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B.M.S COLLEGE FOR WOMEN, AUTONOMOUS
BENGALURU – 560004
SEMESTER END EXAMINATION – JANUARY/FEBRUARY 2023

B.Sc. - I Semester

PROBLEM SOLVING TECHNIQUES
(NEP Scheme 2021-22 onwards F+R)

Course Code: CS1DSC01

Duration: 2 ½ Hours

Instructions: Answer all the sections.

QP Code: 1016

Max. Marks: 60

PART-A

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

(10X2=20)

1. Define an algorithm. Mention any two characteristics.
2. What is flow chart?
3. What is priori Analysis and Posterior Analysis?
4. Why C is called structured language.
5. Differentiate between pre-increment and post increment operator.
6. What is type casting? Mention its types.
7. What you mean by function prototyping.
8. Differentiate between structure and arrays.
9. Define Histogram.
10. What is pointer? Give an example.
11. What is pattern matching? Mention its application.
12. What are the advantages of binary search over linear search?

PART-B

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

(6X5=30)

13. Explain various asymptotic notations.
14. Write an algorithm to find GCD of two numbers.
15. Explain the structure of C program.
16. What is data type? Explain different data types in C.
17. Explain different looping statements in C with an example.
18. What is an array? Write an algorithm to remove duplicate element in a single dimensional array.
19. Explain different string handling functions with an example.
20. Write an algorithm to find square root of a number using Newton's method.

PART-C

III. Answer any ONE question. Each question carries 10 marks.

(1X10=10)

21. What is function? Explain different categories of functions.
22. Write a C program to read a string and to find the number of alphabets, digits, vowels, consonants, spaces and special characters.
23. Write a C program to read marks scored by n students and find the average of marks.

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