



PRESIDENCY COLLEGE

(AUTONOMOUS)

AFFILIATED TO BENGALURU CITY UNIVERSITY, APPROVED BY AICTE, DELHI & RECOGNISED BY THE GOVT. OF KARNATAKA
RE-ACCREDITED BY NAAC WITH 'A+' GRADE

21C203.1C

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END TERM EXAMINATION NOV/DEC 2023
BCA – I SEMESTER
GC203.1C: PROBLEM SOLVING TECHNIQUES

Duration: 2 Hours

Max Marks: 60

Instruction: Answers should be written in **English** only.

PART – A

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

(8 X 2 =16)

1. List the data types in C.
2. List any two properties of algorithm.
3. Write definition of time complexity and space complexity of algorithm.
4. Give any two differences between variable and constant.
5. List any two operations performed on strings.
6. Write the usage of size of () and & operator.
7. Construct an algorithm to find maximum number in array.
8. Explain function prototype.
9. What is structure? Write general syntax to declare structure.
10. Mention the command line arguments?

PART - B

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

(4 X 6 =24)

1. Draw the flowchart and write algorithm to compute factorial of a number.
2. Write an algorithm to reverse the digits and generate steps to reverse 1234.

3. Describe the basic structure of C program with an example.
4. Define function. Distinguish between call by value and call by reference.
5. What is two dimensional array? Write a C program to perform addition of two matrix.
6. Construct a C program for reading and displaying n students records using structure.

PART - C

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

(2 X 10 =20)

1. a) List and explain the various flowchart symbols. 6
- b) Draw the flowchart to generate Fibonacci series 4
2. Explain the various looping statements available in C language. 10
3. a) Explain the ternary operator with suitable example. 5
- b) What are pointers? Write a C program to exchange two numbers using pointers. 5
4. a) What is searching? Write the algorithm to search given key using binary search. 5
- b) Create an algorithm to sort the numbers using bubble sort technique. 5
