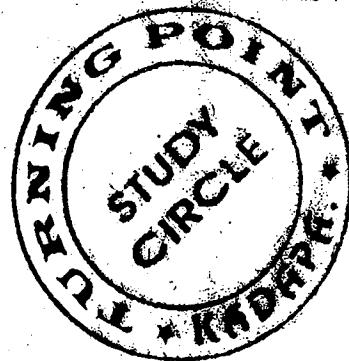


401

COMPUTER KNOWLEDGE FOR COMPETITIVE EXAMS



Turning Point

WE BUILD ON TRUST

SS XEROX SIVA 7013054480

INTRODUCTION

CALCULATOR : The device that performs mathematical operations but it has no storage capacity
COMPUTER : The device that works in electric medium and performs both mathematical and logical operations with storage capacity.

Basic Functions of Computer :

- Accepts input (data)
- Processes the given data
- Produces output (information)
- Stores the output for future use.

Properties that determine power & cost of Computer :

- i) Speed : Computer performs billions of instructions per second (also MIPS)
- ii) user friendly : Very easy to use a computer by humans
- iii) Reliability : It does not commit mistake / error
- iv) Accuracy : It produces the correct results with given input

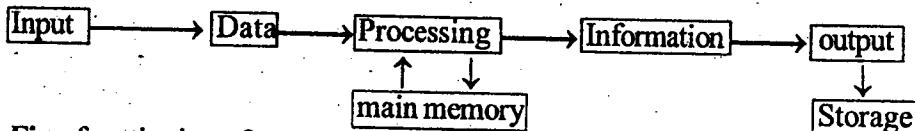


Fig : functioning of computer.

Evolution of Computer

- * ABACUS → It is the first computer introduced in 2000 BC
- * 1617 → John Napier introduced Napier's bones for calculation
- * 1642 → Blaise Pascal invented PASCAL's calculator
- * 1823 - 34 → Charles Babbage developed Analytical Engine, difference Engine.
He is called **father of Computers**.
- Counter wheels are memory components for Analytical Engine.
- * 1801 → Joseph Jacquard introduced Punched cards that were used in cotton looms & Weaving patterns to store data
- * 1941 → JP Eckert & JW Mauchly invented ENIAC.
- ENIAC → Electronic Numeric Integrator and Calculator.
- First commercial electronic Computer
- * 1947 → John Von Neumann introduced EDSAC with storage capacity
- EDSAC → Electronic Delayed Storage Automatic Computer
- * 1951 → Mauchly & Eckert also invented UNIVAC.
- UNIVAC → Universal Automatic Computer
- * 1950 → EDVAC introduced (Electronic Discrete variable Automatic Computer)
- * Micro processor is invented by MARCIAN HOFF
→ So, Electronic Computers Started in 1940's .So generations will start from here.

GENERATIONS

Generation	Years	Chief Components	Memory Elements	Operating System	Language	Examples
Ist	1940-55	Vaccum Tubes/ Electronic valves	Magnetic drums	- No -	Machine language	ENIAC EDSAC EDVAC UNIVAC
2nd	1956-63	Transistors	Magnetic cores Magnetic Tapes	- No -	Assembly Language, FORTRAN, COBOL	IBM 700/1401 IBM 7030
3rd	1964-71	Integrated Circuits	RAM, DISKS	LINUX	ALGOL C, C++ JAVA SQL	CDC 6600/760 IBM 360 IBM 370 CRAY-1
4th	1972-Present	LSI/VLSI Very Large Scale Integrators	All Primary, Secondary Storage devices	Windows DOS, LINUX	SQL ORACLE	All PC's & Desktops, CRAYX-MP
5th	Development Phase.	Artificial Intelligence, Robotics & Nano Science.	Knowledge Information Processing Systems			

Note : Now we are in 4G and using 4 G technology only.

Artificial Intelligence : The Intelligence (science) involved and used by machines to perform the human activities such as writing, reading and all the human activities.

Nano Science : The Science / technology which involves in observation & deals with particals of 1-400nm size itself.

NM indicates Nanometer, which is the least measurement

Robotics : The Sensitive operations in human body are performed through Rod like structures that acts according to machine instructions & these technology is called Robotics.

SYSTEM ARCHITECTURE

The computers architecture is mainly divided into three types of devices as

a) **Input Devices** : The devices which gives instructions to the computer are Input devices.

Examples : Mouse, keyboard, Microphone, Scanner, CD-Drive, Joystick, Barcode Readers, Reel Camera, OCR, OMR, Webcam, MICR Device etc.,

b) **Output Devices** : The devices which gives output data to users are output devices.

Examples : Monitor, Speakers, Printers & Plotters etc.

c) **Processing Device** : CPU

* **Peripherals** : Devices that are connected to CPU (Both input and output devices)

INPUT DEVICES

a) **Mouse**

- : It is the Pointing device
- It works on principle of drag & drop icons (objects)
- To get Properties of any object, we have to press Right button of mouse
- The Scroller is present b/w two buttons of mouse.
- Ball mouse & optical mouse are two types of mouse.

- b) Key Board** : The most widely using device for Input
- We use QWERTY keypad boards.
- Each press on key of key board is " keystroke"
- key stroke is first converted into ANSI Code.
- ANSI - American National Standard Institute

IMP. KEYS :

- * **Capslock** : It is used to change the letter case of Text
 - * **Function keys** : F1 to F12 are 12 functional keys.
 - * **NumLock** : It locks the Number pad and change the numbers into directional keys.
 - * **Modifier keys** : Alt , Ctrl , Shift
 - * **Task manager keys** : Alt + Ctrl+ Del.
 - * **End** : To bring cursor to the end of current line.
 - * **Tab key** : To indent (initialise) the paragraph
 - * **Toggle keys** : Key which performs 2 different actions on Pressing.

Ex: Caps Lock, Num Lock

- c) **Scanner** : The electrical device that converts hard copy of text / image into a computer photographic image that can be stored in the computer memory.
→ TWAIN is related to scanner (verify fullforms)

d) **Joystick** : The device used in computer for playing games as an directional device.

c) **Barcode Readers** :

Barcode : The lines of different length and width found on tags / products and this code is recognized by computer system.

Barcode Reader : Through Input Automation, these readers take the rate/cost of product automatically at POS (point of sale) Systems.

- f) MICR Device :**

MICR - Magnetic Ink character Recognition

- This technique used for cheque clearance in Banks.
 - MICR Code is of 9 digits - 806

896 786 123
City Bank Brach codes

- * First 3 digits indicates city code
* Middle 3 digits indicates Bank co
* Last 3 digits indicates Branch co

Example : 896 786 123

- g) OMR : Optical mark recognition

- h) **OCR** : Optical character recognition

OUTPUT DEVICES

- a) **MONITOR** : The device mostly used for viewing a system.

- It is also called visual Display Unit (VDU)
 - Monitors clarity is based on its Resolution
 - Resolution is measured in Dpi (dots per inch)
 - Each dot is called pixel.
 - As the number of pixels increases, screen clarity is increased

CRT → Cathode Ray Tube Screen → Low clarity

LCD → Liquid Crystal Display Screen → Medium

LED → Light Emitting Diode screen → High clarity

* as the number of dots increases on screen, the space between dots is 1.

Note : IBM is called BIG BLUE.

b) PRINTERS : Devices which produces the hard copy are called printers

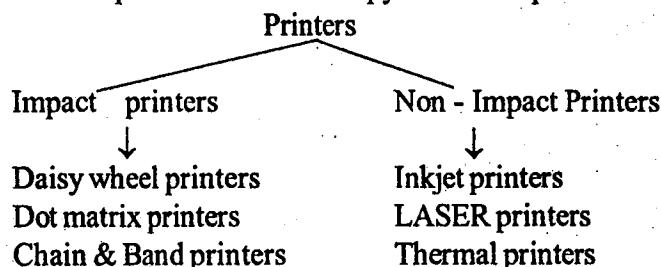


Fig : Printers classification

i) Impact Printers : This type of printer strikes paper and ribbon together to form character on paper.

* **Daisy wheel :** These are typewriters & slow printing Only for text.

- Petals are typewriter keys
- Graphics cannot be printed by using these printers

* **Dot matrix :** These are called pin printers.

- These are bidirectional printers
- used in railway ticket printing

* **Band Printer :** Very fast, expensive & sound making.

- Used in printing current Bills, Bus Tickets etc.,

ii) Non-Impact Printers :

- It does not strike the paper but uses ink spray or toner powder.

* **InkJet :** - Used for colour printing

- It uses ink to spray on paper
- These are replaced with Laser printers.

* **Laser :**

- It prints more number of pages per minute, than other printers.
- It prints high resolution on paper
- It prints high quality graphics
- Now a days widely using printers

* **Thermal Printer :**

- It uses heat on chemically treated paper
- Fax machines are example.

c) PLOTTER : It is a printer, accuracy measured in terms of repeatability and resolution.

- It is most widely used for large size colour printing (Graphics)

- It has penlike structures which prints graphics on flex according to computer instructions

Ex : Movie Banners Printing.

Spooling : The process of maintaining order of pages that has to be printed in sequence.

- The order of sequence is maintained by the spooler (special numeric code)

DEVICES ACTING AS BOTH I/P & O/P DEVICES

- Few devices that gives input and also show/get the out put through same device.

Examples : MODEM, FAX, Touch Screen, AT - Headset, Digital camera.

i) MODEM : Modulator and Demodulator is full form for it.

Modulator - Converts Binary Signal into Analog wave

Demodulator - Converts Analog wave into Binary signals.

ii) FAX : It is also called Facsimile (Far Away Xerox)

* It consists scanner for paper scanning as input to send.

* It has printer to print on paper which is received as FAX message

- So FAX takes input and produces output also.

iii) Touch Screen :

- The touch screen is used for both input & output.

Ex : Touch screen Mobiles.

iv) Digital Camera :

- This camera takes / captures the image (input)
- Same image can be seen on camera screen (output)

v) AT - Head set : Advanced Technology Headset

- Headset (Mic and Speakers) is used for talking & hearing the voice

Ex: Mobile phone Headset

TYPES OF COMPUTERS BASED ON DATA TAKEN & OUTPUT

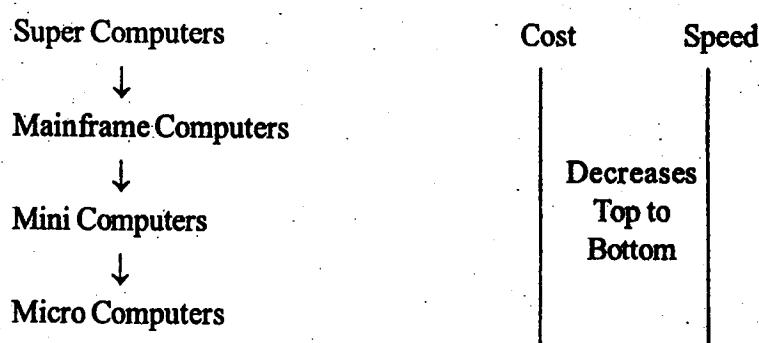
i) **Digital** : The computers count data or signals as "on" or "off" in binary digits only

ii) **Analog** : It recognises data as continuous measurement in wave form by continuous electrical pulses.

iii) **Hybrid** : Combination of measurement and wave signals forms hybrid computers

Ex : Computers in Hospitals

* The **DIGITAL COMPUTERS** are divided into 4 types based on speed.

**i) Super Computers :**

- The high speed & fast computers designed to perform Complex Instructions.
- Seymour cray invented the super computer
- High expensive
- Applications :
 - Weather forecasting
 - Engineering Testing & Design
 - Aircraft maintenance
 - Scientific & Biomedical Research.

Examples : CRAY (1,2) , PARAM series, PACE series.

* PARAM PADMA is Super Computer of India.

ii) Mainframe Computers :

- It serves as backbone for Business World
- Air condition Rooms are mandatory for maintenance
- Huge number of people at network can use the server at a time with Mainframes.
- Applications : - Servers for Banks & Railways.

Ex : IBM - 3000 series, UNIVAC - 1180

iii) Mini Computer :

- These are early days Pc's used in CAD
- CAD - Computer Aided Design.
- These are replaced with personal / micro computers in Banks and Insurance Companies.

Ex: VAX - II

iv) Micro / Personal Computers :-

- Size of micro computers varies from PDA to desktop computers.
- In 5G, PC's are going to replace the mainframes

Ex: Desktops or PC's

PORTABLE DEVICES

a) **Laptops** : The small computers that can be carried anywhere and can be for personal use and business purpose

- Instead of mouse, touchpad is present on Laptop.
- These are portable, so can be carried anywhere

b) **Palmtops** : The devices that are smaller than Laptops but can perform same works.

- Mostly used for surfing Internet only.
- These are also called personal digital assistants (PDA)

Ex: Samsung tabs, Note pads, Note books.

c) **Smartphones** : Devices used for both making calls and surfing Internet.

d) **Small keypad mobiles** :

- WAP is the protocol that provides internet facility for small mobile phones.
- WAP - Wireless Application protocol

Ex: Nokia classic mobile.

CENTRAL PROCESSING UNIT : CPU

- It has various names as
 - * Processor, System unit
 - * Computer tower
 - * Brain of computer

CPU Hard ware :

* The CPU is containing many hardware components that combinedly called as system unit.

What is Hard ware & Software ?

Hardware : The physical components of a Computer that we can see and touch.

Ex : CPU, Monitor, Keyboard, Hard disk, Floppy Disk, CD etc.

Software : It refers to the programs which are required to operate the computer, we cannot touch them

Ex: DOS, Windows7, MS-Office, Operating System etc.,

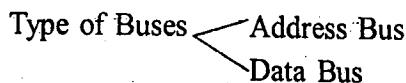
CPU - HARDWARE COMPONENTS**i) Motherboard :**

- It is also called system board
- It contains RAM, ROM, Expansion slots, CMOS Battery, BIOS Chip, SMPS, FAN etc.,
- The communication b/w all these components is passed through BUSES.

*** CMOS Battery :**

- It stands for complementary metal oxide semiconductor Battery
- It is made of lithium metal
- Its main functions are
 - a) To maintain RTC (Real Time Clock) in the computer system
 - b) To wake up the BIOS (Basic Input Output System) to perform the POST (Power on Self Test).

BUSES : The communication lines between the components on the mother board are called buses.



* **Address Bus :**

- It carries only address from Hard disc to RAM
- It is unidirectional bus.

* **Data Bus :**

- It sends the data from RAM to Hard disk and receives data from Hard disk to RAM
- It is Bidirectional Bus

* **BIOS CHIP :** (Basic Input Output System)

- It is the ROM chip on mother board
- BIOS chip is hardware and it contains BIOS software files so it is called **FIRMWARE**.
- BIOS memory cannot be deleted because it is ROM.

* **FAN :** It is the cooling agent for mother board components and CPU.

* **Expansion slots :**

- These are slots provided to install the extra cards such as video graphics cards & multimedia cards.
- These slots are present on mother board.

* **SMPS :** Switch Mode Power Supply

- It supplies power to CPU by converting AC to DC.
- AC - Alternate Current, DC - Direct current.

* **Processor Chip :**

- Processor converts the input to output and made up of silicon metal
- So Computers are called as silicon Sapiens.
- Processor speed is measured in Hertz
- Examples : Intel - core, core 2duo, pentium series, i5 , i7 etc.,
- Speed of processor MHz = 1 Million cycles per second
GHz = 1 Billion cycles per second
- We have CISC & RISC type of processors

<u>CISC</u>	<u>RISC</u>
<ul style="list-style-type: none"> - Complex Instruction Set Computer - It allows more number of micro electronic signals - It uses complex addressing modes <p style="margin-left: 40px;">Ex: Pentium Pro, II, III</p>	<ul style="list-style-type: none"> - Reduced Instruction set computer - It allows small & limited number of signals <p style="margin-left: 40px;">- It uses simple addressing modes</p> <p style="margin-left: 40px;">Ex: IBM RS - 6000, MC-88100</p>

* **RAM :** Random Access Memory.

- It is volatile memory because it loses data when system is turned off.
- It can perform operations in Random
- It is a hardware device in Rectangle shape.
- Its size varies from 256 MB to 8 GB
- RAM is called system memory, Internal memory or memory.

TYPES OF RAM :**i) SRAM :** Static Random Access memory

- It is the high speed RAM (It has 6 Transistors in it)
- It can continue to work / process without refreshing the system
- It is costly in price

ii) SDRAM : Synchronous Dynamic RAM

- To reduce the cost of SRAM, this SDRAM was invented
- It has the same properties as SRAM only.

iii) DRAM : Dynamic Random Access memory

- It is low in speed of Access (It has 1 Transistor & 1 Capacitor)
- It requires many number of times to refresh the system

Market Availability of RAM :**1) SIMM - Single Inline memory module**

- It has 30 or 72 pins
- It supports 16 & 32 bit data transfer Rates

2) DIMM - Dual Inline Memory Module.

- It has 168 pins
- It supports 64 Bit data transfer Rate

Ex: DDR 1, 2, 3 (DDR = Double Data Rate), DDR 3 is the fastest RAM

Note : Above are the important CPU components on mother boards.

*** ROM : Read Only Memory**

- It is non volatile memory and permanent memory.
- It cannot be erased.

*** TYPES of ROM :**

- i) PROM : Programmable ROM (It is Empty chip to add any program to it)
- ii) EPROM : Erasable Programmable ROM
- iii) EEPROM : Electrically Erasable Programmable ROM

PORTS :*** MIDI PORT :** Musical Instruments digital input

- These ports present on CPU front or Back side
- These ports are used to connect speakers, MIC, Head Sets.

Parallel Port :

- These ports present on Backside of the CPU
- These ports are used to connect printers & Scanners in previous days & now also

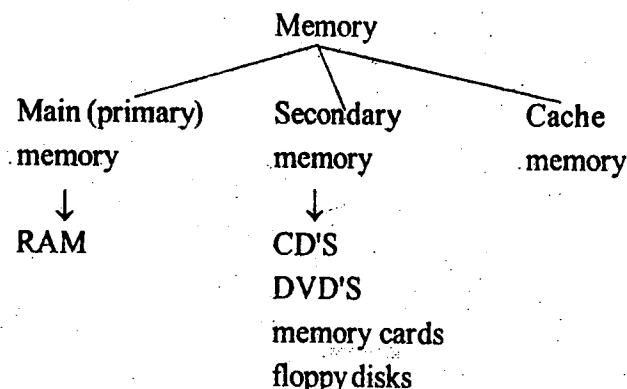
*** USB Port :** Universal Serial Bus.

- This port is to connect all external devices with the cable
- Now pendrives & data cables are connected to this port only.

Hard Disk :

- The storage point of computer is the hard disk
- It stores operating system, softwares & Data etc.
- Memory varies from GB's to TB's in size for Hard disk capacity.

Note: System requires more memory to save voice, graphics, images when compared to text data.

TYPES OF MEMORY & DEVICES**i) Primary Memory :**

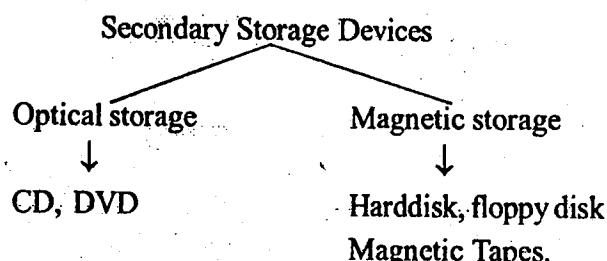
- It is system's main memory called RAM
- It is the memory used only for processing data not for storing the data
- It is temporary & volatile memory

ii) Cache memory :

- The fastest memory in computer & it is volatile
- It holds the previous instructions of computer
- These chips are very costly.

iii) Secondary memory :

- The memory which is stored for further or future use is secondary memory.
- The memory is non - volatile but it can be manipulated (changed)
- It is also called Auxillary memory
- Examples of secondary storage devices
 - CD'S , floppy disks
 - DVD'S, memory cards
 - Flash cards & magnetic Tapes



- We will study one by one clearly.

*** Floppy Disk :**

- It is a magnetic storage component
- Its size varies in length of $3\frac{1}{2}, 5\frac{1}{4}$, 8 inch disks
- The memory size of $3\frac{1}{2}$ inch floppy disk is 1.44 MB
- The memory deleted from floppy disk cannot be retained back from computer.

