Schedule

Date	Time	Contents (6 Hrs each Day)	Venue
21/03/23	8.30 am to 3.30 pm	**1. Introduction to C++:** Key features of C++; Defining variables; Formulating expressions and statements; Built-in data types; Console input/output **2. Operators and types**: Assignment; Compound Assignment; Increment and decrement operators; Const declarations; Type conversions **3. Going Further with Data Types:** Enumerations; Arrays; Using the standard vector class; Using the standard string class; Structures	112
23/03/23	8.30 am to 3.30 pm	**4. Flow of Control**: Decision making: if, if-else, and switch; Looping: for loops, while loops, and do-while loops **5. Defining functions:** Declaring, calling and defining functions; Function overloading; Defining default arguments; Pass-by-copy versus pass-by reference; Defining inline functions; 6. Header files and source files **6. Pointers:** Overview of pointers; Defining pointers; Dereferencing pointers; Const pointers; Null pointers	112
24/03/23	8.30 am to 3.30 pm	**7. Overview of Object Oriented Concepts:** Classes and objects; Abstraction; Encapsulation; Inheritance and polymorphism **8. Defining Classes:** Syntax of class declarations; Public and private members; Creating objects; Using new and delete; Structures vs. classes **9. Implementing Class Functionality:** Function overloading; Default arguments; Anonymous arguments; Ambiguities; Resolving scope conflicts; Using the this pointer	112
25/03/23	8.30 am to 3.30 pm	**10. Defining Constructors and Destructors:** Overview of an objects lifetime; Defining constructors; Constructor chaining; Defining destructors **11. Operator Overloading:** Overview of operator functions; Defining unary operators; Defining binary operators; Defining the operator; Defining input and output operators **12. Defining Class-Wide Members:** Overview; Static data members; Static member functions; Nested types; Friend classes	112
27/03/23	8.30 am to 3.30 pm	**13. Creating Collections of Objects:** The need for collections; Introduction to template classes; Using vector and list; Using iterators; Introduction to template functions; Using the Standard Template Library **14. Copying and Conversions:** The copy assignment operator; Copy constructors; Conversions to a class; Conversions from a class **15. Inheritance**: Recap of inheritance principles; Defining a subclass; Defining protected members; Scoping and initialization; Multiple inheritance; Abstract base classes	112

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