

Module 1: Introduction Overview of C++, Sample C++ program, Different data types, operators, expressions, and statements, arrays and strings, pointers & function components, recursive functions, user- defined types, function overloading, inline functions, Classes & Objects – I: classes, Scope resolution operator, passing objects as arguments, returning objects, and object assignment.

Module 2: Classes & Objects – II Constructors, Destructors, friend functions, Parameterized constructors, Static data members, Functions, Arrays of objects, Pointers to objects, this pointer, and reference parameter, Dynamic allocation of objects, Copy constructors, Operator overloading using friend functions, overloading.

Module 3: Inheritance Base Class, Inheritance and protected members, Protected base class inheritance, Inheriting multiple base classes, Constructors, Destructors and Inheritance, Passing parameters to base class constructors, Granting access, Virtual base classes.

Module 4: Virtual functions, Polymorphism Virtual function, calling a Virtual function through a base class reference, Virtual attribute is inherited, Virtual functions are hierarchical, pure virtual functions, Abstract classes, Using virtual functions, Early and late binding.