*** CD : Compact Disc.**

- Its memory capacity is 700 MB
- Invented by James Russel in 1965
- It is written or read by laser beam of light

*** DVD : Digital versatile disc**

- Its memory size is 4.7 GB, 9 GB & 18 GB
- 9 GB & 18 GB memory disks are called Bluray discs
- Bluray Discs are used to store high definition quality videos only.

ACRONYMS PRESENT ON CD & DVD'S

- i) ROM - Read Only Memory, we cannot write data to it.
- ii) R - Recordable - Write once, Read many times (WORM), cannot Rewrite data to this disc.
- iii) RW - Re write data for many times & we can delete data many times.

*** Magnetic Tapes :**

- These are magnetic storage medium components
- These follows sequential access medium principle
- Every time we have to read data from beginning Part only, no skipping.

Ex: Cinema Reels in olden days.

*** Disk formating : Formation of Tracks and sectors on any disk is called Disk formating**

- UDF : Universal Disk Format
- Clusters on disk holds the data.

4) Flash devices / Flash memory :

- The devices like digital camera, ipods are connected through cables to access their memory in computers
- These type of devices are flash devices & has non-volatile memory.
- Memory accessed through cables is called flash memory

5) Virtual memory :

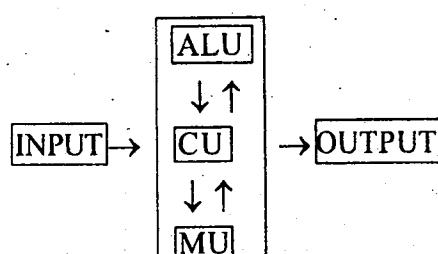
- When ever the RAM memory is not sufficient to hold the processing data, it uses hard disk memory as hidden memory to process the specific task. So the memory utilised from hard disk is called virtual memory.
- virtual memory is present in hard disk.

Example : When installing operating system (3.2 GB), if the RAM is 2GB size, it uses hard disk during Installation process only.

Memory Cards : memory cards are used in digital cameras, mobile phones etc.

- SD cards are used in all these devices
- Here SD stands for secure digital memory cards (SDMC)

Note : With this we complete the types of memory & devices of different types.

CPU Processing units :

CPU mainly divided its processing into ALU, CU & MU

i) ALU : Arithmetic and Logic Unit

- It performs all the arithmetic & Logical processing of CPU
- The registers are present in ALU, that holds very small memory & performs Simple math operations
- * **Accumulator :** It holds the processing data & output result to display
- * **Program counter :** It holds the next instruction that has to be performed by ALU or Registers
- * **Data Register :** It holds the complete data on the hard disk while Processing.

ii) CU : Control Unit

- The Control unit controls & Coordinates all the parts of computers
- Control pins are present and that controls all the components of computer.

iii) MU : Memory Unit

- It contains RAM, ROM, Hard Disk (already explained)

LANGUAGES AND SPECIFICATION*** FORTRAN**

- Formula Translation (1957)
- Coding used for scientific research / Calculations

*** COBOL**

- Common Business Oriented Language (1957)
- Used in business computations

*** ALGOL : Algorithmic Language**

- The language that given a scope for developing the C, C++ & Java languages

*** HTML : Hyper Text Markup Language.**

- The web pages are saved or viewed in HTML format only

*** JAVA : Applets can be created by this language.**

- The language used for webpage creation, websites hosting
- developed by sun micro systems, invented by James Gosling & his Team

*** C++**

- The computer games (Basic) were developed using this language, invented by Bjarne Stroustrup (1983)

*** XML : eXtended Markup Language (world wide web consortium)***** PHP : Personal Home Page. (Designed by Rasmus Lerdorf - 1995)***** C**

- Invented by Dennis MacAlistair Ritchie in 1972
- This language coding replaced by Java now
- **Printf** takes the output statements in code
- **Scanf** takes input data in code

*** SQL**

- Structured Query Language.
- Used for database tables creation

*** .NET**

- The language came in recent days for programming

Note : The computers cannot understand any of the above languages, it needs only machine language or Binary code to understand.

- Binary code means 0's & 1's

SOFTWARES

Programming Language Translators :

- Computer can understand only binary code / machine code
- So, we are writing our program in Java, C & C ++ or Assembly language, so to convert this code in to Binary code we need translator.

Translator : The translator converts the given code in to machine code or binary code.

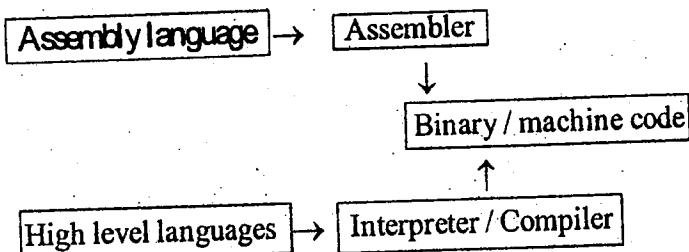


Fig.: Translators of Languages.

i) **Assembler :**

- It converts the Assembly Language code into machine code

ii) **Interpreter :**

- It Compiles the program code line by line & checks for errors
- It consumes more time because it checks code line by line

iii) **Compiler :**

- It compiles the entire program code in a single time for errors
- It is a time saving translator.
- It cannot execute the programs but converts source code into object code

Terms Related to Programming Language :

i) **Instruction :** Any single text given to computer is called instruction

Ex : 0 or 1

ii) **Program :** The combination of 'n' number of instructions is called a program.

* Set of Programs are also called as softwares

iii) **Algorithm :** The step by step instructions of a program written in sequence order is called algorithm

Ex: Sum of 2 numbers.

Step 1 : start

Step 2 : Take a,b,c

Step 3 : Calculate C = a + b

Step 4 : Print C

Step 5 : Stop

iv) **Flow chart :**

The graphical (pictorial) representation of the pseudocode or algorithm are called flowchart

Symbols used in flowchart

→ - Flow Direction (Arrow mark)

○ - Start / stop (Ellipse)

□ - Input / output (parallelogram)

▭ - Processing data (Rectangle)

◇ - Decision making (Rhombus)

○ → connector to next page (circle)

Different types of Languages :

- i) Machine Languages
 - ii) Assembly Languages
 - iii) Low level Languages
 - iv) High level Languages
- Assembly Languages uses MNEMONICS as code in symbols.
- Low level languages can easily interact with the hardware peripherals
Ex: PASCAL, BASIC, Assembly Language, FORTRAN etc.,
- Modern days, we are using only high level languages for programming
Ex: C++, JAVA, C, SQL

Important terms

- * **Control structures** : The Conditions and Loops written in source code
- * **Reserved Words** : The words that are kept aside for its use by programming language.
- * **Bug** : It is also called error (mistake in program code) or Glitch.
- * **Compiling** : Finding errors in the software code
- * **Testing** : Finding errors in the software only
- * **Debugging** : The process of correcting the errors in the software code.
- * **Platform** : The combination of operating system and processor is called platform
Example : Apple macintosh & PC'S are 2 different platforms
- * **Patch** : The vendor - created programs that are available through Internet to repair software is called patch.
- * **API'S** : Application program Interfaces are the small program codes that are present in the operating system

Types of Errors**i) Logical errors :**

- The fault / mistake in the logic of program code causes to get wrong outputs / Results.
- In this case program is executed to get result

Ex: Correct logic $\rightarrow C = A + B ;$

Mistake logic $\rightarrow A = C + B ;$

* We get output for A in place of C due to logical error

ii) Syntax Errors :

- The fault / mistake in the syntax (structure) of the program code cause failure to execute it
- In this case program is not executed

Ex: Missing of semicolons in the code

Correct syntax $\rightarrow C = A + B ;$

Mistake syntax $\rightarrow A = C + B$

* We will not get output

* **A functional Language** reflects the way people think in mathematical way.

* **A programming Language** consists of set of Rules & Syntax and structure.

Executing : The process of carrying out commands is called executing

- Interpreter are used to compile code in BASIC & PASCAL Languages

BASIC - Beginners All purpose Symbolic Instruction code

* Above two are examples for low level Languages

- High level languages uses only compilers to compile program.

LOGIC GATES : These are the basic building blocks of IC'S

- We have 3 Logic gates mainly as AND, OR, NOT.
- A digital circuit result in output based on states of input signals

AND	→ All input must be in '1', to produce '1' as output
OR	→ Any one input or more is '1' to produce '1' as output
NOT	<ul style="list-style-type: none"> → It is also called inverter → It has only one input one output → If input is '1', the output is '0', viceversa
NOR	→ Any one input or more is '1' to produce '0' as output
NAND	→ All input must be in '1', to produce '0' as output
XOR	→ If any one input is '1', but not if 2 or more input are '1', the output is '1'

Memory Measurement :

* Memory in computer is measured in Bits and Bytes

Bit → Binary digit (either 0 or 1)

4 Bits → Nibble

8 Bits → 1 Byte

1 Kilobyte → 1024 bytes → 10^3 → 2^{10} Bytes

Megabyte → 1024 KB → 1 million Bytes → 10^6 → 2^{20} Bytes

Giga byte → 1024 MB → 1 Billion Bytes → 10^9 → 2^{30} Bytes

Terabyte → 1024 GB → 1 Trillion Bytes → 10^{12} → 2^{40} Bytes

Peta Byte → 1024 TB → 10^{15} → 2^{50} Bytes → 1 Quadrillion Bytes

* Exabyte, Zettabyte, Yottabyte are the next higher measurement

1 character (ASCII)

1 Byte → 256 numeric values (0 to 255)

KBPS → Kilobytes per second

Kbps → Kilo bits per second

" Always 'B' represents Byte, 'b' represents bit "

Portable platform : The program written in any platform or language can be run on portable platform.

Booting : The process of loading operating system from disk to RAM is called Booting

- Without booting, computer cannot perform any task

i) **Warm booting :** The process of restarting / turning on the computer, which is under on / working position

ii) **Cool Booting :** The process of starting / turning on the system which is under off position

* **Sequence of operations in Booting :**

Load BIOS → Perform POST → Load operating System → Check configurations settings

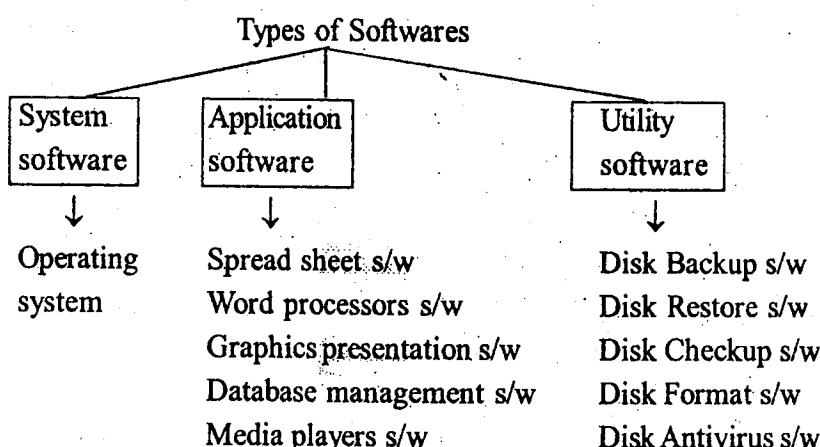
Here i) POST → Power on self test

→ Checks whether all CPU components are connected in proper way or not.

→ POST performed by BIOS only.

Note : C language is high level language with some features of low level language.

SOFTWARE : The set of programs written by programmers to perform some specific tasks is called software
 - Software is a set of programs.



i) System Software :-

- The software which performs various types of functions in order to manage & organise files of computer.
- It is mandatory software to run a computer.

* Operating system is the system software

- It creates interface between user and computer

Examples of operating system : i) Windows

- ii) LINUX
- iii) MS-DOS
- iv) SOLARIS
- v) Apple Macintosh
- vi) Android Operating System

i) Windows Operating System :

- Introduced in 1985 by microsoft corporation.
- It is not a free operating system (Commercial Software)
- Windows 95, 98, ME, XP, 7, Server, 8, vista are few examples

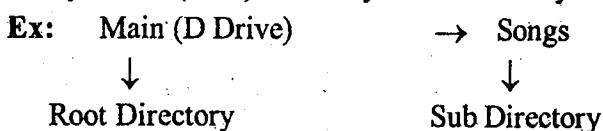
ii) LINUX Operating System :

- It is a free operating system
- It is a multi - user operating system
- It was introduced in 3rd Generation

iii) MS - DOS :

- DOS stands for disk operating system
- It is command driven operating system
- It is single user operating system
- Directories are storage files.

* Directory within (Root) Directory is sub directory



Examples for few DOS commands :

- .exe - Executable files
- .com - Command files
- .Bat - Batch Files
- .Prg - Program files
- .Sys - System files

iv) Apple macintosh :

- This operating system is only for Apple Products.
- Steve jobs is the founder.

v) Android o/s :

- Google is the owner for Android o/s
- Smartphones uses this operating system for Google Applications

Functions of Operating System :

- * Memory Management
- * User Interface
- * Input / output management
- * Information Management
- * Process Management

Classification of operating System :

i) **Multi - User o/s** : It allows 2 or more users to run the programs at the same time.

Ex: UNIX / LINUX

ii) **Multi Tasking o/s** : It allows more than one program to run concurrently

Ex : UNIX, WINDOWS (Few versions)

* Example of multitasking : Surfing Internet & Listen to Songs at a time

iii) **Multi Processing** : It supports running a program on more than one CPU or processor

iv) **Multi threading** : It supports different parts of a single program to run concurrently on system.

v) **Multi programming** : It allows more than one program to run alternatively

Ex: When working on MS Word & Excel we have to work one another alternatively on same screen.

vi) **Single user o/s** : MS-DOS is an example

2) Application Software :

- These are the end - user programs that do real work for users.
- It cannot run without system software
- These are created for user convenience only

Examples :

Word Processor s/w → MS Word, words star, softword, word perfect

Graphics Presentation s/w → MS Power point, Corel Idraw, Flash

Spread sheet s/w → MS Excel.

Database Management s/w → MS Access.

Media players → VLC & MX players etc.

* System software and Application software are two basic types of softwares

Syntax : Set of Rules in programming Language

3) Utility Softwares :

- These are the soft wares that maintain & check for health of computer by scanning and managing data
- These softwares performs a single & specific task

Examples :

- i) Disk Backup s/w → creates backup of system files & data
- ii) Disk Restore s/w → Restores the backup files back to system
- iii) Disk checkup s/w → It checks the data of disk
- iv) disk format s/w → It cleans the disk data
- v) Antivirus s/w → It detects & deletes the virus in system

Kernel Memory : The memory of disk having storage of operating system process is called kernel memory.

4) Firmware :

- The hardware chip that is having storage of software is called firmware

Ex : BIOS operating system is stored on BIOS chip.

5) Embedded Software :

- The software that is used for specific devices such as car, TV, Washing Machine & Watch etc. is called Embedded Software

Availability of Software in Market :**a) Commercial Software :**

- The pre-packaged software available for money in the market
- It is not free, we have to buy from market

Example : Windows, MS - Office

b) Open - source Software :

- It is also called free ware
- It is available at free of cost in Internet or open market

Example : Winzip and LINUX.

c) Share ware s/w :

- The trial version of software that is available for users to share in the market and internet at free of cost.
- The trial versions are released for promotion of the product only.

Ex: PDF converters online.

d) Proprietary s/w : It is a custom s/w, developed to address the specific needs of a company is known as proprietary s/w

Device Drivers : The special and specific programs written to perform task by specific devices only.

Example : Printer drivers

Webcam drivers

Scanner drivers

Windows ME : In this, ME stands for Millenium Edition

Crash : When your computer stops working suddenly without any instruction, this is called crash.

- Backup prevents data from system failure or crash

Backup : It creates a restore point for all the system files and data

- It creates a separate copy of system data base

IBM introduced personal computer in 1981

DESKTOP

Hibernate Mode : The highest power saving mode when compared to sleep mode.

Sleep / Standby Mode : The power saving mode of computer

- The files under process are not disturbed in this sleep mode.

GUI : → Graphical user Interface

→ It creates Icons for applications, which we are able to see on the desktop.

→ Desktop Icons are due to GUI Only

Recycle Bin : When ever we delete some files using delete command, the file will reach Recycle Bin

- If we want delete directly, without moving to Recycle Bin, we have to press " Shift + Delete" Command

Rename Icon :

- To Rename the Icon we have to select Icon and Press F2
- Other wise, select Icon & Press Right button of mouse and select Rename option

Help Menu :

- Help is a command available in start menu

Desktop : The home screen of computer which displays Icons on it for user applications

Cursor : The blinking Indicator that show you where your next action will happen.

Prompt & Dialogue Box :

- A symbol or question on the screen that prompts you to take an action and tell the computer what to do next

Example : Do you want to save ? Yes/No

- It mainly appears due to human / user actions only

Interrupt : The instruction or unique signal generated by a device, that tells the operating system that it is in need of immediate attention is called Interrupt.

Ex: During drivers Installation, It asks for to press " Next" to continue.

Windows Explorer :

- First, it is different from Internet Explorer

- Windows Explorer is a file manager, where as Internet Explorer is a web browser.

* It displays the computer data in folder wise format

Example : Local Disc D

Songs.

BILLA

Here Symbol Indicates that folder contains some sub folders

Window : The Rectangular area on screen that displays a program, text or information is called window.

Speech Recognition Software : This software is used to take voice input where hands are not used to give input to the computer.

RFID : Radio Frequency Identification

- It is the technology that detects the humans / animals location in forest / any where by tracking system
- RFID Devices are inserted in to human / animals body's

Screen saver : It configured correctly, the screen saver will prevent interaction with your computer after a specified time period.

Interface : The remote control that is used to turn on or off some machine is also called Interface.

IMPORTANT QUESTIONS ON BASICS

01. DOS stands for what?
 1) Dynamic operating system
 2) Disk operating system
 3) Default operating system
 4) Disk originating system
02. What was the last version of MS-DOS that recently released (stand alone version)?
 1) 6.11 2) 6.22
 3) 6.0 4) 6.33
03. In MS-DOS , MD command used for what?
 1) Move directory 2) Create directory
 3) Make folder 4) All of these
04. Which of the following is best tool for fixing errors on disk?
 1) CHKDSK 2) SCANDISK
 3) CHDKS 4) FDISK
05. Which command used for setting name to a DISK in DOS?
 1) DISKLABEL 2) NAMELABEL
 3) LABEL 4) NLABEL
06. Which computer memory used for storing currently processing data?
 1) ROM 2) Internal memory
 3) Non-volatile memory 4) CD
07. The detailed description of the program cycle, and program along with the result in printout form is called ?
 1) Report 2) Output
 3) Folder 4) Documentation
08. The term used to describe the instructions that tell the computer what to do is called?
 1) Software 2) Storage
 3) Input 4) Output
09. The action taken on data to get information?
 1) Compiling 2) Terminating
 3) Processing 4) Changing
10. What kind of computer you find in digital watch?
 1) Mainframes
 2) Embedded computer
 3) Notebook
 4) Super computer
11. Which is not a basic function of computer?
 1) Copy text 2) Accept Input
 3) Process data 4) Store data
12. The contents of _____ are lost when the computer turns off.
 1) Output 2) ROM
 3) Input 4) Memory
13. The frequently used instructions of a computer are fetched from?
 1) Cache memory 2) Hard disk
 3) Registers 4) RAM
14. Which of the following is microprocessor based device?
 1) Server 2) Personal computer
 3) Super computer 4) Mainframe
15. The common pointing input device?
 1) Trackball 2) Touchpad
 3) Mouse 4) Keyboard
16. External devices such as printer, scanner and keyboard are called?
 1) Add on devices 2) Expansion slots
 3) Peripherals 4) All of these
17. Which of the following is not hardware?
 1) Compiler 2) Monitor
 3) Light pen 4) Joystick
18. Storage that remains after the power is turned off is referred to as?
 1) RAM 2) ROM
 3) Non-volatile memory 4) Both 2 & 3
19. Which of the below is first electronic computer?
 1) EDSAC 2) Abacus
 3) ENIAC 4) UNIVAC
20. The difference between memory and storage is, that memory is _____ and storage is _____?
 1) Permanent, Temporary
 2) Temporary, Permanent
 3) Slow, fast
 4) Fast, slow
21. What is the permanent memory built into computer?
 1) ROM 2) RAM
 3) Hard disk 4) CPU
22. COMPUTER word derived from which language?
 1) Greek 2) Latin
 3) Spain 4) English
23. The large size computers were in which generation?

