

Chapter 1 Computer – Hardware Components

Instruction: Read the following notes thoroughly:

Important terms

1. **Hardware:** Hardware refers to any physical component of a computer. Monitor, keyboard and hard disk are physical components and thus, are hardware. The most important part of hardware is a CPU. It is called the ‘brain’ of the computer. Hardware is classified into two main categories as Internal Hardware and External Hardware.
2. **Software:** Software refers to the programs, which are required to operate the computer. It instructs a computer about the work to be done. Disk Operating System (DOS), Windows, Oracle and Tally are all software.
3. **MODEM:** The term MODEM is formed by combining the words MO-dulation and DEM-odulation. MODEM is a data communication equipment that translates the digital signals used by a computer into analog signals over telephone lines. The process of translating digital signals into analog signals is called modulation. A MODEM also converts the analog signals into digital signals at the receiving end of a computing device. The process which translates analog signals into digital signals is called demodulation. The basic function of a MODEM is to enable communication between various computers on a network (mainly Internet).
4. **Video card:** A video card is also known as a graphics card. It is an expansion card connected to a motherboard that is used to generate the video output on a screen such as monitor and television. It enhances the quality of the displayed images, and contains its own processing and memory unit.
5. **Motherboard:** A motherboard is a sheet of plastic that holds all the circuitry to connect various components of a computer system. It is one of the most essential parts of a computer system. It holds together many crucial components of a computer, including the Central Processing Unit (CPU), memory and connectors for input and output devices. In addition to circuits, motherboard contains a number of sockets and slots to connect other components. All the activities related to the connected devices start and end in the motherboard.

6. **Disk drive:** A disk drive enables the users to read, write, delete and modify data on a storage disk. It manages the input/output operations of the disk. It can be either external or inbuilt component of a disk. The most common type of disk drive is a hard drive, but several other types of disk drives exist as well. Some examples include removable storage devices, floppy drives and optical drives.
7. **Switched Mode Power Supply:** Switched Mode Power Supply (SMPS) is essential for safe running of power-consuming appliances. Switching power supplies have high efficiency and are widely used in a variety of electronic equipments, including computers and other sensitive equipments requiring stable and efficient power supply. It also contains inbuilt fans to release excessive heat generated during the computer use.
8. **Digital versatile disk:** Digital versatile disk (DVD) is also called digital video disk. It is very similar to a CD but can store much more data. It is an optical disk storage device used for recording movies with high video and sound quality. Data can be recorded on a DVD on one or both sides. Its capacity ranges from 4.7 to 8.5 GB.
9. **Port:** A computer port is a connection between a computer and an external or internal device. Internal ports may connect devices such as hard drives and CD-ROM or DVD drives. External ports may connect modems, printers, mouse and other devices.
10. **Printer:** A printer is an output device that allows us to print our work on paper. There are mainly three types of printers on the basis of print method or print technology which are very popular nowadays.
 - **Dot Matrix Printer:** A dot matrix printer works like a typewriter. The printer head strikes the paper and the ink ribbon to print characters. It is also called the impact printer. This printer is slow and noisy but economical, reliable and durable.
 - **Inkjet Printer:** Inkjet printer is also called a non-impact printer because there is no contact between the printer head and the paper. Printing is done line by line by spraying ink on a sheet of paper. These printers are much faster than the dot matrix printers. They are more expensive and consume more ink. Ink cartridges are used in inkjet printers.
 - **Laser Printer:** Laser printer is a non-impact printer that uses laser beams to print on paper. These printers are much faster than inkjet printers and the print quality is much superior. However, they are expensive and are mainly used in places where fine quality printing is required.