

OBJECT ORIENTED PROGRAMMING

IV SEM

Course Code: 16CS305

Module 1

Programming Paradigms – Introduction to OOP – Overview of C++ – Classes – Structures – Union – Friend Functions – Friend Classes – Inline functions – Constructors – Destructors – Dynamic Initialisation of Objects – Static Members – Passing objects to functions – Function returning objects – Arrays of Objects, Object as Function Arguments.

Module 2

Arrays – Pointers – this pointer – References – Dynamic memory Allocation – functions Overloading – Default arguments – Overloading Constructors – Pointers to Functions – Operator Overloading – Type Conversion.

Module 3

Inheritance – Types – Derived Class Constructors – Issues in Inheritance – Virtual base Class – Polymorphism – Virtual functions – Pure virtual functions.

Module 4

Class templates and generic classes – Function templates and generic functions – Overloading function templates – power of templates – Exception Handling – Derived class Exception – over handling generic functions – Exception handling Functions.

Module 5

Streams – Formatted I/O with IOS class functions and manipulators – File I/O – Name spaces – Array based I/O – Error handling during file operations – Formatted I/O – STL: Overview – Container Classes Lists – Maps – Algorithms Using Functions and Objects – String Class – Sequence Containers, Iterators – Specialised Iterators – Associative Containers. Storing User- Defined Objects – Function Objects.