RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
New Scheme Based On AICTE Flexible Curricula
Computer Science and Engineering, III-Semester

CS304 OBJECT ORIENTED PROGRAMMING SYSTEMS

1. Introduction to Object Oriented Thinking & Object Oriented Programming: Comparison with Procedural Programming, features of Object oriented paradigm– Merits and demerits of OO methodology; Object model; Elements of OOPS, IO processing.

2. Encapsulation and Data Abstraction- Concept of Objects: State, Behavior &

Identity of an object; Classes: identifying classes and candidates for Classes Attributes and Services, Access modifiers, Static members of a Class, Instances, Message passing, and Construction and destruction of Objects.

3. Relationships – Inheritance: purpose and its types, 'is a' relationship; Association, Aggregation. Concept of interfaces and Abstract classes.

4. Polymorphism: Introduction, Method Overriding & Overloading, static and run time Polymorphism.

5. Strings, Exceptional handling, Introduction of Multi-threading and Data collections. Case study like: ATM, Library management system.

Text Books

1. Timothy Budd, "An Introduction to Object-Oriented Programming", Addison-Wesley Publication, 3rd Edition.

2. Cay S. Horstmann and Gary Cornell, "Core Java: Volume I, Fundamentals", Prentice Hall publication.

Reference Books

1. G. Booch, "Object Oriented Analysis& Design", Addison Wesley.
2. James Martin, "Principles of Object Oriented Analysis and Design", Prentice Hall/PTR.
3. Peter Coad and Edward Yourdon, "Object Oriented Design", Prentice Hall/PTR.
4. Herbert Schildt, "Java 2: The Complete Reference", McGraw-Hill Osborne Media, 7th Ed.