

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

I-B.TECH-I-Semester End Examinations (Supply) - June - 2025

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 10 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) What is Pseudo code? Give example. [1M]
- b) Compare while and do-while loops with example. [1M]
- c) What are the parameter passing methods in functions? [1M]
- d) Distinguish between call by value and call by reference? [1M]
- e) How to append one file at the end of the other? Explain with an example. [1M]
- f) Design a solution to implement user defined header file? [1M]
- g) Define a function. . [1M]
- h) Describe function syntax. [1M]
- i) Write the complexity of Bubble sort, insertion sort and selection sort. [1M]
- j) Give the merits and demerits of linear and binary search [1M]

PART-B

(50 Marks)

2. Explain Conditional Branching statements with example. [10M]
- OR**
3. Develop a 'C' program to multiply two matrices by checking the compatibility. [10M]
 4. Write a 'C' program for an employee containing the details such as empno, empname, department and name and salary, The structure has to store 20 employees in an organization. Use the appropriate method to define the above details and define a function that display the contents? [10M]

OR

5. Define a structure. How to initialize a structure? Explain with an example. [10M]
6. Write a 'C' program to read an email address from user using scanf function. The code should accept only email addresses and store user name and domain name separately.(Eg if user supplies xyz@gmail.com username is xyz and domain name is gmail.com) [10M]

OR

7. Explain about types of files with an example. [10M]
 8. Explain parameters and return types of a function. [10M]
- OR**
9. Explain about dynamic memory allocation. [10M]
 10. Write a C program for Selection sort and explain with an example. [10M]

OR

11. Define Binary Search? Develop a C program on Binary search. [10M]
