

# CBCS Scheme



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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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.



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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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