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

CMR ENGINEERING COLLEGE: : HYDERABAD

UGC AUTONOMOUS

I–B.TECH–I–Semester End Examinations (Regular) - JULY- 2021

PROGRAMMING FOR PROBLEM SOLVING

(Common to CSE, CSM, CSD, CSC, INF, ECE and ME)

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

1. *Answer Any **FIVE** Questions. Each Question Carries 14 Marks*
2. *Illustrate your answers with NEAT sketches wherever necessary.*

5 x 14M=70M

1. a) What is a compiler? How to execute a program?
   b) Discuss the importance of algorithm in program development with an example.
   c) Draw a flowchart to find the sum of digits in a given number 'n'.

2. a) List relational operators supported in C language.
   b) What is the need of operator precedence and associatively in expression evaluation? Give illustrations.

3. a) What are self referential structures?
   b) Distinguish between structure and union.
   c) Illustrate array of structures.

4. a) Develop a program to perform multiplication of two given matrices of order m x n, n x p
   b) Demonstrate the usage of strstr and strcat built-in functions.

5. a) Develop a program to append second file content to first file content. Read two file names as command line arguments.
   b) Explain different types of preprocessor command in 'C'.

6. a) Distinguish between the two parameter passing techniques used in functions.
   b) Describe dynamic memory management and the built-in functions for this process.

7. a) What are the different ways of passing arrays to functions? Explain with examples.
   b) Discuss the concept of recursion and give the limitations of recursive functions.

8. a) Is binary search preferred over linear search? Justify your answer.
   b) Perform bubble sort on the following eight numbers, illustrate every pass neatly.
   32, 56, 34, 21, 27, 89, 21, 90.

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