a. Computer hardware refers to the physical components of a computer system. Examples include the central processing unit (CPU), monitor, keyboard, mouse, and printer.

b. The main function of the input unit is to receive data and instructions from the user or external devices and transfer them into the computer system for processing.

c. Memory in a computer refers to the storage space where data and instructions are temporarily stored. The major classification of computer memory is primary memory (also known as main memory) and secondary memory.

d. Primary memory is the main storage area of a computer system that is directly accessible by the CPU. Its types include Random Access Memory (RAM) and Read-Only Memory (ROM).

e. ROM (Read-Only Memory) is non-volatile memory that stores permanent data and instructions, which cannot be modified. RAM (Random Access Memory) is volatile memory that stores temporary data and instructions, which can be read from and written to by the CPU.

f. SRAM (Static Random Access Memory) and DRAM (Dynamic Random Access Memory) are both types of RAM. SRAM is faster and more expensive but requires more space, while DRAM is slower and less expensive but more commonly used.

g. Secondary storage refers to external storage devices that provide long-term storage for data, programs, and files. Examples include hard disk drives (HDDs), solid-state drives (SSDs), and optical discs.

h. Magnetic disks are a type of secondary storage that use magnetic materials such as iron oxide or ferrous oxide to store data. It is most commonly used secondary storage devide in the personal computer. Examples include hard disk drives (HDDs) and floppy disks (which are no longer commonly used).

i. Optical storage is a type of secondary storage that uses lasers to read and write data on optical discs. An example is the compact disc (CD) or digital versatile disc (DVD). The information on the optical disk is stored in the form of pits and lands. And the pits tiny reflective bumps that are created with laser beam.

j. The advantages of a hard disk over a floppy disk include larger storage capacity, faster data access, better durability, and compatibility with modern computer systems.

Difference between Hard Disk and Floppy Disk :

S. No.	HARD DISK	FLOPPY DISK
1.	It is magnetic disk made of aluminium.	It is magnetic disk made of plastic.
2.	It is used as main storage device of computer.	Initially it was used as main storage device but now-a-days it is not used.
3.	It uses 2-4 metallic disk called platter.	It contains single plastic disk.
4.	Data storing surface is coated by magnetic oxide.	Data storing surface is exposed.
5.	It is reliable.	It is not as reliable as hard disk.
6.	Storage capacity is very high.	Storage capacity is low.
7.	Stores data at high speed.	Stores data at low speed.

k. Soft copy output refers to the display of information on a screen, such as a monitor, while hard copy output refers to printed or physical output, such as from a printer.

l. An LCD (Liquid Crystal Display) monitor is thin, lightweight, and produces a sharp image. A CRT (Cathode Ray Tube) monitor is larger, bulkier, and uses a cathode ray tube to display images.

m. A printer is an output device that produces a physical copy of information on paper. Types of printers includes:

i. Impact printer
   - Dot Matrix Printer

ii. Non-Impact printer
   - Inkjet printer
   - Laser printer

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o. A computer needs primary memory to store data and instructions that are actively being used by the CPU for processing. Primary memory allows for quick access to information, enabling the computer to operate efficiently.

p. A computer needs secondary storage to provide long-term storage for data, programs, and files that are not actively being used. Secondary storage devices allow for larger storage capacities and data retention even when the computer is powered off.

q. A 3D printer is a device that can create three-dimensional objects by building them layer by layer using various materials. Applications of 3D printing include prototyping, manufacturing, medical modeling, and educational purposes. ***[Also see on book: page no: 40]***

r. CD (Compact Disc) and DVD (Digital Versatile Disc) are both optical storage media. The main difference is their storage capacity, with CDs typically holding up to 700MB of data, while DVDs can hold 4.7GB or more. ***[Also see on book: page no: 53]***

s. The main differences between primary memory and secondary memory are their speed, capacity, and volatility.

Primary memory is faster than secondary memory as it is directly accessed by the CPU. It has limited capacity and is volatile, meaning that its contents are lost when the computer is powered off. Primary memory includes RAM and ROM.

Secondary memory, on the other hand, is slower than primary memory but has larger storage capacity. It is non-volatile, which means that data stored in secondary memory remains intact even when the computer is turned off. Examples of secondary memory include hard disk drives (HDDs), solid-state drives (SSDs), and external storage devices like USB flash drives and memory cards.

In summary, primary memory provides temporary storage for data and instructions that are actively used by the CPU, while secondary memory offers long-term storage for data, programs, and files that are not currently in use. ***[Also see on book: page no: 54]***