



# BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – Dip.CSE-2022/Dip.ME-2022/Diploma in Robotics & Automation-2022/Dip.EE-2022/Dip.CE-2022

Course Name – Computer Programming

Course Code - ES202

( Semester II )

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Brainware University  
Barasat, Kolkata -700125

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) Select the size of data type int in byte/s (16 bit compiler)

- |      |      |
|------|------|
| a) 1 | b) 2 |
| c) 3 | d) 4 |

(ii) Identify the specifier that is used for integer

- |       |       |
|-------|-------|
| a) %d | b) %f |
| c) %c | d) %a |

(iii) Select the primary memory from the following

- |             |              |
|-------------|--------------|
| a) RAM      | b) Hard Disk |
| c) Pendrive | d) CD        |

(iv) Identify the symbol which is used to represent a decision in a flowchart?

- |              |            |
|--------------|------------|
| a) Rectangle | b) Diamond |
| c) Circle    | d) Square  |

(v) Identify the true statement regarding algorithm.

- |   |                           |
|---|---------------------------|
| a) A software application                         | b) A programming language |
| c) A step-by-step procedure for solving a problem | d) A hardware component   |

(vi) Identify from the following that is not a keyword in C.

- |         |             |
|---------|-------------|
| a) int  | b) float    |
| c) main | d) function |

(vii) Select the valid variable name.

- |          |          |
|----------|----------|
| a) hello | b) float |
| c) int   | d) char  |

- (viii) Select the meaning of x++ operator.
- a) pre increment
  - b) post increment
  - c) pre decrement
  - d) post decrement
- (ix) Identify the keyword used to define a structure in C.
- a) struct
  - b) strc
  - c) structure
  - d) STRUCTURE
- (x) Identify the logical operator from the following
- a) &
  - b) &&
  - c) >>
  - d) <<
- (xi) Select the meaning of the expression x+=5
- a) x=x+x
  - b) x=x+5
  - c) x+5
  - d) x+5=x
- (xii) Select the starting index of an array
- a) 0
  - b) 1
  - c) 2
  - d) 3
- (xiii) Choose why strlen() function is used in string
- a) copy string
  - b) adding strings
  - c) finding length
  - d) append strings
- (xiv) Choose the true statement about passing arguments to a function in C?
- a) Arguments must be passed by reference
  - b) Arguments can only be passed by value
  - c) Arguments can be passed by value or by reference
  - d) None of the above
- (xv) Choose the datatype you should use when defining a function that returns an integer value in C language.
- a) int
  - b) float
  - c) char
  - d) double

**Group-B**

(Short Answer Type Questions)

3 x 5=15

- 2. Define a flowchart to add two numbers. (3)
- 3. State the difference between primary and secondary memory. (3)
- 4. Differentiate between while and do-while loop. (3)
- 5. Write the difference between actual parameters and formal parameters. (3)
- 6. Write a program to calculate the sum of digits of a given number using a function in C programming. (3)

**OR**

Write a C program to find the sum of natural numbers using recursion. (3)

**Group-C**

(Long Answer Type Questions)

5 x 6=30

- 7. Write a program in C to print numbers from 1 to 10 using an array and also find the sum of all elements of the array. (5)
- 8. Define an algorithm. Write its characteristics. [2+3] (5)
- 9. Define a flowchart to find the largest among three different numbers. (5)
- 10. Explain the concept of nested loops in C programming. Provide an example. (5)
- 11. Write a C program to swap two numbers using a function. (5)

12. Write a C program to find the sum of digits of a number using recursion. (5)
- OR**
- Write a program in C to find the factorial of a given number using recursion. (5)

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