse but here with light pen we move the pointer & select the objects.

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OUTPUT DEVICES



L.C.D. Monitor



Laser Printer



Dot Matrix Printer

OUTPUT DEVICES

Output devices allow the Computer System to supply the information, obtained from data processing to the outside world, in human acceptable (readable) form.

Classification of output devices:-

- A) Soft-copy Output :- Output which is not produced on paper.
- B) Hard-copy Output :- Output which is produced on paper.

MONITOR

:- Monitor of a PC works like a television screen. It displays text characters & graphics in colours.

PRINTER

:- Printer is an important device, which is used to print information on paper. There are two types of printer:-

i) Line Printer

ii) Dot matrix Printer.

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DEVICES

OUTPUT



Plotter



Speakers

PLOTTER

:- A Plotter is a computer hardware device much like a printer that is used for printing vector graphics. Plotters are of different types:-

i) Drum Plotter.

ii) Flatbed Plotter.

iii) Ink Jet Plotter.

SPEAKER

:- Speakers are one of the most output devices used with computer system. The speakers receive audio input from a device as a computer or an audio receiver.

SCREEN IMAGE

:- Screen Image Projector is an output device which is used to project information from a computer on to a large screen like cloth screen or a wall, so that it can be viewed by a large crowd.

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APPLICATION OF COMPUTER

Computer is very useful in all field of our life. The major area of computer applications are :-

DEFENCE :- Whole world saw the vast use of computer in defence during Gulf and Afghanistan & Iraq wars.

HOME :- Computers are used at homes for several purpose like online classes, online-examination, ebooks etc.

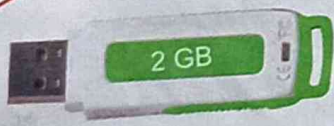
RESEARCH :- Computer is facilitating the research work in big way by performing complex computation.

HEALTH CARE :- Most of the

medical can now be digitized to reports. It on the field of medical therapies of patients is done with by the help of computer.

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DATA STORAGE DEVICES



Pen Drive



Zip Drive



Zip Disk

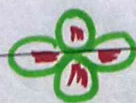
WINDOWS

Window the G.U.I (Graphical User Interface) gets loaded in the memory. All the application in the window can be loaded by clicking on the screen.

Windows is a collection of programs known as an Operating System that controls a PC (Personal Computer). First prior to windows, PC's were operated by series of text commands.

The user can do all operation by clicking at graphical symbols.

Windows is an operating system that acts as interface between developed the user and the computer. It has been developed by 'Microsoft' - world's leading software company, founded by Bill Gates.



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FEATURES OF WINDOW XP

The first version of window O.S was window 95. Since then many new advanced version of window have been developed as follow:-

- window - 98
- window - 2000
- window - VISTA
- window - 7
- window - me
- window - xp
- window - 10

It's the latest version of windows.

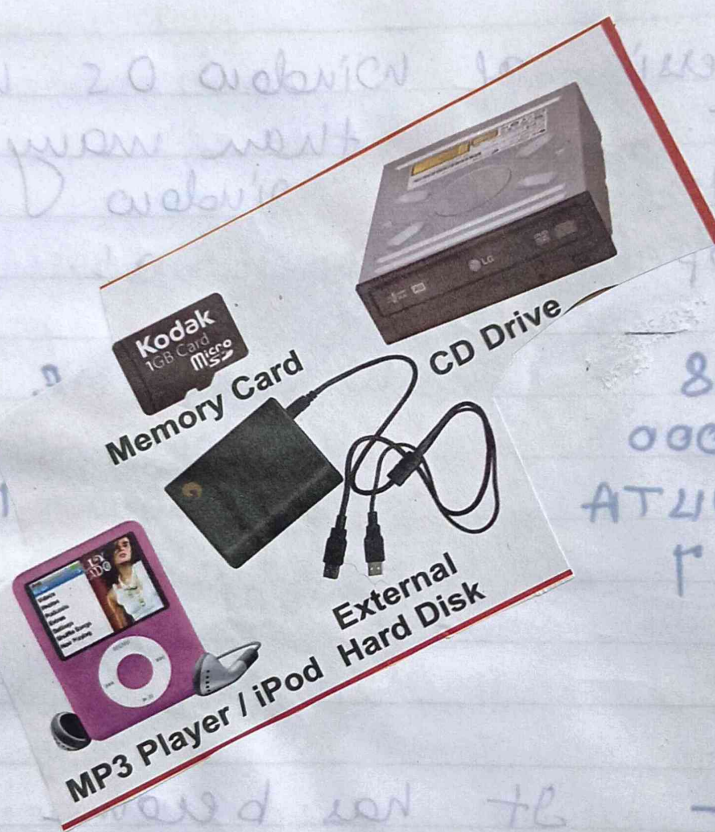
Window-Xp - It has become very popular window because it is user friendly.

