

MCC 503: **INTERNET TECHNOLOGY AND ENTERPRISE  
JAVA** (3-1-0)

**Module-I (15 hours)**

**Internet and Web Technology:** Introduction and overview, Internetworking concept and architectural model, classful internet addresses, classless and subnet address extensions (CIDR), Protocol Layering, , Mobile IP, Client Server model, World wide web, Voice and Video over IP.

**Web Programming:-** Web 2.0, Web Browsers, Web Servers, URLs, URN, URI, Basics of HTML & XHTML Programming: Syntax, Document structures, images, hyperlinks, List, Tables, Forms, Frames, CSS, Basic JavaScript Programming: DOM, Loops, function and arrays. XML: Document structure, DTD, Namespaces, XML Schema, and Parsing XML documents.

**Module-II (15 hours)**

**Enterprise Java Programming:** Overview, Java EE 6 API, Web Applications, Java Servlet Technology: - Lifecycle of a Servlet, Servlet API, Servlet Packages, Types of servlets, Database Access, Stateless and Stateful protocols, Session Tracking. JSP Technology: - Architecture & Anatomy of JSP Page, JSP life cycle, JSP with MVC Architecture, Dynamic webpage Creation, Scripting Elements, Session Tracking, Database access, JSTL, JavaServer Faces (JSF) Technology, Facelets, Ajax.

**Module-III (10 hours)**

**Web Services:** Building Web services with JAX-WS, Enterprise JavaBeans Technology: EJB Component Architecture, Role of EJB & its life cycle, Types of Beans, Stateless and stateful beans, Security features of EJB, Contexts and Dependency Injection for the Java EE Platform; Java Persistence API, Security in Java EE, Java EE Supporting Technologies: Introduction, Transactions and Resource Connections.

**Recommended Books:**

1. Douglas E. **Comer**, "Internetworking with TCP/IP. Volume 1: Principles, Protocols and Architecture", Fifth Edition, 2006, PHI Learning Pvt. Ltd., New Delhi.  
Chapters: 1, 3, 4, 9, 10, 18, 20, 27, 28.
2. Ralph **Moseley**, "Developing Web Applications", 2008, Wiley India, New Delhi.
3. Eric **Jendrock**, D. Carson, I. Evans, D. Gollapudi, K. Haase, C. Srivastha, "The Java EE6 Tutorial", Volume-1, Fourth Edition, 2010, Pearson India, New Delhi.  
Chapters: 1, 3, 4, 5, 7, 9 to 12, 14 to 16, 17, 19, 23, 26, 27, 28.

**References:**

1. Joe **Wigglesworth**, Paula **McMillan**, "Java Programming: Advanced Topics", 3<sup>rd</sup> Edition, 2009, CENGAGE Learning India Pvt. Ltd., New Delhi.
2. William **Stallings**, "Computer Networking with Internet Protocols and Technology", 2004, Pearson education, New Delhi.
3. **Kongent S.**, "Java Server Programming (JEE 6) Black Book, Platinum Edition", 2008, Dreamtech / Wiley India Pvt. Ltd.
4. David **Geary**, Cay S. **Horstmann**, "Core JavaServer Faces", Second Edition, 2007, Pearson Education, Inc. New Delhi.
5. Adrian **Farrel**, "The Internet and its Protocols: A Comparative Approach", 2005, Elsevier India Pvt. Ltd., New Delhi.