



## I B.TECH I Sem Regular End Examination, July 2021

**PROGRAMMING FOR PROBLEM SOLVING****(CSE, CSI, CSM, EEE & INF)****Time: 3 Hours.****Max. Marks: 70**

Note: 1. Answer any FIVE questions.

2. Each question carries 14 marks and may have a, b as sub questions.

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|---|--|-----|-------|------|
| 1 | a) List the basic data types, their sizes and range of values supported by 'C' language.                 | 7M  | C03   | L1   |
|   | b) Write an algorithm to find the roots of a quadratic equation considering all cases.                   | 7M  | C01   | L3   |
| 2 | Explain about different bit-wise and Logical operators with examples.                                    | 14M | C03   | L2   |
| 3 | a) Write a 'C' program to test whether a given number is palindrome or not.                              | 7M  | C05   | L3   |
|   | b) Describe the various jump statements in 'C' with examples.  | 7M  | C03,5 | L2   |
| 4 | a) Write a 'C' program to perform the matrix multiplication.   | 7M  | C03   | L3   |
|   | b) Write a 'C' program to find the biggest number and smallest number of given 'n' numbers using arrays. | 7M  | C03,5 | L2   |
| 5 | a) Explain various looping statements in 'C'.  | 7M  | C03,5 | L2   |
|   | b) Write and explain the general format for declaring and accessing members of a structure.              | 7M  | C05   | L4   |
| 6 | a) Define Recursion. Write a recursive function for finding sum of first n natural numbers.              | 7M  | C04   | L2   |
|   | b) Explain DMA functions with an example programs.   | 7M  | C04   | L1,3 |
| 7 | a) Explain call by reference parameter passing mechanism with an example.                                | 7M  | C04   | L2   |
|   | b) Write the syntax and example for fseek, ftell and rewind functions.                                   | 7M  | C04   | L5   |
| 8 | a) What are command line arguments? Explain with a complete 'C' program.                                 | 7M  | C03   | L1,2 |
|   | b) Explain about preprocessor commands: include, if, undef.  | 7M  | C03   | L2   |