

Part A: Introduction			
Certificate Course	Class: B.Sc.-IT V Semester	Year: 2024	Session: 2024-25
Course Code	ITSE-3T		
Course Title	JAVA		
Course Type	Discipline Specific Elective (DSE)		
Pre-requisite(if any)	As per Govt. Norms / Institutional Scheme		
Course Learning Outcomes (CLO)	After successfully completing this course, the students will be able to: <ul style="list-style-type: none"> <li>• Develop application using java based technologies.</li> <li>• Demonstrate the principles of object-oriented programming.</li> <li>• Understand multi-threading and event handling mechanism</li> </ul> Express different Decision-Making statements and Functions		
Credit Values	04 (03Theory + 01 Practical)		
Total Marks	Max. Marks: 100 = 80Theory + 20 Internal Assessment	Min Passing Marks: 40	

### Part B: Content of the Course

Total number of Teaching-Learning – Hours-45

	Topics (Course Contents)	Hours
	<b>Overview of JAVA:</b> The Genesis of Java, History of Java. Java Virtual Machine (JVM), Java Development Kit (JDK), Java Runtime Environment (JRE), Compiling And Running of Files, Java Vs C++, Data Types, Literals, Variables, Constants, Array And It's Types, Operators, Conditional And Looping Statements.	11
I	<b>Concept of Class and Inheritance</b> - Introduction of Class, Objects And Methods. Concept of Super And Sub Class, Method Overloading & Overriding. Abstract Class, Constructor, Writing Simple JAVA Program. <b>Inheritance:</b> Basics, Types of inheritance, Access Specifiers, using final with inheritance, Abstract class,	11
II	<b>Package and Interface:</b> Defining package, Java.Lang., Java.Util, Java.IO Importing package. <b>Interface:</b> Defining and implementing interface, Variable in interface, Extending interface, Nested interface.	11
IV	<b>Exception handling and Multithreading:</b> Using try and catch, multiple catch classes, Nested try statements, throws and finally, Built in exception, Uncaught exception, Creating own exception class, Java Thread Model: Main thread, Creating own Thread, Life cycle of thread, Thread priorities Synchronization and Messaging, Interthread communication, Suspending, Resuming and stopping thread.	12

  
  
  
