# Ch. 1. Basics of information technology

## Q.1 Complete the following activity:
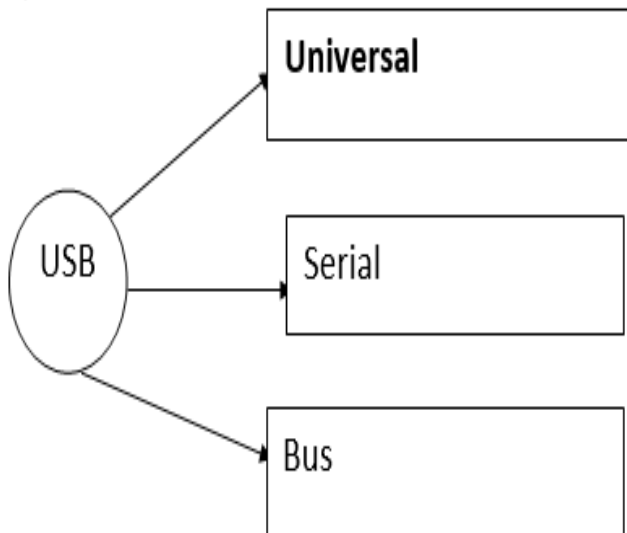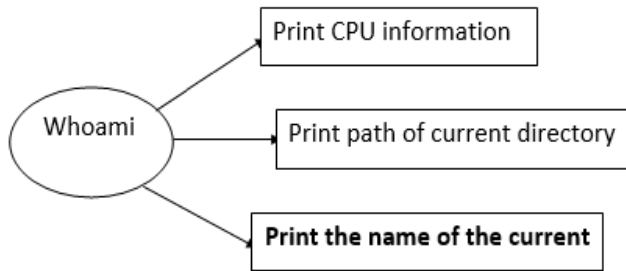
1)

| DOS | → | Disk |
| --- | --- | --- |
|  | → | **Operating** |
|  | → | System |
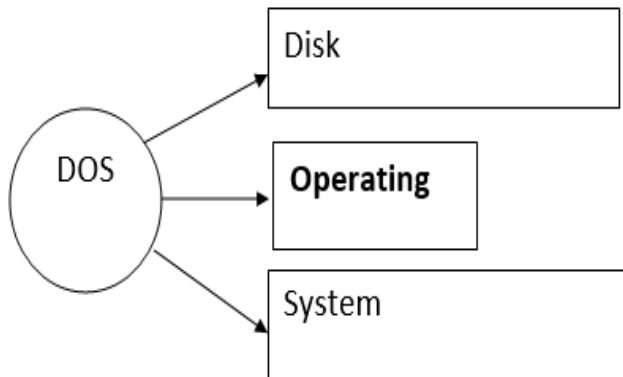
2) Tick the appropriate box internet is a **global** network connecting millions of computer

| Regional | Global | Local |
| --- | --- | --- |

3)

| USB | → | **Universal** |
| --- | --- | --- |
|  | → | Serial |
|  | → | Bus |

4) Tick the appropriate box

Whoami
- Print CPU information
- Print path of current directory
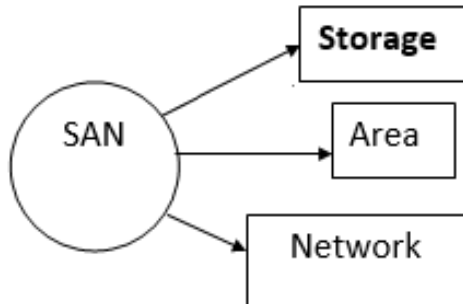- **Print the name of the current**

5)



SAN
- **Storage**
- Area
- Network

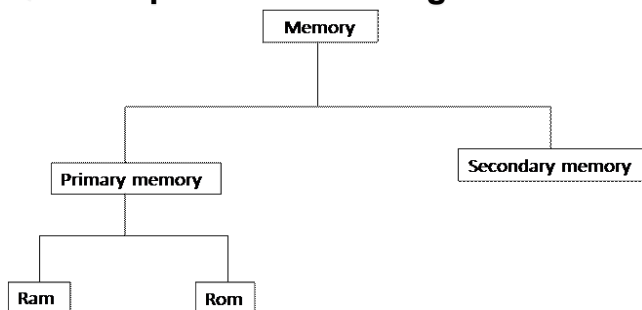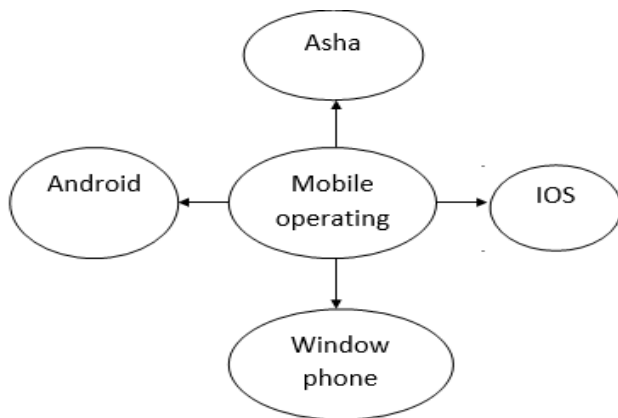## Q.2 Divide the following list of device into appropriate categories:

(Monitor, barcode, reader, printer, keyboard, optical character reader, speaker.)

| Categories | Names |
|---|---|
| Input device | Barcode, keyboard , optical character reader |
| Output device | Monitor , speaker, printer |

## Q.3 Complete the tree diagram:



Memory
- Primary memory
  - Ram
  - Rom
- Secondary memory

**Q.4 Name the following and complete the diagram:**

```
                    ┌─────────┐
                    │  Asha   │
                    └─────────┘
                         ▲
                         │
┌──────────┐       ┌──────────┐       ┌──────┐
│ Android  │◄──────│  Mobile  │──────►│ IOS  │
└──────────┘       │operating │       └──────┘
                   └──────────┘
                         │
                         ▼
                    ┌─────────┐
                    │ Window  │
                    │  phone  │
                    └─────────┘
```

**Q.5 Complete the following With Linux command with their uses:**

| Command | IT's Use |
| --- | --- |
| Pwd | Point the path of current directory |
| Is | Print the list of directories |

## Q.6 Complete the list of following protocols:

TCP/IP   DNS

IMAP   Internet protocol   DHCP

HTTP   FTP
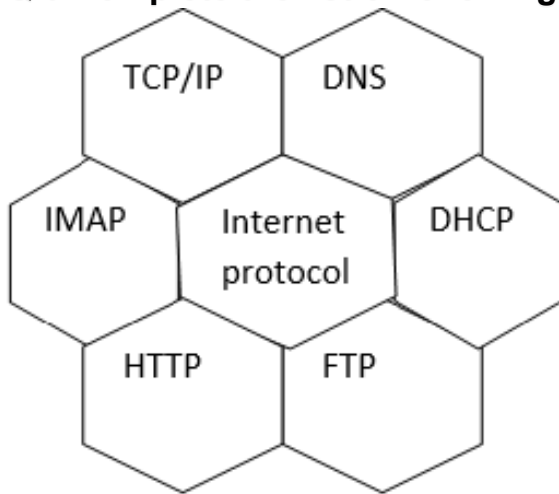
## Q.7 Complete the following long form:

LAN — Local **area** network

GUI — **Graphical** user interfaces

OSS — Open source **software**

## Q.8 Identify the following activities:

You are typing a letter using a computer and suddenly there is a power failure. What type of memory does this activity deals?

**Ans:** RAM

## Q.9 Answer the following:

**1) What is data information? Give example of data and information.**

**Ans:** Data:

- Information in raw or unorganized from such as alphabets, numbers, or symbols that refer to, represent, condition, ideas, or objects. Data is a limitless and present processed by a computer, for output as usable information

    For example:

Karve Nagar 3546, Amit Masand, MG Road,

Pune: 9645876325,524136

Information:

- Processed data is known as information. It is formatted in a manner that allows to utilize to persons in significant way. When the data is interpreted, organized and formatted one can collect proper information.

For example:

Amit Masand, 3546, MG road, karve nagar 524136

Pune: 9645876325


**2) Explain functional units of a computer system:**

**Ans:**

Computer architecture is a specification detailing how a set of software and hardware technology standards interacts to form of a computer system or platform. In short, computer architecture refers to how the computer system is designed and what technology it is compatible with.
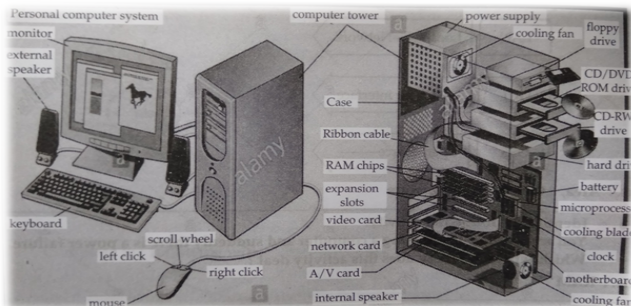


Computer system has following three basic components :

- Input units

As input device is any hardware device that ends data to a computer, allowing you to interacts with and controls it. Data can be in the form of words, symbols, number etc. The function of the input device is to direct commands and data into computer.
For example keyboard, mouse, scanners, digital cameras, joysticks, and microphones.

