SRI KRISHNA INSTITUTE OF TECHNOLOGY, BANGALORE

COURSE PLAN

Academic Year 2019-20

Program:	B E – Information Science and Engineering
Semester :	7
Course Code:	15CS71
Course Title:	Web Technology and Its Application
Credit / L-T-P:	4/ 4-0-0
Total Contact Hours:	50
Course Plan Author:	Y Vamsi Krishna

Academic Evaluation and Monitoring Cell

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Note : Remove "Table of Content" before including in CP Book
      Each Course Plan shall be printed and made into a book with cover page
      Blooms Level in all sections match with A.2, only if you plan to teach / learn at higher levels

A. COURSE INFORMATION

1. Course Overview

Degree:	BE	Program:	IS
Semester:	VII	Academic Year:	2019-20
Course Title:	Web Technology and Its Application	Course Code:	15CS71
Credit / L-T-P:	4/ 4-0-0	SEE Duration:	180 Minutes
Total Contact Hours:	50	SEE Marks:	80 Marks
CIA Marks:	20	Assignment	5 / Module
Course Plan Author:	Vamsi Krishna Y	Sign ..	Dt: 12-08-2019
Checked By:		Sign ..	Dt:
CO Targets	CIA Target : 91 %	SEE Target:	53 %

Note: Define CIA and SEE % targets based on previous performance.

2. Course Content

Content / Syllabus of the course as prescribed by University or designed by institute. Identify 2 concepts per module as in G.

Module	Content	Teaching Hours	Identified Module Concepts	Blooms Learning Levels
1	Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements, Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling.	10	HTML DOCUMENTS , CSS DOCUMENTS	L2,L4
2	HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats, Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, ResponsiveDesign, CSS Frameworks.	10	develop HTML Forms	L4, L3
3	JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where does JavaScript Go?, Syntax, JavaScriptObjects, The Document Object Model (DOM), JavaScript Events, Forms, Introduction to Server-Side Development with PHP, What is Server-SideDevelopment, A Web Server's Responsibilities,	10	Client-Side Scripting, Server-Side Scripting	L3 ,L4

	Quick Tour of PHP, ProgramControl, Functions			
4	PHP Arrays and Superglobals, Arrays, $_GET and $_POST Supergloblal Arrays, $_SERVER Array, $_Files Array, Reading/ Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design, Error Handling and Validation, What are Errors andExceptions?, PHP Error Reporting, PHP Error and Exception Handling	10	PHP Arrays php Exception	L5
5	Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization,Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery,JavaScript Pseudo-Classes, jQuery Foundations, AJAX, Asynchronous FileTransmission, Animation, Backbone MVC Frameworks, XML Processing and Web Services, XML Processing, JSON, Overview of Web Services.	10	Memory management, Pseudo-Classes	L4,L6
1- 5	**Total**	50	-	-

3. Course Material

Books & other material as recommended by university (A, B) and additional resources used by course teacher (C).

1. Understanding: Concept simulation / video ; one per concept ; to understand the concepts ; 15 – 30 minutes

2. Design: Simulation and design tools used – software tools used ; Free / open source

3. Research: Recent developments on the concepts – publications in journals; conferences etc.

Modules	Details	Chapters in book	Availability
A	**Text books (Title, Authors, Edition, Publisher, Year.)**	-	-
1-5	Randy Connolly, Ricardo Hoar, "Fundamentals of Web Development", 1 st Edition,Pearson Education India. (ISBN:978-9332575271)		In Lib / In Dept
B	**Reference books (Title, Authors, Edition, Publisher, Year.)**	-	-
1, 2	1)Robin Nixon, "Learning PHP, MySQL &JavaScript with jQuery, CSS and HTML5", 4 th Edition, O'Reilly Publications, 2015. (ISBN:978-9352130153) 2) Luke Welling, Laura Thomson, "PHP and MySQL Web Development", 5 th Edition,Pearson Education, 2016. (ISBN:978-9332582736) 3) Nicholas C Zakas, "Professional JavaScript for Web Developers", 3 rd Edition,Wrox/Wiley India, 2012. (ISBN:978-8126535088)		In Lib
		-	-
C	**Concept Videos or Simulation for Understanding**		
C1	https://www.w3schools.com/		
C2	https://www.w3.org/Style/CSS/Overview.en.html		
C3	https://www.tutorialspoint.com/php/index.htm		
C4	https://www.javascript.com/		
C5	https://www.tutorialspoint.com/ajax/what_is_ajax.htm		
D	**Software Tools for Design**	-	-
1	https://www.eclipse.org/downloads/		

E	**Recent Developments for Research**			**-**	**-**
1	https://www.itm-conferences.org/articles/itmconf/abs/2019/02/ itmconf_icicci2018_01008/itmconf_icicci2018_01008.html				
2	http://ijsrcseit.com/paper/CSEIT195368.pdf				
F	**Others (Web, Video, Simulation, Notes etc.)**			**-**	**-**
1	https://nptel.ac.in/courses/106105084/ (NPTEL course related to web Technology course				

4. Course Prerequisites

Refer to GL01. If prerequisites are not taught earlier, GAP in curriculum needs to be addressed. Include in Remarks and implement in B.5.
Students must have learnt the following Courses / Topics with described Content . . .

Modules	Course Code	Course Name	Topic / Description	Sem	Remarks	Blooms Level
-						
-						

5. Content for Placement, Profession, HE and GATE

The content is not included in this course, but required to meet industry & profession requirements and help students for Placement, GATE, Higher Education, Entrepreneurship, etc. Identifying Area / Content requires experts consultation in the area.
Topics included are like, a. Advanced Topics, b. Recent Developments, c. Certificate Courses, d. Course Projects, e. New Software Tools, f. GATE Topics, g. NPTEL Videos, h. Swayam videos etc.

Modules	Topic / Description	Area	Remarks	Blooms Level
1	Designing of static web pages, Client server architecture, server side scripting	Client-server scripting		L3
3				
3				
5				
-				
-				

B. OBE PARAMETERS

1. Course Outcomes

Expected learning outcomes of the course, which will be mapped to POs. Identify a max of 2 Concepts per Module. Write 1 CO per Concept.

