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Code No: CT2502

GEC-R17

I B. Tech I Semester Regular Examinations, December 2017

PROBLEM SOLVING THROUGH COMPUTER PROGRAMMING

(Common to 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. Differentiate between getchar() and scanf().
2. Draw the flowchart of *while* loop.
3. Write a simple C-program which uses gets() and puts() for strings.
4. a) What are the uses of Pointers?
b) What is the meaning of * and & operators in pointers?
5. What will be the output of the following program?

```
#include<stdio.h>
struct st
{
    int x;
    float y;
};
int main()
{
    printf("%d", sizeof(struct st));
    return 0;
}
```

6. Define a file.

PART-B

4 × 12 = 48M

1. a) Write a C-program to add two integer numbers and display the sum as a float value. (6M)
b) Explain the characteristics of an algorithm. (6M)
2. a) Write a C-program to reverse the digits of a given number. (6M)
b) Explain dangling else problem with an example. (6M)
3. a) Write a C-program to count the number of odd numbers present in an array. (6M)
b) Write a C-program to read the names of ten students and display them along with index numbers. (6M)

4. a) What is user defined functions? Discuss with an example. (6M)
b) Write a C-program to calculate the sum of squares of all elements present in an array using pointers. (6M)
5. a) Write a C-program to print details of N students using structure. (6M)
b) Write a C-program to use structure within union, display the contents of structure members. (6M)
6. a) Write a C-program to display file content on the screen. (8M)
b) Discuss about unformatted I/O with suitable examples. (4M)
