

3/a

Compu ~~Ans~~

$$\begin{array}{r} 1001 \\ 1011 \\ \hline 1001 \\ 1001 \\ \hline 10010 \end{array}$$

→ first intermeds

$$\begin{array}{r} 0000 \\ 10010 \\ 1001 \\ \hline 11011 \end{array}$$

→ second

$$\therefore (100)_2 \times (1011)_2 \rightarrow$$

$$(11011)_2 \text{ (Ans)}$$

$$3/b. (11000)_2 \div (101)_2 \rightarrow (?)_2$$

$$\begin{array}{r}
 101 \overline{) 11000} \quad 100 \\
 \underline{(-) 101} \\
 10 \\
 \underline{- 00} \\
 100 \\
 \underline{000} \\
 100 \rightarrow \text{Remainder}
 \end{array}$$

Remainder $(100)_2$

$$\therefore (11000)_2 \div (101)_2 \rightarrow (101)_2$$

Answer to the question no : 1

The three main components of a standard CPU are :

- ☐ 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 computer when needed. It is also known as internal storage unit or the main memory (RAM). Its size affects speed, power, and capability. Primary memory and secondary memory are two types of memories in the computer. Functions of the memory unit are -

- ☐ It stores all the data and the instructions required for processing.
- ☐ It stores the final results of

Processing before these 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 unit are -

- ▣ It is responsible for controlling the transfer of data and instructions 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 does not process or store data.

ALU (Arithmetic Logic Unit)

This unit consists of two subsections names.

□ Arithmetic Section

□ Logic Section

Arithmetic Section

Function of this 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, selecting, matching and merging of data.

Answer to the ques no: 5.

The impacts and applications of computer in ~~busine~~ business and militaries are :

Business:

uses of ~~the~~ ~~business~~ computer in business are following -

① Advertising : with computer, advertising experts create art and graphics. Write contents.

② Shopping from home :

Home shopping has been made possible through the use of

computerized catalogues that provide access to product information and permit direct entry of orders to be filled by ^{the} customers.

Military
uses of computer in ~~milit~~ military are following

- * Missile control
- * Smart weapons
- * Military communication

2/a

$$A = (EBAB)_{16} \rightarrow (?)_8$$

E		B		A		B
	↓					
001	110	101	1	10	10	1, 011
↓	↓	↓	↓	↓		↓
1	6	5	6	5		3

$$\therefore A = (EBAB')_{16} \rightarrow (165653)_8$$

2. b

$$A = (2.345)_{10} \rightarrow (?)_2$$

$$\begin{array}{r} 2 \overline{) 12} \\ 2 \overline{) 6} - 0 \\ 2 \overline{) 3} - 0 \\ 2 \overline{) 1} - 1 \\ \hline 0 - 1 \end{array}$$

LSB
↑
MSB

$$\therefore (12)_{10} \rightarrow (1100)_2$$

	. 345
	$\times 2$
0	. 690
	$\times 2$
1	. 380
	$\times 2$
0	. 760
	$\times 2$
1	. 520
	$\times 2$
1	. 040
	$\times 2$
0	. 080
	$\times 2$
0	. 160
	$\times 2$
0	. 320
	$\times 2$
0	. 640
	$\times 2$

1	.280
	$\times 2$
	<hr/>
	.560
	$\times 2$
1	.120
	$\times 2$
0	.240
	$\times 2$
0	.480
	$\times 2$
0	.960
	$\times 2$
1	.920
	$\times 2$
1	.840
	$\times 2$
1	.680
	$\times 2$
1	.360
	$\times 2$
0	.720
	$\times 2$
1	.480

$$\therefore (.345)_2 = (0101100000101001111)$$