Code No.: CS103ES   R20   H.T.No. | | 8 | R | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–B.TECH–I–Semester End Examinations (Supply) - March- 2023
PROGRAMMING FOR PROBLEM SOLVING
(Common for all)

[Time: 3 Hours]   **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A   (20 Marks)

1. a)	Write about ternary operator?	[2M]
b)	Explain flowchart and pseudocode with examples?	[2M]
c)	Define 2D arrays?	[2M]
d)	Define Pointers?	[2M]
e)	Write the modes of binary files?	[2M]
f)	Differentiate text and binary files	[2M]
g)	Define Recursion?	[2M]
h)	Define signature of a function with an example?	[2M]
i)	Differentiate linear and binary search algorithms?	[2M]
j)	Write an algorithm to find the roots of a quadric equation?	[2M]

PART-B   (50 Marks)

2. Explain the switch case with an suitable example program?   [10M]

OR

3. Explain about loops with suitable syntax and example programs?   [10M]

4. Write a program to find the transpose of a given matrix?   [10 M]

OR

5. Write about the following string functions?   [10M]
        i. strlen ( )
        ii. strcat ( )
        iii. strstsr ( )
        iv. strcpy ( )

6. Write a program to find the number of words, characters and lines of a given file?   [10M]

OR

7. Write about the following functions?
   a) ftell ( )   [4 M]
   b) fseek ( )   [3 M]
   c) fewind ( )   [3 M]

8. Explain the following.
   a) Call by Value [5 M]
   b) Call by reference [5 M]

OR

9.a) Write a program to find nth term of a Fibonacci series using recursion? [5 M]
   b) Write the limitations of recursion? [5 M]

10. Write a program for bubble sort? [10M]

OR

11. Explain binary search with an example program? [10M]

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