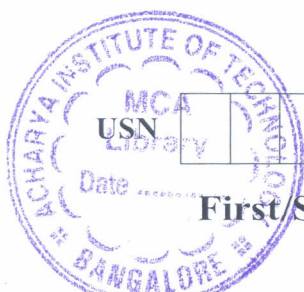


CBCS SCHEME

18CPS13/23



First/Second Semester B.E. Degree Examination, June/July 2025 C Programming for Problem Solving

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain different generation of computers. (08 Marks)
- b. With a neat diagram of computer, explain its components. (06 Marks)
- c. What is Software? Explain different types of softwares. (06 Marks)

OR

- 2 a. Explain Basic Structure of C program with example. (08 Marks)
- b. What is an operator? List any 4 types of operators. (08 Marks)
- c. State whether the following are valid or invalid identifiers.
i) apple ii) continue iii) one-1D iv) #abc 123 v) aVErAge. (04 Marks)

Module-2

- 3 a. With neat syntax explain formatted input and output statements. (08 Marks)
- b. Write C program to find area and circumference of circle. (06 Marks)
- c. What is looping? Explain for loop with syntax and example. (06 Marks)

OR

- 4 a. Explain if, if – else, nested if with syntax and example. (06 Marks)
- b. Write a C program to find roots of quadratic equation and print them with appropriate message. (08 Marks)
- c. Explain break and continue with example. (06 Marks)

Module-3

- 5 a. What is an Array? Explain how 1D and 2D array are declared and initialized. (12 Marks)
- b. Write a program to sort a given array of integers in ascending order using bubble sort. (08 Marks)

OR

- 6 a. Define string. List all the string manipulation functions. Explain any four with examples. (12 Marks)
- b. Write a C program to search an Integer from N numbers using binary search technique. (08 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.

Module-4

- 7 a. What is Function? Explain all categories of function based on return type and parameters. (12 Marks)
- b. Write a C program to find factorial of a number using function. (08 Marks)

OR

- 8 a. Explain pass by value and pass by reference with syntax and example for each. (12 Marks)
- b. Write a recursive program to compute Fibonacci series upto n terms. (08 Marks)

Module-5

- 9 a. Define Structure. Explain the syntax of structure declaration in C with example. (06 Marks)
- b. Write a C program using structure to read, write, compute average marks, display the students scoring above and below the average marks for a class of N students. (08 Marks)
- c. List and explain types of structure with their syntax. (06 Marks)

OR

- 10 a. What is a Pointer? Show how pointer variables are declared and initialized. (08 Marks)
- b. Write a C program to find sum and mean of all elements in an array using pointer. (06 Marks)
- c. What is preprocessor directive? Explain any two preprocessor directives in C. (06 Marks)

* * * * *