**UNIT 1**

**Lecture 1:** Basic Introduction to Procedural & OOP

**UNIT 2**

**Lecture 2:**

* Read & Write using cin and cout
* Datatypes
* Operators
* Conditional and Loops

**Lecture 3:** Classes and Objects

**Lecture 4:**

* Structure and Union
* Enumeration

**Lecture 5:**

* Inline and Non-Inline Function
* Static data member and Member function

**Lecture 6**

* Function with default argument
* Manipulator Function

**Lecture 7**

* Function Overloading
* Scope Rules
* Friend function & class

**Lecture 8**

* Functions and Types: Call by value & Call by reference
* Recursion & Member Function using recursion

**Lecture 9**

* Pointer in CPP (Pointer Arithmetic)
* Void pointer
* Pointer Arithmetic
* Pointer to pointer

**Lecture 10**

* Types of Pointers
* Pointer to objects
* this pointer
* Class containing pointers

**Lecture 11**

* 1D Arrays
* 2D & Multidimensional Arrays

**Lecture 12:** Array of objects

**Lecture 13:** Member functions

**Lecture 14**

* Modifiers of string class
* Strings

**UNIT 3**

**Lecture 15**

* Constructor and Destructor
* Default Constructor and Destructor

**Lecture 16**

* Parametrized constructor\_Copy Constructor\_Initializer list
* Constructor with default arguments

Lecture 17(missed)

**Lecture 18: File Handling**

* Lecture 19
* Sequential & Random Access
* File Operations

Lecture 20 (missed)

Lecture 21(missed)

**UNIT 4**

**Lecture 22**

* Unary Operator Overloading
* Operator Overloading

**Lecture 23:** Binary Operator Overloading

**Lecture 24**

* Type conversion
* Basic to class type conversion

**Lecture 25:** Class to basic type conversion

Lecture 26 (missed)

**Lecture 27:** Inheritance - Basics

**Lecture 28:** Types of Inheritance

**Lecture 29:** Resolving ambiguity in Inheritance

**Lecture 30:** Order of execution of Constructors & Destructors

**UNIT 5**

**Lecture 31:** DMA - Using new and delete

Lecture 32 (missed)

**Lecture 33**: DMA - Memory Leak

**Lecture 34**

* Virtual Destructor
* Polymorphism
* Virtual Function
* Pure Virtual Function

**Lecture 35**

* Abstract class and Concrete class
* Self referential class

**Lecture 36**

* Early binding and Late binding
* Dynamic constructor

**UNIT 6**

**Lecture 37**

* try, catch, throw mechanisms
* Exception Handling

**Lecture 38:** throw, catch mechanism

**Lecture 39**

* Rethrowing exception
* Templates in C++
* Standard Template Library
* Types of templates

**Lecture 40**

* Class template with Inheritance
* Introduction to STL
* STL – Algorithms (Searching Algorithm & Sorting Algorithm )
* STL – Iterators
* STL – Vectors
* STL – Lists
* Containers