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I Semester B.C.A. Degree Examination, February/March - 2024

COMPUTER SCIENCE**Problem Solving Techniques**

(NEP Scheme -2021)

PAPER : CA-C2T**Time : 2½ Hours****Maximum Marks :60****Instructions to Candidates:****Answer all Parts.****PART-A****Answer any FOUR questions. Each question carries 2 marks.****(4×2=8)**

1. Define an Algorithm. Mention two qualities of a good algorithm.
2. Define
 - a) Keyword
 - b) Identifier.
3. What is pointer? Give an Example.
4. What is Pseudorandom Numbers? Give one application.
5. What is TWO way merging? Give an example.
6. What is pattern matching? Give an example.

PART-B**Answer any Four questions. Each question carries 5 marks****(4×5=20)**

7. Explain the different Steps in problem solving.
8. Explain switch statement with syntax and example.
9. Write a c program to find the largest of 3 nos.
10. Write an algorithm to find the smallest divisor of an integer.
11. Write an algorithm to Reverse the Elements of an Array.
12. Write a C program to search an element using Binary search.

[P.T.O.]



PART - C

Answer any Four questions. Each question carries 8 marks.

(4×8=32)

13. Explain Asymptotic Notations with an example.
 14. Explain control statements available in 'C'.
 15. What are command line arguments? Write a C program to demonstrate.
 16. What is factorization ? Write an algorithm to find GCD of two numbers a and b.
 17. Explain selection sort with an example.
 18. Write shell sort algorithm to sort the given set of elements. Trace the shell sort algorithm for the following elements 23,12,67,44,11,99,55
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