

Prof. Surajit Dharma
SACT, Dept. of Physics
Narajoke Raj College

Paper- C7T (sem-III)

Topic- Computer Organization
(Part- 2)

Computer Organization (Part-2)

Storage Devices :-

A storage device is used in computers to store the data. Provides one of the core functions of the modern computer.

Types of Storage :-

There are four type of storage

- (i) Primary storage
- (ii) Secondary storage
- (iii) Tertiary storage
- (iv) off-line storage

Primary Storage :-

Also known as main memory. Main memory is directly or indirectly connected to the central processing unit via a memory bus. The CPU continuously reads instructions stored there and executes them as required. As example: RAM, ROM, cache

RAM :-

It is called Random Access Memory because any of the data in RAM can be accessed just as fast as any of the other data.

☐ There are two types of RAM

- (i) DRAM (Dynamic Random Access Memory)
- (ii) SRAM (Static Random Access Memory)

RAM

Static RAM	Dynamic RAM
<ul style="list-style-type: none">• Faster• More expensive• More power consumption• Does not need to be refreshed	<ul style="list-style-type: none">• Slower• Less expensive• Less power consumption• Needs to be refreshed thousands of times per second

☐ ROM :-

This memory is used as the computer begins to boot up. Small programs called firmware are often stored in ROM chips on hardware devices (like a BIOS chip) and they contain instructions the computer can use in performing some of the most basic operations required to operate hardware devices. ROM memory can't be easily or quickly overwritten or modified.

Cache :-

Cache is a high-speed access area that can be either a reserved section of main memory or a storage device. Most computers today come with L3 cache or L2 cache, while older computers included only L1 cache.

Difference b/w RAM and ROM :-

RAM	ROM
1. Temporary storage	1. Permanent Storage
2. Store data in MBs	2. Store data in GBs
3. Volatile	3. Non-volatile
4. Used in normal operations	4. Used for startup process of computer.
5. Writing data is faster	5. Writing data is slower.