IT ESSENTIAL COURSE TUTORIAL 1

1. CPU is also often called the *brain* of computer.
2. Define a microprocessor.

Central Processing Unit (CPU) or the processor is also often called the brain of computer, The CPU is fabricated as a single Integrated Circuit (IC) chip, the microprocessor is plugged into the motherboard of the computer, CPU gets data and instructions from the memory. It interprets the program instructions and performs the arithmetic and logic operations required for the processing of data. Then, it sends the processed data or result to the memory.

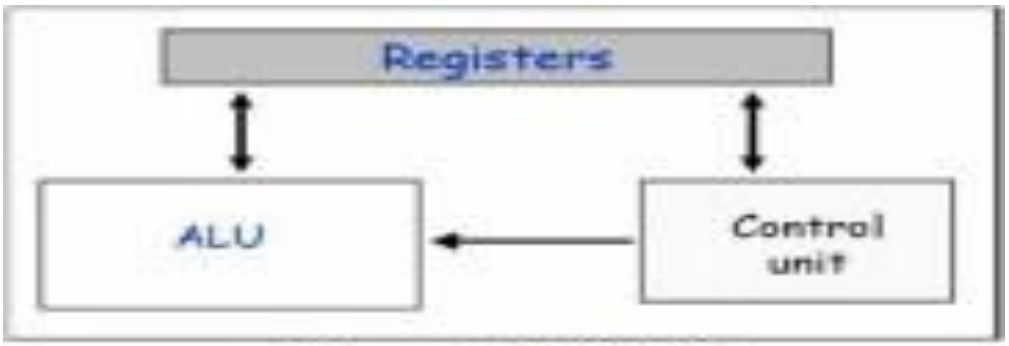

Figure 2.1 CPU

3. Define a motherboard.

Motherboard is a circuit board that has electronic circuit etched on it and connects the microprocessor with the other hardware components.

4. The different parts of the CPU are *ALU* , *CU* and a set of registers.
5. *RAM* and *ROM* are the main memory.
6. What is the purpose of the main memory?

It used to store the data and instructions during execution of the instructions.

7. List the main functions of the CPU

- CPU gets data and instructions from the memory.
- It interprets the program instructions and performs the arithmetic and logic operations required for the processing of data.
- Then, it sends the processed data or result to the memory.

8. ALU consists of the *arithmetic* unit and *logic* unit.

9. What are the functions of the ALU?

ALU performs arithmetic and logic operations, and uses registers to hold the data that is being processed.

10. *Registers* is also called the working memory of the CPU.

11. Why are Registers used in the CPU?

Registers store data, instructions, and intermediate results of processing.

12. Define word size.

The size of register, also called word size, indicates the amount of data with which the computer can work at any given time

13. "This is a 64–bit processor". Explain its meaning.

A 64–bit CPU is one in which each register is 64 bits wide and its CPU can manipulate 64 bits of data at a time.

14. The size of the register is also the *word size*.

15. Which is faster a 32-bit processor or a 64-bit- processor?

The 64-bit- processor is the faster one.

16. What are the functions of the control unit?

The control unit of a computer does not do any actual processing of data. It organizes the processing of data and instructions. It acts as a supervisor and, controls and coordinates the activity of the other units of computer.

17. Explain the need of the cache memory?

Cache store the most recently run instructions, the next ones and the possible ones.

18. The *Cache* memory is placed between the RAM and the CPU.

19. There are *3* levels of cache memory.

20. State three important features of the cache memory.

1. Cache memory is very expensive.
2. Smaller in size.
3. Very high-speed memory.
4. Placed between the RAM and the CPU.