FYUGP/1st Sem/25(NEP)New

2025

Four Year Under Graduate Programme (FYUGP)

1st Semester Examination (Under NEP)
(New Session 2024-25)

COMPUTER SCIENCE (Major)

Paper Code : CMSMJ DC-101

(Introduction to Programming using C)

Full Marks : 30 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

1. Answer any *five* questions : 2×5=10

(a) Define an algorithm. List any two characteristics of a good algorithm.

(b) What is the difference between 'while' and 'do-while' loops in C?

(c) Define type casting. Give one example.

(d) What is the difference between break and continue?

(e) What is a preprocessor directive? Give one example.

(f) Define a pointer. How is a pointer variable declared?

(g) What is the difference between a structure and a union?

Group - B

Answer any *four* questions : 5×4=20

2. Write a C program to find the factorial of a given number using recursion.

3. (a) Explain the differences between 'call by value' and 'call by reference' with examples.

(b) Write a C program to swap two numbers using pointers. 2½+2½

4. (a) Draw a flowchart to check whether a given number is prime or not.

(b) Explain the use of strcmp ( ) function with a suitable example. 2½+2½

5. (a) Discuss the increment and decrement operators in C with examples.

(b) Write a C program to find the sum of elements of a 1D array. 2+3

6. (a) Explain dynamic memory allocation using malloc() and free().

(b) Write a C program to allocate memory dynamically for *n* integers and find their average. 2½+2½

7. Write short notes on any *one* of the following : 5×1=5

(a) Bitwise operators in C

(b) Dangling pointers