



development of other input devices, such as magnetic tape readers. As the technology improved better and easier to use input devices were developed, such as the keyboard, mouse, and scanners bar code readers, etc. Today, sophisticated input devices like digital cameras and webcams have become available even to home computer users.

#### Output Devices

These are devices that are capable of outputting the processed information. The output may be for immediate use, for feedback or for storage for further processing later. The earliest output devices were card punches and tape punches, which punched holes in cards or ribbons of paper to represent data. The need to produce output in more readable forms saw the development of printers, which could output the information in words, diagrams or pictures. Printers could be impact printers, which produced words by hitting pre-moulded hammers against an inked ribbon held close to the paper, or non-impact printers such as laser printers and inkjet printers, which produced words and images by spraying ink on the paper. The need for immediate output which need not be preserved, as well as the need to be able to monitor the processing led to the development of the VDU (Visual Display Unit) or monitor, which could represent the data in words, figures, diagrams and pictures. Initially glowing with an unearthly green colour (called phosphor-green) that could only show words and numbers, monitors today are capable of showing high resolution images like photographs and paintings.

#### Storage Devices

When data has to be stored for later input into another process, it can be output to media like magnetic disks, tape, CD-ROMS, etc. Devices that can write this data onto these media are today widely available at relatively cheap prices, thus putting these devices into the reach of the home computer user. These are called storage devices. When the need is to store large amounts of data, other devices such as Hard Disks are used. Hard disks are magnetic disks that can store large amounts of data in random order, enabling faster access to a particular bit of data that might be needed without having to read all the data on the disk first.

#### Central Processing Unit

The job of the Central Processing Unit (or CPU) is to process the data into information; according to the instructions (or programs) given to it either by direct input (keyboard, mouse, etc) or by input from external media such as magnetic disks. The CPU is further divided into the Control Unit (CU) and Arithmetical and Logical Unit (ALU).

Some professionals also include the Read Only Memory (ROM) and Random Access Memory (RAM) in describing the Central Processing Unit. The Read Only Memory stores program instructions that are absolutely essential for the working of the computer, such as instructions for reading input from a keyboard or for outputting information to the screen. The Random Access Memory is used as a kind of temporary storage area for the CPU while it performs the processing.

#### **Answer the following.**

1. Explain CPU in detail.
2. Describe input devices and storage devices.
3. Explain output devices.

#### **Q. 5. Answer the following:**

**(10)**

- a) Explain the conceptual design models of MIS.

**OR**

- b) Describe generations of computers in detail.