

1. What does CPU 3GHz means?

Ans. The term "CPU 3GHz" refers to the clock speed of a central processing unit. A CPU with 3Ghz clock speed can perform 3 billion cycles per second.

2. What is clock speed?

Ans. Clock speed refers to the rate at which a computer's central processing unit (CPU) executes instructions. It's often measured in hertz (Hz) and indicates how many cycles the CPU can complete per second.

3. CPU vs GPU

S.NO	CPU	GPU
1.	CPU stands for Central Processing Unit.	While GPU stands for Graphics Processing Unit.
2.	CPU consumes or needs more memory than GPU.	While it consumes or requires less memory than CPU.
3.	The speed of CPU is less than GPU's speed.	While GPU is faster than CPU's speed.
4.	CPU contain minute powerful cores.	While it contains more weak cores.
5.	CPU is suitable for serial instruction processing.	While GPU is not suitable for serial instruction processing.
6.	CPU is not suitable for parallel instruction processing.	While GPU is suitable for parallel instruction processing.
7.	CPU emphasis on low latency.	While GPU emphasis on high throughput.

4. Flash memory

Ans. Flash memory is secondary memory and so it is not volatile which means it persists the data even if there is not an electrical supply provided. This flash memory works on the principle of EEPROM. EEPROM stands for Electrical Erasable Programmable Read-Only Memory. ROM operation can only one time write and many times read and we can't erase it. But Flash Memory can be erased multiple times and update the data.

5. Logical Address vs Physical Address

Logical Address

This address is generated by the CPU.

The address space consists of the set of all logical addresses.

These addresses are generated by CPU with reference to a specific program.

The user has the ability to view the logical address of a program.

The user can use the logical address in order to access the physical address.

Physical Address

This address is a location in the memory unit.

This address is a set of all physical addresses that are mapped to the corresponding logical addresses.

It is computed using Memory Management Unit (MMU).

The user can't view the physical address of program directly.

The user can indirectly access the physical address.

6. Hyper Threading vs Multithreading

Hyper-Threading

Technology that allows a single CPU core to handle two threads simultaneously.

Affects individual CPU cores (virtual cores).

Improves multitasking and performance on multi-threaded applications with fewer physical cores.

Mainly in CPUs like Intel's, where each core is split into two virtual cores.

A hardware-based technology (Intel-specific).

Intel's Hyper-Threading allows each core to run two threads (e.g., 4 cores = 8 threads).

Multithreading

The ability of a CPU or software to manage multiple threads of execution within a program or across multiple programs.

Can involve multiple physical or virtual cores.

Depends on the number of physical cores and threads utilized by the software.

Used in both software (programming) and hardware (CPUs) to run multiple tasks.

A broader concept in computing (can be hardware or software-based).

A program running multiple threads across multiple cores (e.g., 4 cores, 4 threads per core = 16 threads).

7. DRAM vs SRAM

SRAM

SRAM stands for Static Random Access Memory.

SRAM stores information with the help of transistors.

In SRAM, capacitors are not used which means refresh is not needed.

SRAM provides faster speed of data read/write.

SRAM consumes more power.

SRAM is expensive.

DRAM

DRAM stands for Dynamic Random Access Memory.

DRAM stores data using capacitors.

In DRAM, contents of a capacitor need to be refreshed periodically.

DRAM provides slower speed of data read/write.

DRAM consumes less power.

DRAM is less expensive.

