**1. What is motherboard?**

The spine of the computer is the *motherboard*, otherwise known as the system board. **Motherboard** is the main system board on which the primary components of the computer, such as the CPU and RAM, are manufactured or installed.

**2. What is chipset?**

**Chipset** is commonly one or two integrated circuits comprising Northbridge and Southbridge functionality, allowing the CPU to communicate with I/O components of various speeds and capabilities.

**3. What is throttling?**

CPU throttling allows reducing the operating frequency of the CPU during times of less demand or during battery operation. CPU throttling is very common in processors for mobile devices.

**4. What is cache?**

Cache is a very fast chip memory that is used to hold data and instructions that are most likely to be requested next by the CPU.

**5. Write 4 port and slot name and their respective device name?**

|  |  |
| --- | --- |
| **Port name/ Slot name** | **Device** |
| AGP / AGP | Monitor |
| Parallel / PCI | Printer |
| USB or PS/2 / PCI | Mouse/ Key board |
| RJ45 / PCI | Ethernet / Nic Card |

**6. What is CPU?**

**CPU (Central Processing Unit)** is the main integrated circuit of a computer system that interfaces with almost all other components and runs application and system processes. Intel and AMD are the most common CPU manufacturers for PC-compatible computers.

**7. Write down the types of system board and elaborate them?**

There are two major types of system boards:

Nonintegrated system board

Integrated system board

System boards are also classified by their form factor or design. They are:

**ATX:** Advanced Technology Extended

**Micro ATX:** Micro Advanced Technology Extended

**BTX:** Balanced Technology Extended

**NLX:** New Low-Profile Extended

**8. Write the components of motherboard?**

The following components are found on a typical motherboard:

Chipsets, Expansion slots and buses, Memory slots and external cache, CPU and processor slots or sockets, Power connectors, Onboard disk drive connectors, Keyboard connectors, Peripheral ports and connectors, BIOS, CMOS battery, Jumpers and DIP switches, Firmware.

**9. What is BIOS?**

**BIOS (Basic Input-Output System)** is the firmware embedded in a ROM chip that is responsible for running POST, booting the system, and presenting an interface for its own configuration.

**10. What is POST?**

**POST (Power-On Self-Test)** is a series of system checks performed by the system BIOS and other high-end components, such as the SCSI BIOS and the video BIOS.

**11. What is CMOS and in CMOS Battery which settings are available when your PC is turned off?**

**CMOS (Complementary Metal Oxide Semiconductor)** memoryis the extremely small storage space that holds user settings and dynamically discovered parameters for the BIOS.

When we turned off a computer, anything that is left in this type of memory is lost forever. To prevent CMOS from losing its rather important information, motherboard manufacturers include a small battery called the CMOS battery to power the CMOS memory.

**12. Write difference between SRAM and DRAM.**

**SRAM** is a faster type of volatile memory that does not require a periodic refresh and is commonly used for cache memory.

**DRAM** is a pervasive type of volatile memory that requires a periodic refresh signal to keep its contents.

**13. What is Integrated and non integrated motherboard?**

**Integrated system board** or motherboard is a motherboard that has I/O interfaces and their circuitry built in.

**Nonintegrated system board** or motherboardis a motherboard that has no I/O interfaces built in, except for a keyboard and possibly mouse interfaces.

**14. Describe ECC & SODIMM.**

**ECC (Error Checking and Correction)** is an error-checking scheme that is able to discover one or two bits in a byte that contain errors, and correct single-bit errors.

**SODIMM** is a small-form factor memory module based on DIMM principles and designed for the mobile computing sector.

**15. Describe hyper-threading.**

**Hyperthreading** refers to Intel’s Hyper-Threading Technology (HTT). HTT-capable processors appear to the operating system to be two processors. As a result, the operating system can schedule two processes at the same time, as in the case of symmetric multiprocessing (SMP), where two or more processors use the same system resources.

**16. Describe L1 Cache and L2 Cache of processor.**

**L1 Cache** is acache memory that is built into the processor die (the CPU’s silicon wafer).

**L2 Cache** is acache memory that can be collocated with the CPU in the same packaging or placed on

the motherboard, external to the CPU packaging. L2 cache is not built into the processor die.

**17. Describe SDRAM.**

**SDRAM** is a form of DRAM that is synchronized to the system clock. Varieties include SDR, DDR, DDR2, DDR3, and DRDRAM.

**18. Describe DDR3.**

**DDR3** is a type of SDRAM that uses both edges of each FSB clock cycle, transferring four bits per edge.

**19. Write 5 device name can be install inside mother board with relevant slot name.**

Central Processing Unit (CPU)

Random Access Memory (RAM)

Expansion slots

Video components

CMOS Battery

**20. Write 5 device name can be installing outside mother board with relevant port name.**

**21. Describe L3 Cache of processor.**

**L3 Cache** is a cache memory on the motherboard that is named as such only when L2 cache is in the CPU packaging. L3 cache is the new name, in such a situation, for what used to be termed L2 cache.

**22. Just write the meaning of DIP, SIPP, DIMM, RIMM, SODIMM.**

**DIP:** Dual Inline Package

**SIPP:** Single Inline Pin Package

**DIMM:** Dual Inline Memory Module

**RIMM:** Rambus Inline Memory Module

**SODIMM:** Small Outline Dual Inline Memory Module

**23. Describe Multicore.**

**Multicore** is one kind of CPU technology that places multiple processor dies in the same packaging, or the equivalent thereof.