III B.Tech – II Semester
(20CS6426) WEB TECHNOLOGIES

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
30	70	100	3	-	-	3

Pre-Requisites: Distributed Computing

Course Objectives:
This course is designed to
- Understand the concepts of Hyper Text Markup Language and Cascading Style Sheets
- Learn Java Script for creating dynamic web pages
- Impart servlet technology for writing business logic and familiarize various concepts of application development using JSP
- Learn the creation of pure dynamic Web application using JDBC
- UnderstandthecoreconceptsofJUNITanditsframework,AJAXconceptstobuildinteractivewebapplications

UNIT-I:
HTML, CSS Basic Syntax, Standard HTML Document Structure, Basic Text Markup, Images, Hypertext Links, Lists, Tables, Forms, HTML5 CSS : Levels of Style Sheets, Style Specification Formats, Select or Forms, The Box Model, Conflict Resolution.

UNIT-II:
Java script The Basic of Java script: Objects, Primitives Operations and Expressions, Screen Output and Keyboard Input, Control Statements, Object Creation and Modification, Arrays, Functions, Constructors, Pattern Matching using Regular Expressions DHTML: Positioning Moving and Changing Elements

UNIT-III:
SERVLETS: Introduction to Servlets (Life cycle of servlets, Java Servlets Development Kit, creating, Compiling and running servlet). The servlet API: javax. Servlet package. Reading and Initializing Servlet Parameters. Http Request & Response Handling, Session Tracking
JAVA SERVER PAGES: Configuring To mcatJSP/ Servlet server. Advantage of JSP technology. JSP Architecture, JSP Access Model. JSP Syntax Basic(Directions, Declarations, Expression, Scriptlets, Comments)JSP Implicit Object(Out, Http Servlet Request, Http Servlet Response, Exception Handling)

UNIT-IV:
The Concept of JDBC; JDBC Driver Types; JDBC Packages; A Brief Overview of the JDBC process; Database Connection; Associating the JDBC/ODBC Bridge with the Database; Statement Objects; Result Set; Transaction Processing; Metadata, Datatypes; Exceptions.

UNIT-V:
JUNIT Introduction, UNIT Testing, Test Framework, Test Case, Assert, Test Runner, Test Suite, Writing a Test, Execution Procedure, Executing Tests, Suite Test, Ignore Test, Time Test, Exceptions Test, Parameterized Test, ANT AJAX :AJAX -What is AJAX?, AJAX–Technologies, Understanding, Synchronous vs Asynchronous, AJAX-Browser Support, AJAX– Action, AJAX–XML Http Request, How AJAX works?, Ajax First Program With Explanation, Ajax Request, open() and send()methods, Ajax Server Response, response Text and Response XML, Java AJAX,AJAX–Examples, Comment Form, Search Example, AJAX-Database Operations, AJAX–Issues

Course Outcomes:

After successful completion of the course, the students will be able to:

S.No	Course Outcome	BTL
1.	Implement web based applications using features of HTML and CSS	L3
2.	Build dynamic web pages using Java Script	L3
3.	Write a server side Java application using Servlet and apply JSP concepts for server side Java application	L1
4.	Implement the web based applications using effective data base access with rich client interaction	L3
5.	Use and execute test frame works, test cases for Java programs and build interactive webpages using AJAX	L3

Text Books:

1. Web Technologies, Black Book, Kogent Learning Solutions Inc, Dreamtech Press.
2. JDBC, Servlets and JSP, New Edition, Santhosh Kumar K, Kogent Learning Solutions Inc, Dreamtech Press

Reference Books:

1. WebTechnologies,UttamK.Roy,Volume2,OxfordUniversity
2. Core Servlets and Java Server Pages Volume 1 CORE TECHNOLOGIES , Mar y Hall and Larry Brown Pearson
3. Java Server Pages, Pekowsky, Pearson.
4. JavaScript, D.Flanagan, O‟Reilly, SPD.