- 1) 1G 2) 2G
3) 3G 4) 4G
24. The Complete processing in computer done at?
 1) RAM 2) ROM
3) Monitor 4) CPU
25. Which of the following are software types?
 1) System software 2) Application software
3) Utility software 4) All of these
26. RAM is a type of which memory?
 1) Volatile 2) Temporary
3) Primary 4) All of these
27. Printed copy is often called as?
 1) Hard copy 2) Soft copy
3) Blank copy 4) Text copy
28. Which of the following is collection of facts which are not in sequence?
 1) File 2) Record
3) Data 4) Information
29. Which device is used to send information into computer?
 1) CPU 2) Input devices
3) Output devices 4) Memory devices
30. Which of the following are direct entry input devices?
 1) Barcode reader 2) Light pen
3) Mouse 4) Optical scanner
5) All of these
31. Which of the following is required when more than person uses Central server at a time?
 1) Light pen 2) Terminal
3) Mouse 4) Keyboard
32. An input/output device at which data enters or leaves a computer system is?
 1) Printer 2) Mouse
3) Terminal 4) Keyboard
33. Multiuser systems provided cost savings by connecting many of— to the CPU?
 1) PC's 2) Dumb terminal
3) Main frames 4) Super computers
34. POS stands for?
 1) Paid on sale 2) Post on speed
3) Point of sale 4) Place of sale
35. To move cursor to the beginning of line in text, which key we press?
- 1) Page up 2) Enter
3) Begin 4) Home
36. Which key is used in combination with other key to perform some function?
 1) Ctrl 2) Shift
3) Alt 4) All of these
37. Which of the below is special device for playing for games?
 1) Mouse 2) Keyboard
3) Joystick 4) Light pen
38. Alt, Ctrl, Shift are called which type of keys?
 1) Modifier 2) Function
3) Adjustment 4) Numeric
39. Which keys are used to restart the computer with keyboard?
 1) Del+Ctrl 2) Alt+ Ctrl+ Shift
3) Alt+ Ctrl+ Del 4) All of these
40. Which of the following is a multidirectional and pointing device?
 1) Keyboard 2) Mouse
3) Joystick 4) Light pen
41. Visual/video display unit is example of?
 1) Input device 2) Output device
3) Both of these 4) All of these
42. FAX is a ?
 1) Input device 2) Output device
3) Both of these 4) We can't say
43. In which of the printer, embossed steel band used for printing letters on paper?
 1) Band printer 2) Chain printer
3) Laser printer 4) Dot matrix
44. The display size of a monitor is measured in which direction?
 1) Horizontally 2) Vertically
3) Diagonally 4) Zigzag
5) All of these
45. A Dot on Monitor screen is called?
 1) Ink 2) Pixel
3) Dpi 4) All of these
46. Which of the following used for displaying information in public places?
 1) Monitors 2) Overhead projectors
3) Both of A&B 4) Kiosk

47. Which of the following is bidirectional printer?
 1) Laser 2) Inkjet
 3) Daisywheel 4) Dot-matrix
48. Which of the below printer cannot be used for graphics printing?
 1) Inkjet 2) Daisywheel
 3) Laser 4) All of these
 5) None of these
49. Which of the following is not output device?
 1) VDT 2) VDU
 3) CRT 4) LCD
 5) None of these
50. Clarity of screen is measured in ?
 1) Rotation 2) Reflection
 3) Resolution 4) Refraction
51. In ALU, Which of the following performs arithmetic calculations?
 1) Pins 2) Registers
 3) RAM 4) ROM
52. Which of the following software satisfy who can't use their hands for computer input?
 1) Video conferencing
 2) Speech recognition
 3) Digitizer
 4) Pinner
53. Which of the following is Primary storage device?
 1) RAM 2) CD
 3) DVD 4) All of these
54. Which of the following is magnetic storage device?
 1) Magnetic tape 2) Hard disk
 3) Magnetic drums 4) All of these
55. The main directory of a disk is?
 1) Root directory 2) Sub directory
 3) Folder 4) Mini directory
56. HDD is full form of?
 1) High disk drive 2) Hard disk drive
 3) Hard digital disk 4) High digital disk
57. UDF stands for?
 1) Universal disk format
 2) Universal data format
 3) Updated disk format
 4) All of these
58. Which of following is process of dividing disk into tracks and sectors?
 1) Tracking 2) Sectoring
 3) Allotting 4) Formatting
59. What is the memory size of 3.5 inch floppy disk?
 1) 1.8 MB 2) 1.4 MB
 3) 2.4 MB 4) 4.7 GB
60. Which of the following is not valid size of floppy disk?
 1) 3.5 inch 2) 8 inch
 3) 5.25 inch 4) 5.5 inch
61. Computers use which number system to store data and perform calculations?
 1) Binary 2) Octal
 3) Decimal 4) Hexa decimal
62. Keystroke is using which code to convert into the corresponding bits?
 1) ASCII Code 2) ANSI Code
 3) EBCDIC 4) ISO
63. What is the value for binary number 1001000?
 1) 24 2) 62
 3) 72 4) 84
64. What is max count that we can get with 8bits?
 1) 255 2) 256
 3) 32 4) 72
65. What is the last value that we can get with 8bits?
 1) 255 2) 256
 3) 32 4) 72
66. If we convert 72 into different number systems, which will get highest number of digits in it?
 1) Binary 2) Octal
 3) Decimal 4) Hexa decimal
67. Which of the following device acts as both input and output devices?
 1) FAX 2) MODEM
 3) Digital camera 4) All of these
68. The terminal (device) which contains only keyboard and screen without processing unit is called?
 1) Active terminal 2) Dumb terminal
 3) Computer 4) Screen
69. What are chief components of 3G computers?
 1) LSI 2) IC's
 3) Transistors 4) All of these

70. Which of the following is sequential access medium device?
 1) CD 2) DVD
 3) Magnetic tape 4) All of these
71. Which metal is used in processors?
 1) Lithium 2) Silicon
 3) Gold 4) Platinum
72. In control unit, what are the functioning elements to control system components?
 1) Registers 2) Control pins
 3) CU 4) Controllers
73. CPU can directly understand which language?
 1) JAVA 2) C++
 3) SQL 4) Assembly
74. Which language directly understood by computer?
 1) High level 2) Machine
 3) Low level 4) Middle level
75. Which of the following is used for scientific calculations?
 1) FORTRAN 2) COBOL
 3) SQL 4) ALGOL
76. The process of finding errors is called ____?
 1) Testing 2) Debugging
 3) Translation 4) Conversion
77. The process of rectifying errors is called ____?
 1) Testing 2) Debugging
 3) Translation 4) Correction
78. One million bytes is equal to?
 1) Kilobyte 2) Megabyte
 3) Gigabyte 4) Terabyte
79. One trillion bytes is equals to ?
 1) Kilobyte 2) Megabyte
 3) Gigabyte 4) Terabyte
80. The machine cycle includes which functions?
 1) Fetch 2) Decode
 3) Execute 4) Store
 5) All of these
81. The simultaneous performance of two or more tasks in single CPU?
 1) Multitasking 2) Multiprogramming
 3) Multi processing 4) All of these
82. Reusable optical storage will typically have the acronym?
 1) CD 2) DVD
 3) RAM 4) RW
83. The common type of storage devices in computer are?
 1) optical 2) Magnetic
 3) Flash 4) Cache
84. Which of the following has the smallest storage capacity?
 1) CD 2) DVD
 3) Floppy disk 4) Pen drive
85. Which of the following is single user operating system?
 1) LINUX 2) UNIX
 3) Windows 4) DOS
86. In flowchart Rectangle represents which function?
 1) Input 2) Processing
 3) Decision 4) Output
87. To make a notebook as desktop model , the note can be connected to a ____ which is connected to a Monitor another devices.
 1) Bay 2) Bus
 3) Docking station 4) Network
88. Gigabyte is the 2 to the power of ?
 1) 10 2) 20
 3) 30 4) 40
89. Information on mother board components travelled through?
 1) Bays 2) Buses
 3) Wires 4) RAM
90. Binary code will have how many choice?
 1) 0 2) 1
 3) 2 4) 3
91. Restarting computer which is running is called ?
 1) Cool booting 2) Warm booting
 3) Both of these 4) Buses
92. VGA is full form for?
 1) Video Graphic Array
 2) Visual Graphic Array
 3) Video Graph Application
 4) All of these
93. In MICR, First 3 digits of code represents?
 1) City code 2) Bank code
 3) Branch code 4) All of these
94. Who is the inventor of C Language?
 1) Charles babbage 2) Dennis Ritchew
 3) Blaise Pascal 4) All of these

- Windows \rightarrow 1980
by Engg by
95. Widows operating introduced in which year?
 1) 1965 2) 1975
 3) 1985 4) 1995
 96. In Kbps, b stands for what?
 1) Byte 2) Bit
 3) Any of these 4) Both of these
 97. Who's idea was to introduce storage capacity in computers at earlier stages?
 1) Eckert 2) Von Neumann
 3) Mauchley 4) Dennis Ritchie
 98. Which of the below item performs POST?
 1) RAM 2) HD
 3) BIOS 4) CD
 99. CRAY 1 is which type of computer?
 1) Super 2) Mainframe
 3) Mini 4) Micro
 100. Virtual memory is present in?
 1) CD 2) DVD
 3) Hard disk 4) RAM
 101. Which of the following code maintains Order in PRINTING devices?
 1) Binary code 2) Spooler
 3) Phisher 4) Pins
 102. Which protocol provides INTERNET connection for keypad(small) mobile phones?
 1) TCP 2) IP
 3) HTTP 4) WAP
 103. Which of the following are forms of RAM in market?
 1) SIMM 2) DIMM
 3) Both A&B 4) MIMM
 104. Which of the following in Register holds next instruction of Accumulator or ALU?
 1) ROM 2) RAM
 3) Program counter 4) All of these
 105. Which of the following translator compiles the source code line by line?
 1) Compiler 2) Interpreter
 3) Assembler 4) All of these
 106. Which type of error does not allow source code to produce output?
 1) Logical 2) Syntax
 3) Both 4) Any of these
 107. What are the basic building blocks of registers in CPU?
 1) Logic gates 2) Basic gates
 3) Dupli gates 4) All of these
 108. Which of the following are Logic gates?
 1) AND 2) OR
 3) NOT 4) All of these
 109. Which of the following is bidirectional bus on mother board?
 1) Address bus 2) Data bus
 3) Logic bus 4) Gate bus
 110. APPLE Macintosh and Desktop PC are two types of _____
 1) Platforms 2) Processors only
 3) OS only 4) Gates
 111. The vendor created program available for free are called?
 1) Repair 2) Patch
 3) Resource 4) Puncter
 112. The property of Desktop icons to open a new window or application is due to?
 1) Software 2) GUI
 3) Network 4) All of these
 113. The unique signal generated by any device, that it is need of immediate action is called?
 1) Event 2) Prompt
 3) Interrupt 4) Signal
 114. In windows explorer, the + Symbol before the folder indicates that, it has _____?
 1) Commands 2) Events
 3) Sub directory 4) Sub folders
 115. Graphics presentation software's are which type of software?
 1) System software 2) Application software
 3) Utility software 4) Embedded software
 116. To rename a folder on desktop, which function key is used?
 1) F1 2) F2
 3) F3 4) F4
 117. The pictorial representation of algorithm called?
 1) Algorithm 2) Source code
 3) Flowchart 4) All of these
 118. In flowchart, CIRCLE indicates which function?
 1) Flow of data 2) Input data
 3) Connector 4) Processing

119. Which of the programming code used in COMPUTER GAMES Development from early days?
- 1) C
 - 2) C++
 - 3) JAVA
 - 4) NET
120. Which of the following technology used in 5G computers?
- 1) Artificial Intelligence
 - 2) Nano science
 - 3) Robotics
 - 4) All of these
121. The technology of sending rod like structures into human body for delegated operations is?
- 1) Robotics
 - 2) Laser
 - 3) Nano science
 - 4) All of these
122. Which of the following is freeware/open source operating system?
- 1) Windows
 - 2) LINUX
 - 3) Macintosh
 - 4) All of these
123. Application Programming Interfaces are built in?
- 1) RAM
 - 2) ROM
 - 3) Operating system
 - 4) Software
124. The software required for printer, scanner etc..to connecting to computer are called ?
- 1) Device drivers
 - 2) Operating system
 - 3) Unknown Software
 - 4) Free ware
125. What is total number of choices given by hexadecimal code ?
- 1) 2
 - 2) 7
 - 3) 10
 - 4) 16
126. What will the maximum number(from 0 to 9) is present in Octal code numbering?
- 1) 2
 - 2) 7
 - 3) 8
 - 4) F
127. 23A4 is example for which number system representation ?
- 1) Binary
 - 2) Octal
 - 3) Decimal
 - 4) Hexadecimal
128. What is the binary code for decimal number 72?
- 1) 1001000
 - 2) 1011000
 - 3) 1000100
 - 4) 11001100
129. Which of the following is not a hexadecimal number?
- 1) A23F
 - 2) A24G
 - 3) 2345
 - 4) 453A
130. Barcode readers are used at _____ systems.
- 1) PDS
 - 2) PPS
 - 3) POS
 - 4) PRS
131. Which of the following is Non-impact printer?
- 1) Inkjet
 - 2) Laser
 - 3) Thermal
 - 4) All of these
132. Intel Pentium is a _____?
- 1) Operating system
 - 2) RAM
 - 3) ROM
 - 4) Processor
133. Who designed the first electronic computer ENIAC?
- 1) van Neumann
 - 2) Joseph m. jaquard
 - 3) Charlessbabbage
 - 4) J.P. Eckert and J.W.Mauchly
134. Who invented the C++ language?
- 1) Bjorn stroustrup
 - 2) Columbus
 - 3) Dennis M.Ritchie
 - 4) Karl marx
135. The keystroke is converted to which code of standard bits?
- 1) ANSI
 - 2) ASCII
 - 3) Binary
 - 4) All of these
136. The information stored in CD-ROM is in the form of?
- 1) Digital
 - 2) Analog
 - 3) ANSI
 - 4) Text
137. Which technology is used in CD-ROM drive?
- 1) Mechanical
 - 2) Optical
 - 3) Laser
 - 4) Density
138. Which of the below company is leader in hard disk manufacturing?
- 1) IBM
 - 2) HP
 - 3) Segate
 - 4) Samsung
139. Hard disk can have _____ heads.
- 1) 1
 - 2) 2
 - 3) 0
 - 4) More than 2
140. EEPROM stands for?
- 1) Electrically erasable Permanent Read Only Memory
 - 2) Electrically engaged Programmable Read Only Memory
 - 3) Erasable erasable Permanent Read Only Memory
 - 4) Electrically erasable Programmable Read Only Memory
141. Memory unit is a part of?
- 1) CU
 - 2) ALU
 - 3) CPU
 - 4) Register

142. Which of the following is only a readable cannot be modified?
 1) Floppy disk 2) CD-ROM
 3) Hard disk 4) All of these
143. Which of the following is the memory unit for analytical engine?
 1) Counter wheels 2) RAM
 3) ROM 4) Hard disk
144. SMPS Converts ?
 1) DC to AC 2) AC to DC
 3) RAM to ROM 4) All of these
145. In MS-DOS , The primary hard disk has the drive letter of?
 1) C 2) A
 3) B 4) D
- 146.. MOS stands for?
 1) Method Organ System
 2) Metal Oxide Semiconductor
 3) Mother Of System 4) Most
147. Which storage device is mounted on REELS?
 1) Hard disk 2) Floppy disk
 3) Magnetic Tapes 4) CD
148. Primary memory stores which of the following?
 1) Programs 2) Data
 3) Result 4) All of these
149. Data is stored in computer as?
 1) Matter 2) CD's
 3) Data 4) Files
150. Which of the below can easily carried in hand, and stores large amount of data?
 1) Floppy 2) CD
 3) DVD 4) RAM
151. Which of the following can store large amount of data?
 1) DVD 2) Hard disk
 3) CD 4) Processor
152. Which of the following is temporary memory?
 1) RAM 2) ROMM
 3) PROM 4) All of these
153. Which of the following is a sequential access device?
 1) Magnetic Tape 2) CD
 3) DVD 4) All of these
154. The supplement of the primary internal storage of a computer is?
- 1) Back-end storage 2) Secondary storage
 3) RAM 4) All of these
155. In MICR , C stands for what ?
 1) Code 2) Computer
 3) Character 4) Control
156. Which of the following device is virus free?
 1) CD 2) DVD
 3) Floppy disk 4) None of these
157. Resolution of laser printer is measured with?
 1) LPI 2) CDM
 3) MHz 4) DPSI
158. Speed of line printer is limited by the speed of?
 1) Cartridge used 2) Current bills
 3) Paper movements 4) All of these
159. The OMR is able to evaluate only those documents which printed within _____ position.
 1) Special 2) Marked
 3) Magnified 4) Scanned
160. Which of the following input device used for playing the video games in computer?
 1) Joystick 2) Track ball
 3) Mouse 4) Printer
161. The keys of the keyboard are?
 1) Alphanumeric keys 2) Functional keys
 3) Arrow keys 4) All of these
162. The device that draws the pictures or diagrams under computer control is?
 1) Printer 2) Light pen
 3) Plotter 4) All of these
- 163.Which of the following is a CRT?
 1) Printer 2) Monitor
 3) Scanner 4) Mouse
164. TWAIN is related which of the following device?
 1) Scanner 2) Printer
 3) MICR 4) Joystick
165. The light sensitive device that converts printed text or other images into digital form is?
 1) Scanner 2) Printer
 3) Mouse 4) MICR
166. Which of the following is not input device?
 1) MICR 2) VDU
 3) Light pen 4) Keyboard
167. COMPARE is which type of function?
 1) Arithmetic 2) Functional
 3) Logical 4) All of these

168. What are the arithmetic functions of ALU?
- 1) Add ,subtract, move, Compare
 - 2) Divide, compare, multiply, add
 - 3) Add, subtract, multiply, compare
 - 4) Divide, multiply, add. Subtract
169. Peripheral devices are :
- 1) Apart of CPU 2) Only output devices
 - 3) Input devices 4) Both 2 & 3
170. Basic Parts of CPU are ?
- 1) ALU, RAM, ROM 2) ALU, CU, RAM
 - 3) ALU, CU, MU 4) ALU, RAM, MU
171. The first calculating device was?
- 1) Clock 2) ABACUS
 - 3) ENIAC 4) Calculator
172. Who built the first mechanical calculator?
- 1) Blaise Pascal 2) JAQUARD
 - 3) John mauchely 4) All of these
173. Punched cards were introduced by?
- 1) Jaquard 2) Pascal
 - 3) Charless 4) Madhan
174. What the chief components of 3rd generation computers?
- 1) VLSI 2) IC'S
 - 3) LSI 4) Vacuum tubes
175. Windows operating system introduced in which generation?
- 1) 1st 2) 2nd 3) 4th 4) 3rd
176. IBM 7030 belongs to which generation?
- 1) 1ST 2) 3RD 3) 4TH 4) 2ND
177. Processor speed is measured in terms of?
- 1) Hertz 2) MHz
 - 3) GHz 4) All of these
178. Accumulator register holds which of the following data?
- 1) Result 2) Processing data
 - 3) Both of these 4) RAM
179. Which of the following will perform the POST operation?
- 1) RAM 2) BIOS 3) CAD 4) HDD
180. Which of the following is impact printer?
- 1) Daisywheel 2) Dot-matrix
 - 3) Chain printer 4) All of these

Answers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2	2	2	3	2	4	1	3	2	1	4	1	2	3	3	1	4	3	2
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	1	4	4	4	1	3	2	5	2	3	2	3	4	4	3	1	3	2
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
2	3	1	3	2	3	4	2	5	3	2	2	1	4	1	2	1	4	2	4
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	2	1	1	4	2	2	3	2	2	4	2	1	1	2	2	4	5
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	4	2	3	4	2	3	3	2	3	2	1	1	2	3	2	2	3	1	3
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
2	4	3	3	2	2	1	4	2	1	2	2	3	4	2	2	3	3	2	4
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
1	2	3	1	4	2	4	1	2	3	4	4	4	1	1	1	2	3	4	4
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
3	2	1	2	1	2	3	4	4	3	2	1	1	2	3	4	4	3	2	1
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
4	3	2	1	1	2	3	4	4	3	2	1	1	2	3	4	4	3	2	4

M.S. OFFICE

How to start MS Office Components :

- Step 1 : Click on start button
- Step 2 : Select All programs
- Step 3 : Next click on MS office
- Step 4 : Select the component you need as Word, Power point or Excel etc.,

Before looking into M.S.Office components, we will see some basic concepts that related to M.S. Office

Instruction : The input data of any thing either '0' or '1' is called Instruction

Command : The predefined Instruction to the computer

Ex : Print

Menu : The command which shows you different choices

Ex : File

- The commands are used in menu's also.

