

CBCS SCHEME



18CPS13/23

First/Second Semester B.E. Degree Examination, June/July 2023

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. Define Token? Explain the different types of tokens available in C-Language. (10 Marks)
- b. Which of the following are valid variable names if not give reason
i) int ii) n\$ iii) a_b iv) New Delhi v) auto. (05 Marks)
- c. What is a flowchart? Explain the meaning of symbols used in flowchart. (05 Marks)

OR

- 2 a. Define Computer? Explain different computer Languages. (10 Marks)
- b. Write an algorithm and program to find the area and perimeter of a circle. (10 Marks)

Module-2

- 3 a. What is Branching? Explain if, if... else and switch with its syntax and example. (10 Marks)
- b. Write a C-program to find the reverse of an integer number and whether it is a palindrome or not. (06 Marks)
- c. Explain the use of getch(), getche() and patch() functions. (04 Marks)

OR

- 4 a. Write a program to compute the Binomial Co-efficient. (08 Marks)
- b. Write a program to print the multiplication table of a given integer number. (04 Marks)
- c. Explain break and continue statements with suitable examples. (08 Marks)

Module-3

- 5 a. Explain how single dimensional arrays are declared and initialized with syntax and example. (10 Marks)
- b. Write a program to find the product of given the matrices and ensure rules of multiplication are checked. (10 Marks)

OR

- 6 a. Explain how strings are declared and initialized with syntax and example. (10 Marks)
- b. Write a C program to search for a given element in an array using binary search. (10 Marks)

Module-4

- 7 a. What is recursion? Write a recursive program to find the factorial of a given number. (10 Marks)
- b. What are actual and formal parameters? Explain with an example program. (10 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.

OR

- 8 a. What is a function? What are the different types of functions? (06 Marks)
b. Write a C program to generate Fibonacci series using recursive function. (10 Marks)
c. Explain any two built in functions. (04 Marks)

Module-5

- 9 a. What is preprocessor? Explain #define and #include preprocessor directive with an example. (10 Marks)
b. Explain the following C functions with syntax and example to each. (10 Marks)
i) malloc () ii) calloc () iii) realloc () iv) free ()

OR

- 10 a. How structure is different from an array? Explain the declaration of structure with an example. (10 Marks)
b. Write a C program to swap two numbers using pointers. (05 Marks)
c. What is pointer? Explain how to declare and initialize a pointer variable. (05 Marks)

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