Silent features Of window :-

- * window is smart and safe.
- * window is easy to use.
- * windows is object oriented.
- * windows supports multitasking.
- * Global connectivity

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FEATURES OF WINDOW XP



- 8E - window
- 0008 - window
- AT4U - window
- 1 - window

- 9X-window

Silent features of - window

WINDOWS ACCESSORIES

Window Accessories provides many additional programs that help in performing various jobs. It contains a few programs. They are Paint, games, calculator, multimedia, entertainment, Notepad & Word Pad.

Click on → Start → All Programs
↓
Accessories.

- PAINT :- Paint is a program used to draw, edit, & view drawing picture, you can paste a picture into another document.
- CALCULATOR :- The window calculator is just like another calculator.
- WORD PAD :- Word Pad is a simple word processor. Word Pad deals with both plain text & formatted text.

WINDOWS ACCESSORIES

Windows Accessories provides many additional programs that help in performing various tasks. It contains a few programs that are built into Windows. Calculator is one of the programs that are built into Windows.

Click on →



Central Processing Unit (C.P.U.)

PAINT

Paint is a program used to draw, edit, and save pictures. You can paste a picture into another document.

CALCULATOR

The Windows Calculator is just like another calculator.

WORD PAD

Word Pad is a simple word processor. Word Pad deals with both plain text & formatted text.

MS-WORD

INTRODUCTION :-

MS-WORD is very powerful & popular word doc. processor which allows to create, edit & save document for future use. It provides a number of high quality readymade templates & wizard for letters, reports, web-page & other document types. It corrects, deletes & insert text characters, words, lines, paragraphs & image anywhere in the document.

COMPONENTS OF THE WORD DOCUMENT :-

Following are the components of word.

- Title Bar
- Menu Bar
- Tool Bar
- Standard tool bar.
- Scroll Bar.
- Work space.
- Ruler Bar.

Start → Click start Button → Click Programs option → Click microsoft word.

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M3 - Word

INTRODUCTION :-

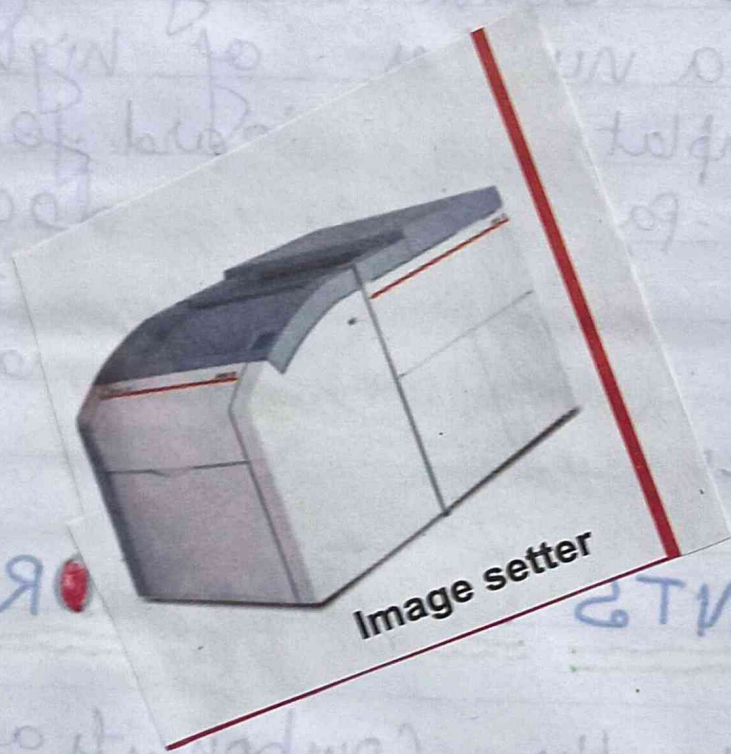


Image setter

MICROSOFT POWER POINT

Power Point is a tool you can use to communicate your ideas effectively through visual aid. You can in Power Point include all features you need to produce professional-looking presentation. It also provides the facility to represent musical data too.

To Start M-s Power Point :-

- i) Click on 'Start'
- ii) Click to 'Programs' option.
- iii) Click to on Microsoft Power Point.

FUNCTIONS

- i) Opening a file :- To open a file.
- ii) Saving a file :- To save a file

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iv) Copying the Presentation :- To copy original documents for various purposes. To copy in another way, do the following.

- ① open the file we want to make a copy.
- ② click file & select save As.
- ③ click the new name of file in the file name text box.
- ④ click Save.

v) Renaming a file.

vi) closing A file.

vii) Exiting Ms - Power Point :- We can

quit Ms - Power Point, after we finish and close our files. To quit Ms - Power Point, use the following instructions :-

click file & then select the Exit.
or Press ALT + F4 together from the keyboard.

