SARDAR PATEL UNIVERSITY
Programme: B.Sc (Information Technology)
Semester: VI
Syllabus with effect from: November - 2013

Paper Code: US06CINT03	Total Credit: 3
Title of Paper: Object Oriented Programming Using JAVA	

Unit	Description in detail	Weightage (%)
I	**Object Oriented Concepts, Loop & Branching Statements** Introduction to OOP,Object Oriented Paradigm,Basic Concepts of OOP: Objects and classes, data abstraction and encapsulation, inheritance, polymorphism, dynamic binding, message communication. Benefits of OOP, Applications of OOP. Java History, Features, Java Environment Introduction, Simple Java Program, Java Program Structure, Implementing a Java Program, JVM, Java Tokens and Comments Constants, Variables, Data types, Declaration of Variables, Giving values to Variables, Getting Values of Variables, Default Variables. Scope of Variables,Type Casting, Command line arguments Operators: Arithmetic, Relational, Logical, Assignment, Increment/Decrement, Conditional & Special operators Decision Making: if Statement, The If…else statement, nesting of if…else , the else if ladder, switch statement,?: operator Looping: while, do…while, for, for each loop jumps in loops, labelled loops Arrays: One, Two dimensional Arrays, Variable size Array, Strings and its Methods	25%
II	**Class, Objects, Method Overloading and Overriding** Defining a class, adding variables, adding methods, creating objects Accessing class members, Constructors, methods overloading, static members. Introduction to inheritance, Types of Inheritance, super keyword Overriding methods. Final Variables, methods and classes. Abstract methods and classes. Interfaces: Introduction, Defining, Extending, Implementing & Accessing	25%
III	**Exception Handling, Packages and Managing I/O** Managing Errors & Exceptions: Introduction, Types of errors, Exception, Syntax of Exception Handling Code, Multiple catch Statements, finally, Throwing our own exceptions, Throws Packages: Introduction, JAVA API Packages, Using System Packages, Creating user define packages, Accessing & Using package Using lang(String, Math), util(Calender, Date, ArrayList) packages Managing I/O files : introduction, concept of streams, character stream classes, byte stream classes	25%
IV	**Applet and Event Handling** Applet Architecture and Skeleton HTML APPLET Tag, Display Technique (DrawString, Lines, Rectangle, Ellipses, Circles, Arcs, Polygons, Color) Itroduction to Event Handling Event Sources (Button, CheckBox, Choice, List, Text) java.awt package (Button, CheckBox, CheckBoxGroup, Choice, Color,	25%

Label, List, TextArea, TextField	

Basic Text & Reference Books:

- Programming with Java- A Primer by E. Balaguruswami, 3rd Edition, TMH Publication
- The Complete Referecne – Java 2 7th Edition Herbert Schildt. TMH Publication
- Saba Zame , Handbook of Object technology, CRC Press, Washington DC, 1999
- Mary Campion and Kathy Walrath, Java tutorial, Second Edition, Addison Wesley Pun. 1998.
- Java 2 Programming Black Book, Steven Holzner