Modules	Course Code.#	Course Outcome **At the end of the course, student should be able to . . .**	Teach. Hours	Concept	Instr Method	Assessment Method	Blooms' Level
1	15CS71.1	Apply HTML syntax and semantics	05	HTML	Lecture /	Slip Test	L3

		to build web page		DOCUMEN TS	PPT		Apply
1	15CS71.2	Illustrate CSS syntax and semantics to build web page	05	CSS DOCUMEN TS	Lecture / PPT	Assignme nt	L3 Apply
2	15CS71.3	Design HTML forms to build web page	05	develop HTML Forms	Lecture / PPT	Assignme nt and Slip Test	L3 Apply
2	15CS71.4	Demonstrate CSS layout to build web page	05	develop CSS Forms	Lecture / PPT	Assignme nt	L3 Apply
3	15CS71.5	Develop a client – side javascript scripting to build web page	05	Client-Side Scripting	Lecture	Slip test	L3 Apply
3	15CS71.6	Demonstrate server – side script using PHP to generate and dilsplay the content dynamically.	05	Server-Side Scripting	Lecture and Tutorial	Assignme nt	L3 Apply
4	15CS71.7	Apply object oriented concepts in PHP to build web page	05	PHP Arrays	Lecture	Assignme nt and Slip Test	L3 Apply
4	15CS71.8	Show different Exception and error handling methods in order to validate web page	05	php Exception	Lecture	Assignme nt	L3 Apply
5	15CS71.9	Report small memory management using cookies and URL in web application	05	Memory manageme nt	Lecture	Assignme nt	L2 Understandi ng
5	15CS71.10	Explain the concept of AJAX and Jquery for web services	05	Pseudo-Classes	Lecture and Tutorial	Assignme nt	L2 Understandi ng
-	-	**Total**	**50**	-	-	-	**L2-L6**

2. Course Applications

Write 1 or 2 applications per CO.

Students should be able to employ / apply the course learnings to . . .

Mod ules	Application Area Compiled from Module Applications.	CO	Level
1	Demonstrate various HTML Documents with examples	CO1	L3
1	Demonstrate various CSS Selector forms with examples	CO2	L3
2	Develop HTML Documents to build web page using forms	CO3	L3
2	Apply CSS layouts to build web page using forms	CO4	L3
3	Demonstrate a client – side JavaScript scripting to build web page	CO5	L3
3	Illustrate server – side script using PHP to generate and display the content dynamically.	CO6	L3
4	Develop object oriented concepts in PHP to build web page	CO7	L3
4	Illustrate different Exception and error handling methods in order to validate web page Report small memory management using cookies and URL in web application	CO8	L3
5	Report small memory management using cookies and URL in web application	CO9	L2
5	Explain the concept of AJAX and Jquery for web services	CO10	L2

3. Mapping And Justification

CO – PO Mapping with mapping Level along with justification for each CO-PO pair.

To attain competency required (as defined in POs) in a specified area and the knowledge & ability required to accomplish it.

Mod ules	Mapping		Mapping Level	Justification for each CO - PO pair	Leve l
-	CO	PO	-	**'Area': 'Competency' and 'Knowledge' for specified 'Accomplishment'**	-
1	CO1	PO1	L1	Knowledge is required to understand HTML tags to build web pages	L3
	CO1	PO2	-	Analysing the problem is not required. no mapping	L3
	CO1	PO3	-	No design development required . No mapping	L3
	CO1	PO4	-	No investigation and interpretation. No mapping	L3
	CO1	PO5	L2	No tool used . No mapping	L3
	CO1	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO1	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO1	PO8	-	Ethical responsibility is required to build web site	L3
	CO1	PO9	-	Individual as well as team work required to build web page.	L3
	CO1	PO10	-	Communication is required with in a team to build web page .	L3
	CO1	PO11	-	No finance management required . No mapping.	L3
	CO1	PO12	-	Life long learning required to maintain web sites .	L3
1	CO2	PO1	L1	Knowledge is required to understand HTML tags to build web pages	L3
	CO2	PO2	L4	Analysing the problem is not required. no mapping	L3
	CO2	PO3	-	No design development required . No mapping	L3
	CO2	PO4	-	No investigation and interpretation. No mapping	L3
	CO2	PO5	L2	No tool used . No mapping	L3
	CO2	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO2	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO2	PO8	-	Ethical responsibility is required to build web site	L3
	CO2	PO9	-	Individual as well as team work required to build web page.	L3
	CO2	PO10	-	Communication is required with in a team to build web page .	L3
	CO2	PO11	-	No finance management required . No mapping.	L3
	CO2	PO12	-	Life long learning required to maintain web sites .	L3
2	CO3	PO1	L1	Knowledge is required to understand HTML tags to build web pages	L3
	CO3	PO2	L4	Analysing the problem is not required. no mapping	L3
	CO3	PO3	-	No design development required . No mapping	L3
	CO3	PO4	-	No investigation and interpretation. No mapping	L3
	CO3	PO5	L2	No tool used . No mapping	L3
	CO3	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO3	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO3	PO8	-	Ethical responsibility is required to build web site	L3
	CO3	PO9	-	Individual as well as team work required to build web page.	L3
	CO3	PO10	-	Communication is required with in a team to build web page .	L3
	CO3	PO11	-	No finance management required . No mapping.	L3
	CO3	PO12	-	Life long learning required to maintain web sites .	L3
2	CO4	PO1	L1	Knowledge is required to understand HTML tags to build web pages	L3
	CO4	PO2	L3	Analysing the problem is not required. no mapping	L3
	CO4	PO3	L3	No design development required . No mapping	L3
	CO4	PO4	L2	No investigation and interpretation. No mapping	L3
	CO4	PO5	L2	No tool used . No mapping	L3

