Course Code: MCT-300  
Course: Introduction to Object Oriented Programming

L:3 Hrs, P:0, T: 1 Hr Per week  
Total Credits: 7

Course Objectives
1. To study and understand the basic object oriented features
2. To understand the class/ member concept and their implementation
3. To study and understand the concept of constructors, destructors and inheritance
4. To study and understand various operator overloading and streams paradigm

Course Outcomes
On successful completion of the course, students will be able to:
1. Conceptualize object oriented features and their implementation.
2. Implement classes and member concepts.
3. Develop programs using constructors, destructors and inheritance
4. Implement operator overloading and streams paradigm

Syllabus
UNIT - I
OOPs Features: Data encapsulation, Inheritance, Data abstraction, Polymorphism and Difference between OOPS and POP, Benefits of OOP, Applications of OOP, reference variables, scope resolution operator.

UNIT II

UNIT III
Class and Members: Concept of a class, Access control of members of a class, Instantiating a class, Static and Non-static data members and member functions, Friend Function, Array Of objects.

UNIT IV
Constructors and Destructors: Default constructor, Parameterized constructor, copy constructor, Constructor overloading, Dynamic Constructors, Destructors.

UNIT V
Inheritance: Deriving a class from another class, Different types of Inheritance, Access control of members under derivation, Different ways of class derivation, Virtual Base Classes and abstract Classes. Virtual Functions.

UNIT VI

Text Books:

Reference Books: