

Problem Solving Methodologies and Programming in C (Theory) (Major-1)**Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Que.1 Answer following Questions (Any Two) (10)

- 1) Explain History of C and differentiate between traditional C and Modern C.
- 2) Write short note on C Tokens.
- 3) What is flow chart? Explain Dry run and its uses with example.
- 4) Explain operators and hierarchy of operators.

Que.2 Answer following Questions (Any Two) (10)

- 1) Write short note on jumping statements.
- 2) Explain all types of if.
- 3) Explain for and while loop with example.
- 4) Explain switch statement and ternary operators.

Que.3 Answer following Questions (Any Two) (10)

- 1) Write short note on header files.
- 2) What is user defined function? Explain its types.
- 3) Explain memory allocation function with example.
- 4) Explain Nesting and Recursion with UDF.

Que.4 Answer following Questions (Any Two) (10)

- 1) What is an array? Explain string array with example.
- 2) Explain Array with functions using UDF.
- 3) Explain Array of structures and Array within Structure.
- 4) What is union? Explain difference between structure and union?

Que.5 Answer following Questions (Any Two) (10)

- 1) Explain pointer to structure and pointer within structure.
- 2) Explain pointer to variable and pointer to pointer with example. Explain use of pointer in dynamic programming.
- 3) Explain different functions to store data in file.
- 4) What is command line argument? Explain with example.
