Code No: CT1501 **R14**

I B. Tech I Semester Regular/Suppl. Examinations, November 2015

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. Evaluate the following expressions
   i. (5.2 / 3) * 3 + 5 % 3 ii. 14 % 3 + 7 % 2
2. Write the differences among break, exit and continue statements.
3. What is an array? How array is different from structure.
4. What is function prototype? Give syntax.
5. Define structure? How structure is different from union.
6. What are the differences between text and binary modes in a file.

PART- B

4 × 12 = 48M

1. a) Define type conversion? Explain briefly about logical and ternary operator. (6M)
   b) Write a program to print the sum of the following harmonic series for a given value of n: 1 + 1 / 2 + 1 / 3 + ... 1 / n (6M)
2. a) Explain else if ladder with the help of a flowchart? What is dangling else problem. (6M)
   b) Write a program to find the LCM and GCD of given two numbers. (6M)
3. a) Write the differences between the following functions:
   i) strcpy and strncpy ii) strcat and strncat iii) strcmp and strncmp (6M)
   b) Write a program to sort given set of elements in ascending order. (6M)
4. a) Explain the process of declaring and initializing pointers. (6M)
   b) Write a c program that uses a pointer as a function argument. (6M)
5. a) Define nested structure? How it differs from array of structures? Explain with an illustrative example. (6M)
   b) Write a program to add two complex numbers by passing structure to a function. (6M)
6. a) List and explain random access to file functions along with their syntax with suitable example. (7M)
   b) Write a program that counts number of lines in a given file. (5M)

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