	CO4	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO4	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO4	PO8	L2	Ethical responsibility is required to build web site	L3
	CO4	PO9	L2	Individual as well as team work required to build web page.	L3
	CO4	PO10	L2	Communication is required with in a team to build web page .	L3
	CO4	PO11	-	No finance management required . No mapping.	L3
	CO4	PO12	-	Life long learning required to maintain web sites .	L3
3	CO5	PO1	L1	Knowledge is required to understand HTML tags to build web pages	L3
	CO5	PO2	L3	Analysing the problem is not required. no mapping	L3
	CO5	PO3	-	No design development required . No mapping	L3
	CO5	PO4	-	No investigation and interpretation. No mapping	L3
	CO5	PO5	L2	No tool used . No mapping	L3
	CO5	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO5	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO5	PO8	-	Ethical responsibility is required to build web site	L3
	CO5	PO9	-	Individual as well as team work required to build web page.	L3
	CO5	PO10	-	Communication is required with in a team to build web page .	L3
	CO5	PO11	-	No finance management required . No mapping.	L3
	CO5	PO12	-	Life long learning required to maintain web sites .	L3
3	CO6	PO1	L2	Knowledge is required to understand HTML tags to build web pages	L3
	CO6	PO2	L3	Analysing the problem is not required. no mapping	L3
	CO6	PO3	L4	No design development required . No mapping	L3
	CO6	PO4	-	No investigation and interpretation. No mapping	L3
	CO6	PO5	L2	No tool used . No mapping	L3
	CO6	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO6	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO6	PO8	-	Ethical responsibility is required to build web site	L3
	CO6	PO9	-	Individual as well as team work required to build web page.	L3
	CO6	PO10	-	Communication is required with in a team to build web page .	L3
	CO6	PO11	-	No finance management required . No mapping.	L3
	CO6	PO12	-	Life long learning required to maintain web sites .	L3
4	CO7	PO1	L2	Knowledge is required to understand HTML tags to build web pages	L3
	CO7	PO2	L4	Analysing the problem is not required. no mapping	L3
	CO7	PO3	L5	No design development required . No mapping	L3
	CO7	PO4	-	No investigation and interpretation. No mapping	L3
	CO7	PO5	L2	No tool used . No mapping	L3
	CO7	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO7	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO7	PO8	-	Ethical responsibility is required to build web site	L3
	CO7	PO9	-	Individual as well as team work required to build web page.	L3
	CO7	PO10	-	Communication is required with in a team to build web page .	L3
	CO7	PO11	-	No finance management required . No mapping.	L3
	CO7	PO12	-	Life long learning required to maintain web sites .	L3
4	CO8	PO1	L2	Knowledge is required to understand HTML tags to build web pages	L3
	CO8	PO2	L3	Analysing the problem is not required. no mapping	L3
	CO8	PO3	L3	No design development required . No mapping	L3
	CO8	PO4	L4	No investigation and interpretation. No mapping	L3
	CO8	PO5	L2	No tool used . No mapping	L3
	CO8	PO6	-	Applying the contextual knowledge to the society to build website	L3

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	CO8	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO8	PO8	-	Ethical responsibility is required to build web site	L3
	CO8	PO9	L2	Individual as well as team work required to build web page.	L3
	CO8	PO10	-	Communication is required with in a team to build web page .	L3
	CO8	PO11	-	No finance management required . No mapping.	L3
	CO8	PO12	-	Life long learning required to maintain web sites .	L3
5	CO9	PO1	L2	Knowledge is required to understand HTML tags to build web pages	L3
	CO9	PO2	L4	Analysing the problem is not required. no mapping	L3
	CO9	PO3	L6	No design development required . No mapping	L3
	CO9	PO4	L3	No investigation and interpretation. No mapping	L3
	CO9	PO5	L2	No tool used . No mapping	L3
	CO9	PO6	-	Applying the contextual knowledge to the society to build website	L3
	CO9	PO7	-	Have to understand the impact of HTML for sustainability of web site	L3
	CO9	PO8	L2	Ethical responsibility is required to build web site	L3
	CO9	PO9	L2	Individual as well as team work required to build web page.	L3
	CO9	PO10	L1	Communication is required with in a team to build web page .	L3
	CO9	PO11	-	No finance management required . No mapping.	L3
	CO9	PO12	-	Life long learning required to maintain web sites .	L3
5	CO10	PO1		Knowledge is required to understand HTML tags to build web pages	L3
	CO10	PO2		Analysing the problem is not required. no mapping	L3
	CO10	PO3		No design development required . No mapping	L3
	CO10	PO4		No investigation and interpretation. No mapping	L3
	CO10	PO5		No tool used . No mapping	L3
	CO10	PO6		Applying the contextual knowledge to the society to build website	L3
	CO10	PO7		Have to understand the impact of HTML for sustainability of web site	L3
	CO10	PO8		Ethical responsibility is required to build web site	L3
	CO10	PO9		Individual as well as team work required to build web page.	L3
	CO10	PO10		Communication is required with in a team to build web page .	L3
	CO10	PO11		No finance management required . No mapping.	L3
	CO10	PO12		Life long learning required to maintain web sites .	L3

4. Articulation Matrix

CO – PO Mapping with mapping level for each CO-PO pair, with course average attainment.

-	-	Course Outcomes		Program Outcomes															-
Modules	CO.#	**At the end of the course student should be able to . .**		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3	Level

Module	CO	Statement	PO1				PO5	PO6	PO7	PO8	PO9		PO11			
		.														
1	15CS71.1	Apply HTML syntax and semantics to build web page	√				√	√	√	√	√		√	L3		L2
1	15CS71.2	Illustrate CSS syntax and semantics to build web page	√				√	√	√	√	√		√	L3		L4
2	15CS71.3	Design HTML forms to build web page	√				√	√	√	√	√		√	L3		L4
2	15CS71.4	Demonstrate CSS layout to build web page	√				√	√	√	√	√		√	L3		L3
3	15CS71.5	Develop a client – side javascript scripting to build web pag	√				√	√	√	√	√		√	L3		L3
3	15CS71.6	Demonstrate server – side script using PHP to generate and dilsplay the content dynamically.	√				√	√	√	√	√		√	L3		L4
4	15CS71.7	Apply object oriented concepts in PHP to build web page	√				√	√	√	√	√		√	L3		L5
4	15CS71.8	Show different Exception and error handling methods in order to validate web page	√				√	√	√	√	√		√	L3		L4
5	15CS71.9	Report small memory management using cookies and URL in web application	√				√	√	√	√	√		√	L3		L6
5	**15CS71.10**	Explain the concept of AJAX and Jquery for web services	√				√	√	√	√	√		√	**L3**		
-	**15CS71**	**Average attainment (1, 2, or 3)**														**-**
-	PO, PSO	1.Engineering Knowledge; 2.Problem Analysis; 3.Design / Development of Solutions; 4.Conduct Investigations of Complex Problems; 5.Modern Tool Usage; 6.The Engineer and Society; 7.Environment and Sustainability; 8.Ethics; 9.Individual and Teamwork; 10.Communication; 11.Project Management and Finance; 12.Life-long Learning; S1.Software Engineering; S2.Data Base Management; S3.Web Design														

5. Curricular Gap and Content

Topics & contents not covered (from A.4), but essential for the course to address POs and PSOs.

