

FBEF 512

JAVA PROGRAMMING

(3-0-0)

Module – I (10Hrs)

Introduction to Java and Java programming Environment. Object Oriented Programming. Fundamental Programming Structure: Data Types, variable, Typecasting Arrays, Operators and their precedence. Control Flow: Java's Selection statements (if, switch, iteration, statement, while, dowhile, for, Nested loop). Concept of Objects and Classes, Using Existing Classes building your own classes, constructor overloading, static , final, this keyword . Inheritance: Using Super to Call Super class constructor, Method overriding, Dynamic method Dispatch, Using Abstract Classes, Using final with inheritance. The Object Class. Packages & Interfaces : Packages, Access Protection, Importing package, Interface, Implementing Interfaces, variables in Interfaces, Interfaces can be extended. Exception Handling: Fundamentals, Types Checked , Unchecked exceptions, Using try & catch, Multiple catch, throw , throws, finally, Java's Built in exceptions, user defined exception.

Module - II (10Hrs)

Multi Threading: Java Thread Model, Thread Priorities, Synchronization, Creating a thread, Creating Multiple threads, Using is Alive () and join (), wait () & notify (). String Handling: String constructors, String length, Character Extraction, String Comparison, Modifying a string. Java I/O: Classes & Interfaces, Stream classes, Byte streams, Character streams, Serialization. JDBC: Fundamentals, Type I, Type II, Type III, Type IV drivers. Networking: Basics, Socket overview, Networking classes, & interfaces, TCP/IP client sockets, whois, URL format, URL connection, TCP/IP Server Sockets.

Module - III (10Hrs)

Applets: Basics, Architecture, Skeleton, The HTML APPLET Tag, Passing Parameters to Applets, Applet context and show documents (). Event Handling: Delegation Event model, Event Classes, Event Listener Interfaces, Adapter classes. AWT: AWT Classes window fundamentals, component, container, panel, Window, Frame , Canvas, Creating a frame window in an Applet , working with Graphics , Control Fundamentals , Layout managers, Handling Events by Extending AWT components. Core java API package, reflection, Remote method Invocation (RMI) Swing: J applet, Icons & Labels, Text fields, Buttons, Combo boxes, Tabbed panes, Scroll panes, Trees, Tables. Exploring Java-lang: Simple type wrappers, Runtime memory management, object (using clone () and the cloneable Interface), Thread, Thread Group, Runnable.

Text Books: 1. Introduction to Java Programming: Liang, Pearson Education, 7th Edition.

2. Java The complete reference: Herbert Schildt, TMH, 5th Edition.

Reference Books: 1. Balguruswamy, Programming with JAVA, TMH.

2. Programming with Java: Bhave&. Patekar, Pearson Education.

3. Big Java: Horstman, Willey India, 2nd Edition.

4. Java Programming Advanced Topics: Wigglesworth, Cengage Learning.

5. Java How to Program: H.M. Deitel& Paul J. Deitel, PHI, 8 th Edition