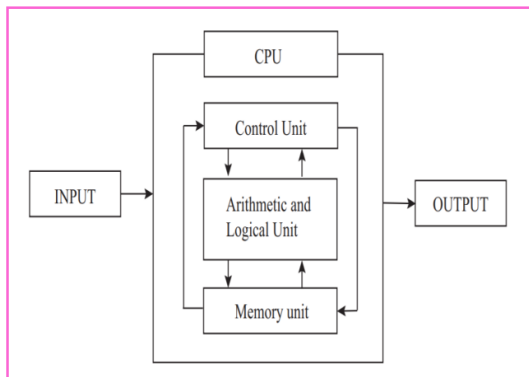# 1

COMPUTER FUNDAMENTALS

- A computer is an electronic machine that takes an input, processes it to produce the desired output. It is combination of Hardware and Software.

- **WORKING OF A COMPUTER:** The working of a computer can be well understood by the block diagram shown in Fig

- The working of a computer can be broadly categorized into following four functions or steps:
  - Receive input – Accept data/information from user through various input devices like the keyboard, mouse, scanner, etc.
  - Process information–Perform arithmetic or logical operations on data/ information.
  - Store information—Store the information in storage devices like hard disk, CD, pen drive etc.
  - Produce output–Communicate information to the user through any of the available output devices like monitor, printer, etc

- **INPUT DEVICES:** An input device is used to get data or instructions from the user. This data is then passed on to CPU for processing so as to produce the desired result. Although keyboard and mouse are the two common input devices, other devices such as Optical Character Recognition (OCR), Magnetic Ink Character Recognition (MICR), and mark sense reader, etc., are also used as per our requirement.

- **CENTRAL PROCESSING UNIT (CPU):** CPU is the 'Brain of the computer'

A typical CPU has the following components:

  - Control Unit (CU)
  - Arithmetic Logic Unit (ALU)
  - Memory Registers

- **OUTPUT DEVICES:** Output devices receive information from the CPU and present it to the user in the desired form. Some of the output devices are monitor, printers, plotters, etc.

- **MEMORY UNIT: There** are two kinds of computer memory: primary and secondary.
  Random Access Memory (RAM)
  Random Access Memory (RAM) is the type of memory in which it is possible to randomly select and use any location

of the memory directly to store and retrieve data. It is also called as read/write memory.

Read Only Memory (ROM)

This is another type of primary memory from which data can only be read. We cannot write or modify data once written on to the ROM.

Cache Memory

To increase the performance of CPU, a small memory chip is attached between CPU and main memory whose access time is very close to the processing speed of CPU. This memory is called as Cache memory.

Types of Computer Memory
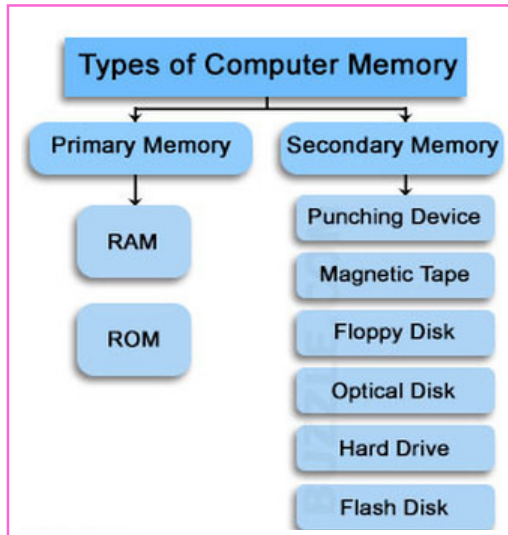
- **MEMORY ACCESSING MODES**

  An addressing mode refers to the manner in which a given memory location is accessed

  Direct Access or Random Access

  It is the type of accessing mode in which the value to be stored in a particular memory location is obtained directly.

  Sequential Access memory

  It is the type of memory in which the stored data is read in sequence.

CHECK YOURSELF

1. Which of the following is an output device?   A. Keyboard   B. Mouse   C. Monitor   D. Light pen

2. Which of the following is an input device? A. Plotter B. Printer C. VDU D. Mouse

3. What is the full form of RAM?
A. Remote Access Memory
B. Random Access Memory
C. Remote Access Memory
D. Random Access Memory

4. Which of the following is **NOT** considered hardware?
A. Operating System B.CPU C. Keyboard D. Hard disk

5. What is the full form of VDU?
A. Virtual Development User
B. Virtual Detection Unit
C. Visual Detection Unit
D. Visual Display Unit

STRETCH YOURSELF

1. What are the main components of a computer?

2. Explain the basic working of a computer?

3. What is the difference between RAM and ROM?

4. Give few examples of Secondary memory?

ANSWERS

Answers to Check Yourself:

1. C
2. D
3. B
4. A
5. D