Modules	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping

6. Content Beyond Syllabus

Topics & contents required (from A.5) not addressed, but help students for Placement, GATE, Higher Education, Entrepreneurship, etc.

Modules	Gap Topic	Area	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1	Frameworks, librairies	Web Technologies				
1	AngularJS, React.	Web Technologies				

2	Bootstrap, jQuery.	Web Technologies						
2								
3								
3								
4								
4								
5								
5								

C. COURSE ASSESSMENT

1. Course Coverage

Assessment of learning outcomes for Internal and end semester evaluation. Distinct assignment for each student. 1 Assignment per chapter per student. 1 seminar per test per student.

Mod ules	Title	Teach. Hours	No. of question in Exam						CO	Levels
			CIA-1	CIA-2	CIA-3	Asg	Extra Asg	SEE		
1	HTML and CSS	10	2	-	-	1	1	2	CO1, CO2	L3
2	HTML Tables and Forms and CSS Layout	10	2	-	-	1	1	2	CO3, CO4	L3
3	Client-Side & Sever Scripting	10	-	2	-	1	1	2	CO5, CO6	L3
4	PHP Arrays and exception Handling.	10	-	2	-	1	1	2	CO7, C08	L3
5	Managing State and Advanced	10	-	-	4	1	1	2	CO9, CO10	L3
-	**Total**	**50**	**4**	**4**	**4**	**5**	**5**	**10**	**-**	**-**

2. Continuous Internal Assessment (CIA)

Assessment of learning outcomes for Internal exams. Blooms Level in last column shall match with A.2.

Mod ules	Evaluation	Weightage in Marks	CO	Levels
1,2	CIA Exam – 1	30	CO1, CO2, CO3, CO4	L3
3,4	CIA Exam – 2	30	CO5, CO6, CO7, C08	L3
5	CIA Exam – 3	30	CO9, CO10	L2
1,	Assignment - 1	05	CO1, CO2, CO3, CO4	L3
3,4	Assignment - 2	05	CO5, CO6, CO7, CO8	L3
5	Assignment - 3	05	CO9, CO10	L2
1 - 5				
	Final CIA Marks	**20**	**-**	**-**

D1. TEACHING PLAN - 1

Module - 1

Title:	**HTML and CSS**		Appr Time:	15 Hrs
a	*Course Outcomes*		**CO**	**Bloom**

				s
-	At the end of the topic the student should be able to . . .	-	**Level**
1	Apply HTML syntax and semantics to build web page	CO1	L3
2	Illustrate CSS syntax and semantics to build web page	CO2	L3
b	*Course Schedule*	-	-
Class No	**Portion covered per hour**	**-**	**-**
1	Introduction to HTML, What is HTML and Where did it come from?	C01	L3
2	HTML Syntax	C01	L3
3	Semantic Markup	C01	L3
4	Structure of HTML Documents	C01	L3
5	Quick tour to HTML Elements	C01	L3
6	HTML5 Semantic Structure Elements	C01	L3
7	Introduction to CSS, What is CSS	C02	L3
8	CSS Syntax, Location of Styles,	C02	L3
9	How Styles Interact,	C02	L3
10	The Cascade: The Box Model, CSS Text Styling.	C02	L3
c	**Application Areas**	**CO**	**Level**
1	Demonstrate various HTML Documents with examples	CO1	L3
2	Demonstrate various CSS Selector forms with examples	CO2	L3
d	**Review Questions**	-	-
1	Explain the concept of domain name conversion with figure and suitable example .	CO1	L3
2	Give syntax and an example for each of the following tags. i) <pre> ii)<p&gt> iii)<sup> iv) <sub> v) <blockquote> vi) <img>	CO1	L3
3	Give and explain response and request phases of hypertext transfer protocol.	CO1	L3
4	Develop a complete XHTML document with proper headings, a table with four rows and three columns, a form with two labels, two textbox three checkbox, three radio buttons, a submit and a reset button. (Assume suitable content for the web page)	CO1	L3
5	Explain various selector forms with an example.	CO2	L3
6	Explain with an example the concept of framesets and frames in building web pages .	CO2	L3
7	Explain the different levels of style sheets are available in CSS.	CO2	L3
8	Explain the difference between XHTML and HTML.	CO2	L3
9	Explain alignment of text with all properties.	CO2	L3
10	Create an XHTML document that includes atleast two images and enough text to precede the images, flow around them (one on left and one on right) and continue after the last image (Note : Use CSS tags).	CO2	L3
e	**Experiences**	-	-
1			
2			

Module – 2

Title:	HTML Tables and Forms and CSS Layout		Appr Time:	10 Hrs
a	*Course Outcomes*		-	**Blooms**
-	The student should be able to:		-	**Level**
1	Design HTML forms to build web page.	CO3		L3
2	Demonstrate CSS layout to build web page.	CO4		L3
b	*Course Schedule*		-	-
Class No	**Module Content Covered**		**CO**	**Level**
11	HTML Tables and Forms, Introducing Tables		CO3	L3
12	Styling Tables		CO3	L3
13	Introducing Forms		CO3	L3
14	Form Control Elements		CO3	L3
15	Table and Form Accessibility, Microformats		CO3	L3
16	Advanced CSS: Layout		CO4	L3
17	Normal Flow, Positioning Elements		CO4	L3
18	Floating Elements, Constructing Multicolumn Layouts		CO4	L3
19	Approaches to CSS Layout		CO4	L3
20	Responsive Design, CSS Frameworks.		CO4	L3
c	**Application Areas**		**CO**	**Level**
1	Develop HTML Documents to build web page using forms		CO3	L3
2	Apply CSS layouts to build web page using forms		CO4	L4
d	**Review Questions**		-	-
11	Explain alignment of text with all properties.		CO3	L3
12	Explain the different primitives in JavaScript with examples.		CO3	L3
13	Write a JavaScript to generate a list of first 4 Fibonacci number.		CO3	L3
14	Explain the two ways an array object can be created.		CO3	L3
15	Explain the array methods with suitable examples.		CO4	L3
16	With an example, explain JavaScript screen output and keyboard input methods.		CO4	L3
17	Describe briefly the major differences between Java and JavaScript's.		CO4	L3
18	**Explain the control expressions with examples.**		CO4	L3
e	**Experiences**			
1				

