**C++ PROGRAMMING:**

**WEEK 1**

DAY 1 – Getting start with C++

How to install a text editor?

Do I need to know C to learn C++?

Why it is so needed c++?

Why do I want to learn C++

DAY 2 – Introduction to C++ programming

History of C++

Basic concepts

Application used

DAY 3 – Data Types, Variables

Definition for data types and variables

Types variables

Rules for naming variables

Simple Program for data types and variables?

DAY 4 – Operators

What is operators?

Types that covered?

Example program for Arithmetic operators

Condition that are need to be applied

DAY 5 – Summary

1. Find sum and average for given five values.
2. To manipulate fractional numbers, we must declare variables of type float.
3. Calculate simple interest by giving principle, rate of interest and number of years.
4. Check an accepted year is leap year or not.

**WEEK -2**

DAY 1 – Learning Conditional and Control Statement

If statement

If-Else statement

Nested If-else statement

If-Else If ladder

Switch statement

DAY 2 – Understanding Arrays, Strings

Definition

Array declaration

Processing an array

Array Initialization

Passing string to function

DAY 3 – Pointer in C++

What is pointer?

Declaration of pointer

Sample program

Features

DAY 4 – Function in C++

Definition and advantage

Recursive function

Storage Classes

Inline function

Function overloading

DAY 5 – Assignments

1. Write c++ program to combine two string
2. To store of values and print ascending and descending order using c++ program
3. Find the largest value in an array of size N using function.

**WEEK – 3**

DAY 1 – oops in c++

Software Crisis

Features of oops

Oops definition

Advantages of oops

DAY 2 – Learn I/O streams

Define stream?

Types of stream

Formatted output with printf

Input/Output in C

DAY 3 – Dynamic Memory

malloc() and syntax

calloc() and rules

free() and application

realloc() and conditions

Sample program

DAY 4 – STL in C++

Define Standard Template Library?

STL has four components

Flow chart for STL

Merits and Demerits

Rules to apply STL

DAY 5 – Assignment

1. Design an object with the following information

NAME

DATE OF BIRTH

BLOOD GROUP

HEIGHT

WEIGHT

CONTACT ADDRESS

1. Write a program to implement the i/o streams

**WEEK – 4**

DAY 1 – Understanding Exception Handling

Definition

Types pf exception Handling

Type conversion for primitive types

Sample program

DAY 2 –C Signal handling

Standard signals

Debugging

Handling

Example Usage

DAY 3 – C++ Multithreading

What is Multithreading?

How to create thread?

Join thread

Passing argument to thread

Initializing thread with a function

DAY 4 -PROJECT WORK

1. Develop a program in C++ using function template the matrix operator for int, float and long data type.
2. Find the area of the circle for integer, float, double data type using function overloading.
3. Write a program to find whether a given number is Armstrong or not using function.