

7. If a computer contains RAM, why does it need ROM too?

Normally, the instructions and data are stored in a secondary storage devices permanently. In addition to data and program instructions currently being processed, RAM also holds operating system instructions that control the basic functions of a computer system. These instructions are loaded into RAM every time when the computer is booted, and they remain

resident until the computer is turned off. But RAM is a volatile memory i.e. its content will be lost when the power is turned off. Now ROM plays the important role. ROM contains a small set of instructions called the BIOS (Basic Input Output System). These instructions access the hard disk, find the operating system, and load it into RAM. After the operating system is loaded, the system is ready to be used.

EXERCISES

1. Write full forms of the following:
ENIAC, ALU, CU, RAM, ROM, EPROM, EEPROM, BIOS, POST, MIPS, CMOS
2. Briefly describe the functions of the different components of a conventional digital computer with the help of a suitable block diagram.
3. What is a CPU? What is its function? Mention its several components.
4. Explain the different memory units.
5. Discuss the memory hierarchy within a computer system.
6. What is cache memory? Why is it necessary?
7. Give three examples of system software.
8. Briefly state the role of the operating system in a computer system.
9. What is BIOS? Describe its functions.
10. What is meant by POST?
11. What is the boot sector?
12. Describe the bootstrap process.
13. Distinguish between the following:
 - (a) Compiler and interpreter
 - (b) System software and application software
 - (c) RAM and ROM
 - (d) Primary memory and secondary memory
 - (e) Bit and byte
 - (f) Hardware and software

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