E1. CIA EXAM – 1

a. Model Question Paper - 1

Crs	15CS71	Sem:	7	Marks:	30	Time:	75 minutes

Code:											
Course	Web Technology and Its Application										
-	-	Note: Answer any 3 questions, each carry equal marks.							Marks	CO	Level
1	a	Explain the concept of domain name conversion with figure and suitable example .							4	CO1	L1
	b	Give syntax and an example for each of the following tags. i) <pre> ii)<p&gt> iii)<sup> iv) <sub> v) <blockquote> vi) <img>							4	CO1	L2
	c	Give and explain response and request phases of hypertext transfer protocol.							4	CO2	L3
	d	Develop a complete XHTML document with proper headings, a table with four rows and three columns, a form with two labels, two textbox three checkbox, three radio buttons, a submit and a reset button. (Assume suitable content for the web page)							4	CO2	L3
2	a	Explain various selector forms with an example.							4	CO1	L2
	b	Explain with an example the concept of framesets and frames in building web pages .							4	CO1	L4
	c	Explain the different levels of style sheets are available in CSS.							4	CO2	L3
	d	Explain the difference between XHTML and HTML.							4	CO2	L2
3	a	Explain alignment of text with all properties.							4	CO3	L1
	b	Explain the different primitives in JavaScript with examples.							4	CO4	L2
	c	Write a JavaScript to generate a list of first 4 Fibonacci number.							4	CO3	L1
	d	Explain the two ways an array object can be created.							4	CO4	L2
4	a	With an example, explain JavaScript screen output and keyboard input methods.							4	CO3	L2
	b	Describe briefly the major differences between Java and JavaScript's.							4	CO4	L2
	c	Explain the control expressions with examples.							4	CO3	L1
	d	Explain the array methods with suitable examples.							4	CO4	L3

b. Assignment -1

Note: A distinct assignment to be assigned to each student.

Model Assignment Questions						
Crs Code:	15CS71	Sem:	7	Marks:	5 / 10	Time:	90 – 120 minutes
Course:	Web Technology and Its Application					

Note: Each student to answer 2-3 assignments. Each assignment carries equal mark.

SNo	USN	Assignment Description	Marks	CO	Level
1	1KT16IS002, 1KT16IS046	Explain HTTP.	5	CO1	L3
2	1KT16IS004, 1KT16IS047	Explain Web servers operation and general server characteristics	5	CO1	L3
3	1KT16IS006, 1KT16IS048	Explain any two web programmer's tools used in web programming	5	CO1	L3
4	1KT16IS007, 1KT15IS004	What tag and attibute are used to define a link? Discuss ab out it.	5	CO1	L3
5	1KT16IS008, 1KT15IS010	Briefly explain why should one use XHTML over HTML.	5	CO1	L3

6	1KT16IS009, 1KT15IS015	What is MIME? Explain his type specifications.	5	CO1	L3
7	1KT16IS010, 1KT15IS021	Explain the standard XHTML document structure.	5	CO1	L3
8	1KT16IS011, 1KT15IS023	Explain the concept of domain name conversion, with figure and a suitable example.	5	CO1	L3
9	1KT16IS015, 1KT15IS035	Explain the following tags with syntax and an example for each: i) <p> ii) <pre> iii) <sup> iv) <sub> v) <blockquote>	5	CO1	L3
10	1KT16IS016, 1KT15IS044	What tag and attribute are used to define a link? Discuss about it.	5	CO1	L3
11	1KT16IS017	Explain all controls that are created with the <input> tag with examples, which are used for text collection.	5	CO1	L3
12	1KT16IS018	Explain the XHTML tags used for lists in documents.	5	CO1	L3
13	1KT16IS023	What is the purpose of external level style sheet? Compare it with the other two levels.Write the format of external level style sheet.	5	CO2	L3
14	1KT16IS024	Explain all selector forms.	5	CO2	L3
15	1KT16IS025	Explain <span> and <div> tags	5	CO2	L3
16	1KT16IS028	Explain following tags, with example: i) Select ii)Frame iii)Textarea iv) Div.	5	CO2	L3
17	1KT16IS033	Write a XHTML program to create a table with two levels of column label: an overall label, meals and three secondary labels, breakfast, lunch and dinner. There must be two levels of row labels: an overall label, foods and four secondary labels, bread, main course, vegetable and dessert. The cells of the table must contain a number of grams for each category of the food.	5	CO2	L3
18	1KT16IS034	How lists are handled in XHTML? Design an XHTML code for illustrating nested lists.	5	CO2	L3
19	1KT16IS039	Explain the following, with respect to table creation in XHTML documents. i) <table> ii)tr, th and td attributes iii)rowspan and colspan attributes iv) text decoration v) <span> and <div>.	5	CO2	L3
20	1KT16IS040	Explain conflict Resolution.	5	CO2	L3
21	1KT16IS041	Write an XHTML document to describe an ordered list of four states. Each element of the list must have an unordered list of at least two cities in the state.	5	CO2	L3
22	1KT16IS042	Write a XHTML program to create nested ordered lists of cars. The Outer List must have three entries: compact, midsize, and sports. Inside each of these three lists there must be two sublists of body styles.	5	CO2	L3
23	1KT16IS043	Design an XHTML code for constructing a sample class timetable to illustrate table handling.	5	CO2	L3
24	1KT16IS044	Explain any two web programmer's tools used in web programming.	5	CO2	L3