File : The collection of related information stored and deal with it as a unit called file.

Copying : The process of taking a copy of the existing thing may be text / file / folder etc.

- We have to press Ctrl + C command

Editing : The process of making changes or correcting the existing document is called editing

Save : The process of saving a file with required name (moving from RAM to Hard disk)

Save As : The process of saving the file with some other name

- It can be done when we need 2 or more copies for same file.

Clipboard : When ever we cut / copy the text, first it is placed / stored temporarily on clip board.

MICROSOFT WORD :

- It is word processor and an application software
- We have recent versions of M.S.Office 2003, 2007 and 2010 & 2013 which gives us the different options in different way.
- So, we see the M.S. Office 2003 which is the basic version & used widely.

* **File Extension :** The file extension is the dot extension created automatically when we create / save a file.

- It shows identification for the type of file.
- In MS Word, → For 2003 Version → For 2007, 2010, 2013

↓ ↓
.doc .doc x

- Always the file extension is followed after the file name with dot extension only

Ex: turningpoint.doc

Different bars present in M.S. Office:

i) **Title Bar :** The title or file name is displayed on the title bar

- It has the options to minimize, maximize and close options.
- It is present on top place of any window / Screen
- [] → minimize → It minimizes the current window but not closed.
- [+] → maximize → It maximize the minimized windows. Minimized files are shown in taskbar
- [x] → close → It closes the current application / window (exit)

ii) Taskbar : This bar present at the bottom of screen

- It contains minimized applications & names
- It has start menu option
- The IST (Time) displayed at corner of taskbar
- The volume control Icon present on taskbar only.

* The file name is displayed in title bar & task bar

iii) Menu Bar : The bar that shows different menus that are present in the application

- Ex : File, Edit, View etc.,
- Menu gives the choice of commands / options to select

iv) Standard tool bar : The bar which has some standard tools . Such as open, save, print, send etc.

- The buttons are placed in this bar

v) Format Tool bar : The bar which contains format text options is called format tool bar.

- It contains buttons & options to change font style, font size & changing page styles etc.
- It contains options to perform on text of page
- It contains alignment tools (Left, Right, Center alignment)

vi) Status Bar :

- The Bar that is present just above the task bar
- It shows the current page number, line number & text number.
- * Text indicates all numbers, Alphabets, Special Symbols & Spaces etc.

vii) Ruler Bar : This bar helps in maintaining vertical Alignment

viii) Scroll Bar : This bar helps in moving the pages to up & down

Now we will see the menu bar and its options clearly that, which are important. It is menu of M.S. Office (Word) -2003.

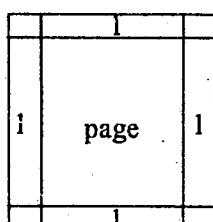
File	Edit	View	Insert	Format	Tools	Table
↓	↓	↓	↓	↓	↓	↓
New	Cut	Normal	Break	Font	Word count	Formula
Open			(page break)			hide gridlines
Save	Copy	Web layout	Hyperlink	Paragraph	Protect/document	
Save As	Paste	Print layout	Diagram	Background	letter & mailing	
page setup	Find	Header & footer	Date & Time	Styles & formating	Mail merge	
Print	Replace	Zoom	Picture	Change case	Spelling & grammer	
File search	Goto	Full screen		Drop Cap.	Macro	

Note : We will clearly see all the options / commands one by one in M.S. Word only

- In M.S. Excel and M.S. power point we will see important & remaining commands.

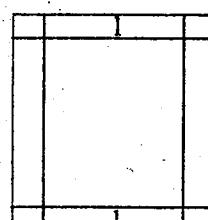
Default Margins of M.S. Word Page :

M.S. Word 2003



All sides are
1 inch
1 inch = 2.54 cm
- In this case, Top & Bottom, left & Right margins are 1 inch only

MS Word - 2007



In this case top &bottom margin is 1 inch
Left & Right margins is 1.25 inch

1) **File menu** : Alt + F is shortcut key

a) **Open** : This command is used to open an existing document / file
 → ctrl + o is the shortcut key to open the existing document in the memory / storage

b) **New** : This command is used to open a new document
 → ctrl + N is the short cut key

c) **Save** : To save the current document with required name
 → ctrl + S is the shortcut key

d) **Save As** : To save the existing document with some other file name
 → F12 is the function key to get save as option / dialogue box

e) **Page Setup**: This command is used to change the page margins and page size.
 → A4 size paper measurement → 21.0 x 29.7 cm

f) **Print Preview** : This option is used to see the page how it appears after taking the print out on paper.

g) **Print** : This command is used for print dialogue box
 → ctrl + p is the shortcut

h) **Exit** : This command is used to leave the current page / document

2) **EDIT MENU** : Alt + E is the shortcut key

a) **Undo** : The undo operation performs the last actions to be taken back
 → ctrl + z is the shortcut key

Ex: By mistake if you delete 2 paragraphs and not yet saved, you can use this **Undo** operation to retrieve the paragraphs back

b) **Redo** : This command can only repeat the last undo action that performed.

Ex: If we had deleted one word & after some time another word, if you press Redo it bring back only single word.
 → ctrl + y is the short cut key

c) **Cut** : The command when pressed, after selecting some text, it is removed & copied to the clipboard
 → Ctrl + x is the short cut key.

d) **Copy** : This command pressed after selecting some text it can only copy the same text but can not delete the text

- The text is copied to clipboard
- ctrl + c is the shortcut key

* If we want to select entire document to copy,
 We have to press Ctrl = A → Select All, and next Ctrl + C → Copy

e) **Paste** : This command pastes the selected text through cut or copy command

- The data from clipboard is pasted here
- Ctrl + V is the short cut key

f) **Select All** : To select all the contents of page / document we have to press Ctrl + A

g) **Find** : To find any specific word / Letter by giving some key words of that letter, we use find option
 - Ctrl + F is the short cut key

Ex: If we have "Computer Awareness" word in a page, if you press Ctrl + F and give just "Comp", than press enter.

- It displays all words starting with comp only.

Magnifier Range is from 10% to 500%

h) Goto : This command opts you to enter in to any page by just giving the page number

- Ctrl + G is the shortcut key

Ex : Press Ctrl + G and enter '7' in space provided, you will be directed to 7th page of document

i) Replace : This command is used to replace any word or letter with some other word / letter you want to do.

→ Ctrl + H is the shortcut key

Ex : If suppose, you have typed "Test" as "Tast" in all the pages of document

- If you want to correct all the pages with same word than press Replace and given from as Tast & Change it to "Test", it changed for whole document.

3) View : Alt + V is the short cut key.

a) Normal Layout : In this layout graphic pictures cannot be displayed

- Only text data is displayed.

b) Page layout : In this layout graphic pictures can be displayed.

c) Out line layout : In this layout rulers are provided to adjust page margins / sizes.

d) Tool bars : This is very important command under view menu

→ To select whether to show / hide some standard tool bar, this option is needed.

e) Header & Footer :

Header : The content / title that has to be displayed on top of the all pages of a document is kept with the help of Header

Ex: Title.

Footer : The content on Bottom side of page for all the pages of documents can be kept by using footer option

Ex : page number or date etc.,

f) Zoom : This option is used to increase / decrease the size of the document to clearly view the contents of page / file

- With this option we can see all the pages of document in the single window by reducing zoom level to minimum
- 100% is the normal view of a print layout page.
- 10% to 500% zoom is available in MS Word.

4) Insert :

a) Break : By clicking on Break you can select page Break.

Page Break : To Break the 2 paragraphs or single page in to 2 pages to separate the content, we use page break option.

- By placing the cursor at division point on document press Ctrl + Enter or select Pagebreak
- Ctrl + Enter is short cut for Pagebreak

b) Picture : We can insert any picture from Gallery to word document by pressing on picture command and selecting any picture / photo

c) We can insert Date & Time, Page numbers & Symbols by selecting from Insert menu.

5) Format :

- This menu is used to change fonts, borders & styles.

- This is very important menu for text formating (called as powerful menu in MS Word)

a) Font : Ctrl + D is the short cut key

- It is used to change font style, size and calligraph.

b) **Paragraph** : Here we can change the distance b/w words & lines & paragraphs.

c) **Bullets & Numbering** :

- To highlight some points of the document, this option provides special bullets & numbers

Ex : =>, • ⚫ , ○ etc

d) **Background** : We can change the background colour of the document with this option.

e) **Change case** : After selecting the text, we can change the selected text in below styles types.

Ex : "Letter" is word selected

* **Upper case** : All the text is converted into capital letter

Ex: LETTER

* **Lower case** : All the text is converted into small letters

Ex: letter

* **Sentence Case** : After every line ended with fullstop(.), the next letter becomes a capital letter

Ex : Letter sent. The people

* **Title case** : The every first letter of the word in any line is converted into capital letter

Ex : Letter Sent. The People

f) **Drop Cap** : A drop cap is a large capital letter at the beginning of a text block that has the depth of two or more lines of regular text.

6) Tools :

This menu is used to access spell check, macros, mail merge etc.

a) **Spelling and Grammar** :

- F7 is the shortcut function key

- we can check the spelling mistakes in the document

b) **Word Count** :

- We can count the number of words in specified line or page or paragraph

c) **Auto correct** :

- To auto correct the spelling mistakes & alignments in any paragraph we use this option.

d) **Protect Document** :

- This provides the security to the document by creating an authentication password

- Password restricts the access of unauthorized users to use the document

e) **Mail merge** :

- This option is useful to send same letter to different address or many people with different names

- Here the content of letter is same

- We can send same letter to many people with their address at a time

f) **Letter wizard** :

- This wizard tells us steps to creates a letter in step by step manner

- Its like helping window to users to create a letter

g) **Macro** :

- The specially created commands that can be used to perform some specific functions by users itself

7) TABLE :

a) **Insert table** : We can create tables in MS Word document by selecting number of columns & Rows.

b) **Hide Gridlines** : To hide the lines & Show only content of table, this option is useful & used.

IMPORTANT TERMS IN MS WORD : KEY & TASKS.

- i) **Alt and Ctrl** : These two command keys are used in combination with another key or with mouse
 - Ex : Ctrl + C used to copy the selected text.
- ii) **ESC** : it is used to cancel selection in a menu
- iii) **Back space** : Pressing this key deletes the character to the left of the cursor
- iv) **Delete** : This key deletes the character to the right of the cursor.
- v) To select entire paragraph, we have to press the mouse continuously for 4 times
 - To select entire line, we have to press the mouse continuously for 3 times
 - To select single word, we have to press the mouse 2 times, by placing cussor at that word only.
- vi) In MS word - 2007 version, the print, save options are found in **HOME** menu, not in file menu
 - because there is no file menu in menu bar for version 2007.
- vii) **Vertical Alignment** :
 - By using the Ruler Bar, we can justify the page with vertical alignment
 - All the lines kept in uniform length vertically
- viii) → .doc & .docx are default file extensions of 2003 & 2007 version but, **Document1** is the default file name
- ix) **Bold** : To standout any word, we select the word / text and apply Bold style to it.
 - ctrl + B is the shortcut key.
- x) **Italic** : To change the text into Italic font we need to select 'I' symbol on format tool bar
- xi) **Underline** : To underline the text (may be selected text)
 - ctrl + U is the shortcut key.
- xii) **Home key** : This command takes the cursor to the starting letter of the same line
- xiii) **End key** : This command takes the cursor to the last letter of the line
- xiv) **ctrl + End** : This commands takes the cursor to the last letter of the whole document
- xv) **ctrl + Home** : This commands takes the cursor to the first letter of the whole document
- xvi) The **Red underline** appeared automatically, indicates that the word not present in word dictionary.

MS - POWER POINT

- It is Graphics presentation software.
- Here we will see only important aspects regarding power point
- Slides** : The individual page in power point is called slide
 - data representation is done through slides only

- Template** : It is a professionally designed empty document that can be adopted for user needs.
 - In these templates, with provided styles, we can manipulate the data.
- Slide master** : The house of all these predesigned templates of different styles
- Slide sorter** : The seperate window structure, which shows all the slides and give us a chance to rearrange the slides in required order.

File extension:

- .ppt & .pptx are default file extensions for MS-PPT of 2003 & 2007 respectively
- other extensions in powerpoint

Version - 2003

- * PPS (Power Point Show)
- * Pot (Template)

Version 2007, 2010, 2013

- * PPSX (Power Point Show)
- * POT X (Template)

AMD is the Processor's Manufacturing Company

Multimedia : The data having any type of text / image / audio/ motion picture data is called multimedia.
 → In powerpoint slides, we can insert multimedia contents.

New slide : → To get the new slide we have to select from file menu
 → Ctrl + M is the shortcut key for new slide

Note, Handouts & Outlines : The small size slides in page that give idea of any special content to audience
 → These look like Note points in corners

Default size of slide :

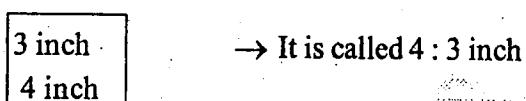
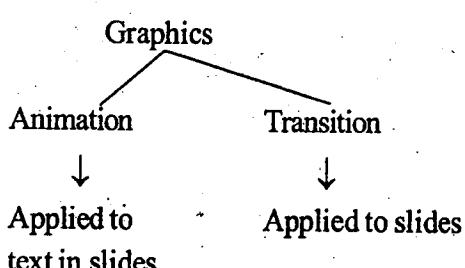


Fig : slide measurements

→ ENTER key is pressed at end of every line in slide



→ we can add audio files to the slides

i) Animations :

- it is selected from custom animation menu
- There are 3 types of Animations : 1) Entrance 2) Emphasis 3) Exit
- Animation widely used for text with in a slide

ii) Transitions :

- These graphics is applied between different slides that has to be appeared indifferent way
- Transition can not be applied to text in slide

Formats used in slides :

- i) Audio File formats : . wav, . mp3
- ii) Video file format : . mpeg, . 3gp
- iii) Image file format : . bmp, . Jpeg, . tiff

Note : All these extensions are given at end of the book.

Slide show : The full size / full screen view of the slides, without any menu bars and options

- It creates a full screen size slides
- We can select from view menu
- F5 is the shortcut key
- To get out from the slideshow, we have to press "ESC" Key

Hide Slide : To hide the unwanted slides in the slide show which are not to be deleted from power point file.

- This command present in slide show menu

AWT : Abstract Window Toolkit (provides frames in JAVA)

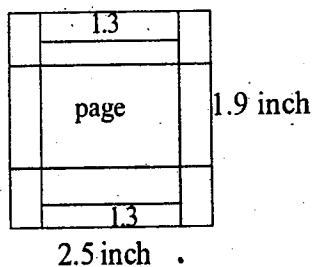
XBRL : eXtensible Business Reporting Language

MS EXCEL

- MS Excel is a spreadsheet application Software
- The data representation is in the form of Rows and columns
- The data base stored here in the form of tables

Default Page margins

- Left, Right margin → 1.9 inch
- Top, Bottom margin → 2.5 inch
- here 1.3 inch, in top & bottom margin
is reserved for Header & Footer.



File Extensions :

- .xls is the default file extension for MS-Excel 2003 version
- .xlsx is the default file extension for MS-Excel 2007, 2010, 2013 versions
- .xlsm (macro), .xlsb (binary) are also file extensions here

Purpose of Spreadsheets :

- Effective tool used for creation of tables and to perform calculations
- VBA applications are performed through these spreadsheets

Important terms :

- * **Cell** : It is the basic unit of worksheet where text is entered.
- * **Worksheet** : The combination of Rows & columns in a tabular form is called worksheet
- * **Work book** : The combination of 2 or more worksheets is called a work book
- Gridlines** : The lines that makes to form the Rows and columns are called Gridlines
- Spreadsheet** : It is a software tool that lets the users to enter, calculate & manipulate with set of numbers
- Active cell** : The current cell / processing cell where the cursor placed is called Active cell
 - Active cell content is displayed in formula bar.

Range of cell : The selection of more than 2 cells which are consecutive is called Range of cell

Cell Address : The coordinate points of column & Row of a cell is called cell Address

Ex: A4 → A is column, 4 is Row

* We have to represent column number followed by Row number only.

Row : The horizontal gridlines are formed as rows

- Rows are numbered from 1 to 65536

- 65536 is equal to $(256)^2$

Column : The vertical gridlines are formed as columns

- Total we have 256 columns.

- Columns are represented with Alphabets

- Columns Series Starts from A to Z, AA to AZ, BA to BZ, CA to CZ _____ IA to IV only

- IV is the last column in work sheet.

Formula : The sequence of values, Functions & arguments are used in formula to produce a new value from existing values

Example: = Sum (A1 : A2)

Here sum is a function

A1 & A2 are arguments

* Always formula starts with '=' operator

CELL REFERENCING : The Reference of a cell address in formulas through its column and row labels
→ cell referencing may be done in 3 ways

i) **Absolute Referencing :** The address of cell is shown with address values of both column & Row exactly

Ex: \$ B \$ 7 \$ → is address

ii) **Relative Referencing :** The address of cells is not specified exactly

Ex: B 7

iii) **Mixed Referencing :**

→ It is combination of Absolute & Relative referencing. The address of cell is shown with any one of the label either column or row

Ex : \$ B7, B \$ 7

Arguments : The values passed into functions through parenthesis.

- Arguments may contain numbers, text, constants and Alphabets etc.

Functions : The predefined commands that can perform specific calculations in worksheet by passing arguments through them.

Ex: i) Sum → To get Sum of values

ii) Min → To get the minimum value

iii) Max → To get the maximum value

iv) Avg → To get average of the numbers

v) Count → To count the non-empty cells (numeric)

Special Features of MS - Excel :

i) **Auto Sum :** It helps you to add the contents of a cluster of adjacent cells

ii) **List Autofill :** It automatically extends cell formatting when a new item is added to the end of a list

iii) **Auto fill :** It allows you to quickly fill cells with repetitive or sequential data such as dates or numbers or text

iv) **Auto Shapes toolbar :** It will allow you to draw a number of geometrical shapes, arrows, flowchart elements, stars etc.

v) **Wizard :** It guides you to work effectively while you work by displaying various helpful tips and techniques based on what you are doing

vi) **Charts :** Features will help you to present a graphical representation of your data in the form of Pie, Bar & Line charts.

vii) **Pivot Table :** It sums data in seconds and allow you to perform data analysis

→ Pivot table helps in generating reports like periodic financial statements, statistical reports etc.

→ Users can also analyze complex data relationships graphically.

viii) **Formula Bar :** The current data which we are typing in the Active cell is displayed in the formula bar

ix) **Spell check :** To perform Spell check we have to press F7 key

x) **Goto :** To goto a specific cell, we have to press F5 Key

Ex: goto B7, it takes cursor to B7 Cell only.

xi) **Print screen key :** It is the key in keyboard which takes the snapshot of current screen / window, so that we can paste image anywhere required.

xii) **Merging :** The process of combining two or more cells / tables into single table / worksheet is called merging.

xiii) **Transpose :** The function that display row data in column & column data in row.

SHORT CUTS:

Ctrl + Spacebar → To select the entire column

Shift + Spacebar → To select the entire Row

F7 → Spell check

F5 → To get a specific cell

F2 → It allows you to edit current cell

Note : Many shortcut keys are provided at end of the MS Office.

WINDOWS KEYS

SHORTCUT KEY	FUNCTION
Windows+ M	Minimize all the windows
Windows+F1	Display the Microsoft windows help
Windows++	Zoom in – increase page zoom
Windows--	Zoom out- decrease the zoom of page
Windows+ space bar	Show desktop without closing current page
CTRL+ALT+DEL	Bring windows task manager
F1	Help window of program
F2	To rename the selected icon
F5	To refresh contents or system
Alt+ F4	To close the current program

MS EXCEL KEYS

Home	Moves to the beginning of the row
F1	Opens excel help task pane
F2	Edits the current cell and its content
F3	Displays paste name dialogue box
F4	Repeats last action/command
F5	Go to box for a specific cell
F7	Spell check box
F11	Creates chart of the data in current range
F12	Display save as dialogue box
Ctrl+Shift+&	Applies the outline border for selected cells
Ctrl+Shift+~	Applies general number format
Ctrl+Shift+#	Applies date format with day month and year
Ctrl+Shift+^	Applies exponential number format with two decimal places
Ctrl+Shift+@	Applies the Time format with hour and minute, and AM or PM
Ctrl+Shift+:	ENTERS THE CURRENT TIME
Ctrl+ ;	Enters the current date
Ctrl+Spacebar	To select entire column
Shift+Spacebar	To select entire row

* Remaining same as ms word Commands only....for cut copy paste print find etc.....

