

NAME OF THE SUBJECT	L	T	P	C
OBJECT ORIENTED PROGRAMMING THROUGH JAVA	3	0	1	4
Unit – I (12 Hours) An introduction to Object Oriented Programming, Features of Object Oriented Programming Introduction to Java. Difference between C/C++ and Java, Features of Java, First Java Program, Writing the java program, Compiling the program, JVM and its significance in executing a program, Architecture of JVM. Understanding, Java Tokens, Datatypes, Operators, Control Structures and Arrays, Conditional Statements, Loops/ Iterators, Jumping Statements, Java Arrays, Multidimensional Arrays, Taking Input from keyboard, Command Line Arguments, Using Scanner Class, Using Buffered Reader class.				
Unit - II (12 Hours) Introduction to Classes and Objects. Constructors, static Keyword, this Keyword, Array of Objects, Access Modifiers (Public, Private, Protected, Default). Inheritance, Types of Inheritance and Java supported Inheritance, super, Polymorphism, Method Overloading, Constructor Overloading, Method Overriding, Dynamic Method Dispatching. String Manipulations. Wrapper classes, Auto boxing and unboxing. Abstract classes, Interfaces, Multiple Inheritance Using Interfaces, Java API Packages, User-Defined Packages, Accessing Packages, Error and Exception Handling, Types of exceptions Hierarchy of Exception classes, try, catch, finally, throw, throws, Commonly used Exceptions and their details ,User defined exception classes.				
Unit – III (12 Hours) Multithreading, Thread in Java, Thread execution prevention methods. (yield(), join(), sleep()), Concept of Synchronization, Inter Thread Communication, Basics of Deadlock, Demon Thread, Improvement in Multithreading, Inner Classes, Introduction, Member inner class, Static inner class, Local inner class, Anonymous inner class. IO Streams (java.io package), Byte Stream and Character Stream, Files and Random Access Files, Serialization, Collection Frame Work (java.util), Util Package interfaces, List, Set, Map.				
Unit – IV (12 Hours) Applet Introduction, Life Cycle of an Applet, GUI with an Applet, Abstract Window Toolkit (AWT), Introduction to GUI, Description of Components and Containers, Component/Container hierarchy, Understanding different Components/Container classes and their constructors, Event Handling, Different mechanisms of Event Handling, Listener Interfaces, Adapter classes.				
Text Books: 1. <i>Programming in Java. Second Edition. Oxford Higher Education. (SachinMalhotra/ SauravChoudhary)</i> 2. <i>Core Java For Beginners. (RashmiKanta Das), Vikas Publication</i>				
Reference Books: 3. <i>JAVA Complete Reference (9th Edition) HerbaltSchelidt</i>				