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MS - EXCEL

MS - excel is a windows based spreadsheet package which can be used to make calculations & derive analysis on the basis of produced data in a tabular form.

SPREAD SHEET :- A spreadsheet or

an electronic spreadsheet is a software program mostly used for finance & accounts works.

ROWS :- A spreadsheet's row is an entire line of cells lying horizontally. In old version there were 65536 rows. But now in MS-excel 2010 1048576 rows.

COLUMNS :- The vertical lines of cells is called columns.

CELLS :- The intersection of a row and column is called cell.

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MS - EXCEL



Laptop Computer

SPREAD SHEET

ROWS :-

COLUMNS :-

CELLS :-

COMPUTER NETWORK

A computer network is a group of computers that use a set of common communication system & with another computer & share their resources, data & applications.

ADVANTAGE :-

- ① Efficient Use of storage Media.
- ② Reduction in hardware costs.
- ③ Efficiency.
- ④ Redundancy.

TYPES OF NETWORK

LAN
↓

Local Area Network

MAN
↓

Metropolitan
Area Network.

WAN
↓

Wide area
Network

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COMPUTER NETWORK

A computer network is a group of computers that use a set of common communication system to share their resources, data & application.

DEVICES

Digitizing Pad



TYPES OF NETWORK

WAN



Wide area network

MAN



Metropolitan Area network

LAN



Local Area network

LAN :-

- Local Area Network is a group of computers connected to each other in a small area like room.
- minimum range upto 10 km.
 - Provide High Security
 - connected through twisted pair co-axial cable etc.

MAN :-

It is a network that covers large area by inter-connecting different LAN.

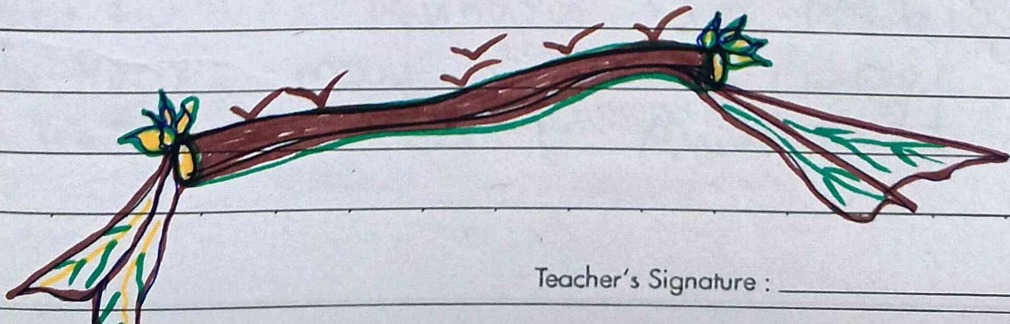


- minimum range upto 50 km.
- Provide High Security

WAN :-

It is a network that extends over large area such as countries or state.

- Quite bigger network than LAN.
- Internet is one of the biggest WAN in the world.



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DEVICES

Y-Cables



U.P.S.

INTERNET

Internet is a global wide area network that connects computer system across the world. It includes several high-bandwidth data lines that comprise the internet 'backbone'. These lines are connected to major Internet hubs that distribute data to the other locations, such as web servers.

Internet is one of the best technologies used in the present world of computer.

Important Terms Related to Internet.

→ WEB PAGE :- A collection of billions of web pages that you can view with web browser. The page of website is known as web page. A web page may include image, text, net links, videos & audios etc.

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INTERNET



Compact Disk

WEBSITE :→ website is just like a book. As a book contains pages, a website contains no. of web pages that hold a large amount of information.

WORLD WIDE WEB (W.W.W) :→ The

World Wide Web is a collection of documents stored in computers around the world.

HYPERLINK :→ Web page contains

highlighted text, images called hyperlink. By clicking the link you can move one page to another page. You can identify the hyperlink because they appear underlined with blue colour.

WEB SERVER :→

A web server is a computer on the internet that stores web pages. A web server is available for other people to view. It accepts request from user for webpage & send it back to user response.

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WEBSITE :-



Web Camera



Card Reader

HYPERLINK :-

WEB SERVER :-

MULTIMEDIA

It is a interactive, non linear media in comparison to broadcast television. multimedia can be defined as the integration of text, graphics, animation still image video & audio along with computing technology.

COMPONENTS OF MULTIMEDIA :-

There are various components of multimedia. They are given below.

- A) Textual information.
- B) Image (Graphics)
 - a) Bitmap Image
 - b) Vector Image.
- C) Animation.
 - Digital Audio
 - Digital Video.

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