MS POWER POINT KEYS

Ctrl+M	New slide
F5	SLIDE SHOW
SPACE BAR	Next slide
Esc	End slideshow
Alt+U	Mute the sound in slide

MS-WORD SHORTCUTS

Shortcut key	Description
Ctrl+A	Select ALL content of the page
Ctrl+B	BOLD the selected text
Ctrl+C	COPY Selected text
Ctrl+D	Open the FONT dialogue box
Ctrl+E	Aligns text to CENTER of the screen
Ctrl+F	Open FIND dialogue box
Ctrl+G	Open GOTO dialogue box
Ctrl+H	Open REPLACE dialogue box
Ctrl+I	ITALIC the selected text
Ctrl+J	Aligns the text to justify the screen
Ctrl+M	Indent the paragraph
Ctrl+N	Create NEW document
Ctrl+O	OPEN an saved / existing document
Ctrl+P	Open the PRINT dialogue box
Ctrl+R	Aligns selected text to the RIGHT of the screen
Ctrl+S	It SAVES the document
Ctrl+U	It UNDERLINES the selected text
Ctrl+V	PASTE the text/ file / folder
Ctrl+W	To CLOSE the current document
Ctrl+X	To CUT the selected text
Ctrl+Y	REDO the last action performed
Ctrl+Z	UNDO last action
End	Moves cursor to the end of line
CTRL+ End	Moves cursor to the end of document
Home	Moves cursor to beginning of line
CTRL+ Home	Moves cursor to beginning of Document
CTRL+ 5	To maintain 1.5 line spacing
F1	Open HELP Dialogue box
F5	Open FIND, REPLACE, GOTO dialogue box
F7	Spell and grammar check to selected text
F12	Opens a SAVE AS dialogue box
Shift+F12	It SAVES the document
Shift+F3	Changes letter case or to Title case Of Selected text
Ctrl+ Shift+F12	PRINTS the document
Alt+ Shift+ D	Insert the current DATE in the document
Alt+ Shift+ T	Insert the current TIME in the document
Mouse double click	To select a complete word
Mouse triple click	To select a complete line

Structure of Functions :

- It begins with function name, opening Paranthesis, arguments and closing parenthesis.

Types of charts :

- Barchart** : It emphasis on comparisions among individual items
→ Categories are organized vertically and values horizontally
- Line chart** : It shows trends in data at equal intervals
→ Usefull to depict the change in a value over a period of time
- Piechart** : It shows the proportional size of items that make up a data series to the sum of the items.

MS - ACCESS & DBMS

- Microsoft Access works only in windows operating system
- It cannot work in Apple macintosh system
- MS access works along with RDBMS.
- RDMBS - Relational Database management system

Data base : The data of a particular type stored in form of tables and retrieved when ever required.

Different ways of Database storage :

- Array** : The linear data structure which store a single data type elements only

Ex: Array int [10]

- It can stores only 10 integer values, but not characters

- Stack** : The data insertion (push), deletion (pop) are from single side only

- The deletion is performed on below principle

- LAST IN FIRST OUT → LIFO

Ex : Rings arranged to a fixed Rod on Floor

- Queue** :

- The elements are inserted (front) in one side & deleted from other side (rear) in queue.

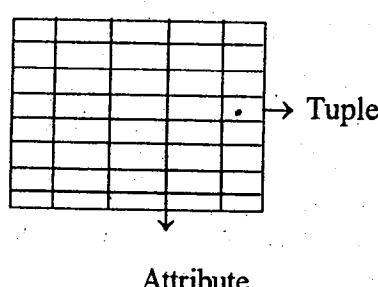
- It follows FIRST IN FIRST OUT → FIFO

Ex : Q lines for tickets at Box office

Note : Array is only the linear data structure.

Data base Table :

- Tuples → The Rows in database table called tuple
- Attribute → The columns in the data base table is called Attribute

*** Primary key :**

- The key which uniquely Identify a Record
- Each table have only one primary key

* The sequence of elements in data base are

Character → field → Record → file → Data base

Here

- Characters are entered into the filed
- Combination of fields is called Record
- Combination of Records is called file
- All these files are stored in Database

* Foreign Key : A field in this table which is primary key in another table

* Queries : These are used in SQL to create and retrieve the data from data base table

* Data Redundancy : Maintaining more than 2 copies of the same file in database is called data redundancy

* Data Inconsistency :

When we are maintaining data redundancy, by keeping many copies of same file at different locations in data base, If there is any updation or correction in data, we have to update / correct all multiple copies, otherwise It causes data In consistency

→ Dat Inconsistency is caused due to data redundancy only.

Ex: If we have list of one class students names.

→ making 5 copies and storing in all 4 drives and desktop also

→ If any student added into class, the data has to be updated in all 5 copies, but we update on only desktop file, So it cause data Inconsistency.

SQL → Structure Query Language.

i) DDL - Data definition Language

- Used for creating the tables

Ex: Create, Alter, Drop, Rename.

- Here we are defining or creating a new table by using queries.

ii) DML → Data manipulation Language

- DML Commands are used to retrieve the specific data from table

- DML commands are not used to create the table, but only to modify the data in tables.

Ex: Select, Update, Insert, Delete, Merge commands.

iii) TCL : Transaction control language (COMMIT, ROLL BACK)

RELATIONAL DATA BASES

i) Relationships : When ever we are creating relation between two different tables having some data it is called Relationship

→ Relationships are created by using primary key & foreign keys

Ex : Employee Name

Employee Name	Emp.ID

Table-1

Emp. ID	Salary

Table -2

Emp. ID	Work

Table - 3

Fig: Relational Model

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From Figure :

- Here Emp ID is primary key in Table 1
- Emp ID is foreign key in Table 2 & Table 3
- * These type of models creating entity relationships are called E-R models.
- * Primary key is specified with underline to the entity (Entity is the real world object)
- A is Primary key → A is entity only

Emples for database Access Tools :

- * MS Access
- * d BASE
- * ORACLE
- Above 3 are the database access tools

Data mining : The technique used by business men to see the trends in market by comparing values from past history.

Data ware house : The storage house of different types of data to be retrieved by data mining technique
- It stores multiple type of data base.

Sorting Data : Arranging the data in logical order in data base storage.

NUMBER SYSTEMS

Basically there are 4 types of number systems

- 1) Binary Number system have 0, 1 so only 2 choice.
→ Computer data stored in Binary format only
→ Base is 2
- 2) Decimal Number system 0 to 9
→ No Alphabets are used in this number system
→ Base is 10
- 3) Octal Number system → 0 to 7
→ There is no 8 or 9 in the octal number code.
→ Base is 8.
- 4) Hexa Decimal Number System
→ we use 0 to 9 and A to F in the number coding

Here A = 10 D = 13

B = 11 E = 14

C = 12 F = 15

→ The Base is 16

CONVERSIONS :

1) Binary to decimal Number

Convert 1 1 0 0 1 0 to Decimal number

$2^5 \times 1$	$2^4 \times 1$	$2^3 \times 0$	$2^2 \times 0$	$2^1 \times 1$	$2^0 \times 0$
----------------	----------------	----------------	----------------	----------------	----------------

→ So add $(2^1 \times 1) + (2^4 \times 1) + (2^5 \times 1)$, We get $2 + 16 + 32 \Rightarrow 50$ as Answer.

2) Decimal to Binary Code

Convert 50 to Binary Code

2	50
2	25 - 0
2	12 - 1
2	6 - 0
2	3 - 0
	1 - 1

- 1) Divided given number with 2 until we get dividend as 1
 2) Write from Bottom to Top, we get $110010_{(2)}$

3. Binary to Octal Code :

Convert 110010 to octal code

- * Divide the given binary code into 3 digits segment from Right side, so we get

1 1 0 / 0 1 0

Now Substitute in values for standard code 8421, we get

Step 1: 8 4 2 1

0 1 0 → take same value in 1's place

0+2+0=2 → take 0 value in 0's place and add them

For 010, we got 2

Step 2: 8 4 2 1

1 1 0

4+2+0=6

for 110, we got 6

Now merge 110, 010 so we get

62 → Its base is 8.

4) Binary to Hexadecimal code :

Convert 110010 to Hexadecimal Code

- * Divide binary code into 4 digits segment from right side, so we get

11 / 0010

Step 1 : Substitute in standard code 8421, we get

8 4 2 1

Step 2 : 8 4 2 1

0 0 1 0

0 0 1 1

0+0+2+0=2

0+0+2+1=3

Step 3 : Merge 11,0010 into single number, we get 32 base (16)

One more Ex: Binary to Hexa Decimal number

Convert 11111100110011 in to Hexa decimal.

Step 1 : Divide code in to 4 digits segment from right side

1 1 1 1 1 0 0 1 1 0 0 1 1

(d) (c)

(b) (a)

Step 2 : Now substitute code in standard code 8421

- | | | |
|------------------|------------------|-------------------|
| a) 8 4 2 1 | b) 8 4 2 1 | c) 8 4 2 1 |
| 0 0 1 1 | 0 0 1 1 | 1 1 1 1 |
| <u>0+0+2+1=3</u> | <u>0+0+2+1=3</u> | <u>8+4+2+1=15</u> |
| d) 8 4 2 1 | | |
| 0 0 0 1 | | |
| <u>0+0+0+1=1</u> | | |

Step 3 : Merge all these numbers from Right sides into single number

Here 15 is to be converted in to Alphabet

15 = F

Finally we get result as

1 F 33 (16)

Note : For the examination point part I is very important which consists of maximum questions

IMPORTANT QUESTIONS - MS OFFICE

1. What tool works best for word processing?
1) ms-ppt 2) typewriter
3) ibm word 4) microsoft word
2. MS-Word allows creation of _____ type of documents by default?
1) .DOC 2) .WPF
3) .TXT 4) .DOT
3. Outlook express is a _____?
1) email client 2) scheduler
3) address book 4) all of the above
4. What program is used in MS-Word to check the spellings?
1) spellpro 2) spellcheck
3) outlook express 4) all of these
5. Which of the following are valid min. & max. zoom sizes in MS-OFFICE?
1) 10,100 2) 10,1000
3) 20,250 4) 10,500
6. Which key should be pressed to start a new paragraph in MS-Word?
1) down cursor key 2) enter key
3) shift+enter 4) control +enter
7. Which of these toolbars allows changing fonts and their sizes?
1) standard 2) formatting
3) print preview 4) all of these
8. What option is used to use a paragraph at another place without removing it from the first place?
1) rotate 2) copy-paste
3) delete 4) move
9. What option is used to use a paragraph at another place after removing it completely from 1st place?
1) rotate 2) cut-paste
3) delete 4) move
10. To standout(Highlight) a word, what option can be used?
1) standout 2) delete
3) print 4) bold
11. Which option may be used to change page-size & margins?
1) page-setup 2) view
3) tools 4) data
12. Which of the following is the latest version of MS-WORD?
1) Word-97 2) word-98
3) word-ME 4) word-13
13. Which of the following is not a valid version of MS-Office?
1) office 95 2) office 97
3) office 99 4) office 2000
14. A letter, memo, report or other file prepared by Microsoft word is called a?
1) worksheet 2) slide
3) document 4) database
15. The contents of a clip board remain the same until?
1) you copy other text
2) you cut other text
3) you shut down your computer
4) all of above

16. Name of a newly created document is?
 1) document 1 2) word
 3) DOC 4) file
17. in MS word, RTF stands for ?
 1) real time formatting 2) real time fonts
 3) rich text format 4) really text files
18. Which toolbar in MS Word, allows you to direct access internet while working in a word document?
 1) main tool bar 2) web tool bar
 3) standard tool bar 4) graphics tool bar
19. On how many documents you can work simultaneously in MS word?
 1) one 2) two
 3) more than two 4) any number
20. User can use _____ button to cancel the last editing?
 1) ctrl+u 2) undo
 3) redo 4) shift+u
21. New selected font is applied to?
 1) full document
 2) all the text above the current cursor position
 3) the selected text
 4) only to headings
22. MS Word automatically changes the font color of these?
 1) email address 2) web address
 3) mail address in US 4) both 1 & 2
23. Auto-text can be used to insert _____ in a document?
 1) text 2) graphics
 3) any of the above two 4) both of the above
24. Macros stored in the global macro sheet can be used?
 1) in the current document only
 2) in any document
 3) can be used only local
 4) not consistent behavior
25. Redo button is used to?
 1) reverse a redo action 2) users choices
 3) reverse an undo action 4) all the above
26. Magnifier button is available on?
 1) print preview toolbar
 2) standard toolbar 3) formatting toolbar
 4) both on 1 & 3
27. One of the following is not permitted while naming a data source?
 1) letters 2) numbers
 3) underscores characters 4) spaces
28. Option designed to automatically save a backup copy of your document at specified intervals is?
 1) close button 2) create data source
 3) auto save 4) save as
29. It is family of types styles such as arial, Geneva, modern etc. it is?
 1) format 2) font
 3) form letter 4) form
30. It is the way text appears on a page. it is?
 1) format 2) font
 3) form letter 4) form
31. It refers to a title for a part of document?
 1) header 2) heading
 3) indent 4) leader characters
32. It refers to the distance between text boundaries and page margins?
 1) header 2) heading
 3) indent 4) leader characters
33. Which key used for centre alignment for text in MS-WORD?
 1) Ctrl+C 2) Ctrl+I
 3) Ctrl+E 4) Ctrl+V
34. Which of the following page orientation have more letters for line in the document?
 1) Portrait 2) Landscape
 3) Same for both 4) Can't say
35. To delete text right side of the cursor , which command is pressed?
 1) Backspace 2) Delete
 3) All of these 4) Any of these
36. To goto specific page which command key is pressed?
 1) F2 2) F4
 3) F5 4) F6
37. Page count and word count is displayed in which bar?
 1) Tool bar 2) Formula bar
 3) Task bar 4) Status bar
38. Title of the document is displayed in Title bar and _____ ?
 1) Status bar 2) Tool bar
 3) Task bar 4) Menu bar
39. Page break is found in which menu?
 1) File 2) Edit
 3) Insert 4) Tools
40. What is the key combination for page break ?
 1) Ctrl+Enter 2) Ctrl+ Shift
 3) Ctrl+ END 4) CTRL+ home

MS-EXCEL

1. Which of the following is the latest version of Excel?
 1) Excel 2003 2) Excel 2013
 3) Excel 2015 4) Excel 2007
2. The default MS-Excel file extension is ?
 1) .doc 2) .ppt
 3) .xls 4) .exe
3. The maximum number Rows in worksheet are?
 1) 225 2) 256
 3) 65536 4) 65336
4. The maximum number of columns in worksheet are ?
 1) 225 2) 256
 3) 65536 4) 65336
5. In worksheet, the intersection of column and row is called?
 1) Grid 2) Table
 3) Cell 4) Box
6. The collection of worksheets is called?
 1) Excel book 2) Excel sheet
 3) Workbook 4) Work table
7. Which of the following is not cell address?
 1) C7 2) CA77
 3) TC21 4) AB23
8. By default how many worksheets are present in the workbook?
 1) 4 2) 3
 3) 2 4) 1
9. Anything that we type in active cell is displayed in which bar?
 1) Formula bar 2) Title bar
 3) Task bar 4) All of these
10. Which of the key opens window for GOTO specific cell ?
 1) F4 2) F5
 3) F6 4) F7
11. Which shortcut command insert the current date?
 1) Ctrl+; 2) Ctrl+,
 3) Ctrl+: 4) CTRL+”
12. Which shortcut command inserts the current time?
 1) Ctrl+; 2) Ctrl+;
 3) Ctrl+.. 4) Ctrl+”
13. By default the text alignment in the cell is?
 1) Left 2) Right
 3) Center 4) Justify
14. By default the numbers aligned in the cells which side?
 1) Left 2) Right
 3) Center 4) Justify
15. Which sign is used to specify a cell range?
 1) ; 2) ”
 3) : 4) –
16. Which sign we use to enter formula?
 1) _____ 2) =
 3) ++ 4) —
17. In which menu, we get the validation command?
 1) File 2) Edit
 3) Format 4) Data
18. In which bar, we find Autosum button?
 1) Formula Bar 2) Formatting bar
 3) Status BAR 4) Standard tool bar
19. Protect document is found in which menu?
 1) File 2) Edit
 3) Tools 4) Format
20. How many types of cell references are there MS-Excel ?
 1) 4 2) 3
 3) 2 4) 1
21. By which menu we can ungroup the data?
 1) Data 2) Insert
 3) Edit 4) View
22. In Excel, pie charts can be plotted on ____?
 1) One data series 2) Two data series
 3) Threc data series 4) All of these
23. Which of the following represents ABSOLUTE cell referencing?
 1) \$C\$9 2) \$C9
 3) C\$9 4) C9
24. Which of the following represents RELATIVE cell referencing?
 1) \$C\$9 2) \$C9
 3) C\$9 4) C9
25. Which of the following represents MIXED cell referencing?
 1) \$C9 2) C\$9
 3) Both of 1&2 4) C9
26. A pattern of worksheet which has predesigned formulas but empty cells for user's work directly
 1) Slide 2) Template
 3) Document 4) All of these

27. Comments put in cells are called:
 1) Good tip 2) Cell tip
 3) Nice tip 4) All of these
28. Getting data from a cell located in different sheet is called?
 1) Referencing 2) Addressing
 3) Accessing 4) Updating
29. Which key used for spell check in work sheet?
 1) F2 2) F4
 3) F7 4) F12
30. To get SAVE AS dialogue box , what function key is pressed?
 1) F6 2) F8
 3) F10 4) F12
31. The process of bringing different workbooks together to form as single workbook?
 1) Pasting 2) Merging
 3) Pasting 4) Adding
32. In Excel , charts are prepared by which option?
 1) Pivot table 2) Chart wizard
 3) Pie chart 4) Create chart
33. Which of the following is not a function name in EXCEL ?
 1) Min 2) Max
 3) Sum 4) Avg
 5) None of these
34. The cell address passed into _____ are called as arguments ?
 1) Function 2) Sum
 3)Table 4) Sheet
35. The predefined command functions in MS-Excel are called ?
 1) Templates 2) Macros
 3) Memos 4) Makers
36. Which function key used for editing the current cell in worksheet?
 1) F1 2) F2
 3) F3 4) F4
37. Which of the following performs data analysis in EXCEL tables?
 1) Macros 2) Memos
 3) Pivots 4) All of these
38. The cursor placed cell is called?
 1) Active cell 2) Missed cell
 3) Cell address 4) Cell ordinance
39. Which of the following chart formed in 360° angle in circular form?
 1) Bar chart 2) Line chart
 3) XY Chart 4) Pie chart
40. What is the function key for creating chart?
 1) F11 2) F9
 3) F7 4) F5

MS-POWERPOINT

1. The maximum ZOOM percentage in MS-Power point is?
 1) 100% 2) 200%
 3) 300% 4) 400%
2. What is the shortcut key for slideshow?
 1) F2 2) F3
 3) F4 4) F5
3. Which keys will produce a new slide in Power point?
 1) Ctrl+N 2) Ctrl+M
 3) Ctrl+S 4) Ctrl+N+M
4. Which key is pressed to exit from the slideshow?
 1) End 2) Home
 3) Esc 4) Finish
5. What is the file extension for MS-PPT file?
 1) .ppt 2) .pptx
 3) Both 1 & 2 4) .doc
6. The predesigned empty slide with different styles is called?
 1) Slide 2) Template
 3) Ready slide 4) Folder slide
7. The arrangement of slides can be done from ?
 1) Slide master 2) Slide sorter
 3) Slide Arranger 4) Slide Changer
8. Which of the following is graphics presentation software ?
 1) MS-PPT 2) Adobe photoshop
 3) Corel IDraw 4) All of these
9. In slideshow , which menu is appeared?
 1) File 2) Edit
 3) Format 4) Tools
 5) None of these
10. Which of the following are graphics options in Power Point?
 1) Animations 2) Transitions
 3) Both of 1&2 4) Layers

