DCCA102

Reg. No. ☐☐☐☐☐☐☐☐

I Semester B.C.A. Degree Examination, May/June- 2022

COMPUTER SCIENCE

Problem Solving Techniques

(NEP Scheme)

Paper : CA-C2T

Time : 2½ Hours

Maximum Marks : 60

Instructions to Candidates : 1. Answer any **Four** questions from each part.
 2. Answer All Parts

PART - A

I. **Answer any Four questions, each carries Two marks.** (4×2=8)

1) What is an Algorithm ? Give one of its advantage.

2) Define Asymptotic notation List any two.

3) Write the basic structure of C program.

4) What is on array? Write the statements to print the elements of an array.

5) What is hash search ?

6) Mention any two differences between linear search and binary search.

PART - B

II. **Answer any Four questions each carries Five marks.** (4×5=20)

7) Differentiate between while and do-while loop. Illustrate with example.

8) Write a program to find whether a given number is prime number or not.

9) Example bitwise operators in C with suitable examples.

10) Write a C program to compute GCD of two integers. Use a function to compute GCD

11) Write an algorithm for selection sort. Illustrate with an example.

12) Explain two way merge with example.

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PART - C

III. Answer any Four questions each carries Eight marks   (4×8=32)

13) Explain the different data types supported by C language Mention their range and size.

14) What is type casting? Write a C program to differentiate implicit and explicit type casting.

15) Explain the difference between call by reference and call by value with an example for each.

16) Write a C program to perform multiplication of 2 matrices.

17) Write a pseudocode to implement binary search. Illustrate with example.

18) Write a C program to implement Quick sort and explain with an example.