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Code No: CT1501

GEC-R14

I B. Tech I Semester Supplementary Examinations, May 2016

PROBLEM SOLVING USING C

(Common to Electrical & Electronics Engineering,

Electronics and Communication Engineering,

Computer Science and Engineering and Information Technology)

Time: 3 Hours

Max. Marks: 60

Note: All Questions from **PART-A** are to be answered at one place.

Answer any **FOUR** questions from **PART-B**. All Questions carry equal Marks.

PART-A

6 × 2 = 12M

1. What is operator precedence? Evaluate the following expression
 $(10/3) * 3 + 5 \% 3$?
2. What is a Loop? Why is it necessary in the program?
3. How does an ordinary variable differ from an array?
4. What is dynamic memory allocation? List dynamic memory allocation functions.
5. What is a nested structure? Give an example.
6. Enumerate the differences between Text and Binary files.

PART-B

4 × 12 = 48M

1. a) Explain the program development steps in detail. (6M)
b) Write an algorithm and draw flow chart to find the sum of Square root of any three numbers. (6M)
2. a) Explain the use of the statements break, exit and continue with examples. (6M)
b) Write a program to calculate bill for internet browsing. The conditions are given below.
i) 1 Hour Rs.20
ii) ½ Hour Rs.10
iii) 12 Hours Rs.90
The owner should enter number of hours spent by customer. (6M)
3. a) What are multi-dimensional arrays? Demonstrate the use of multi-dimensional arrays with an example. (6M)
b) Write a program to arrange the names of persons in alphabetical order. (6M)

4. a) What is recursion? Write a recursive function to find the factorial of a number. (6M)
b) Write a program to find sum of the given numbers using pointer. (6M)
5. a) How are array of structures defined? Give an example. (7M)
b) Explain the importance of bit fields? How do bit fields save memory space? (5M)
6. a) Explain various file I/O functions (5M)
b) Write a C program to copy contents of one file into another file. (7M)