MS-ACCESS

1. Which of the following is DBMS software?
 1) Word 2) Powerpoint
 3) Excel 4) Access
 2. Attributes can be defined for ?
 1) Pages 2) Menus
 3) Entity 4) All of these
 3. Which option is used for giving the heading in the form ?
 1) Textname 2) Head
 3) LABEL 4) HEADING
 4. Queries can be saved in database as _____?
 1) Filters 2) Objects
 3) Database 4) All of these
 5. Is it possible to open 2 databases at a time ?
 1) yes 2) No
 3) Our choice 4) We can't say
 6. What is the shortcut key for REFRESH?
 1) F2 2) F3
 3) F4 4) F5
 7. The collection of data arranged in tables is called?
 1) Database 2) Datasheet
 3) RDBMS 4) DDBMS
 8. The process of summarizing data from more than one source is called?
 1) Data hiding 2) Data merging
 3) Data consolidation 4) Data filter
 9. The function that display the records which meets a particular condition?
 1) Data hiding 2) Data merging
 3) Data consolidation 4) Data filter
 10. Which of the data item follows LAST IN FIRST OUT for deletion of data in them?
 1) Array 2) Stack
 3) Queue 4) All of these
 11. _____ is a technique used for reading trends in market from past history?
 1) data hiding 2) Data mining
 3) Data filter 4) All of these
 12. Which of the following is a linear data structure?
 1) Array 2) Stack
 3) Queue 4) All of these
 13. The key which uniquely identifies the record in DBMS table?
- 1) Foreign key 2) Primary key
 3) Null key 4) Data key
 14. Maintaining more than 2 copies of same data files is called?
 1) data hiding 2) Data filter
 3) Data redundancy 4) Data filter
 15. Creating table is which type of command ?
 1) DDL 2) DML
 3) DAL 4) DSL
 16. The situation of not updating all the same copies of files with latest data causes ____?
 1) Data hiding 2) Data consistency
 3) Data redundancy 4) Data filter
 17. DDL and DML commands used in which language?
 1) JAVA 2) C++
 3) SQL 4) All of these
 18. Which of the following is the query language?
 1) HQL 2) DQL
 3) MQL 4) SQL
 19. MS-Access is which type of DBMS?
 1) RDBMS 2) DDBMS
 3) OODBMS 4) MDBMS
 20. Through _____ formation among tables we can merge the data in them?
 1) Negations 2) Relationships
 3) Both of these 4) Database
 21. Which of the following are 3G Languages?
 1) SQL 2) C++
 3) Java 4) All of these
 22. Which of the following is not a translator for program code conversion?
 1) Compiler 2) Assembler
 3) Terminator 4) Interpreter
 23. JAVA language is ?
 1) Low level language
 2) 4G Language
 3) High level language
 4) All of these
 24. Which of the following is Low Level Language?
 1) C++ 2) BASIC
 3) JAVA 4) SQL
 25. Which of the following converts high level language code into machine language?
 1) Interpreter 2) Compiler
 3) Assembler 4) Both 1&2

26. Which of the following converts assembly language code into machine language?
- 1) Interpreter
 - 2) Compiler
 - 3) Assembler
 - 4) Both 1&2
27. One Trillion bytes is equals to ?
- 1) Kilo byte
 - 2) Mega byte
 - 3) Giga byte
 - 4) Tera byte
28. Which of the following holds largest memory?
- 1) Kilobyte
 - 2) Tera byte
 - 3) Mega byte
 - 4) Giga byte
29. To get the properties of an object(icon/ folder), which button of mouse is clicked?
- 1) Left
 - 2) Right
 - 3) Middle
 - 4) Reddy
30. Cache memory is?
- 1) Fastest
 - 2) Temporary
 - 3) Slow memory
 - 4) Both 1&2

MS-WORD KEY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4	1	4	2	4	2	2	2	2	4	1	4	3	3	4	1	3	2	4	2
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
3	4	4	2	3	1	4	3	2	1	2	3	3	2	2	3	4	3	3	1

MS-EXCEL KEY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	3	3	2	3	3	3	2	1	2	1	1	1	2	3	2	4	4	3	2
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	1	1	4	3	2	2	3	3	4	2	2	5	1	2	2	3	1	4	1

MS-PPT KEY

1	2	3	4	5	6	7	8	9	10
4	4	2	3	3	2	2	4	5	3

MS-ACCESS KEY

1	2	3	4	5	6	7	8	9	10
4	3	3	2	2	4	1	3	4	2
11	12	13	14	15	16	17	18	19	20
2	1	2	3	1	2	3	4	1	2
21	22	23	24	25	26	27	28	29	30
4	3	3	2	4	3	4	2	2	4

NET WORKING

NETWORK : The group of computers connected together either physically or in wire less medium

→ We can share the files & Information, software, hardware (CPU) through network

* Internet is the popular network which allows millions of users to share information

Node : Every computer in network is called Node

- Both clients and servers are said to be Nodes.

TYPES OF NETWORK

1) **PAN** : Personal Area Network

- The sharing of files / information between two computers by connecting them with cable / bluetooth / infrared Rays
- By using PAN, we can also share internet connection
- It is limited to a Room only

2) **LAN** : Local Area Network

- The small and single site network which connects the computers in a building and also to adjacent building
- HUB is the connecting device used in connecting computers in the LAN

Example : Internet cafes, college Labs etc

* See PAN is not considered as small network to compare.

3) **MAN** : Metropolitan Area Network

- The network that connects between different metropolitan areas (Ex : Holland to Sydney)
- Cable TV is the best example
- Satellite signals also used in MAN.

4) **WAN** : Wide Area Network

- This is the network geographically dispersed collection of LAN'S
- To connect WAN, It uses X.25 protocol technology that widens the signal strength.
- X.25 is a communication oriented protocol

Ex: Internet, www

* LAN and Topology both are same meaning

Types of LAN or Topologies :

Topology : The way of computers arrangement in connecting the LAN or Network is called Topology.

We have generally 6 topologies : i) Bus Topology

ii) Ring Topology

iii) Star Topology

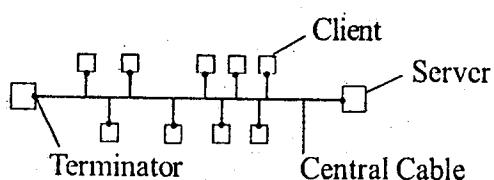
iv) Mesh Topology

v) Tree Topology

vi) Hybrid Topology

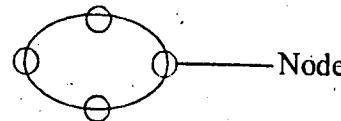
i) **BUS Topology :**

→ The computers are arranged in such a way that Bus seats are arranged in general life Bus.



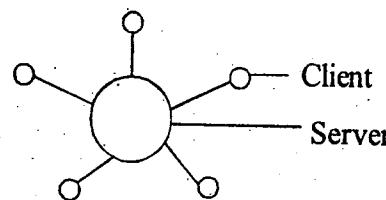
- The central cable in this topology is called Back bone of Network
- If the **Backbone fails**, the entire network failures.
- Data Sent in Packets from server to the destination Computer (client)
- Terminators will absorb the signals sent by server to clients.

ii) **Ring Topology :**



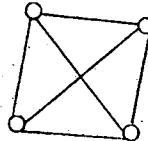
- In Ring LAN, all the nodes are connected in a circular path.
- Here, there is no central server in the network
- To avoid collisions in data transmission, the **tokens** are provided to all the nodes
- When the token time comes to a specific node, it can transmit data to remaining systems / nodes.
- Failure in single node causes entire network failure
- It contains n nodes & n connections in number

iii) **Star Topology :**



- The central Server sends data and receives data to / from all the clients
- If one node fails, entire network does not fail
- If central server fails, entire network will fail.
- Very easy for fault diagnosis
- * Fail in network means loses its connectivity
- Star topology is the **best topology** to connect in Real life.
- Low cost for construction of star topology
- It contains n nodes & n-1 connections

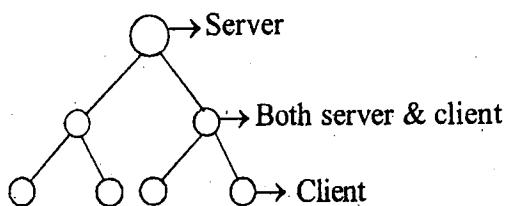
iv) **Mesh Topology :**



- Very high cost in construction of mesh Topology
- Each node have connection with all the remaining nodes.
- Very difficult for fault diagnosis

Fault Diagnosis : Finding the disconnected wire or node in the network is called fault diagnosis.

BIO METRICS : Creating Login Pass Word through human body interaction.
Ex : Breath Scan, eye scan, finger print, retina scan.

v) Tree Topology :

- The computers are connected from one to another
- The possibility for a node to act both as **client & server** is only in tree topology.

Client : The active member of the network

- It always sends request to server & waits for response from the server.

Server : The passive (sleeping) member of the network

- It waits for client requests & gives the response to them.

* So, in tree topology the middle nodes are acting as both client and server.

vi) Hybird Topology : The connection of nodes with the combination of any of the two topologies is called as Hybrid Topology

Ex: Bus topology + star topology

star topology + Ring topology

HUB's → are the connecting devices in LAN / topology.

Docking station : The station to which the laptops are connected to make them for converting as projectors or big screens like desktop & LCD' Screens.

TYPES OF WAN'S

* In exam point of view, it is not important and it is only for Reference only

* The below are the public networks, authorized & run by telecommunication Authorities.

a) PSTN : Public Switched Telephone Networks

- Designed for telephone, which requires modem connection
- It is used in FAX machine
- It is analog transmission
- It is low speed transmission

b) PSDN : Public Service Digital Network

- This network connects public with private networks through e-mail services and chatting
- It is high Reliable and quality communication

c) VAN : Value added Network

- It provides Electronic Data Interchange (EDI)
- The owner rentout network for subscribers

Ex: Invoice and sale purchase order.

d) ISDN : Integrated Services Digital Network

- It uses both modems and multiplexers
- It is for limited distance only.

Network Architecture : The construction of nodes (Computers) to form as network structure-is called network Architecture

MULTIPLEXING

The process of combining many number of input signals into single output signal to send.

Ex: Air medium Radio waves

Telephone signals

Demultiplexing : The process of separating single output signal into many number of signals to receive.

TYPES OF MULTIPLEXING

i) FDM : Frequency Division Multiplexing

- It uses analog data transmission
- Band pass filters are used in separating channels.

ii) SDM : Space Division multiplexing

- It divides channels through space division

Ex: Stereo Headset.

iii) TDM : Time Division Multiplexing

- It divides channels through time division
- It uses digital transmission of signals

iv) CDM : Code Division multiplexing

- It divides channels based on their code

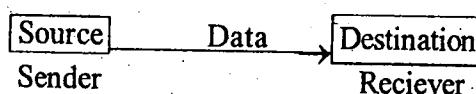
Ex: CDMA mobiles are separate from GSM mobiles

Note : CDM & SDM are not important for exams.

TYPES OF DATA TRANSMISSION

* Data Transmission is the process of communication of data between source (sender) and destination (Receiver)

a) Simplex Transmission :



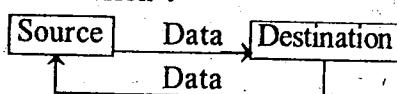
→ In this type, the communication is processed only in one direction from sender to Receiver

→ Receiver cannot respond to the sender.

Example : Radio channels

* We can only listen songs, we cannot Reply them through radio

b) Half Duplex Transmission :



→ The communication between source and destination is bidirectional in this type

→ But, the communication is possible one after another not simultaneously.

Ex: Walky Talky, FAX machine.

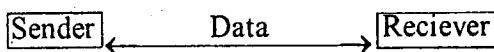
* Here the sender will send information to Receiver and waits for Receiver response.

→ Same thing happens from receiver side, both of them cannot transmit data at a time.

c) Full Duplex Transmission :

→ The communication of signals between source (sender) and receiver (destination) at a time.

→ They need not wait for one another to send request or response



Ex: Telephones, Chatting, messages etc.

Note : Examples are not important for types of transmission, only definitions are to be understood.

Different elements used for Data Transmission :

- i) **Coaxial Cables :** The cable TV's are connected through this cables
- ii) **Optical Fibres :** These are very reliable, cost free & very high speed data transfer
- iii) **Wireless Medium :** Using different ways of wireless medium also data transmission takes place

INTERNET

Terms Relating Internet :

* **Intranet :** The network of systems within an organization and not able to be accessed by the outside organizations.

Ex: Database in CID (Crime Investigation Dept.)

* **Extranet :** The organization given permission to outside another organization to access their data, this is possible through extranet

* **Protocol :** The set of governing rules on network are called protocols

* **TelNet :** It is a protocol that allows the system to connect remote computer for accessing data & internet

Ex : If A & B are two systems having Telnet protocol, only A is having Internet facility than through Telnet, B also can use internet facility.

Evolution of Internet :

ARPANET : The first intranet /Internet developed in 1969 by US Defence for the internal communication.

→ Full form is Advanced Research Projects Agency Network

→ Vinton Cerf is the father of Internet

OSI REFERENCE MODEL

→ It stands for open systems Inter connection Model

→ It has divided model into 7 Layers

→ The communication from sender to receiver & vice versa happens in network through this OSI reference model only.

The 7 Layers of OSI model are : 7) Application Layer

 6) Presentation Layer

 5) Session Layer

 4) Transport Layer

 3) Network Layer

 2) Data link Layer

 1) Physical Layer

* The physical layer is the first Layer in OSI model

* Application Layer is the seventh (last) layer in OSI model

Note : Generally we don't know what is the process that happens, after sending email from our side to any friend. the process is hidden in the form of OSI reference model

* Layers 7 to 4 deals with end to end communication between data source and destination

* Layers 3 to 1 deals with communications between network devices such as Routes, Switch, bridge etc.

OSI Reference Model Table

No	Layer	Application	Protocols	Devices
7	Application Layer	* Input & output of Data * Sending & Receiving Data	HTTP, SMTP, SNMP FTP, POP, DNS	Gateway
6	Presentation Layer	* Coding & Decoding * Compression & De Compression * Encryption & Decryption	- NO -	Gateway
5	Session Layer	* Maintains User Sessions * Host Communication	- NO -	Gateway
4	Transport Layer	* Provides Acknowledgement	TCP, UDP	Gateway
3	Network Layer	* Packets Formation * Network Connection	IP, ICMP, ARP	Router
2	Data Link Layer	* Frames Formation * Error Detection & Correction	- Not Required	Switch, Bridge
1	Physical Layer	* Data Converted into electrical, electromechanical and Digital Signals	- Not Required	Repeater

7) Application Layer :

- This is the 7th or Last layer in OSI model (for user interface with network)
- It defines interface between users data and data transfer communication in network
- The user sending / receiving e-mail is work done in this layer
- * FTP, SMTP, DNS, HTTP, POP3 are the important protocols involved in the application layer

Here**a) FTP : File Transfer Protocol**

- It sends & receives the data in network

b) SMTP : Simple mail Transfer Protocol

- It is the protocol involved in sending any mail.

c) POP3 : Post office protocol version 3

- It is the protocol involved in Receiving any email

d) HTTP : Hyper Text Transfer Protocol

- The protocol which connects the webpage / URL to the web server

e) DNS : Domain Name system

- It connects the web site address to the particular domain in web server

POPT
10/2 + G1 & 8/1

6) Presentation Layer :

- It specifies the architecture for independent data transfer
 - It encodes & decodes the data
 - It Encrypts & decrypts the data
 - It compress & decompress the data
- * No protocols are involved in presentation Layer
- * CODEC's are used for compression and de compression
- a) **Encryption** : The process of converting normal text into cipher text is called encryption
 - * Text is converted into numbers & Alphabets
 - b) **Decryption** : The process of converting cipher text into its original form of Normal message / text is called decryption
 - * Cipher text is converted into original message

5) Session Layer :

- It manages & Controls users session & dialogues
 - It reports the upper layer errors
- * No protocols involved in this session Layer
- Here only Host communication is processed

4) Transport Layer :

- It manages end to end message delivery in network by giving acknowledgement to users
 - It provides sequential packet delivery through error recovery and flow control mechanisms.
 - It provides connection less oriented packet delivery
 - Multiplexing and segmenting done here.
- * TCP, UDP are the protocol involved in this layer
- a) **TCP - Transmission control protocol**
 - b) **UDP - User Datagram Protocol**

Gateway : Networking device for data transmission in above 4 layers

3) Network Layer :

- It determines the data transfer mechanism between network devices
 - It determines the path for flow control of data
 - Data is divided in to packets
- * Internet Protocol (IP) is involved in Network Layer
- Router** : It works on single protocol and determines the next network point to which to forward a data packet towards its destination.

2) Data link Layer :

- Its main role to detect & correct the packets transmit errors.
 - It determines procedure for operating the communication links
 - It divides data packets into Frames
- * **Switch and Bridge** are used for connecting network segments

1) Physical Layer :

- It is the first layer in OSI Reference model
 - It interfaces between network medium and devices
 - It converts data into optical, mechanical & electrical characteristics.
- * **Repeater** used to strengthen the signals.

TCP / IP Model :

* TCP / IP is the internet connecting protocol suit

- The model is a part of OSI Reference model but have only 4 layers of it

- The presentation layer & session layer are absent in TCP / IP Model

- Data link layer & network layer are taken as single part in TCP/ IP Model

Note : Now we will see who provides the Internet & ways of connecting to Internet

ISP : Internet service Provider

- It provides the Internet facility through world wide web.

- It is the authority to permit client / individual for connecting to Internet

- In return it takes the IP address of the system of users to connect to the network

IP Address : Internet Protocol Address

- This address is unique address provided by ISP to the single / Individual system on the network.

* After obtaining permission, we require the Internet connection

Ex: 162.200 . 20.61 is an IP address

Internet Protocol Versions :

Based on Address length and speed of access, we have 2 Internet protocol versions

a) **IPV6** → Internet Protocol Version 6

- It supports 128 Bit address length

- It provides high speed access of data

b) **IPV4** → Internet Protocol Version 4

- It supports 32 bit address length

- It provides low speed access of data

	From	To
Class - A	0.0.0.0	127.255.255.255
Class - B	128.0.0.0	191.255.255.255
Class - C	192.0.0.0	223.255.255.255

	From	To
Class - D	224.0.0.0	239.255.255.255
Class - E	240.0.0.0	247.255.255.225

TYPES OF INTERNET CONNECTION**1) Dialup Connection :**

- The connection of Internet by using existing / new telephone line connection

- It requires the MODEM to connect to computer

- Its low in speed, so it is not broad band connection

2) DSL Connection :

- It stands for Digital subscriber line (not link)

- It requires an existing / new telephone line connection

- It provides high speed internet access, compared to dial up connection (due to replacement of copper wires in cable).

- So, it is a type of broadband connection

3) Broad band Connection :

- It does not require a telephone line connection

- It is optional to have telephone line connection

- It provides high speed data access to Internet

- Routers are used in this connection to clear the data traffic & provide high speed access.

- Though it is costly to connect, It is used widely by the people in world.

4) WIFI : Wireless Fidelity

- It does not require any cable connection
- It provides high speed Internet access so it is also broad band connection
- It is a Wireless connection to network
- It is limited to a small distance only

Note : Above 4 types of connections are basic types of internet connections. We have another type of Internet connection

5) WIMAX : World wide Interoperability for microwave Access

- When compared to wifi, It has capacity to cover larger distance.

Example : If suppose, wifi is connected up to 500 metres, wimax can be connected upto 2 kilometers.

- Both are used for connecting to Internet only

Web Browser :

- The program written to view the web pages
- Web Browser is a software that is used to view the web pages.

LOGIN : The process of authentication for connecting to Internet by providing user name and password

Authentication : The process of verifying valid username and password, that is given by the user.

Licence / End user Agreement : Accepting the terms and conditions of any software / licencing authority to use their products for our personal use

Web Site : The collection of web pages in a single place, that is called website.

Homepage : The first page of the website that appeared after entering URL in the address bar.

URL : It is word based address of IP address

- Its full form is uniform Resource locator
- It holds the websites address name
- It is a unique address for any website.

