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

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–B.TECH–I–Semester End Examinations (Supply) - December- 2025
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 of fopen function.	[2M]
f)	Differentiate text and binary files	[2M]
g)	Define Recursion with syntax.	[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 syntax and 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 matrix.	[10M]
	OR	
5.	Write the syntax and example of following string function. i) strlen ii) strcat iii) strstr iv) strcpy	[10M]
6.	Write a program to find the no of words, characters and lines using file handling function.	[10M]
	OR	
7.	Write the following functions?	
a)	ftell	[4 M]
b)	fseek	[3 M]
c)	rewind	[3 M]
8.	Explain the following parameter passing method.	
a)	Call by Value.	[5 M]
b)	Call by reference.	[5 M]
	OR	
9.a)	Write a program to find n^{th} term of a Fibonacci series using recursion.	[5 M]
b)	Write the limitations of recursion.	[5 M]
10.	Write a program for bubble sort with example.	[10M]
	OR	
11.	Explain binary search with an example program.	[10M]

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