**CONTENT OF C++ LANGUAGE TRAINING COURSE**

|  |
| --- |
| **1. Introduction to Programming Languages**   * Procedure Oriented v/s Object Oriented Programming Language * It’s Characteristics |
| **2. Introduction to C++**   * Definition * Why C++ * Features of C++ * C++ Over C * Tokens | Operators | Data types * Structure of C++ program * Introduce Namespace concept * Cout and Cin |
| **3. Basic C++ Programs | Conversion of C programs into C++ Programs**   * Creating namespace * Brief Introduction about Control Statements * Conversion of Array | String | Function Programs |
| **4. Object Oriented Concept**   * Object * Class * Inheritance * Polymorphism * Encapsulation * Polymorphism |
| **5. Structure in C++**   * Difference Between Class and Structure |
| **6. Programs through Class and Object**   * this pointer * Array of Object |
| **7. Reference Variable | Scope Resolution Operator**   * Call By Value * Call By Reference * Call By Address |
| **8. Use of Getter and Setter Method | Concept of Default Argument** |
| **9. Compile Time Polymorphism(Function Overloading),Function Overloading Example** |
| **10. Use of new and delete Keyword in C++** |
| **11. Introduction to Constructor**   * Types Of Constructor * Default Constructor * Parameterized Constructor * Copy Constructor |
| **12. Constructor Overloading, Destructor** |
| **13. Passing Object and Returning Object From Function With Example.** |
| **14. Static Concept**   * Static Data Member * Static Member Function * Program to count the total number of Objects created. |
| **15. Introduction to Inline Function and Friend Function with Example** |
| **16. Introduction to Operator Overloading**   * Overload Unary Operator(++,--) * Overload Binary Operator(+ for add two String Object, Time Object) * Operator Overloading Using Friend Function. |
| **17. Introduction to Inheritance**   * Types of Inheritance * Single Inheritance * Multiple Inheritance * Multilevel Inheritance * Hybrid Inheritance * Hierarchical Inheritance |
| **18. Function Overriding.** |
| **19. Pointer to Base Class and Pointer to Derived Class.** |
| **20. Virtual Function, Pure Virtual Function.** |
| **21. Abstract class** |
| **22. Diamond shape Ambiguity, Virtual Base Class** |
| **23. Exception Handling in C++** |
| **24. Introduction to Template**   * Types Of Template * Function Template * Class Template |
| **25. File Handling** |