Ex: <http://www.google.com.html>

Here :

- i) **http:** Hypertext transfer protocol
 - It links / connects website to web server
- ii) **www:** World wide web
- iii) **google :** It is the website name not address
- iv) **.Com :** It is the domain Name
- v) **html :** hypertext markup Language

we will see one by one clearly

HTML : Hypertext means text, image, audio & video etc.,

- Web pages are saved & viewed in HTML format only

Domains : The host / server of the website category is called domain

- Ex :**
- .gov → Government
 - .Com → Commercial
 - .Net → Network
 - .edu → Education
 - .org → organization
 - .In → India

Examples for Web Browsers :

- . Netscape Navigator . Mozilla firefox . opera
- . Mosaic . UC Browser . Dolphin Browser
- . Internet Explorer . Google chrome

Upload : The process of data transmission from client / local system to the server is called upload

→ Sending attachments is upload

Download: The process of fetching / receiving data from server to local system is called download

→ downloading songs is a download.

Attachment : The paper, music, video file that is sent as a soft copy and that can be modified at receiver side is called Attachment.

TYPES OF WEBSITES

i) **Static website :** The webpages or information on website is not changed from /for long time

ii) **Dynamic website :** The webpages or information on website is changed from / for regular time / daily.

Now we have system, internet connection, web browser, so we see the services provided by internet

SERVICES OF INTERNET

- 1) E - Mail 2) Chat 3) Video conferencing 4) Social Networking

1) E - Mail :

→ It is also called Electronic mail, It is similar to writing a letter to recipients but transmitted in electronic medium.

→ ASCII Code : American standard code for Information Interchange

→ The text in mail is first converted from normal text to ASCII code (not ANSI Code)

→ Each character in ASCII code is 1 Byte or 8 Bits of data.

Protocols for E-Mail :

→ **SMTP** : Simple Mail Transfer Protocol

→ It is used to sending an mail

→ **POP** : Post Office Protocol

→ It is used to receive the mail

→ POP3 is the version 3 protocol using now a days

* G-Mail is a Google product.

E-MAIL COMPONENTS

a) **Sign Up :** Creating an account by providing our details to the server for their confirmation

→ The process of creating account is called signup process.

b) **Captcha Code :** The program that can generate and grade tests that humans can pass but current computer programs cannot pass.

→ Distorted text is used as captcha code

→ We have to enter this code while creating Account for verification.

c) **Authentication :** The process of verifying the username & password is called Authentication

d) **Compose :** The command to create /send a new mail to others from sender side.

e) **Inbox :** The received emails to our e-mail account are stored in this place.

f) **Drafts :** The important documents / mails/ Data / Attachments can be stored here

→ The created mail which is not sent is also stored in Drafts only.

- g) **Sent Box** : The sent mails are stored in this place.
 - h) **Mail box** : For all the above 3 components, this is the storage house of e-mail account
 - Mail box is called storage house of e-mail.
 - i) **Trash** : The deleted items from mail box is moved to trash
 - It is similar to Recycle Bin, but Trash is online memory where as Recycle bin is system memory.
 - j) **Spam** : The unsolicited & Junk mails are stored in this place
 - The lottery mails received by unknown persons are stored here.
 - Spam is considered as not an security threat.
- Note :** Whenever you receive an unknown mail (mails from unknown person), you should not open it & you have to directly delete it.
- k) **Forward** : The content / mail already present in mail box and it is sent to another person through this option
 - To avoid creating a new mail, we can use this command
 - l) **Subject** : The main headline (contents) of email is written in this space
 - m) **Address book** : The mail addresses of friends & others are saved here
 - n) **BCC** : Blind Carbon Copy
 - Sender address written in BCC is not displayed in remaining receivers inbox / mail.
 - o) **CC** : Carbon Copy
 - Sender address written in CC is displayed in remaining receivers inbox / mail.

Automatically Generated Components :

- While we are sending mail, 2 components are automatically generated, that we need not give in mail at receiver side only
- Those are **sender Email address and Time with Date of email sent**.
- These 2 components are seen only at receiver side

E_Mail Address :

Ravindra reddy.engg@gmail.com

- No space are allowed / accepted in email address
- @ is the separator between username and domain name
- here Ravindra reddy.engg is the username.

website Address : www.turningpointstudycircle.com

- No spaces are allowed / accepted in website address
- No @ or special symbols are allowed here
- Domain name separated with (dot) in URL

2) Chat :

- We have many online chatting websites, which provides text conversation between people on Internet.

Ex: Yahoo messenger

Google Talk

Rediff Messenger

3) Video Conferencing :

- The service provided by Internet, for meeting people & talk directly in video conference from different places around the world.
- It Requires camera and also Head set (optional)
- Teleconferencing is also electronic meeting (Audio chat) Provided by networking

4) Social Networking :

→ The way of connecting people around the world at one place to share their views & ideas through Internet

→ These are creating maximum awareness about social issues around the world

Ex:	Facebook	orkut	Twitter	Google+
	Linked In	Badoo	meetup	Ning

- * Facebook is the largest using social networking site around the world.

- * Linked In is used for business awareness & market strategy

- * orkut is Google product, Before Introduction of Facebook it was used widely.

Web mail Interface : It allows you to access your email from any where in the world, by just having user name and password.

Types of E-mail Text :

→ In E-mails we see plaintext, Images, colour text, tables and different graphics. so we have 3 types of text used in emails

a) **Plain Text :** It does not support Bold, Italic & Coloured text or fonts

b) **HTML Text :** It allows fonts, Bullets & colours also

c) **Rich Text :** It supports Bullets, Images & alignment

Instant messaging : The contacts shown / referred by the email mailing list of people who regularly participate in discussion topics is called Instant messaging

→ Frequently messaged users names are displayed here.

Search Engines :

→ The tools to launch a search on the web or Internet are called search Engines

→ The keywords are taken by search Engine to provide the links that relates to the key words

Ex : Google, Lycos, Yahoo, Delta etc.

Link : The complete website Address / URL of a website is called link

→ It is shared any where to open specific page / image.

Hit : The count that provides the number of visitors to that particular web site or webpage

Ex: Likes given to photos in face book.

Other services Provided by Internet :

1) E- Commerce 2) M-commerce 3) Internet Banking

1) E - Commerce : The online shopping (Both selling & purchasing) of products and services is called E-commerce

→ It is also called Electronic Commerce.

Ex : Buying Apparals from online sites such as ebay, flipkart, snapdeal etc.

2) M- Commerce : The store that combines online shopping and physical presence is called Mobile Commerce

→ Here the physical presence is mandatory

→ It is also called mobile commerce

Ex: Providing security passwords by physical presence through mobiles

Note : both are almost same, except physical presence is required in M- Commerce

- * IRC - Internet Relay Chat
- * EDI - Electronic Data Interchange
- * RAR File - Roshal ARchive File.

3) Internet Banking :

- The facility provided by banks to do online transactions through computers and Internet facility
- on line transactions Refers to
 - * Paying Bills
 - * Donations to charities from our Bank Account
 - * Transacting amount to other accounts

→ To maintain this account, user must have Account in Bank and also get an user ID & Password

Virtual Keypad : The key board provided by specific websites such as Online banking websites to reduce the risk of key stroke threats while entering username & Password.

→ Virtual keypad is visible on screen only.

Flash : The small size animation pictures on webpages

→ These requires flash player to view

Reloading webpage :

- To reload any web page we click on " Refresh" Button or on " Reload" option only
- We have no Reload button on tool Bar, We have only Refresh Button on Tool Bar.

Cookies : These are the components that store the web history performed by user on specific computer.

Bookmark : The web pages saved by users to see even when there is no Internet connectivity also.

History : The URL of webpages opened in computer are stored here.

Favourites : The frequently opening URL (websites) can be saved here.

TYPES OF SERVERS ON INTERNET

1) Web server : The program that using client / server model and WWW with HTTP.

2) Client server architecture: It is network architecture which separates the client from server.

→ It allows clients to send requests to the servers.

3) Proxy server :

- It provides the webpages from servers to clients
- It also serves as firewall to prevent from unauthorised access.

WAP : Wireless Application Protocol

- It is used as web browser for small mobile devices
- It provides only few applications such as

- * Sports Results
- * E-Mail
- * News Headlines
- * Music Down loads

NIC : Network Interface card

→ It connects a local system to the network

Ethernet card : It is the IEEE standard cable, used for connecting a system to the network point.

→ It is hard wired device

→ It carries / allows 48 bits address length

Note : NIC and Ethernet card both are same and present in CPU board.

FAT : File Allocation Table

- It contains info. about the sizes of files stored and also about its clusters

NETWORKING DEVICES

The devices that are used as mediators in connecting to the network are called Networking devices

- 1) **Bridge** : It connects multiple network segments along with data link layer
 - It works on data link layer
- 2) **Switch** : The device splits the network traffic and sends it to different destinations
 - It works on Data link Layer, uses MAC address to transmit data.
- 3) **Repeater** : The device that regenerate digital signals received while transmitting from one part to another
 - It works in physical Layer
- 4) **Router** : The device used in data traffic clearance in Internet Protocol
 - It is the device used in Broad band Internet Connection
 - It works in Network Layer to connect internet.
- 5) **Gateway** : The device setting at a network node for interfacing with another network that uses different protocols.
 - It works on all 4 layers from Transport Layer to Application Layer
 - The only device that works in 4 layers is Gateway.

- 6) **Brouter** : Hybrid device that combines features of Bridge & Router.

Connecting Devices :

- 1) **MODEM** : It is combination of both modulator and Demodulator
 - It is used in Dial -up connection along with the telephone line
- 2) **HUB** : The connecting device used in connecting ethernet segments in LAN'S
 - It holds the connection from All the nodes
 - It works on physical Layer only.

Types of HUB's :

- a) **Active Hub** : The signal is Amplified, so they work as Repeaters.
 - So it requires power supply
- b) **Passive Hub** : The signal is forwarded as it is.
 - So it does not require power supply.

Digital Banking :

- It is different from online Banking
- The transactions / Bill Payments using mobile phones is called digital Banking
- Internet & Telephone both may be used in digital Banking

Junk Mail : The Advertisement mails sentout by specific sites for which, we have given our email Id.

- These are also considered as spam only.

Meta Search Engine : A metasearch engine is a search tool that sends user requests to several other search engines and/or databases and aggregates the results into a single list or displays them according to their source.

Stylus : A stylus (plural: styli or styluses) is a writing utensil, or a small tool for some other form of marking or shaping, for example in pottery.

Hot Keys : A hot key is a key or a combination of keys on a computer keyboard that, when pressed at one time, performs a task (such as starting an application) more quickly than by using a mouse or other input device.

COMPUTER VIRUS

VIRUS : Vital Information Resource Under seize.

- It is a program designed to spread itself & infects executable files / hard disks and makes virus copies it self.
- Virus attacks computer and corrupts / removes the data.

TYPES OF VIRUS

1) Boot Sector Virus :

- The virus present in the boot devices like disk / diskdrive or floppy disk
- Brain virus is an boot sector virus

2) Worm : The self replicating computer program that always harm the network

- It has two programs in it.

3) Trojan Horse : The harmful virus, which is a written program that harms the computer.

- Creeper is the trojan horse virus

4) Bomb : The virus which has some payload to destroy files on computer.

- Logic Bomb :** It occurs when user of computer takes action that triggers the bomb.
- It requires the human action

Time Bomb : It occurs to blast payload in computer at specific time or data written in program

- It does not require human action.

Virus hoax : The false email message warning, the recipient of a virus is going around.

5) Micro virus : It spreads in only application software

- * Trend micro is the anti virus program to kill it in the computer.

Scanning : The process of searching for known virus present in the system files is called scanning

6) Spyware : The malicious software that collects information about users without their knowledge.

7) Malware : It is a superset of virus, worms, trojan horses, root kits and spyware etc.

SECURITY THREATS

1) Phishing / Spoofing : The attempts made fraudently to acquire sensitive information such as passwords, credit card details etc by acting as a trust worthy person

- Attempts here called as phishing trips.

2) Hacker : A person who uses his or her expertise to gain access to other people's computers to get information illegally or do damage is called Hacker

3) Identity Theft : Collecting personal information and effectively posing (acting) as another individual is known as crime of Identity theft.

- Here the person uses some others identity to get the information.

4) Cyber Crime: The theft or frauds through online (Internet) is called cyber crime.

* **Malicious Hacker :** The Hacker who involved in the hacking process with intension.

* **Non - malicious Hacker :** The Hacker who involved in the hacking process with no knowledge & for time pass only.

Spam : It is the unsolicited and bulk mails in the e-mail

- * This is not a security threat.

Ethical Hacking : The hacking done by department to retrieve the status of thief or criminal.

PREVENTION TECHNIQUES**1) Digital Signatures :**

- The private key is maintained with Encryption and public key maintained at Decryption
- All the users can not change data, but they can only access data in data base.

2) Ceaser cipher : It is the method of shifting every plain text messages replaced with n^{th} successive Alphabet
→ text is converted into another alphabets**3) Firewall :** It is a software or hardware based device to permit or deny network transmission based on set of rules and used to protect network from unauthorized access

→ Firewall is also an hardware device

→ Firewall is also having software to act

ANTIVIRUS : The program written by programmers to catch and kill the computer virus is called Antivirus.

Ex : Trend micro Antivirus

Anti Spyware 2010

Kaspersky Antivirus 2010

MCA fee Antivirus 2010

Norton Antivirus 2010

Symantic Antivirus 2010

Avast Antivirus 2013

Examples for VIRUS :

* Creeper	* Morris worm	* I Love You	* Code Red
* Sasser	* Blaster	* Nimade	* Melissa
* Elk cloner			

* Spoofing and phishing are both techniques follow same strategy so both are same threats only.

Note : We have started with history & Generations and Ended with Antivirus.

IMPORTANT QUESTIONS - INTERNET & NETWORKING

1. The first network that planted the seeds of network was ?
 - 1) ARPANET
 - 2) NSF net
 - 3) I net
 - 4) V net
5. Which of the following is not network device ?
 - 1) Router
 - 2) Switch
 - 3) Modem
 - 4) Bridge
2. Acronym www in www.yahoo.com stands for?
 - 1) world word in wonder
 - 2) world wide web
 - 3) world web widening
 - 4) wonderful world web
6. which of the following is not an application protocol in TCP/IP suit ?
 - 1) FTP
 - 2) SMTP
 - 3) SNMP
 - 4) MRTP
3. we often use _____ for world wide web ?
 - 1) network
 - 2) server
 - 3) web
 - 4) E-resource
7. which protocol provides e-mail facility among different hosts ?
 - 1) smtp
 - 2) ftp
 - 3) Telnet
 - 4) SNMP
4. An inter-company network which is used to distribute information, documents files and database is called as ?
 - 1) LAN
 - 2) Extranet
 - 3) WAN
 - 4) MAN
8. 192.9.200.153 is an ?
 - 1) Ethernet address
 - 2) IP Address
 - 3) Computeraddresss
 - 4) All of the above
9. which is the other name for LAN card ?
 - 1) NIC
 - 2) Networkconnector
 - 3) Modem
 - 4) Internet card

10. What is the address given to computer connected to a network ?
 - 1) System address
 - 2) SYSID
 - 3) Process ID
 - 4) IP address
11. WEB site is a COLLECTION OF ?
 - 1) HTML Document
 - 2) Graphic files
 - 3) Audio and Vedio Files
 - 4) All the above
12. Which of the following protocol used for webServer connection ?
 - 1) HTTP
 - 2) FTP
 - 3) W3C
 - 4) UDC
13. the Communication protocol used by the internet is ?
 - 1) HTTP
 - 2) TCP/IP
 - 3) www
 - 4) All the above
14. The first page that you view normally in web site is ?
 - 1) Google Page
 - 2) Master Page
 - 3) Banner Page
 - 4) Home page
15. For connection of internet you will need ?
 - 1) An IP Address
 - 2) TCP/IP connection
 - 3) An ISP
 - 4) All the above
16. A user can get files from the another computer on the internet by using ?
 - 1) FTP
 - 2) UTP
 - 3) HTTP
 - 4) All the above
17. in reality internet protocol recognizes only ?
 - 1) IP Address
 - 2) A postal mail address
 - 3) A location of the host
 - 4) Server
18. The ground station in VSAT communication called ?
 - 1) HTTP
 - 2) MULTIPLEXER
 - 3) Hub
 - 4) Repeater
19. For a small website one need to buy space from the ?
 - 1) Network administrator
 - 2) Telephone Exchange
 - 3) ISP
 - 4) Internet society
20. A host on the internet finds another hosts by its?
 - 1) Postal Address
 - 2) Electronic address
 - 3) IP Address
 - 4) Name
21. What do u need to put yours web pages in WWW ?
 - 1) Connectionless protocol
 - 2) Connection oriented protocol
22. Which of the following topology is least affected by addition\removing the nodes ?
 - 1) Ring
 - 2) Bus
 - 3) Star
 - 4) NET
23. Host differs from desktop computers in that they can handle ?
 - 1) Multiple connection
 - 2) Single connection
 - 3) No Connection
 - 4) All of the above
24. Favourites are accessible from the _____ menu?
 - 1) Start
 - 2) Title
 - 3) Stop
 - 4) File
25. the new favorite entry will be named _____ to the title of the web page ?
 - 1) Field
 - 2) Long Run
 - 3) Short-cut
 - 4) All the above
26. In which type of network the systems are connected either with infrared rays or blue tooth?
 - 1) PAN
 - 2) LAN
 - 3) MAN
 - 4) WAN
27. Which of the following can be share through network?
 - 1) Database
 - 2) Information
 - 3) Files
 - 4) All of these
28. Which of the following small, single site network?
 - 1) LAN
 - 2) MAN
 - 3) PAN
 - 4) WAN
29. Cable TV is example for which type of network?
 - 1) PAN
 - 2) LAN
 - 3) MAN
 - 4) WAN
30. Internet and WWW is examples for which network ?
 - 1) PAN
 - 2) MAN
 - 3) LAN
 - 4) WAN
31. Which version protocol is used in connection to WAN ?
 - 1) X.21
 - 2) X.22
 - 3) X.25
 - 4) X.26
32. X.25 is a
 - 1) Connectionless protocol
 - 2) Connection oriented protocol

- 3) Connection terminator
4) All of these
33. Which of the following is not a topology?
1) Bus LAN 2) Star LAN
3) Ring LAN 4) Mesh LAN
5) None of these
34. In which LAN , The central passing cable acts as Backbone of Network?
1) Bus LAN 2) Star LAN
3) Mesh LAN 4) Tree LAN
35. In which topology, n nodes will have $n-1$ connections between them?
1) Bus LAN 2) Star LAN
3) Mesh LAN 4) Tree LAN
36. In which topology, the tokens are issued to all the nodes for data transmission?
1) Bus LAN 2) Star LAN
3) Ring LAN 4) Tree LAN
37. In which LAN , Each node will have the connection with all the remaining nodes in the network?
1) Bus LAN 2) Star LAN
3) Mesh LAN 4) Tree LAN
38. In which topology, the same node(system) acts as both client and server in the network?
1) Bus LAN 2) Star LAN
3) Mesh LAN 4) Tree LAN
39. Which of the device is used in LAN connection?
1) MODEM 2) HUB
3) ROUTER 4) Gateway
40. Which of the following is a type of Wide Area Network Connection?
1) PSTN 2) PSDN
3) VAN 4) ISDN
5) All of these
41. In FDM, which of the following used for separating the channels in network?
1) RAM 2) ROM
3) Gateway 4) Band pas filters
42. Which type of data transmission is two way communication but not simultaneously in network?
1) Simplex 2) Half duplex
3) Full duplex 4) All of these
43. Telephone communication is which type of data transmission?
1) Simplex 2) Half duplex
3) Full duplex 4) All of these
44. Which of the following is a connection medium in the network?
1) Cables 2) Optical fibers
3) Wireless medium 4) All of these
45. The type of network, where outside organization not allowed for database access is called?
1) Intranet 2) Extranet
3) Public network 4) All of these
46. The type of network, where outside organization is permitted for database access is called?
1) Intranet 2) Extranet
3) Public network 4) All of these
47. Which of the following software allows you to connect to the remote server on network?
1) Intranet 2) Ethernet
3) Telnet 4) Mallet
48. Which of the following is set of rules that governs the network?
1) Ethernet 2) Protocol
3) Monocot 4) All of these
49. ARPANET came into existence for use, in which year?
1) 1949 2) 1959
3) 1969 4) 1989
50. How many layers are present in OSI reference model ?
1) 7 2) 8
3) 9 4) 10
51. In OSI Model, OSI Stands for?
1) Open system interface
2) Open system interconnection
3) Open Source Interface
4) Open source interconnection
52. Which of the following is first layer in OSI model?
1) Application layer 2) Transport layer
3) Data link layer 4) Physical layer
53. Which of the following protocols are working in application layer?
1) SMTP 2) FTP
3) DNS 4) POP
5) All of these
54. Which protocol is worked in receiving E-Mail in the web?
1) SMTP 2) POP
3) FTP 4) DNP

