Semester	VI	Course Title	Programming in JAVA	Course Code	18 EC 663
Teaching Period	50 Hours	L – T – P – TL*	3– 1 – 0 – 4	Credits	3
CIE*	40 Marks	SEE*	60 Marks	Total	100 Marks

CREDITS- 03

Course Objectives:

- Adopt object oriented features to develop java applications.

- Study the concepts of importing packages, interfaces and inheritance.

- Understand and develop programs using thread concepts.

- Demonstrate the usage of Event handling and Applets.

- Implement client side and server side programming for two way communication.

Module 1
INTRODUCTION: Introduction, History of Java, Java Buzzwords, Java's Byte code, Java Development Kit (JDK), Object oriented programming, Simple Java programs.   **INTRODUCING CLASSES:** Class Fundamentals, Declaring Object, Constructors, This keyword, Garbage collection, overloading methods, Access control, final key word, nested and inner Classes.
Module 2
INHERITANCE: Inheritance Basics, Using super, Creating a multilevel Hierarchy, When Constructors are called, Method Overriding, Dynamic method Dispatch, Using Abstract Classes, Using final with inheritance, The Object class   **PACKAGES AND INTERFACES:** Packages, Access Protection, Importing Packages, Interfaces
Module 3
MULTITHREADED PROGRAMMING: The Java Thread Model, The Main Thread, Creating Thread, Creating Multiple Threads, Using is Alive and join,Thread Priorities, Synchronization, Inter thread Communication, Suspending, Resuming and Stopping Threads Using Multithreading.
Module 4
EVENT HANDLING : Two Event Handling Mechanisms, Delegation Event Model, Event Classes, Sources of Events, Event Listener Interfaces, Using the Delegation Event Model, Adapter Classes, Inner Classes.   **APPLETS**: Applet Basics, Applet Architecture, An Applet Skeleton, Simple Applet Display Methods The Applet HTML Tag,, Passing Parameters to Applets, get Document Base and get Codebase, Applet Context and show Document.
Module 5

SERVLETS: Java Servlet and common Gateway Interface Programming, A simple Java Servlet, Anatomy of a Java Servlet, Reading Data from a Client, Reading HTTP Requests Headers, sending Data to a Client and writing HTTP Response Headers, Working with Cookies, Tracking Session.

JAVA SERVER PAGES: JSP, JSP Tags. Tomcat, Request String, User Sessions, Cookies, Session Objects. (Text-2)

Course Outcomes:
- Learn object oriented concepts for java applications.
- Illustrate the usage of Packages, Interfaces and inheritances
- Apply the multithreading programming to solve synchronization problems.
- Develop applications using applets with events handling.
- Create J2ee component using Servlets and JSP.

Text Books:
- Java the Complete Reference-Herbert Schildt, 9th Edition, Tata McGraw Hill, Seventh Edition.
- Create J2ee component using Servlets and JSP.

Reference Books:
- Introduction to JAVA Programming - Y. Daniel Liang, 10th Ed.,1Pearson Ed, 2015
- The J2EE Tutorial, Stephanie Bodoff et ak, 2nd Edition Pearson Education, 2012.