



**2021/TDC/CBCS/ODD/
CSCDSC/GE-101T/084**

**TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022**

**COMPUTER SCIENCE
(1st Semester)**

Course No. : CSCDSC/GE-101T

(Programming Fundamentals Using C/C++)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any *fifteen* of the following questions :

1×15=15

1. Define constant.
2. What is escape sequence?
3. What do you mean by data type?
4. What is a variable?



(2)

5. What is a function?
6. Write the syntax for accessing a structure member.
7. What is the main advantage of passing arguments by reference?
8. What do you mean by subscript in array?
9. What is static variable?
10. What kind of information is represented by a pointer variable?
11. Write the general syntax for pointer declaration.
12. What is the use of malloc function?
13. What is abstraction in C++?
14. What is member function?
15. Define destructor.
16. What do you understand by friend function?
17. What is operator overloading?

22J/624

(Continued)

(3)

18. What is polymorphism?
19. What is an abstract class?
20. What do you mean by exception?

SECTION—B

Answer any *five* of the following questions : $2 \times 5 = 10$

21. What is the difference between 'a' and "a" in C++?
22. How does implicit-type conversion differ from explicit-type conversion?
23. Differentiate between structure and union.
24. How is an array initialized? Give an example.
25. What is the purpose of the indirection operator?
26. Distinguish between the following :
`int*ptr = new int(5);`
and
`int*ptr = new int[5];`
27. What is the difference between an object and a class?

22J/624

(Turn Over)



(4)

28. Differentiate between parameterized constructor and copy constructor.
29. Compare compile time polymorphism with run-time polymorphism.
30. How is exception handled in C++?

SECTION—C

Answer any *five* of the following questions : 5×5=25

31. Explain with general syntax about different conditional statements used in C/C++.
32. Write a C++ program to generate Fibonacci sequence.
33. What is recursion? Write a C++ program using recursive function to find the value of factorial of a number.
34. Write a C++ program to find the maximum and minimum of an array.
35. Discuss about static and dynamic allocation of memory. How do they differ with one another?

22J/624

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(5)

36. Write a C++ program to swap values of two variables by passing pointers.
37. What is constructor? What is its significance? Explain with example the process of declaring and defining a constructor.
38. What is a class? How is a member function of a class defined? What is the significance of access specifier in a class?
39. Explain with example the overloading of unary operator. Take unary minus (-) as an example.
40. What is inheritance? What are different forms of inheritance? Give an example of each.

22J—130/624

2021/TDC/CBCS/ODD/
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