

## Ans to the Question NO 1

Central processing Unit (CPU) consists of the following features -

- CPU is considered as the brain of the computer.
- CPU performs all types of data processing operations.
- It stores data, intermediate results, and instructions (Program).
- It controls the operation of all parts of the computer.

CPU itself has following three components.

- Memory or storage unit.
- control Unit.
- (ALU) (Arithmetic logic unit).

## Memory or storage unit -

This unit can store instructions, data, and intermediate results. This unit supplies information to other units of the computer when needed. It is also known as ~~internal~~ internal storage unit or the main memory or the primary storage or Random Access memory. (RAM). Its size affects speed, power, power, and capability. Primary memory and ~~secondly~~ secondary memory are two types of memories in the computer.

Function of the memory unit are -

- It stores all the data and the instructions required for processing.

- It stores the final results of processing before those results are released to an output device.
- All inputs and outputs are transmitted through the main memory.

### Control unit -

\* This unit controls the operations of all parts of the computer but does not carry out any actual data processing operations.

Functions of this units are -

- It is responsible for controlling the transfer of data and instruction among other units of a computer.
- It manages and coordinates all the units of the computer.

- It obtains the instructions from the memory interprets them, and directs the operation of the computer.
- It communicates with the input / output devices for the transfer of data or results from storage.
- It does not process or store data.

### ALU -

This unit consists of two subsections namely -

- Arithmetic section.
- Logic section.

## Arithmetic section

Function of arithmetic section is to perform arithmetic operations like addition, subtraction, multiplication and division.

All complex operations are done by making repetitive use of the above operations.

## Logic section

Function of logic section is to perform logic operations such as comparing, selection, matching and merging of data.

Ans to the Question NO 2

a) given,  $A = (EBAB)_{16}$

$$\begin{array}{cccc} E & B & A & B \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 110 & 1011 & 1010 & 1011 \end{array}$$

$$\begin{array}{ccccccc} 001 & 110 & 101 & 110 & 101 & 011 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 6 & 5 & 6 & 5 & 3 \end{array}$$

$$= (165653)_8$$

Ans -  $(EBAB)_{16} = (165653)_8$

b) Given,  $A = (12.345)_{10}$

Hence,

$$\begin{array}{r} 2 \mid 12 \\ 2 \mid 6 \text{ } 0 \\ 2 \mid 3 \text{ } 0 \\ \hline 1 \text{ } 1 \end{array}$$

$$= (1100)$$

and,

$$\begin{array}{r} 0.345 \\ \times 2 \\ \hline 0.69 \\ \times 2 \\ \hline 1.38 \\ \times 2 \\ \hline 0.76 \\ \times 2 \\ \hline 1.52 \\ \times 2 \\ \hline 1.04 \end{array}$$

$$= (01011)$$

$$\therefore (12.345)_{10} = (1100.01011)_2$$

Ans

Ans to the Question # 103

a) given,

$$(1001)_2 \times (1011)_2 = ?$$

$$\begin{array}{r} 1001 \\ 1011 \\ \hline 1001 \\ 1001x \\ \hline 0000x \\ 1001x \\ \hline 1100011 \end{array}$$

$$\therefore (1001)_2 \times (1011)_2 = (1100011)_2$$

b)  $(11000)_2 \div (101) = (?)_2$

$$101 \left| \begin{array}{r} 11000 \\ 101 \\ \hline 00100 \end{array} \right| 100 \rightarrow \text{quotient}.$$

$\Rightarrow$  remainder

Ans to the Question NO 4

A computer based system is a system in which a computer is involved and consists of three major elements :- Hardware, software and users. The elements of a computer based systems are described in three following scenarios :

• Facebook

• Facebook -

Hardware :- Mobile phone or computer, network platform and a server computer.

Software :- Facebook app apps on US browser, Data base and operating system.

User :- common people, celebrity person,  
Teenager and people of all ages.

b  
• ULAB Moodle :-

Hard Hardware — Mobile phone or personal computer, Network, platform and server computer.

Software — google chrome, Data base and operating system.

User — Students, teachers and official people.

## Ans to the Question No 5

computer has become very important nowadays because its very much accurate, fast and can accomplish many tasks easily. computer is important in business and military.

The ~~is~~ importance of computer in business — computer speed up the business processes and system with top quality. A computer is important to use in business to automate the manufacturing, marketing and distribution process. computer help in research, Production, distribution, marketing, banking, team management, business automation data storage, employee management and very helpful to increase productivity at lower cost, less time with high quality.

~~topic~~

## Computer's importance in the military -

The computers have played an increasing important role in the military. The computers in the military have been adapted or designed to do a broad range of task, such as ~~not~~ analyzing intelligence, organizing prudent data for military leaders, geospatial analysis, controlling smart weapons or communication.

