NP – 163

K.L.E. Society's Degree College Bangalore 560021

I Semester B.C.A. Degree Examination, May 2022
(NEP – 2021-22 and Onwards)
COMPUTER SCIENCE
Paper – 1.2 : Problem Solving Techniques

Time : 2½ Hours

Max. Marks : 60

Instruction : Answer any four questions from each Part.

PART – A

Answer any 4 questions. Each question carries 2 marks. (4×2=8)

1. Define Algorithm.
2. Define Token with an example.
3. Write any two rules for Identifiers.
4. Define Binary Search.
5. What is sorting ? List any two sorting techniques.
6. What is an array ? Give the syntax.

PART – B

Answer any 4 questions. Each question carries 5 marks. (4×5=20)

7. Write an algorithm to exchange the values of two variables.
8. Write a note on break and continue with an example.
9. Illustrate the declaration and initialization of pointers with an example.
10. Write a C program to remove the duplicate entries in a single dimensional array.
11. How do find the smallest divisor of an integer ?
12. Write an algorithm to perform hash search on the given set of elements.

P.T.O.

PART – C

Answer **any 4** questions. **Each** question carries **8** marks. (4×8=32)

13. a) Explain the various Asymptotic Notations with their significance. 6

    b) What is pattern searching ? 2

14. a) Explain the structure of a C program. 4

    b) Differentiate between if and if else. 4

15. Write a C program to find the roots of the Quadratic Equation. 8

16. a) Write a 'C' program to demonstrate the following string operations. 4

    i) strepy () ii) strcat() iii) Strlen() iv) strrer()

    b) Write a short note on hash search. 4

17. a) Write a C program to read 2 × 2 matrices and perform Addition and Subtraction operations on the matrices. 6

    b) What do you mean by two way merge ? 2

18. a) Perform the Bubble sort operation on the following elements 23, 5, 13, 65, 8 to arrange them in ascending order. 6

    b) Write any two application of text line editing. 2