55. Encryption to the data done in which layer?
 1) Application layer 2) Physical layer
 3) Transport layer 4) Presentation layer
56. In encryption, the plain text is converted into ?
 1) Normal text 2) Cipher text
 3) English text 4) Data text
57. Acknowledgement provision is available in which layer?
 1) Application layer 2) Physical layer
 3) Transport layer 4) Presentation layer
58. The network device that connects different networks and different protocols is?
 1) MODEM 2) HUB
 3) ROUTER 4) Gateway
59. Which device used in network layer of OSI model?
 1) MODEM 2) HUB
 3) ROUTER 4) Gateway
60. The error detection and correction is done in which layer of OSI model?
 1) Application layer 2) Transport layer
 3) Data link layer 4) Physical layer
61. Which of the following network devices works in data link layer?
 1) Switch 2) Bridge
 3) Both 1&2 4) Router
62. Which of the network device prevents data signal from Attenuation?
 1) Repeater 2) HUB
 3) ROUTER 4) Gateway
63. Which of the following is high speed internet connection?
 1) Dial up 2) DSL
 3) Net 4) Node
64. Which of the network device clears data traffic in network and provides broadband internet Connection ?
 1) MODEM 2) HUB
 3) ROUTER 4) Gateway
65. The process of authentication for connecting to internet is called?
 1) Accessing 2) Login
 3) Security 4) Scanning
66. Which of the following is a domain name?
 1) .NET 2) .ORG
 3) .GOV 4) .IN
 5) All of these
67. Which of the following 2 items created by server while sending mail to others?
 1) Sender name , time
 2) Sender mail address, Time
 3) Subject , body
 4) All of these
68. Which is the storage house for e-mail components online?
 1) Inbox 2) Mail box
 3) Sent box 4) Trash
69. The deleted messages from e-mail box are moved to ?
 1) Recycle bin 2) Trash
 3) Inbox 4) Delete box
70. The email address of friends in e-mail are saved to ?
 1) E-mail box 2) Address book
 3) Phone list 4) Contact list
71. Which of this is not accepted in email address?
 1) Spaces 2) Underscore
 3) Text 4) Numbers
72. Which internet protocol version supports 128 bit address length?
 1) IPV3 2) IPV4
 3) IPV5 4) IPV6
73. The technology involved in taking the class room teaching in computer without going to class room?
 1) E-Commerce 2) E-Governance
 3) E-Learning 4) All of these
74. The small size animated pictures moving on webpages are called?
 1) Media 2) Flash
 3) Podcast 4) Krish
75. Which button we press to reload a webpage ?
 1) Reload 2) Regenerate
 3) Refresh 4) All of these
76. Which of the following is not a security threat?
 1) Virus 2) Worm
 3) Trojan horse 4) Spam
77. The self-replicated virus that can copy multiple copies by itself is called?
 1) Trojan horse 2) Logic bomb
 3) Worm 4) All of these
78. Which of the following spreads when user takes action that triggers the bomb?
 1) Worm 2) Time bomb
 3) Logic bomb 4) Micro virus

79. The superset of virus, worms, Trojan horse and spyware is called?
 1) Virus 2) Malware
 3) Freeware 4) Firmware
80. In digital signatures, the _____ key will be with owners to manipulate the data base?
 1) Private key 2) Public key
 3) Both of these 4) Secure key
81. Which technique is used by hacker to get confidential details of others?
 1) Siting 2) Watching
 3) Phishing 4) Humming
82. Which of the following is antivirus program?
 1) Anti-spyware
 2) Trend micro antivirus
 3) Norton
 4) All of these
83. Firewall is used to prevent unauthorized access from both the sides as software and _____?
 1) Hardware 2) Malware
 3) Spyware 4) Freeware
84. The property of involving intentionally for hacking the data is called?
 1) Time pass 2) Non malicious
 3) Malicious 4) Dragon
85. The way of getting the deleted data from the cybercrime committed person system is?
 1) Computer forensics 2) Malpractice
 3) Hacking 4) All of these
86. Opera, Mozilla, netscape navigator, safari are examples for?
 1) Webpages 2) System software
 3) Web browsers 4) All of these
87. Which of the following is a search engine on web?
 1) Google 2) Yahoo
 3) Delta 4) All of these
88. Webpages are saved in _____ format ?
 1) HTTP 2) HTML
 3) RTF 4) PDF
89. Antivirus is
 1) System software 2) Application software
 3) Utility software 4) Embedded software
90. Which allows you to view the websites on internet?
 1) Web browser 2) Search engine
 3) Ethernet 4) Telnet
91. HTTP stands for
 1) Hyper Text Trend Protocol
 2) Hyper Text Transfer Protocol
 3) Hyper Text Trade Protocol
 4) Haryana Text Transfer Protocol
92. OCR Stands for ?
 1) Optical Character Reader
 2) Optical Code Reader
 3) Optical Character Recognition
 4) Optics Code Recognition
93. What is the full form of POP?
 1) PostOffice Protocol
 2) Point of Port
 3) Point Of Protocol
 4) All of these
94. Which of the following are social networking sites?
 1) Linked in 2) Facebook
 3) Tweeter 4) All of these
95. Which of the following is Chatting Provider in internet?
 1) Yahoo messenger 2) Google Talk
 3) Rediff Messenger 4) All of these
96. Which of the below text does not support colored text or fonts in E-Mail Text ?
 1) Plain text 2) HTML Text
 3) Rich text 4) All of these
97. Which are the memory components that store the web history on computer?
 1) Clouds 2) Cookies
 3) Clocks 4) Google
98. The IEEE standard cables that are used to connect computers to the network are called?
 1) Telnet 2) Ethernet
 3) Intranet 4) Extranet
99. The process of searching for known virus in the system is called?
 1) Shimming 2) Scanning
 3) Scamming 4) Finding
100. The unsolicited and bulk mails in E-Mail is called?
 1) Spam 2) Scam
 3) Storm 4) Virus

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	1	3	4	1	2	1	4	4	1	2	4	4	1	1	2	3	3
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4	1	1	1	3	1	4	1	3	4	3	2	5	1	2	3	3	4	2	5
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
4	2	3	4	1	2	3	2	3	1	2	4	5	2	4	2	3	4	3	3
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
3	1	2	3	2	5	2	2	2	2	1	4	3	2	3	4	3	3	2	1
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
3	4	1	3	1	3	4	2	3	1	2	3	1	4	4	1	2	2	2	1

IMPORTANT ABBREVIATIONS**ALU** → Arithmetic Logic Unit**AI** → Artificial Intelligence**ASP** → Application Service Provider**ALGOL** → Algorithmic Language**ANSI** → American National Standard Institute**ASCII** → American Standard Code for Information Interchange.**ARPANET** → Advance Research Projects Agency Network**API** → Application Programming Interface**ATM** → Automated Teller Machine**ATM** → Asynchronous Transfer Mode**AWT** → Abstract window toolkit**BIOS** → Basic Input Output Systems**BIT** → Binary Digit**BASIC** → Beginner's All purpose Symbolic Instruction Code**BMP** → Basic Multilingual Plane (BITMAP)**CDMA** → Code Division Multiple Access**CPU** → Central Processing Unit**CMOS** → Complementary Metal Oxide Semiconductor**CU** → Control Unit**CD** → Compact Disc**CD-R** → CD Recordable**CDRW** → CD Rewritable**CDROM** → Compact Disc Read only Memory**CISC** → Complex Instruction Set Computer**CAD** → Computer Aided Design

CRT → Cathode Ray Tube.
COBOL → Common Business Oriented Language
CGI → Computer Generated Imagery
DNS → Domain Name System
DSL → Digital Subscriber Line
DVD → Digital Versatile Disc
DRAM → Dynamic Random Access memory
DDL → Data Definition Language
DML → Data Manipulation Language
DPI → Dots Per Inch
DVR → Digital Video Recorder
DBMS → Data Base Management System
DVI → Digital Visual Interface
DSS → Decision support system
EDI → Electronic Data Interchange
E-MAIL → Electronic Mail
ERM → Entity Relationship Model
EEPROM → Electronically Erasable Programmable Read only memory
EPROM → Erasable Progeammable Read only memory
ENIAC → Electronic Numerical Integrator and Calculator
EDSAC → Electronic Delayed storage Automatic Computer
EDVAC → Electronic Discrete variable Automatic Computer.
EXE → Executable
FDMA → Frequency Division multiple Access
FTP → File Transfer Protocol
FIFO → First In First Out
FORTRAN → Formula Translation
GB → Giga Byte
GPS → Global Positioning System
Gb → Gigabit
GSM → Global System for mobile telecommunication
GIF → Graphics Interchange Format
GUI → Graphical User Interface
GHZ → Giga Hertz
GPRS → General Packet Radio Service
HTTP → Hyper Text Transfer Protocol
HTML → Hyper Text Markup Language
HDV → High Definition Video
HDD → Hard Disk Drive
HLL → High Level Language
HP → Hewlett packard
ISDN → Integrated Services Digital Network
ISP → Internet Service Provider

IRC → Internet relay chat
IPV → Internet Protocol Version
IC → Integrated Chip (circuit)
IT → Information Technology
IBM → International Business Machine
IE → Internet Explorer
IMAP → Internet Message Access Protocol
ISO → International Standardization Organization
ITU → International Telecommunication Union
ICMP → Internet control message protocol
JSP → Java Server Pages
JPEG → Joint Photographic Experts Group
KB → KiloByte
Kb → Kilobit
KBPS → Kilo Bytes Per Second
Kbps → Kilo bits Per second
KYC → Know Your Customer
LAN → Local Area Network
LSI → Large Scale Integrator
LCD → Liquid Crystal Display
LED → Light Emitting Diode
LIFO → Last In First Out
LISP → List Processing
LASER → Light Amplification by Stimulated Emission of Radiation
MAN → Metropolition Area Network
MB → Mega Byte
MBPS → Mega bytes Per Second
MAC → Media Access Control
Mb → Megabit
MbPS → Mega bits per Second
MHZ → Mega Hertz
MU → Memory Unit
MCA → Micro Channel Architecture
MICR → Magnetic Ink character Recognition
MPEG → Moving Pictures Experts Group
MANET → Moble Ad-Hoc Network
MIPS → Million Instructions Per Second
MIDI → Music Instrument Digital Interface
MODEM → Modulator Demodulator
MSDOS → Microsoft Dos
MMS → Multimedia Message Service
MIME → Multipurpose Internet Mail Extension

NIC → Network Interface Card
NT → New Technology
NACS → Netware Asynchronous communication services
OSI → Open System Interconnection
OCR → Optical Character Recognition
OMR → Optical Mark Recognition
ORG → Organization
OPP → Object Oriented Programming
OS → Operating System
PAN → Personal Area Network
PSTN → Public Switched Telephone Network
PSDN - Public Service Digital Network
POST → Power on Self Test
PC → Personal Computer
PDF → Portable Document Format
PDA → Personal Digital Assistant
P2P → Peer to Peer
PROM → Programmable Read Only memory
POP → Post Office Protocol
PPP → Point to Point Protocol
PPI → Pixels Per Inch
PPT → Power Point Presentation
RDBMS → Relational Database Management System
RAID → Redundant Array of Independent Disks
RAM → Random Access Memory
ROM → Read Only Memory
RISC → Reduced Instruction Set Computer
RATS → Regression Analysis of Timeseries
SDM → Space Division Multiplexing
STP → Shielded Twisted Pair Cables
SMTP → Simple Mail Transfer Protocol
SRAM → Static Random Access Memory
SDRAM → Synchronous Dynamic Random Access Memory
SDMC → Secure Digital Memory Card
SQL → Structure Query Language
SMS → Short messaging Service
SIM → Subscriber Identity Module
SP2 → Service Pack 2
SATA → Serial Advanced Technology Attachment
SNMP → Simple network management protocol
TRAI → Telephone Regulatory Authority of India
TDM → Time Division multiplexing

TCP → Transmission Control Protocol
TTL → Transistor Transistor Logic
TB → Tera Byte
TV → Television
TIFF → Tagged image file format
UPS → UnInterruptible Power Supply
URL → Uniform Resource Locator
USB → Universal Serial Bus
UDP → User Datagram Protocol
VAN → Value Added Network
VB → Visual Basic
VIRUS → Vital Information Resource Under Seize
VLSI → Very Large Scale Integrator
VGA → Video Graphics Array
VPN → Virtual Private Network
VM → Virtual Memory
VT → Video Terminal
VOIP → Voice Over Internet Protocol
WAN → Wide Area network
WWW → World Wide Web
Wi-fi → Wireless Fidelity
Wi Max → World wide Inter operability for Microwave Access
Windows Me → Windows Millenium
Windows NT → Windows New Technology
WAP → Wireless Application Protocol
XML → Extensible Markup Language
XHTML → Extensible Hypertext Markup Language
ZIP → Zone Information Protocol.

FILES & EXTENSIONS

File : The memory in computer is stored in files & they have file names

File Extension : The suffix of the file name, that indicates the type of format & its contents.

Note : We see different File extensions separately

i) Text files :

- . doc → document File (MS Office Word 2003)
- . docx → document file (MS Office Word 2007/10/13)
- . RTF → Rich Text Format
- . txt → Plain text file (Note Pad)

2) Image files :

- . jpg (or) .jpeg → joint photographic experts group
- . bmp → bitmap
- . gif → Graphics Interchange Format
- . Png → Portable Network Graphics.
- . tif → Tagged Image file

3) Audio Files :

- .mp3 → media player 3
- .amr → for small GSM mobiles
- .wma → windows media Audio file
- .midi → MIDI file
- .aac → Advanced Audio Codio (MPEG-4)

4) Video Files :

- .flv → Flash video
- .3gp → used in GSM mobiles (Small mobiles)
- .mp4 → MPEG -4 Video file
- .wmv → windows media video file
- .mpeg → moving pictures experts group

5) Other Files :

- .pdf = Portable document format
- .PMD = Page maker Document file
- .SYS = System Files
- .exe = executable file
- .torrent = bit torrent file

IMPORTANT TERMS

1) UPS : Uninterruptible Power Supply

- The device which gives continuity to process work even when power off's
- It provides Battery power to the attached / connected devices.

Ex : for Computers, Fans, Tv's, Printers etc, We connect the UPS

2) MCA : Micro channel Architecture

- It is the chip architecture developed by IBM
- It allows 16-32 Bit address length

3) Instructions in Processor & Their types :

- We can divide processor into CISC & RISC based on their complexity in Instructions

CISC	RISC
<ul style="list-style-type: none"> - Complex Instruction Set Computer - It allows more number of micro electronic signals - It uses complex addressing modes <p>Ex: Pentium Pro, II, III</p>	<ul style="list-style-type: none"> - Reduced Instruction set computer - It allows small & limited number of signals - It uses simple addressing modes <p>Ex: IBM Rs - 6000, MC-88100</p>

4) RAID : Redundant Array of Independent Disk

- It combines multiple diskdrive components into Logical unit
- It consists many number of copies having same data to provide fault tolerance.

5) Surge Protector : Appliance used to protect electrical devices from voltage spikes.

- * Voltage spikes means high voltage & low voltages.

6) Instruction Cycle : It is the base processing cycle of computer

→ process starts from fetch cycle and ends with execute cycle

[fetch instruction → Decode → evaluate Address → Fetch operands → execute → Store]

7) OOP : Object Oriented Programming

The concepts / objects of oop are :

- 1) Class
- 2) Object
- 3) Data Abstraction
- 4) Data Encapsulation
- 5) Polymorphism
- 6) Inheritance
- 7) Overloading

Note : Basic oop concepts are only 5, which are numbered from 3 to 7 in list.

Here

Polymorphism : Existing two or more forms for a single class

Inheritance : Acquiring features of parent class to the child class

8) Logic gate families : DTL, TTL, ECL, etc.,

* ECL is the fastest logic family

9) POS Terminals / Systems :

→ POS stands for point of sale

→ The POS systems or terminals are used in super markets and shopping complex for billing the products through bar code Readers

→ Through Bar code itself, they even find the offers & discounts on the special products in PSS sys.

10) MS Paint :

→ The basic free painting tool provided by windows to draw the pictures.

→ This is found in all systems where they are using windows operating system.

11) Spooling:

→ The process of maintaining order of printing pages in printer device

→ It is maintained by spooler (Numeric code)

12) Tab Key : To indent (represent) the paragraph

13) Podcast : The files of image, text, audio, video in the internet ready to download

14) Access Time : Time read data from a peripheral data storage

15) Adder : The digital logic circuits that implements adding process in ALU for 2 or more binary num

16) Alpha Numeric Data : A to Z and 0 to 9

17) Applet : The java application downloaded by webserver and runs on users computer

Ex: Financial Calculators

18) Band Width : The amount of data that sent through network connection

→ Internet speed depends on band width

19) **Baud Rate :** Measuring amount of data transferred in one second

→ Modem speed is measured through baud rate

20) **Bluray Disk :** Red laser beam to read and write data on disk

→ Single layer disk up to 25 GB

→ Double layer disk up to 50 GB

21) **C Language :** Developed in AT and T labs

22) **CAD :** Computer Aided Design

→ Civil Engineers use CAD to Draw Building Plans in Computer

23) **CODEC :** Compression and DE compression

Ex: Cinepak and MPEG

24) **Crash :** The Hardware or Software problem that causes information to be lost on computer or to shutdown automatically.

25) **DDR :** Double Data Rate (RAM) A type of SDRAM to fast delivery of data.

EX : DDR-2, DDR-3

26) **Directory:** List of files stored in computer

27) **Documentation :** The documents that contain code, flowchart, algorithm, result in written form

28) **Ethernet Card (NIC) :** Network interface card, it is a board in CPU, to connect network cables

29) **HTML :** Hypertext Markup Language

→ Web pages are saved in HTML Format

30) **IP Address :** It is divided into four segments with 32 bit address Length

Ex: 162.150.20.15

31) **Logic Gates :** A digital circuit result in output based on states of input signals

AND → All input must be in '1', to produce '1' as output

OR → Any one input or more is '1' to produce '1' as output

NOT → It is also called inverter

→ It has only one input one output

→ If input is '1', the output is '0', viceversa

NOR → Any one input or more is '1' to produce '0' as output

NAND → All input must be in '1', to produce '0' as output

XOR → If any one input is '1', but not if 2 or more input are '1', the output is '1'

32) **LOOP :** The repetition of program instruction until a conditional exit is occurred

33) **Surfing :** Exploring (browsing) the Internet

34) **Syntax :** A set of grammatical rules defining valid use of specific commands & Instructions in a Computer Language.

- 35) **Telnet** : It is an IP (Internet Protocol) that let you to connect computer as remote server to anywhere in the world & to use that computer as if you were logged on locally.
- 36) **TRACK** : A ring on surface of magnetic disk
- 37) **TWAIN** : Technology Without An Interesting Name
→ It is related to scanner
- 38) **ZOOM** : Process of enlarging or reducing image size displayed on computer monitor.
- 39) **ZIP** : Zonal Information Protocol
→ Compression of application files.
- 40) **Mobile Phone Software** : android, symbian, ios, bada, etc.,
- 41) **Digitization** : Process of converting voice, text, audio, video into digital form
- 42) **Veronica** : It is a place where Gopher Protocol is applied
- 43) **Circuit Switching** : Method used in PSTN system where there is a direct connection between communication devices.
- 44) **Skype** : Application for video chat through internet.
- 45) **Peripherals** : except CPU, remaining connecting devices to computer
Ex: Pendrives, Printers, Scanners, etc.,
- 46) **E-learning** : The process of attending class through online in computer without going to class room
- 47) **MOSAIC** : First browser in web
- 48) **Sector** : Section of recording track on magnetic disk
- 49) **Spider** : The process followed by search Engine to investigate new pages on website & collect the information that needs to be put in their index
- 50) **Streaming** : Taking packets of information (Audio or Video) from internet & storing it in temporary files to allow it to play in continuous flow.
- 51) **Toggle Key** : The key which performs two actions
Ex: Caps lock Key
- 52) **IMEI** : International Mobile Equipment Identity

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