D2. TEACHING PLAN - 2

Module – 3

Title:	Client-Side & Sever Scripting	Appr Time:	10 Hrs

a	Course Outcomes	-	Blooms
-	The student should be able to:	-	Level
1	Develop a client – side javascript scripting to build web page	CO5	L2
2	Demonstrate server – side script using PHP to generate and dilsplay the content dynamically.	CO6	L3
b	Course Schedule		
Class No	Module Content Covered		Level
1	JavaScript: Client-Side Scripting	CO5	L3
2	What is JavaScript and What can it do?	CO5	L3
3	JavaScript Design Principles, Where does JavaScript Go?,	CO5	L3
4	Syntax, JavaScript Objects,	CO5	L3
5	The Document Object Model (DOM)	CO5	L3
6	JavaScript Events, Forms	CO5	L3
7	Introduction to Server-Side Development with PHP	CO6	L3
8	What is Server-Side Development	CO6	L3
9	A Web Server's Responsibilities,	CO6	L3
10	Quick Tour of PHP, Program Control , Functions	CO6	L3
c	Application Areas	CO	Level
1	Demonstrate a client – side javascript scripting to build web page	CO5	L3
2	Illustrate server – side script using PHP to generate and display the content dynamically.	CO6	L3
d	Review Questions	-	-
1	What is an applet ?	CO5	L3
2	Discuss the advantages and disadvantages of client side scripting.	CO5	L3
3	How is a browser plug-in different from a browser extension.	CO5	L3
4	Identify and briefly describe at least four different server-side development technologies.	CO5	L3
5	Describe the difference between the multi-threaded and multi-process setup of PHP in Apache.	CO6	L3
6	What are server side include files? Why are they important in PHP ?	CO6	L3
7	How does PHP allow variable names to be specified at run-time? Explain with an example.	CO6	L3
8	How are parameters passed by reference different than those passed by value?	CO6	L3
9	What is the use of functions in JavaScript.?	CO6	L3
10	When should one use try catch blocks?	CO6	L3
e	Experiences	-	-

Module – 4

Title:	**PHP Arrays and exception Handling.**	Appr Time:	10 Hrs
a	*Course Outcomes*	-	**Blooms**
-	The student should be able to:	-	**Level**
1	Apply object oriented concepts in PHP to build web page	CO7	L3
2	Show different Exception and error handling methods in order to validate web page	CO8	L3
b	*Course Schedule*		
Class No	**Module Content Covered**	**CO7**	**Level**
1	PHP Arrays and Super globals	CO7	L3
2	Arrays, $_GET and $_POST Super global Arrays,	CO7	L3
3	$_SERVER Array, $_Files Array	CO7	L3
4	Reading/Writing Files, PHP Classes and Objects	CO7	L3
5	Object-Oriented Overview, Classes and Objects in PHP	CO7	L3
6	Object Oriented Design	CO7	L3
7	Error Handling and Validation	CO8	L3
8	What are Errors and Exceptions?	CO8	L3
9	PHP Error Reporting	CO8	L3
10	PHP Error and Exception Handling	CO8	L3
c	**Application Areas**	**CO**	**Level**
1	Develop object oriented concepts in PHP to build web page	CO7	L3
2	Illustrate different Exception and error handling methods in order to validate web page Report small memory management using cookies and URL in web application.	CO8	L3
d	**Review Questions**	-	-
1	In LAMP stack, what software is responsible for responding to HTTP requests?	CO7	L3
2	Can Apache support the multi-thread mode? Why is thread advantageous?	CO7	L3
3	How are parameters passed by reference different than those passed by values?	CO7	L3
4	Describe the ASP.NET Framework.	CO7	L3
5	What is the use of functions in JavaScript?		
6	What is embedded JavaScript used? What is the disadvantages of using embedded JavaScript.	CO8	L3
7	How does one access a particular HTML tag through JavaScript.?	CO8	L3
8	Name some common software design layers.	CO8	L3
9	How do AJAX requests differ from normal requests in HTTP request-response loop?	CO8	L3
e	**Experiences**		
1			
2			

E2. CIA EXAM – 2

a. Model Question Paper - 2

Crs Code:	15CS71	Sem:	7	Marks:	30	Time:	75 minutes		
Course:	Web Technology and Its Application								
-	-	**Note: Answer any 2 questions, each carry equal marks.**					**Marks**	**CO**	**Level**
1	a	Identify and briefly describe at least four different server-side development technologies.					8	CO7	L3
	b	Describe the difference between the multi-threaded and multi-process setup of PHP in Apache.					8	CO7	L3
2	a	How does PHP allow variable names to be specified at run-time? Explain with an example.					8	CO7	L3
	b	How are parameters passed by reference different than those passed by value?					8	CO7	L3
3	a	What is embedded JavaScript used? What is the disadvantages of using embedded JavaScript.					8	CO8	L3
	b	How does one access a particular HTML tag through JavaScript.?					8	CO8	L3
4	a	Name some common software design layers. Explain each layer.					8	CO8	L3
	b	How do AJAX requests differ from normal requests in HTTP request-response loop?					8	CO8	L3

b. Assignment – 2

Note: A distinct assignment to be assigned to each student.

Model Assignment Questions							
Crs Code:	15CS71	Sem:	7	Marks:	5 / 10	Time:	90 – 120 minutes
Course:	Web Technology and Its Application						
Note: Each student to answer 2-3 assignments. Each assignment carries equal mark.							

SNo	USN	Assignment Description	Marks	CO	Level
1	1KT16IS002, 1KT16IS046	How do AJAX requests differ from normal requests in HTTP request-response loop?	5	CO7	L3
2	1KT16IS004, 1KT16IS047	What are software layers, and what benefit do they provide?	5	CO7	L3
3	1KT16IS006, 1KT16IS048	What are some reasons a user might have JavaScript disabled.?		CO7	L3
4	1KT16IS007, 1KT15IS004	What kind of variable typing is used in JavaScript ? What benefits and dangers arise from this?	5	CO7	L3
5	1KT16IS008, 1KT15IS010	Why is embedded JavaScript used ?what is the disadvantage of using embedded Java scripts?	5	CO7	L3
6	1KT16IS009, 1KT15IS015	Describe how to validate a form in HTML.	5	CO7	L3
7	1KT16IS010, 1KT15IS021	How does PHP allow variable names to be specified at run-time? Explain with an example.	5	CO7	L3
8	1KT16IS011, 1KT15IS023	How are parameters passed by reference different than those passed by value?	5	CO7	L3
9	1KT16IS015, 1KT15IS035	Identify and briefly describe at least four different server-side development technologies.	5	CO7	L3

