CBCS Scheme

USN ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚   **15PCD13/23**

First/Second Semester B.E. Degree Examination, June/July 2018
Programming in C and Data Structures

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1   a. What is pseudocode and what is the purpose of pseudocode? **(06 Marks)**
    b. Explain the basic structure of a 'C' program and write a 'C' program to calculate the area of rectangle. **(10 Marks)**

OR

2   a. Which are 2 important point to declare variable? Explain with syntax. **(06 Marks)**
    b. What is data type and explain all different data types with syntax and examples. **(10 Marks)**

Module-2

3   a. How many decision control statements are there in 'C' language? List out all types of control statements. **(04 Marks)**
    b. Explain if-else control statement with syntax and flow chart. **(06 Marks)**
    c. Explain else-if ladder control statement with syntax and flow chart. **(06 Marks)**

OR

4   a. Explain 'for' loop control statement with syntax and flow chart. **(06 Marks)**
    b. What is the difference between while-do loop and do-while loop? Explain with syntax and example. **(06 Marks)**
    c. Write a 'C' program to find the sum of 'N' natural numbers using 'for' loop. **(04 Marks)**

Module-3

5   a. Define array. Explain how one-dimensional array is declared and initialized with syntax. **(06 Marks)**
    b. Write a 'C' program to read N integers (+Ve, –Ve and zero) into an array:
        i)   Find the sum of –Ve integers
        ii) Find the sum of +Ve integers
        iii) Find the average of all integers **(10 Marks)**

OR

6   a. Define string. List out all string manipulation functions. **(06 Marks)**
    b. Write a 'C' program to read 2-strings and compare both the strings with specified number of characters and with case sensitive and without case sensitive. **(10 Marks)**

Module-4

7   a. What is structure? Write a 'C' program to read name, USN from main function and print the name, USN using structure. **(06 Marks)**
    b. Explain type defining a structure with two different techniques and also with syntax. **(06 Marks)**
    c. What are different operations that can be performed on the file? Explain fscanf operation with syntax? **(04 Marks)**

OR

8 a. Write a 'C' program to count the number of characters, number of lines and number of white spaces from a file. **(10 Marks)**

   b. What is meant by array of structure? How it can be created? **(06 Marks)**

Module-5

9 a. What is pointer? How pointers are declared and initialized? Explain with syntax. **(06 Marks)**

   b. Write a 'C' program to access the value of variable 'a' and 'b' through the pointer 'p' and 'q' by *p and *q respectively. **(05 Marks)**

   c. Write a 'C' program by using single pointer 'p' is made to point variable a, b and c respectively and display the value of a, b, and c through single pointer p. **(05 Marks)**

OR

10 a. What are preprocessors directives? Explain the advantages of preprocessor directives with examples. **(08 Marks)**

   b. Explain conditional compilation preprocessor directives with suitable program to find the area of circle, by giving the radius of circles. **(08 Marks)**

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