



## I B.Tech II Sem Supply End Examination, July (March) 2021

**Programming for Problem Solving****(EEE, CSE & 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) | Write an algorithm or pseudo code for solving a quadratic equation.  | 7M  | CO | BL |
|   | b) | How characters are represented internally? What is output of following program fragment?<br><pre>char c = 'A'; for( i = 1; i &lt;= 5; i++) {     c= c + i;     printf("%c\t",c); }</pre> | 7M  | CO | BL |
| 2 | a) | Volume of cone is given as $V = \frac{1}{3} \pi r^2 h$ . Write a C program to calculate the volume of cone.  | 7M  | CO | BL |
|   | b) | Compare and contrast between Machine language, Assembly language and high-level language.  | 7M  | CO | BL |
| 3 | a) | List and explain briefly any five string manipulation functions in C.  | 7M  | CO | BL |
|   | b) | How can pointers be used for inter function communication?   | 7M  | CO | BL |
| 4 | a) | Write a sample program to demonstrate the use of nested structures.  | 7M  | CO | BL |
|   | b) | Discuss about the different file status functions.   | 7M  | CO | BL |
| 5 | a) | Write a program that accepts a source file name and destination file name as command line argument and copies source file to destination file.   | 7M  | CO | BL |
|   | b) | Discuss briefly the commonly used pre-processor commands.  | 7M  | CO | BL |
| 6 |    | What do you mean by formal parameters and actual parameters? Implement functions with function declaration as void add Num(int, int) and int add Two Num(void) to add two integers.      | 14M | CO | BL |
| 7 | a) | What is meant by recursive function? Write recursive function for calculating factorial of the given number.   | 7M  | CO | BL |
|   | b) | Write an algorithm to find minimum and maximum number of a given set.  | 7M  | CO | BL |
| 8 | a) | Write a program to search an element in the list of elements using linear search.  | 7M  | CO | BL |
|   | b) | What is meant by order of complexity? Discuss the order of complexity for linear and binary search.  | 7M  | CO | BL |