

# **MODULE – 1**

## **Advance 'C' Programming**

- ✓ Basics of 'C' Programming
- ✓ How to write a program
- ✓ Logic Development
- ✓ Programming with Array, Functions, Pointers
- ✓ Files and Pre-Processor Directives
- ✓ 'C' Programming for Embedded Systems

## **Advance 'C++' Programming**

- ✓ Principles of Object Oriented Programming
- ✓ Concept of Classes and Objects
- ✓ Constructor and Destructors
- ✓ Programming with inline, friend and virtual functions
- ✓ Programming in function and operator overloading
- ✓ Programming with Pointer and Polymorphism

## **Data Structure**

- ✓ Basic concept of Data Structure
- ✓ Single & Double Link List
- ✓ Trees

## **Preparation**

- ✓ Interview Related Questions and Answers
- ✓ Test on Completion of every part of Module-1

## **MODULE – 2**

### **Micro-Controller 8051**

- ✓ Assembly Language
- ✓ Embedded 'C' Programming
- ✓ Instruction Set
- ✓ Port Programming
- ✓ LED Blinking
- ✓ Timer Concept and Programming
- ✓ Serial & Parallel Communication and Programming
- ✓ LCD, Keyboard Interface and Programming
- ✓ RS-232, External Memory Interface and Programming
- ✓ Interrupt Handling (Timer, Serial, External) and Programming
- ✓ **Interview Related Topics, Questions and Answers**

### **Micro-Controller PIC**

- ✓ Assembly Language
- ✓ Instruction Set
- ✓ Port Programming
- ✓ LED Blinking
- ✓ Timer Concept and Programming
- ✓ UART and USART Concept
- ✓ EEPROM Programming
- ✓ **Interview Related Topics, Questions and Answers**

### **Protocols**

- ✓ I2C
- ✓ SPI
- ✓ I2C with RTC Concept and Programming

### **Concept of Power Supply & Basics of Hardware**

## **MODULE – 3**

### **UNIX Internals(Optional)**

- ✓ Architecture of UNIX Systems
- ✓ Concept of kernel
- ✓ Internal Representation of Files
- ✓ System Calls for File System
- ✓ Structure of Processes
- ✓ Process Control
- ✓ Process Scheduling and Time
- ✓ Memory Management Policies

### **RTOS Fundamentals and Operating systems**

- ✓ Difference between RTOS and Operating Systems
- ✓ Need of An RTOS
- ✓ Real Time System
- ✓ Embedded System
- ✓ Kernel
- ✓ Process
- ✓ Multi-Programming
- ✓ Interrupts
- ✓ Task and its Various States