

# CLUSTER UNIVERSITY SRINAGAR

## (SYLLABUS)

Course Code	BCA-CR5101
Course Title	Java Programming
Semester	BCA 5 <sup>th</sup> Semester
Course Type & Credits	Core Paper - 04 Credits (L) + 02 Credits (P) = 06 Credits

### Unit I

Introduction to Java programming: The Java Virtual Machine, Object-oriented programming with Java: Classes and Objects, Variables and data types, Conditional and looping constructs, Arrays Fields and Method Constructors, Overloading methods, Garbage collection, Nested classes

### Unit II

Inheritance: Overriding methods, Polymorphism, Making methods and classes final, abstract classes and methods, Interfaces, Exception handling with try-throw-catch-finally constructs, The Exception class, The Object class: Cloning objects, The Linked List class, Strings, String conversions, working with types: Wrapper classes, Enumeration interface

### Unit III

Working and creating java Applets: Applet life cycle, Configuring applets, Applet capabilities and restrictions, Working and creating java Packages Package access, Documentation comments

I/O Packages: InputStream and OutputStream classes, Reader and Writer classes

### Unit IV

AWT and Swing: Layout Managers, Event Handling, The Action Listener interface, Panels, Classes for various controls, such as label, choice, list, Checkbox, Dialogs and frames, Using menus, Using the adapter classes, Graphics, Multithreading and Thread Synchronization.

### Suggested Readings:

1. Herbert Schildt, "The Complete Reference Java-2 ", Sixth Edition 2004, Tata McgrawHill
2. Dietel&Dietel, "Java: How to Program Java 2, Sixth Edition, 2006, Pearson Education
3. Horstmann& Cornell, "Java2 Vol-1 & Vol-2", Seven Indian Reprint 2006, Pearson Education
4. E BalaGurudamy " Programming with java A Primer" 3rd edition