

B.Tech I Year (R13) Supplementary Examinations December/January 2015/2016

PROGRAMMING IN C & DATA STRUCTURES

(Common to CE, ME, EEE, ECE, EIE and IT)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- What is an input device? Mention input devices.
 - What is flowchart? Write different symbols for different activities.
 - Write any four backslash constants.
 - What are the Bitwise operators in C language?
 - What is a pointer? How is pointer initiated?
 - What is recursion? Give an example.
 - Explain the command line arguments.
 - What are the stack operations?
 - What is merge sort?
 - Write the string handling functions.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Mention the steps involved in Software Development.
 (b) What is an algorithm? Explain Fibonacci series 1, 1, 2, 3, 5, --- n?

OR

- 3 What is an operator? Explain different operators in C.

UNIT – II

- 4 (a) Write about while and for loops and write suitable examples.
 (b) Write a program to determine the Greatest Common Divisor (GCD) of two numbers.

OR

- 5 (a) Distinguish between call by value and call by reference with examples.
 (b) Write a program to display the Pascal's triangle.

UNIT – III

- 6 (a) What is an array? What are advantages of arrays over ordinary variables? How arrays are declared and initialized?
 (b) Write a program for finding the largest number in an array.

OR

- 7 What do you mean by sorting? Mention different types of sorting. Give some examples and explain Quick sort in detail.

UNIT – IV

- 8 (a) Define structure and give the general syntax for structure. Write suitable example program.
 (b) Give difference between the structures and arrays.

OR

- 9 Describe various types of files and operations on files with an example.

UNIT – V

- 10 What are the advantages and disadvantages of stack? Write a program to illustrate stack operations.

OR

- 11 (a) What is data structure? Explain the linear and non-linear data structure in detail.
 (b) Write binary search for finding given element is in the list or not.
