



USN 15PCD13/23

First/Second Semester B.E. Degree Examination, June/July 2019 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. Write a general structure of C program. Explain with example. (06 Marks)
 - b. List basic data types in C. Write the significance of each data type. (04 Marks)
 - c. What is Variable? Explain the syntax of variable declaration and variable initialization.

 (06 Marks)

OP

- 2 a. With syntax and example, explain the formatted and unformatted input and output functions in C. (06 Marks)
 - b. Write a C program to convert temperature from degree centigrade to Fahrenheit. (04 Marks)
 - c. Explain various operators supported by C. (06 Marks)

Module-2

- 3 a. Explain the syntax of for loop and write a program using for loop to find sum of first n natural numbers. (08 Marks)
 - b. Explain the syntax of if statement and write a program to find largest of 3 numbers using if statement.

 (08 Marks)

OR

a. With example, explain the syntax of switch statement.

(06 Marks)

b. Explain Break and Continue statements.

(04 Marks)

c. Differentiate between while and do - while loops.

(06 Marks)

Module-3

- 5 a. Explain declaration and initialization of two dimensional array and write a program to multiply two matrices. (10 Marks)
 - b. What is function? Explain the differences between call by value and call by reference.

(06 Marks)

OR

6 a. Explain the various string manipulation functions.

(06 Marks)

b. Write a C program to find factorial of a number using recursion.

(04 Marks)

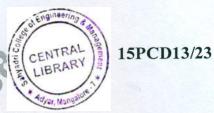
c. Explain with example syntax of puts and gets functions.

(06 Marks)

Module-4

- a. What is File? Explain any five file manipulation functions with example. (08 Marks)
 - b. Write a C program to maintain record of n students with appropriate fields and print the marks of student if name is entered. (08 Marks)

OR



What is Structure? Explain the syntax of structure declaration. Explain structure within structure with an example. (08 Marks)

b. Write a C program to read text from file and display it on screen.

(08 Marks)

Module-5

What is Stack? Explain various stack operations. 9

(08 Marks)

What is Pointer? Write a C program to swap two numbers using pointers.

(08 Marks)

What is Dynamic Memory Allocation? Explain the four functions for memory management. 10

(08 Marks)

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(08 Marks)