



ST. FRANCIS DE SALES COLLEGE

A FRANSALIAN INSTITUTE OF HIGHER EDUCATION **AUTONOMOUS**

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END SEMESTER EXAMINATION – DECEMBER 2024

COMPUTER SCIENCE – I SEMESTER BCA

24BCA14 – PROBLEM SOLVING TECHNIQUE

Time: 3 Hours

Max. Marks: 80

Instruction: *Answer should be written completely in English*

SECTION – A

Answer any **FIVE** questions. Each question carries **TWO** marks.

(5 X 2 = 10)

1. Define Algorithm? Write any two features of algorithm.
2. How to define symbolic constants in C. Give an example.
3. What is the keyword? Give two examples.
4. Write a general syntax of the ternary operator.
5. Mention the difference between entry and exit control loop.
6. Define command line arguments.
7. Write any four sorting techniques.
8. Write the difference between break and continue statement.

SECTION – B

Answer any **SIX** questions. Each question carries **FIVE** marks.

(6 X 5 = 30)

9. Write an algorithm to generate Fibonacci sequence.
10. Define variable and constant. Explain basic data types in 'C' programming language.
11. Write a 'C' program to find the largest 3 numbers.
12. Describe the concept of sorting by exchange with suitable example.
13. Explain switch statement in C with example program.



14. Give differences between structure and union.
15. Write an algorithm to reverse the digits of an integer.
16. Write an algorithm to remove duplicates from an ordered array.

SECTION – C

Answer any **FIVE** questions. Each question carries **EIGHT** marks.

(5 X 8 = 40)

17. Explain looping structures in 'C' programming with example. (8)
18. Write a C Program to multiply two matrices. (8)
19. a) Write an algorithm to find maximum element of an array. (4)
b) Write a 'C' Program to print factorial of a number. (4)
20. Write a 'C' Program to search for an element using Linear Search. (8)
21. What are the different file operations? Explain in detail. (8)
22. What is pointer? Write a 'C' Program to find the size of the integer and character pointer. (8)

