

## **Practical 1: Identify Basic Terms and Components of a Computer – Summary Report**

A computer is an electronic device that processes data and converts it into useful information. It works using a combination of hardware (physical parts) and software (programs).

Is practical ka main aim hai basic computer terms, hardware components, aur unki functioning ko identify karna aur unka summary banana.

### **Basic Terms of a Computer**

#### **(A) Data**

- Raw facts & figures.
- Example: numbers, text, symbols.
- Computer isse process karta hai to information banti hai.

#### **(B) Information**

- Processed & meaningful data.
- Example: Marks ka total, sorted list, generated reports.

#### **(C) Hardware**

- All the physical components of a computer that we can touch.
- Example: CPU, RAM, keyboard, mouse, monitor.

#### **(D) Software**

- Programs or instructions that tell the hardware what to do.

- Two types:
  - System Software (OS like Windows, Linux)
  - Application Software (MS Word, Browsers)

#### (E) Input

- Data given to the computer via input devices.
- Example: Keyboard typing, mouse click, scanning.

#### (F) Output

- Results produced by the computer.
- Example: Display on monitor, printed page, audio.

#### (G) Processing

- CPU performs operations on data.
- Includes: calculations, comparisons, decision making.

#### (H) Storage

- Where data is saved permanently or temporarily.
- Example: RAM, Hard Disk, SSD, Pen Drive.

#### (I) Booting

- The process of loading the operating system when the computer starts.

## **Basic Components of a Computer**

### **(A) Input Devices**

Devices that send data to the computer.

Common Input Devices:

- Keyboard – text input
- Mouse – pointer control
- Scanner – captures images
- Microphone – audio input
- Webcam – video input

### **(B) Output Devices**

Devices that show results to the user.

Common Output Devices:

- Monitor – display
- Printer – hard copy output
- Speakers – sound output
- Headphones – audio output

### **(C) System Unit (CPU Cabinet)**

This is the main core of the computer.

Components Inside System Unit:

1. Motherboard

- Main circuit board.
- All components connect here.
- Controls communication between components.

## 2. Processor (CPU)

- Called the *brain of the computer*.
- Performs calculations and processing.
- Two main parts:
  - ALU (Arithmetic Logic Unit) – calculations & logic
  - CU (Control Unit) – controls operations

## 3. RAM (Random Access Memory)

- Temporary memory.
- Stores active data and programs.
- Volatile (data is lost when power off).

## 4. ROM (Read Only Memory)

- Permanent memory.
- Stores boot instructions (BIOS/UEFI).

## 5. Storage Drives

- HDD (Hard Disk Drive) – magnetic storage, high capacity

- SSD (Solid State Drive) – faster, uses flash memory
- NVMe SSD – extremely fast storage

## 6. SMPS (Power Supply Unit)

- Converts AC to regulated DC power
- Supplies electricity to all components.

## 7. Expansion Cards

- Additional cards installed in PCIe slots
  - Graphics Card (GPU)
  - Sound Card
  - Network Card
  - WiFi/Bluetooth Card

## (D) Storage Devices (External & Internal)

Internal Storage:

- HDD
- SSD
- NVMe
- ROM

External Storage:

- Pen Drive
- Memory Card
- External Hard Disk
- CD/DVD
- Cloud Storage

## (E) Peripheral Devices

Optional but useful devices.

Examples:

- Printer
- Scanner
- Webcam
- Projector
- Game Controller

## **Working of a Computer (Cycle)**

Computer works on the IPO Cycle:

1. Input

User provides data via input devices.

2. Processing

CPU processes the data.

3. Output

Meaningful information is produced on output devices.

#### 4. Storage

Information is saved for future use.