

C PROGRAMMING

TIME DURATION: 24 HRS

Introduction

- ✓ Installation(VS Code) Compiler + Setup

Chapter 1 –

- ✓ Variables, Data types + Input/Output

Chapter 2 - Instructions & Operators

- ✓ Arithmetic operators
- ✓ Assignment operators
- ✓ Comparison operators
- ✓ Logical operators
- ✓ Bitwise operators

Chapter 3 - Conditional Statements

- ✓ if-else
- ✓ switch
- ✓ Break Statement
- ✓ Continue Statement
- ✓ Goto Statement

Chapter 4 - Loop Control Statements

- ✓ Do While Loop
- ✓ While Loop
- ✓ For Loop

Chapter 5 - Functions & Recursion

- ✓ Functions
- ✓ Call by value & reference
- ✓ Recursion
- ✓ Storage Classes

Chapter 6 - Pointers

- ✓ Pointers
- ✓ sizeof() operator in C
- ✓ Array of Pointers
- ✓ Void Pointer
- ✓ References
- ✓ Reference vs Pointer
- ✓ Function Pointer in

Chapter 7 - Arrays

- ✓ Arrays
- ✓ Array to Function
- ✓ Multidimensional Arrays

Chapter 8

- ✓ Strings

Chapter 9

- ✓ Structures

Chapter 10

- ✓ File I/O

Chapter 11

- ✓ Dynamic Memory Allocation

Memory Management

- ✓ malloc() vs new in C
- ✓ free vs delete in C

C++ PROGRAMMING

TIME DURATION: 40 HRS

PROGRAMMING C++

- ✓ Introduction
 - C vs C++
 - History
 - Features
- ✓ Installation (VS Code) Compiler + Setup
 - Installation
 - Program
 - cout, cin, endl

Chapter 1

- ✓ Variables, Data types + Input/Output
 - Variable
 - Data types
 - Keywords

Chapter 2

- ✓ Instructions & Operators

Chapter 3

- ✓ Conditional Statements
 - if-else
 - switch
 - Break Statement
 - Continue Statement
 - Comments

Chapter 4

- ✓ Loop Control Statements
 - For Loop
 - While Loop
 - Do-While Loop
 - Go to Statement

Chapter-5

- ✓ Functions
 - Functions
 - Call by value & reference
 - Recursion
 - Storage Classes

Chapter-6

- ✓ Array
 - Arrays
 - Array to Function
 - Multidimensional Arrays

Chapter-7

- ✓ Pointers
 - Sizeof() operator
 - Array of Pointers
 - Void Pointer
 - References
 - Reference vs Pointer
 - Function Pointer
 - Memory Management
 - Malloc() vs new
 - Free vs delete

Chapter-8

- ✓ **Object Class**
 - OOPs Concepts
 - Object Class
 - Constructor
 - Copy Constructor
 - Destructor
 - this Pointer
 - static
 - Structs
 - Enumeration
 - Friend Function
 - Math Functions

Chapter-9

- ✓ Inheritance
 - Inheritance
 - Aggregation

Chapter-10

- ✓ Polymorphism
 - Overloading
 - Overriding
 - Virtual Function

Chapter-11

- ✓ Abstraction
 - Interfaces
 - Data Abstraction

Chapter-12

- ✓ Namespaces

Chapter-13

- ✓ Strings

Chapter-14

- ✓ Exception Handling try/catch User-Defined

Chapter-15

- ✓ File & Stream getline