# 1

BASICS OF COMPUTER

COMPUTER: Computer is an electronic device which takes raw data (input) from the user and processes through set of instructions (called program) and gives the result (output).

- Computer can process both numerical and non-numerical (arithmetic and logical) calculations.

- Computer was invented by Charles Babbage.

- The brain of computer is called Central Processing Unit (CPU).

- Central Processing unit has 3 major parts: **Memory Unit, Control Unit and Arithmetic Logic Unit.**
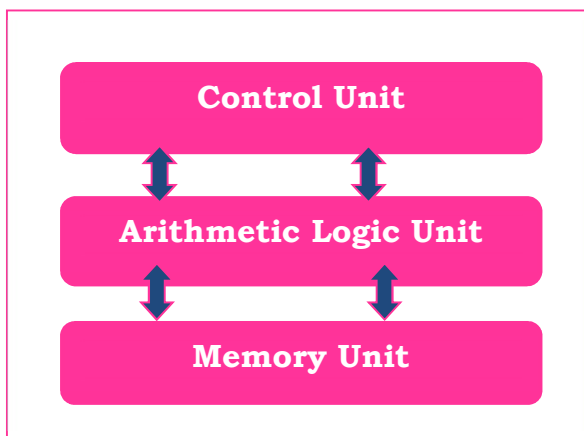
MAJOR PARTS OF A COMPUTER: CPU, Key Board, Mouse, Monitor and Continuous power supply Unit.

- The external devices for computers are classified into 3 categories: Input devices, output devices and peripheral devices.

INPUT DEVICES: Keyboard, Mouse, Light Pen, Optical Mark Reader, Optical Character reader, Microphone, Track Ball.

OUTPUT DEVICES: Monitor (CRT, LCD and LED), Printer (Laser printer, Ink-Jet Printer, Dot Matrix and Line printer), Plotter (Flat Bed and Drum) and Speakers.
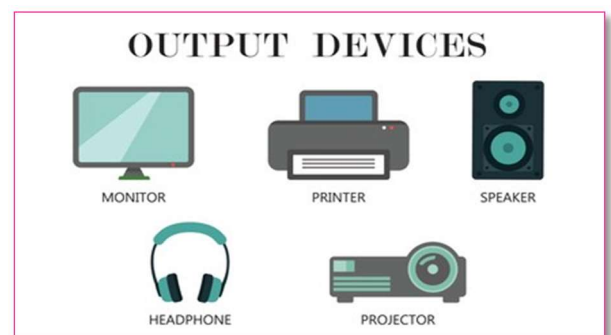
ARITHMATIC LOGIC UNIT: ALU performs all arithmetic operation (addition, subtraction, multiplication, division etc.) and Logical operation (comparison, greater than, less than etc.).

CONTROL UNIT (CU): It is referred as control unit. CU performs all
Major operations like input, output and processing.

MEMORY: It is classified into 2 categories. Primary memory and Secondary memory.

- Primary memory consists of RAM and ROM. Secondary memory includes devices like hard disk, CD, DVD, pen drive, Zip drive etc.

SOFTWARE: It is referred as set of programs. Software can be broadly classified as: System software and Application software.

- System software is mainly of two types: Operating systems and Utilities
- Application Software are General packages and customized packages

LANGUAGES: The computer language is used to write programs or any specific applications. Broadly the computer language can be classified into 3 categories: assembly language, machine language and high-level language.

- ✓ Machine language or machine code consists of binary code. It is directly understood by the computer.
- ✓ Both machine and assembly language are hardware specific.

- ✓ A high level language is a programming language that uses English & mathematical symbols as instruction.

COMPILER: It converts the high level programs into machine code. It scans the entire program at a time.

Programming languages like C, C++ & Java uses compilers.

INTERPRETER: Interpreter also converts the high level program to machine level language. It interprets the program line by line. Interpreter takes less amount of time to analyse the source code. Programming languages like Python, JavaScript uses interpreters.

ASSEMBLER: Assembler is quite similar to compiler. It converts assembly language to machine code.

Difference	
High Level	**Low Level**
• Programmer-friendly language • Portable • Easy to understand • Easy to debug	• Machine-friendly language • Non-portable • Difficult to understand • Difficult to debug

CHECK YOURSELF

1. Identify various parts and write the names in the blank boxes
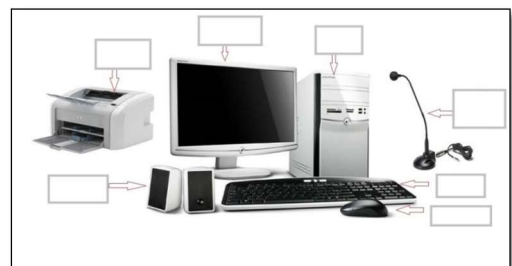
2. Identify the followings

3. What is a software? Choose the right option.
   A. ANY part of the computer that has a physical structure
   B. Clothing designed to be worn by computer users.
   C. Flexible parts of a computer
   D. Instructions that tell the hardware what to do
4. Which is not an output device?
   A. Key board
   B. Monitor
   C. Printer
   D. Plotter
5. Which among the following uses compiler?
   A. C++
   B. MS-Word
   C. Adobe
   D. Paint

STRETCH YOURSELF

1. Briefly explain about various parts of computer.
2. Write the difference between high level language and low level language.
3. What is the different type of software?
4. Explain the role of control unit in CPU.
5. What is the use of assembler?

ACRONYMS

CPU: Central Processing Unit

MOUSE: Manually Operated User Selection Equipment

VDU: Visual Display Unit

LED: Light Emitting Diode

LCD: Liquid Crystal Display

CRT: Cathode Ray Tube

UPS: Uninterruptible Power Supply

RAM: Random Access Memory

ROM: Read Only Memory

ANSWERS

Check Yourself

3. D

4. A

5. A

Stretch Yourself

1. Write about Input and Output devices