



## Chapter-1 Introduction to Computer (English Version)

**Q.1:- Distinguish between analog and digital computers.**

**Answer:-**

**Analog Computer:** Analog computers handle or process information which is of a physical nature, as for example, measuring temperature, pressure, and so on.

**Digital Computer:** Digital computers process data which is essentially in a binary or two-state form, namely, zero and one. Presently, we use PCs which are digital computers.

**Q.2:- How can you say that the CPU is the brain of the computer system?**

**Answer:-**

A CPU is the brain of a computer because its primary function is to execute programs. Besides executing program, the CPU also controls the operation of all other components such as memory, input and output devices. Under its control, programs and data are stored in the memory and outputs are displayed on the monitor screen or printed on paper, once processing has taken place.

### Q.3:- Explain any two fields where computer can be used.

Answer:-

- A. Banks: Almost every bank uses computers to keep the records of money transactions and financial documents. It is also used in this sector because of speed, convenience and security that it provides.
- B. Business: Computer has now become an integral part of corporate life. Today, computers can be found in every store, supermarkets, restaurants, offices, etc. One can buy and sell things online, bills and taxes can be paid online and even the future of business can be predicated using artificial intelligence software.

### Q.4:- Differentiate between RAM and ROM.

Answer:-

RAM: It is the main memory and allows you to temporarily store data. The CPU reads data from RAM to perform specific tasks. RAM is volatile, which means it is available only while the computer is turned on. The contents of RAM must be copied to a storage device if you want to save the data in the RAM.

ROM: It is the memory that retains its contents even after the computer is turned off. Almost every computer with a small amount of ROM contains the boot firmware. This consists of a few kilobytes of code that tells the computer what to do when it starts up, e.g., running hardware diagnostics and loading the operating system into RAM.

## Q.5:- Differentiate System Software and Application Software?

Answer:-

- A. System software gets installed when the operating system is installed on the computer while application software is installed according to the requirements of the user.
- B. System software includes programs such as compilers, debuggers, drivers, assemblers while application software includes media players, word processors, and spreadsheet programs.
- C. Generally, users do not interact with system software as it works in the background, whereas users interact with application software while doing different activities.
- D. A computer may not require more than one type of system software while there may be a number of application software programs installed on the computer at the same time.
- E. System software can run independently of the application software while application software cannot run without the presence of the system software.

## Q.6:- List various sub units of the CPU and give the function of each of the units.

Answer:-

Central Processing Unit (CPU) is the brain of any computer system. All major calculations, manipulations and comparisons are

made by the CPU. The CPU is also responsible for activating and controlling the operations performed by all other units of the computer system.

The major parts of a CPU are:

- A. Arithmetic and Logic unit (ALU)
- B. Control unit (CU)
- C. Main Memory or Primary Memory

**Arithmetic and Logic Unit:** All calculations, including comparisons, are made by the ALU. The data and instructions, stored in the primary memory prior to processing, are transferred to the ALU where processing takes place. Results generated in the ALU are transferred to primary memory. After completion of processing, the final results available in the primary memory are sent to an output device, such as printer.

ALUs are designed to perform the four basic arithmetic operations (add, subtract, multiply, divide) and logic operations (comparison between numbers, letter and or special characters) and conditions (less than, equal to, or greater than).

**Control Unit:** Control Unit obtains instructions from the program stored in the main memory, interprets the instructions, and issues electrical signals that cause other units of the system to perform their functions. The control unit acts as the central nervous system for all other components of the computer. It coordinates the entire jobs done by the computer system.

**Memory:** The function of the memory is to store information. The main memory (primary memory) is a fast memory; it stores programs along with data, which are to be executed. It also stored

necessary programs of system software, which are requires to execute the user's program. The main memory is directly addressed by the CPU. Semiconductor memories, RAMs are used as main memory.

**Input and Output Devices:** Input devices are those through which we enter data and instructions. An input device converts input data and instructions into a suitable binary form which is store d in the memory of a computer. The most commonly used input devices are keyboard and mouse. Other input devices are MICR, Light pen, OCR, Joystick, and OMR, etc.

Output devices are those devices of computer system that supplies information or results either in the form of hardcopy (printer) or softcopy (monitor). Some of the common output devices are Monitor, Printer, Plotter, Multimedia Projector, and speech synthesizer. Devices which works both.

JAWAHAR COMPUTER EDUCATION