WEB ENGINEERING

	L	T/P	C
Paper Code: ETCS-308			
Paper: Web Engineering	**3**	**1**	**4**

INSTRUCTIONS TO PAPER SETTERS: **MAXIMUM MARKS: 75**

1. Question No. 1 should be compulsory and cover the entire syllabus. This question should have objective or short answer type questions. It should be of 25 marks.
2. Apart from Question No. 1, rest of the paper shall consist of four units as per the syllabus. Every unit should have two questions. However, student may be asked to attempt only 1 question from each unit. Each question should be of 12.5 marks.

Objective: This paper gives understanding of web designing to the students.

UNIT - I

History of the Internet, Basic internet protocols, World Wide Web (W3C), HTTP: Hypertext Transfer Protocol.
Markup languages-XHTML: Introduction to HTML, basics of XTHML, HTML elements, HTML tags, lists, tables, frames, forms, defining XHTML's abstract syntax, defining HTML documents.
CSS style sheets: Introduction, CSS core syntax, text properties, CSS box model, normal flow box layout, other properties like list, tables, DHTML, XML, XML documents & vocabulary, XML versions & declarations, Introduction to WML.

[T1,T2][No. of hrs. 10]

UNIT – II

Client Side Programming: JAVA Scripts, basic syntax, variables & data-types, literals, functions, objects, arrays, built-in objects, JAVA Script form programming, Intrinsic event handling, modifying element style, document trees,
Server side programming – Java Servlets: Servlet architecture, life cycle, parameter data, sessions, cookies, servlets capabilities, servlets & concurrency. Introduction to JSP, JSP Tags, JSP life cycle, custom tags.

[T1,T2][No. of hrs. 12]

UNIT - III

Security Threats, Security risks of a site, Web attacks and their prevention, Web security model, Session management, authentication, HTTPS and certificates, Application vulnerabilities and defenses.
Client-side security, Cookies security policy, HTTP security extensions, Plugins, extensions, and web apps, Web user tracking.
Server-side security tools, Web Application Firewalls (WAFs) and Fuzzers.

[T1,T2][No. of hrs. 10]

UNIT – IV

Introduction to Web 2.0 and Web 3.0, Concepts and Issues, Latest Trends in Web Technologies. Web Security concerns. Applications of Web Engineering Technologies in distributed systems etc. Case studies using different tools.

[T1,T2][No. of hrs. 12]

Text Books:

[T1] Web Technologies: A Computer Science Perspective, Jackson, Pearson Education India, 2007.
[T2] Web Engineering: A Practitioner's Approach by Roger S Pressman, David Lowe, TMH, 2008.

Reference Books:

[R1] Achyut Godbole,Atul Kahate, "Web Technologies", McGraw-Hill Education, Third Edition.
[R2] Uttam K Roy, "Web Technologies", Oxford University Press, 2012.
[R3] Chris Bates, "Web Programming", Wiley
[R4] Web Engineering by Gertel Keppel, Birgit Proll, Siegfried Reich, Werner R., John Wiley.
[R5] Thinking on the Web: Berner's LEE, Godel and Turing, John Wiley & Sons Inc.