



## C Programming

### Detailed Syllabus:

#### C Programming

##### 1) Getting Started

- Brief Introduction
- Programming Language
- About C Programming
- C Character Set
- Constants, Variables & Keywords
- Constants in C
- Variables in C
- Writing a C Program
- Instructions and Assignments
- Basic Operators in C Programming

##### 2) The Decision Control Structure

- Decisions Control Structure & the If Statement
- The if-else Statement
- Use of Logical Operators
- Different types of Operators
- Points to remember

##### 3) Loop Control Structure

- Loops and the While loop
- While Loop
- For Loop
- Operators in Loop
- The Odd Loop
- Break Statement
- Continue Statement
- do-while loop

##### 4) Case Control Structure

- Decisions using switch
- The Tips and Traps
- Switch versus if-else Ladder
- The goto keyword

##### 5) Functions and Pointers

- About Functions
- Passing Values between Functions
- Scope Rule of Functions
- Calling Convention

- One Dicey Issue
- Advanced Features of Functions
- Function Declaration and Prototypes
- Call by Value or Call by Reference
- An Introduction to Pointers
- Pointer Notation
- Function Calls
- Basics of Call by value and call by reference
- Conclusions
- Recursion
- Recursion and Stack
- Adding Functions to the Library

## **6) Data Types Revisited**

- Data type
- Integer number variables
- Integers, signed and unsigned
- Chars, signed and unsigned
- Floats and Doubles
- Issues related to Data types
- Storage Classes in C
- Automatic Storage Class
- Register Storage Class
- Static Storage Class
- External Storage Class
- To study the Ground rules for the Storage Class

## **7) Arrays**

- About Array
- Usage of Arrays
- Pointers and Arrays
- Passing an Entire Array to a Function
- Two Dimensional Arrays
- Initializing a 2-Dimensional Array
- Memory Map of a 2-Dimensional Array
- Pointers and 2-Dimensional Arrays
- Pointer to an Array 295
- Passing 2-D array to a Function
- Array of Pointers

## **8) File Handling**

- File Operations
- Opening a File
- Reading from a File
- Trouble in Opening a File
- Closing the File