

## **EC6008 WEB TECHNOLOGY**

### DETAILED SYLLABUS

#### **OBJECTIVES:**

- To design and create user interfaces using Java frames and applets.
- To have a basic idea about network programming using Java.
- To create simple Web pages and provide client-side validation.
- To create dynamic web pages using server-side scripting

#### **UNIT I JAVA FUNDAMENTALS**

Java Data types – Class – Object – I / O Streams – File Handling concepts – Threads – Applets – Swing Framework – Reflection

#### **UNIT II JAVA NETWORKING FUNDAMENTALS**

Overview of Java Networking - TCP - UDP - InetAddress and Ports - Socket Programming - Working with URLs - Internet Protocols simulation - HTTP - SMTP - POP - FTP - Remote Method Invocation - Multithreading Concepts

#### **UNIT III CLIENT-SIDE TECHNOLOGIES**

XML - Document Type Definition - XML Schema - Document Object Model - Presenting XML - Using XML Parsers: DOM and SAX – JavaScript Fundamentals - Evolution of AJAX - AJAX Framework - Web applications with AJAX - AJAX with PHP - AJAX with Databases

#### **UNIT IV SERVER-SIDE TECHNOLOGIES**

Servlet Overview - Life cycle of a Servlet - Handling HTTP request and response - Using Cookies - Session tracking - Java Server Pages - Anatomy of JSP - Implicit JSP Objects – JDBC - Java Beans - Advantages - Enterprise Java Beans - EJB Architecture - Types of Beans - EJB Transactions

#### **UNIT V APPLICATION DEVELOPMENT ENVIRONMENT**

Overview of MVC architecture - Java Server Faces: Features - Components - Tags - Struts: Working principle of Struts - Building model components - View components - Controller components - Forms with Struts - Presentation tags - Developing Web applications - Hibernate: Configuration Settings - Mapping persistent classes - Working with persistent objects - Concurrency - Transactions - Caching - Queries for retrieval of objects - Spring: Framework - Controllers - Developing simple applications.

#### **TEXT BOOK:**

1. Deitel, Deitel, Goldberg, "Internet & World Wide Web How to Program", Third Edition, Pearson Education, 2006.

#### **REFERENCES:**

1. Marty Hall and Larry Brown, "Core Servlets and Javasever Pages", Second Edition
2. Bryan Basham, Kathy Siegra, Bert Bates, "Head First Servlets and JSP", Second Edition
3. Uttam K Roy, "Web Technologies", Oxford University Press, 2011.