

Semester-III

BSCS301 : Java Programming and DCCN

Course Outcomes:

- CO1: Understand the concepts of OOPs. Able to understand network communication using the layered concept.
- CO2: Knowledge of basic programming constructs of Java , Understand various types of transmission media, network devices.
- CO3: Understand and Implement the concepts of Classes and Objects, Understand the concept of flow control
- CO4: Implement Polymorphism, Inheritance, and Multithreading, LAN protocols
- CO5: Enlighten the use of Interfaces, Packages and Exception Handling, Understand the working principles of LAN

Unit- I

Concept of Object Oriented : Evolution of OOP, OOP Paradigm, Advantages of OOP, Difference between Procedure Oriented and Object Oriented Paradigm, Features of Object Oriented Language – Encapsulation, Data Abstraction, Inheritance, Polymorphism Introduction to JAVA: Features of Java, Java virtual machine, Java Tokens, Operators, Data types, Programming Concepts, Conditional Statements, Iterative Statements, Arrays, Methods in Java.

Unit-III

Computer Networking: Introduction, Definition, Characteristics, Advantages and Limitations. Types of Network on the basis of Geographical Span (LAN, MAN, WAN) Network Topology - Bus, Star, Ring, Tree, Mesh, Hybrid. Transmission Mode - Simplex, Half Duplex and Full Duplex, Components of Network. **OSI Model:** Physical Layer - Transmission Media: Guided (Twisted Pair, Coaxial Cable, Fiber Optics) & Unguided Media (Radio, Microwaves, Satellite), Multiplexing (FDM, TDM, WDM).