C++ Syllabus

Introduction to C++
Introduction to C++ and its basics - datatypes, operators

1. Write your first C++ program
2. Variables and data types in C++
3. Operators: Arithmetic, relational, logical, bitwise, conditional
4. Unary, type conversion and type casting
5. Basic programs of C++ using operators
6. Practice problems

Conditional statements and Loops
Control Structures: decision making and looping statements

1. Decision Control - if, if - else, if-else-if programs
2. Switch case
3. While loop and its problems
4. For loop and its problems
5. Program based on nested for loop
6. Practice problems

Arrays, Strings & introduction to sorting
Basics of Arrays, strings, pointers, functions and sorting

1. Break, continue and goto statement
2. User defined / Pre defined functions
3. Pointer: Introduction, Pointer arithmetic
4. Call by value and call by reference
5. Recursion
6. Array: Declaration, initialization and its problems
7. Insertion, deletion in 1d array, merge two arrays
8. Bubble sort and insertion sort
9. Selection and merge sort
10. Strings
11. 2dArray and its problems

Structures, Pointers and File handling

Slightly advanced concepts of Structures, pointers and file handling using C++

1. Structures in C++
2. Array of structure and nested structure
3. Unions
4. Pointer to pointer, Array of pointer
5. Dynamic memory allocation in C++
6. Practice problems
7. File handling - File opening modes, file handling functions
8. Preprocessor directives