I B.Tech I Semester Supplementary Examinations Dec - 2016
C PROGRAMMING
(Common to All Branches)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) What is a flow chart? Explain different elements of a flow chart.
    b) Explain structure of a C program.
    c) Explain relational and logical operators.   (5+4+6)

2. a) Explain different Bit-Wise operators in detail.
    b) An electric power distribution company charges domestic consumers as follows

Consumption Units	Rate of charge
0-20	Rs 0.50 per unit
201-400	Rs 100 plus Rs0.65 per unit excess of 200
401-600	Rs 230 plus 0.80 per unit excess of 400
601 and above	Rs 390 plus Rs 1.00 per unit excess of 600

    Write a c program that reads the customer number and power consumed and print amount to be
    paid by the customer (Use else-if ladder)   (10+5)

3. a) What is string? Write a program to test whether a given string is a palindrome or not without
       using functions.
    b) Explain while, do-while and for statements with examples.   (7+8)

4. a) What is an Array? Explain declaration and initialization of single, two and multi-
       dimensional arrays.
    b) Write a C program to add two matrices.   (5+10)

5. a) What is Towers of Hanoi problem? Give recursive solution to it.
    b) What is a function? Write program for passing 2-D arrays to functions.   (7+8)

6. a) What is a pointer? Explain the process of accessing a variable through its pointer with an
       example.
    b) Write a C program to swap two numbers using pointers.   (8+7)

7. a) What is a structure? Explain nested structure with example.
    b) What is a Union? List the differences between Structures and Unions.   (8+7)

8. a) What is a file? Explain different operations of a file.
    b) Write a C program to read and display contents of an existing file.   (8+7)