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Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – Dip.CE-2024/Dip.CSE-2024/Dip.EE-2024/Dip.ME-2024/Dip.RA-2024

Course Name – Introduction to IT Systems

Course Code - DES00001

( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify the input device.
  - a) Key board
  - b) Speaker
  - c) Monitor
  - d) Printer
- (ii) Identify the output device.
  - a) Key board
  - b) Mouse
  - c) Scanner
  - d) Speaker
- (iii) Select the secondary memory from the following.
  - a) RAM
  - b) Hard Disk
  - c) SRAM
  - d) DRAM
- (iv) Identify the main function of the computer's motherboard.
  - a) To store data permanently
  - b) To provide a platform for connecting all other components
  - c) To process graphical data
  - d) To manage network connections
- (v) Choose the generation of computers where integrated circuits (ICs) were introduced.
  - a) Second Generation
  - b) Third Generation
  - c) Fourth Generation
  - d) Fifth Generation
- (vi) Identify the type of memory that is fastest but also the most expensive per unit of storage.
  - a) Hard Disk Drive (HDD)
  - b) Random Access Memory (RAM)
  - c) Cache Memory
  - d) Solid-State Drive (SSD)
- (vii) Select the correct symbol for taking input in the flowchart.
  - a) Square
  - b) Circle
  - c) Parallelogram
  - d) Rectangle
- (viii) Select the type of error-Missing semi-colon (;) in program.
  - a) logical
  - b) syntax

- c) grammar d) semantic
- (ix) Select the equivalent decimal of the binary number 1010 from the below options.  
 a) 8 b) 10  
 c) 12 d) 14
- (x) Choose the correct base for hexadecimal number system from the following.  
 a) 2 b) 10  
 c) 8 d) 16
- (xi) Choose the universal gate from the following  
 a) AND b) NAND  
 c) EX-OR d) Ex-NOR
- (xii) Indicate the correct one of 2's complement of 0101  
 a) 1010 b) 1011  
 c) 1100 d) 1001
- (xiii) Identify Which of the following is applied to terminate a statement in C.  
 a) , b) ;  
 c) \ d) :
- (xiv) Select an example of post increment  
 a) w++ b) ++w  
 c) w-- d) --w
- (xv) Select best the use of break keyword  
 a) End the loop when encountered b) Skip the current iteration and move to next iteration  
 c) Terminate the program d) All of these

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#### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain 'Flowchart' in C programming. (5)
3. Explain the function of "break" statement in C programming. (3)
4. Illustrate the basic functions of computer. (3)
5. Describe general architecture of computer. (3)
6. Deduce the syntax and flowchart of "if...else" statement. (3)

OR

- Deduce the syntax of "switch case" statement in C programming. (3)

#### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe different types of error in programming. (5)
8. State the key characteristics that define each generation of computers, from the first to the fifth. (5)
9. Explain the types of operating systems and how they differ from one another. (5)
10. 'NOR' gate is called 'Universal Gate'-justify with proper logic. (5)
11. Illustrate the two laws of De-Morgan's theorem. (5)
12. Illustrate what is the Boolean data type, and what are its two possible values? (5)

OR

- Illustrate increment and decrement operators with examples. (5)

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