



BRAINWARE UNIVERSITY

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Brainware University
Barasat, Kolkata -700125

Term End Examination 2023

Programme – B.Tech.(CSE)-DS-2021/B.Tech.(CSE)-DS-2022

Course Name – Programming for Problem solving/Programming for Problem Solving

Course Code - ESCD201

(Semester II)

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 Name of the loop where execution of the body is done at least once
- a) while
b) for
c) do while
d) None
- (ii) Select an example of post increment
- a) w++
b) ++w
c) w--
d) --w
- (iii) Choose a correct statement about C structure elements
- a) Structure elements are stored on random free memory locations
b) structure elements are stored in register memory locations
c) structure elements are stored in contiguous memory locations
d) None
- (iv) Predict the output
- ```
#include<stdio.h>
void main(){
if(5);
printf("right");
}
```
- a) compilation Error  
b) No Error no output  
c) right  
d) 5
- (v) Choose the Default the return type of main() function
- a) int  
b) void  
c) char  
d) float

(vi) Select the correct option to comment out single-line.

- a) /\* \*/
- b) //
- c) \\\* \*\\
- d) \\\

(vii) Select the secondary memory from the following

- a) RAM
- b) Hard Disk
- c) SRAM
- d) DRAM

(viii) Identify the type of C language.

- a) low level
- b) high level
- c) machine level
- d) assembly

(ix) Select how String in C is considered

- a) array of int
- b) array of float
- c) array of character
- d) All of these

(x) Select the correct language to write an algorithm

- a) Natural Language like English
- b) High level Language
- c) Machine level Language
- d) None

(xi) Identify a method of arranging data elements in an order

- a) Merge sort
- b) No search
- c) Linear search
- d) Binary search

(xii) #include<stdio.h>

```
void main(){
int x=65;
printf("%c",x);
}
```

Predict the output

- a) 65
- b) 97
- c) A
- d) a

(xiii) Write the meaning of structure in C language

- a) A structure is a collection of elements that can be of same data type.
- b) Elements of a structure are called members
- c) A structure is a collection of elements that can be of different data type
- d) All the above

(xiv) Select where r mode in file used for

- a) reading only
- b) both reading and writing
- c) writing only
- d) editing

(xv) Choose the meaning of FILE reserved.

- a) A structure tag declared in stdio.h
- b) One of the basic datatypes in c
- c) It is a type name defined in stdio.h
- d) Pointer to the structure defined in stdio.h

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write the difference between i++ and ++i. (3)
3. Differentiate between break and continue. (3)
4. Classify User Defined Function. (3)
5. Explain the different modes in which files can be opened in C? (3)
6. Write a program in C for calculating factorial of a number (3)

OR

Write a C program to check if a number is odd or even. (3)

**Group-C**  
(Long Answer Type Questions)

5 x 6=30

7. Illustrate increment and decrement operators with examples. (5)  
8. Distinguish among call by value and call by address function. (5)  
9. Write a program to count the number of words in a file in C. (5)  
10. Report the type of error occurs in the following code and then rewrite the correct code. (5)

```
int main()
{
 printf("Hello World!")
 return 0;
}
```

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11. `void swap(int* x, int* y)` (5)

```
{
 int temp = *x;
 *x = *y;
 *y = temp;
}

// Driver Code
int main()
{
 // Declaring Integer
 int x = 1, y = 5;
 printf("Before Swapping: x:%d , y:%d\n", x, y);

 // Calling the function
 swap(&x, &y);
 printf("After Swapping: x:%d , y:%d\n", x, y);

 return 0;
}
```

Estimate the output of this program and explain with reason.

12. Design a flowchart to find the greatest among three numbers. (5)

**OR**

Design a flowchart to find the factorial of a number taken input from the user. (5)

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