Code No.: R22CS103ES | R22 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–B.TECH–I–Semester End Examinations (Regular) - February- 2024
PROGRAMMING FOR PROBLEM SOLVING
(Common for all)

[Time: 3 Hours] **[Max. Marks: 60]**

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 **(10 Marks)**

1. a)	Write about ternary operator?	[1M]
b)	Explain flowchart and algorithm with examples?	[1M]
c)	Define array and types of arrays.	[1M]
d)	Define Pointer?	[1M]
e)	Write the modes of files.	[1M]
f)	Differentiate text and binary files.	[1M]
g)	Define Recursion?	[1M]
h)	Define a function with an example?	[1M]
i)	Differentiate linear and binary search algorithms?	[1M]
j)	Write an algorithm to swap two numbers?	[1M]

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 addition of a given matrix? [10M]

OR

5. Write the following. [10M]
   i. Strlen( )
   ii. Strcat( )
   iii. Strstsr( )
   iv. Strcpy( )

6. Write a program to find the no of words, characters and lines of a given file? [10M]

OR

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

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

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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