10	1KT16IS016, 1KT15IS044	Describe the difference between the multi-threaded and multi-process setup of PHP in Apache.	5	CO8	L3
11	1KT16IS017, 1KT16IS041	What is a static variable and how does it differ from a regular one?	5	CO8	L3
12	1KT16IS018, 1KT16IS042	What are three access modifiers?	5	CO8	L3
13	1KT16IS023, 1KT16IS043	Explain the role of an interface in object-oriented programming.	5	CO8	L3
14	1KT16IS024, 1KT16IS044	Describe the concept of dynamic dispatching.	5	CO8	L3
15	1KT16IS025	What are the advantages of inheritance?	5	CO8	L3
16	1KT16IS028	What are the three error reporting flags? How are excepted errors different from warnings?	5	CO8	L3
17	1KT16IS033	What is the role of error reporting in PHP? How should it differ for development sites compared to production sites?	5	CO8	L3
18	1KT16IS034	What are the most common ways of reducing validation errors?	5	CO8	L3
19	1KT16IS039	Describe the different error_reporting Constants.	5	CO8	L3
20	1KT16IS040	What problem does spam bots cause.	5	CO8	L3

D3. TEACHING PLAN - 3

Module – 5

Title:	Managing State and Advanced		Appr Time:	10 Hrs
a	***Course Outcomes***		-	**Blooms**
-	The student should be able to:		-	**Level**
1	Report small memory management using cookies and URL in web application		CO9	L2
2	Explain the concept of AJAX and Jquery for web services		CO10	L2
b	***Course Schedule***			
Class No	**Module Content Covered**		**CO9, CO10**	**Level**
1	Managing State, The Problem of State in Web Applications		CO9	L2
2	Passing Information via Query Strings,		CO9	L2
3	Passing Information via the URL Path		CO9	L2
4	Cookies, Serialization		CO9	L2
5	Session State, HTML5 Web Storage		CO9	L2
6	Caching, Advanced JavaScript and jQuery		CO9	L2
7	JavaScript Pseudo-Classes, jQuery Foundations		CO10	L2
8	AJAX, Asynchronous FileTransmission, Animation		CO10	L2
9	Backbone MVC Frameworks, XML Processing and Web Services		CO10	L2
10	XML Processing, JSON, Overview of Web Services.		CO10	L2
c	**Application Areas**		**CO**	**Level**
1	Report small memory management using cookies and URL in web application.		CO10	L2
2	Explain the concept of AJAX and Jquery for web services.		CO9	L2
d	**Review Questions**			
1	How can we pass information in HTTP?		CO9	L1
2	What are the different types of global web storage objects? What is their purpose?		CO9	L3

3	How can we pass information in HTTP?	CO9	L2
4	Describe the use of URL rewriting.	CO9	L4
5	What is the difference between session cookies and persistent cookies?	CO9	L2
6	Explain how does the browser know which type of cookie to create?	CO9	L5
7	Why are prototypes more efficient than other techniques for creating classes in JavaScript?	CO9	L2
8	How can an object be instantiated using the concepts of object literals?	CO10	L3
9	What does $() short stand for in jQuery?	CO10	L4
10	What is well-formedness and validity in the context of XML? How do they different?	CO10	L1
11	What are the in-memory and the event approaches to XML processing? How do they differ?	CO10	L4
e	**Experiences**	-	-
1			
2			

E3. CIA EXAM – 3

a. Model Question Paper - 3

Crs Code:L3	15CS71	Sem:	7	Marks:	30	Time:	75 minutes
Course:	Web Technology and Its Application						

-	-	Note: Answer any 2 questions, each carry equal marks.	Marks	CO	Level
1	a	What are the different types of global web storage objects? What is their purpose?	16	CO9	L1
	b	Describe the use of URL rewriting.		CO9	L2
2	a	Explain how does the browser know which type of cookie to create?	16	CO10	L2
	b	Why are prototypes more efficient than other techniques for creating classes in JavaScript?		CO10	L2
3	a	What is well-formedness and validity in the context of XML? How do they different?	16	CO10	L2
	b	What are the in-memory and the event approaches to XML processing? How do they differ?		CO10	L2
4	a	Why are prototypes more efficient than other techniques for creating classes in JavaScript?	16	CO10	L2
	b	How can an object be instantiated using the concepts of object literals?	16	CO10	L2

b. Assignment – 3

Note: A distinct assignment to be assigned to each student.

Model Assignment Questions							
Crs Code:	15CS71	Sem:	7	Marks:	5 / 10	Time:	90 – 120 minutes
Course:	Web Technology and Its Application						
Note: Each student to answer 2-3 assignments. Each assignment carries equal mark.							

SNo	USN	Assignment Description	Marks	CO	Level

1	1KT16IS002, 1KT16IS046	What are the in-memory and event approaches to XML processing? How do they differ?	5	CO9	L2
2	1KT16IS004, 1KT16IS047	Explain JSON in java script?	5	CO9	L2
3	1KT16IS006, 1KT16IS048	What is the difference between the append() and appendTo() methods?	5	CO9	L2
4	1KT16IS007, 1KT15IS004	What are twp techniques for AJAX file upload? Explain any one.	5	CO9	L2
5	1KT16IS008, 1KT15IS010	What are the commonly used animations in jQuery?	5	CO9	L2
6	1KT16IS009, 1KT15IS015	How would you change the text color of all the <a> tags in jQuery?	5	CO9	L2
7	1KT16IS010, 1KT15IS021	Jquery extends the CSS syntax for selectors. Explain what that means.	5	CO10	L2
8	1KT16IS011, 1KT15IS023	How are collections and views useful?	5	CO10	L2
9	1KT16IS015, 1KT15IS035	Write a jquery selector to get all the <p> that contain the word "hello".	5	CO10	L2
10	1KT16IS016, 1KT15IS044	How can we use ensure jQuery loads, even if the CDN is down?	5	CO10	L2
11	1KT16IS017, 1KT16IS041	What is cross-origin resource sharing(CORS)?Explain.	5	CO10	L2
12	1KT16IS018, 1KT16IS042	Describe the two models for page caching.	5	CO10	L2
13	1KT16IS023, 1KT16IS043	In PHP, how are sessions stored between requests?	5	CO10	L2
14	1KT16IS024, 1KT16IS044	What is the difference between page output caching and application caching?	5	CO10	L2
15	1KT16IS025	Describe the best practices for using persistent cookies.	5	CO10	L2

