

## Unit 1. Introduction:-

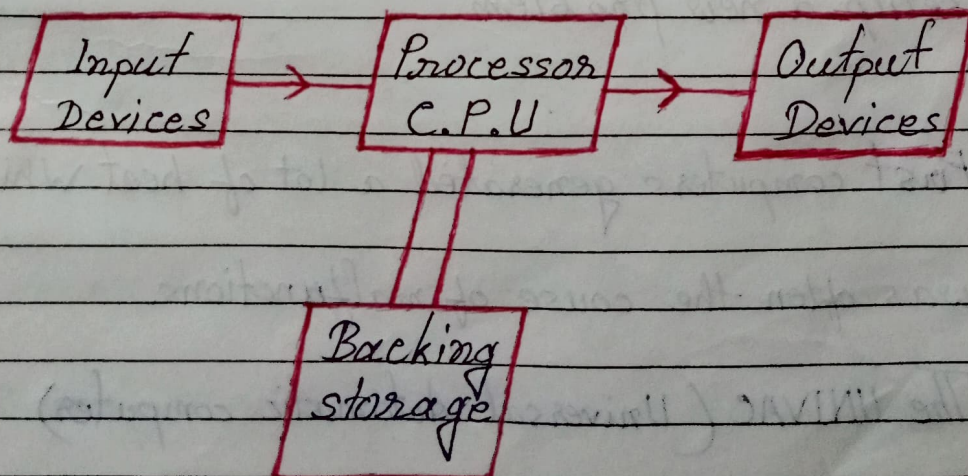
### Unit 1.1.1 Introduction of Computer.

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#### \* Computer \*

- \* It is a programmable electronic device designed for storing and processing data based on sequence of instruction.
- \* A Computer is a fast system that is organized to accept, store, and process data and produce output results under the direction of a stored program of instructions.

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① First generation:- vacuum Tube  
(1940 - 1956)

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- i. → The first computer system used vacuum tubes for circuitry and magnetic drums for memory.
- (ii) These computers were very expensive to operators.
- (iii) First generation computers relied on machine language, the lowest level programming language understood by computer to perform operation.
- (iv) They could only solve one problem at a time.  
It would take operator days or even weeks to setup a new problem.
- (v) First computers generated a lot of heat. Which was often the cause of malfunctions.

Example:- The UNIVAC (Universal Automatic computer)

The UNIVAC was the first commercial computer

Teacher's Signature .....



delivered to a business client, the U.S. census Bureau in (1951)

→ ENIAC (Electronic Numerical integrator and computer) computers.

## 2. Second generation:- Transistors (1956-1964)

- (i) Transistors replaced vacuum tubes in the second generation of computers
- (ii) The transistor was far superior to the vacuum tube allowing computer to become smaller faster, cheaper, more energy efficient and more reliable, than there first generation predecessors.
- (iii) Second generation computer still relied on punched cards for input and printouts for output.
- (iv) Second generation computers moved from binary machine language to symbolic, or assembly language.



### 3. Third generation :- Integrated circuits (1964-1971)

- (i) The development of the integrated circuit was the hallmark of the third generation of computers.
- (ii) Transistors were replaced by integrated circuits which drastically increased the speed and efficiency of computers.
- (iii) Instead of punched cards and printouts users interacted with third generation computer through keyboard and monitors.
- (iv) Computers for the first time become accessible to a mass audience because they were smaller and cheaper than their predecessors.



#### 4. Fourth generation :- Microprocessors (1971-Present)

- (i) The microprocessor brought the fourth generation of computers as thousands of integrated circuits were built onto a single silicon chip.
- (ii) What in the first generation filled an entire room could now fit in the palm of the hand.
- (iii) In (1981) ~~Ap~~ IBM introduced its first computer for the home user.
- (iv) In (1984) Apple introduced the macintosh.
- (v) Microprocessor also moved out to the desktop computers.

#### 5. fifth generation :- VLSI integration (1966-Present)

Fifth generation computers are only in the minds of advance research scientists and being tested out in the laboratories.