- Central processing unit:

After receiving data and commands from the user, a computer system has to process the instructions provided using Central Processing Unit (CPU). It has three elements:
(a) Arithmetic and Logic Unit: An arithmetic logic unit (ALU) is a   major component of the-central processing unit of a computer system. It does all processes related to arithmetic and logic operations like add, subtract, multiply etc.
(b)  Control Unit:  The control unit (CU) is a component of a computer's central processing unit (CPU) that directs the operation of the processor. It tells the computer's memory, arithmetic and logic unit and input and output devices how to respond to the instructions that have been sent to the processor.
(c) Memory Unit: Memory unit is the amount of data that can be stored in the storage unit. Once the data has been entered using input devices, the system stores the data in the memory unit. '

### Types of Memory. 'Primary Memory & Secondary Memory.

- Primary Memory: It 18 internal memory of the computer also known as main memory'. ' It is of two types RAM and ROM
- RAM (Random Access Memory) 'RAM stands for Random Access Memory also known as read/write memory. Information stored in this memory is lost as the power supply to the computer is switched off; it is also called as "Volatile Memory".

- ROM(Read Only Memory) :ROM stands for Read Only Memory. ROM is a permanent Type memory. The contents are not lost as the power supply to the computer is switched off. ROM cannot be overwritten by the compute. It is also called "Non Volatile Memory".


- Secondary Memory: It is external memory of the computer which is used to store large amount of data. The secondary storage devices are: Hard disk, Pen drive, CD, DVD etc.

- Output Unit: An output device is any device used to send data from a computer to another device or user. Most computer data output that is 'meant for humans is in

the form of audio or video. Thus, most output devices used by humans are in these categories. Examples include monitors, projectors, speakers,

headphones and printers.



Block Diagram of Computer
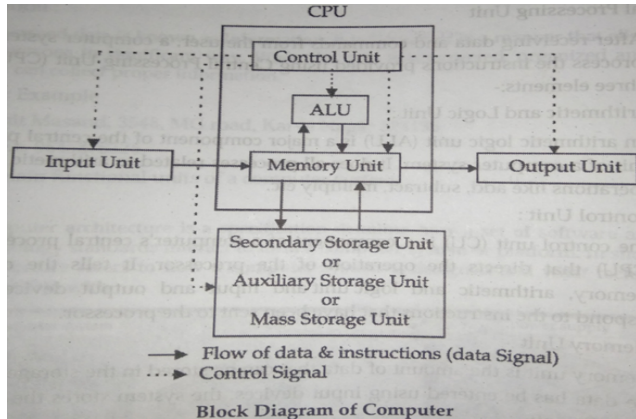
## 3. What is storage unit? Explain types of primary memory storage.

**Ans:** Storage unit:

When a user enters data using input devices, the computer system stores this data in memory unit i.e. storage unit. The storage unit uses a set of pre-programmed instructions to further transmit this data to other parts of CPU. There are two types of memory (1) Primary memory

**(2) Secondary memory.**

**Types of Primary memory storage:**

**1. RAM**: It stands for Random Access Memory. RAM is known as read/write memory. It is the main memory of the computer system. The information stored in this memory is lost as the power supply to the computer is switched off, so it is also called as "Volatile Memory."

**2. ROM:** It stands for Read Only Memory. ROM is permanent memory. The content is not lost when power supply is switched off. ROM cannot be overwritten by the computer, so it is also called"Non-Volatile Memory",

## 4. Explain how Linux is different from window.

**Ans:**

1. Linux is open sources system whereas window operating system is commercial.
2. Linux has access to source code and alters the code as per user need whereas a window does not have access to-source code.
3. Linux distribution don't collect user data" whereas Windows collect all the user details which lead to privacy_ concern.

4. As the software is open to public, it constantly updates, improves and expands as more people can work on its improvement.

**5. Write down the difference between LAN, MAN and WAN.**
**Ans: Network:** -A computer network is a connection of two or more computers for the purpose of sharing.
**Types of Network.**
**The following are types of Network:**
**1. LAN (Local Area Network)**
**2. MAN (Metropolitan Area Network)**
 **3. WAN (Wide Area Network)**
These are explained as follows:
**1)  LAN (Local Area network)**
a) LAN Stands for Local Area Network
b) A LAN IS a network of connected devices that exist within a specific location.
c) LANs may be found in homes, offices, educational institution, or other areas
d) LAN is easy to setup.
e) Data transmits at a very fast rate.

**2) MAN (Metropolitan Area network):**
a) MAN stands for Metropolitan Area Network
b) A public or private network used to connect various locations including suburbs in metropolitan cities.
c) A MAN is a network, which covers an entire city, but uses LAN topology.
d) MANs are formed by connecting multiple LANs
e) Examples of a MAN are the cable TV network in a city

**3) WAN (Wide Area network):**
a) WAN stands for Wide Area Network
b) A WAN is any network that crosses metropolitan, regional, or national boundaries
c) Most networking professionals define a WAN as any network that uses routers and public network links (for e.g. Telephone lines).
d) Due to long distance transmission, the noise and errors are more in WAN.
e) The best example of WAN is Internet.