

Code: CS3T3

II B.Tech - I Semester – Regular Examinations – December 2015

**PROGRAM DESIGN
(COMPUTER SCIENCE AND ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1. a) What is the need of library functions? Give any 2 examples of library functions.
- b) Define Pointer to an array with an example.
- c) List out any 4 characteristics of modular programming.
- d) Define scope of variable in C language. Explain with example.
- e) What is the difference between character array and string?
- f) What do you mean "Array of Structures"? Give an example.
- g) Explain the effect of following statements.
`int a,*b; b=&a;`
- h) What is the difference between the functions "malloc" and "calloc"?
- i) Write about binary files in C.
- j) What is the advantage of using macro definitions in a program?
- k) What is conditional Compilation? How does it help a programmer?

PART – B

Answer any **THREE** questions. All questions carry equal marks. 3 x 16 = 48 M

2. a) Explain about void functions without arguments and void functions with input arguments with examples? 8 M

b) Describe the top down design used in C language. Also explain how the structured charts will be helpful in top down design. 8 M

3. Develop a top down Modular program to
 - a) Read two integer arrays with unsorted list of elements. 8 M
 - b) To sort them in ascending order. 8 M

4. a) Explain about the following string handling functions with examples. 8 M
 - i) `strcat()` ii) `strcpy()`

 - b) What is type-defined structures? Differentiate Structure and Union with a clear example for each. 8 M

5. a) How do we access a variable through its pointer? Explain with example. 8 M

b) Write a program that reverses the elements of a given array using a pointer parameter. 8 M

6. a) Explain about procedural and data abstraction with an example. 8 M
- b) Write a program to copy the content of one file into another. 8 M