

Code: CS3T3

**II B.Tech - I Semester – Regular/Supplementary Examinations
November - 2018**

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

Duration: 3 hours

Max. Marks: 70

PART – A

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

11x 2 = 22 M

1.

- a) Write the syntax of functions with arguments.
- b) List out various types of functions.
- c) Write recursive program to reverse the given string.
- d) What is scope of variable?
- e) What is union and when union structure is used in programs?
- f) List out various string functions in the String library.
- g) What is File?
- h) How do you declare an array of 10 pointers pointing to integers?
- i) When pointers are required in programs?
- j) What is a macro?
- k) Write a program to open a file in write mode.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain about top down design approach with suitable example. 8 M
- b) Justify How structured charts using in a top down design? 8 M
3. a) Differentiate between pass-by-value and pass-by-reference. 8 M
- b) Design a program to swap two integer values using pass-by-reference. 8 M
4. a) How to send arrays into functions? Explain with suitable examples. 8 M
- b) Write a C program to perform row-wise summation of the real valued input matrix. Determine the largest of these row-wise summation values. Use 2-D and 1-D arrays. 8 M
5. a) Compare and contrast Structure and Union with suitable examples. 8 M

b) Write a program to accept records of the different states of the country using array of structures. The structure should contain char state, int population, int literacy rate and int per capita income. Assume data. Display the state whose literacy rate is highest and per capita income is highest.

8 M

6. a) Give a brief note about the elements in a pointer data type. What are the advantages and disadvantages of pointers?

8 M

b) List any 3 file handling functions. Explain in detail. 8 M