



**2021/TDC/CBCS/ODD/
CSCHCC-101T/082**

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

COMPUTER SCIENCE

(1st Semester)

Course No. : CSCHCC-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 *ten* of the following questions :

2×10=20

- 1. Explain keyword with example.**
- 2. What is variable? How is variable declared?**
- 3. What is type casting? Why is it necessary?**



(2)

4. Differentiate between call by value and call by reference.
5. What are function prototypes? What is their purpose?
6. What is function call? From what parts of a program can a function be called?
7. What is a pointer? What is its use?
8. Differentiate between malloc and calloc.
9. What is meant by the address of a memory cell? How are addresses usually numbered?
10. How does a class enforce data hiding?
11. What is static class member?
12. How is memory allocated to a class and its objects?
13. What is the purpose of operator overloading in C++?
14. What is pure virtual function? Give example.
15. How are exceptions handled in C++?

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(Continued)

(3)

SECTION—B

Answer any five of the following questions :

6×5=30

16. (a) Write a C++ program to determine whether a given number is 'odd' or 'even'. 4
(b) How is break statement different from continue statement? 2
17. (a) Differentiate between procedure-oriented and object-oriented programming. 3
(b) Explain the different loop statements used in C/C++. 3
18. Write short notes on the following : 2×3=6
(a) Actual and formal argument
(b) Inline function
(c) Recursion
19. (a) What is array? How is array initialized? 2
(b) Write a C++ program to add two 2-dimensional matrices. 4
20. (a) What is preprocessor directive? Explain the use of # define, # elif directives. 3
(b) What are the different file mode parameters used in open()? Explain briefly. 3

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(Turn Over)



(4)

21. (a) Write a C++ program using pointers to compute the sum of all elements stored in an array. 4

(b) What is the relationship between array name and pointer? 2

22. (a) What is friend function? What are the merits and demerits of using friend function? 3

(b) What is object? How can object be created? Also write down the syntax of accessing class member. $1+1+1=3$

23. (a) What do you mean by default constructor? What is its rule? 3

(b) Describe the importance of destructor. List some of the special properties of destructor. 3

24. (a) How can binary operators be overloaded? Explain with an example. 4

(b) What is operator function? Describe the syntax of an operator function. 2

25. (a) Describe how an object of a class that contains objects of another classes is created. 3

(b) What is inheritance? What are its various forms? 3