F. EXAM PREPARATION

1. University Model Question Paper

Course:		Web Technology and Its Application					Month / Year		Dec /2019	
Crs Code:		15CS71	Sem:		7	Marks:		80	Time:	180 minutes
-	**Note**	Answer all FIVE full questions. All questions carry equal marks.						**Marks**	**CO**	**Level**
1	a	Briefly explain why should one use XHTML over HTML						16	CO1	L3
	b	Explain the following tags with syntax and an example for each: i) <p> ii) <pre> iii) <sup> iv) <sub> v) <blockquote>							CO1	L3
		OR								
-	a	Explain all selector forms.						16	CO2	L3
	b	How lists are handled in XHTML? Design an XHTML code for illustrating nested lists.							CO2	L3
2	a	What are the elements used to define the structure of an HTML table?						16	C03	L3
	b	Describe the purpose of a table caption and the table heading elements.							C03	L3
-	a	Describe how block-level elements are different from online elements.						16	CO4	L3
	b	Briefly describe the two ways to construct multi-column layouts in CSS.							CO4	L3
3	a	How is a browser plug-in different from normal requests in the HTTP request response loop.						16	CO5	L3

	b	Why is embedded javascripts used? What is disadvantage of using embedded javascripts ?			L3
	c	What is use of function in javascript.?		CO5	L3
		OR			
-	a	Identify and briefly describe at least four different server-side development technologies.	16	CO6	L3
	b	What are server-side include files? Why are they important in PHP?		CO6	L3
4	a	Can Apache support the multi-thread mode? Why is thread advantageous?	16	CO7	L3
	b	How are parameters passed by reference different than those passed by values?		CO7	L3
		OR			
-	a	How does one access a particular HTML tag through JavaScript.?	16	CO8	L3
	b	Name some common software design layers.		CO8	L3
	c	How do AJAX requests differ from normal requests in HTTP request-response loop?		CO8	L3
5	a	Describe the use of URL rewriting.	16	CO9	L2
	b	What is the difference between session cookies and persistent cookies?		CO9	L2
	c	Explain how does the browser know which type of cookie to create?		CO9	L2
		OR			
	a	How can an object be instantiated using the concepts of object literals?	16	CO10	L2
	b	What does $() short stand for in jQuery?		CO10	L2
	c	What is well-formedness and validity in the context of XML? How do they different?		C010	L2

2. SEE Important Questions

Course:	Web Technology and Its Application					Month / Year	Dec /2019	
Crs Code:	15CS71	Sem:	7	Marks:	80	Time:	180 minutes	
Note	Answer all FIVE full questions. All questions carry equal marks.					-	-	
Module	Qno.	Important Question				Marks	CO	Year
1	1	Explain HTTP. Explain the standard XHTML document structure.					CO1	2011
	2	Explain the XHTML tags used for lists in documents.					CO1	2012
	3	Explain all selector forms.					CO2	2017
	4	Explain all controls that are created with the <input> tag with examples, which are used for text collection.					CO2	2016
	5	Explain the difference between HTML and HTML.					CO1	2007
2	1	What are the elements used to define the structure of an HTML table?					CO3	
	2	What are the two different ways of passing information via the URL.?					CO3	
	3	What is difference between replaced inline elements and non replaced inline elements.					CO3	
	4	In CSS, what does floating an element do? How do you float an element?					CO4	
	5	Briefly describe the two ways to construct multi column layouts in CSS.					CO4	
3	1	Identify and briefly describe at least four different server-side development					CO5	

		technologies.			
	2	Describe the difference between the multi-threaded and multi-process setup of PHP in Apache.		CO5	
	3	What are server side include files? Why are they important in PHP ?		CO5	
	4	How does PHP allow variable names to be specified at run-time? Explain with an example.		CO6	
	5	How are parameters passed by reference different than those passed by value?		CO6	
4	1	What is embedded JavaScript used? What is the disadvantages of using embedded JavaScript.	16	CO7	
	2	How does one access a particular HTML tag through JavaScript.?		CO7	
	3	Name some common software design layers. Explain each layer.		CO7	
	4	How do AJAX requests differ from normal requests in HTTP request-response loop?		CO8	
	5	How do AJAX requests differ from normal requests in HTTP request-response loop?		CO8	
5	1	What are the different types of global web storage objects? What is their purpose?	16	CO9	
	2	Describe the use of URL rewriting.		CO9	
	3	What is well-formedness and validity in the context of XML? How do they different?		CO9	
	4	Explain how does the browser know which type of cookie to create?		CO10	
	5	Why are prototypes more efficient than other techniques for creating classes in JavaScript?		CO10	

G. Content to Course Outcomes

1. TLPA Parameters

Table 1: TLPA – Example Course

Module-#	Course Content or Syllabus (Split module content into 2 parts which have similar concepts)	Content Teaching Hours	Blooms' Learning Levels for Content	Final Blooms' Level	Identified Action Verbs for Learning	Instruction Methods for Learning	Assessment Methods to Measure Learning
A	B	C	D	E	F	G	H
1	Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements	5	L2	L2	Action Verb : Apply	Lecture / PPT	Slip Test
1	Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling.	5	L4	L4	Action Verb : Illustrate	Lecture / PPT	Assignment
2	HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats,	5	L4	L4	Action Verb : Design	Lecture / PPT	Assignment and Slip Test
2	Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements,	5	L3	L3	Action Verb :	Lecture / PPT	Assignment

	Constructing Multicolumn Layouts, Approaches to CSS Layout, ResponsiveDesign, CSS Frameworks.				Demonstarte		
3	JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where does JavaScript Go?, Syntax, JavaScriptObjects, The Document Object Model (DOM), JavaScript Events, Forms,	5	L3	L3	Action Verb : Develop	Lecture	Slip test
3	Introduction to Server-Side Development with PHP, What is Server-SideDevelopment, A Web Server's Responsibilities, Quick Tour of PHP, ProgramControl, Functions	5	L4	L4	Action Verb : Demonstrate	Lecture and Tutorial	Assignment
4	PHP Arrays and Superglobals, Arrays, $_GET and $_POST Superglobal Arrays, $_SERVER Array, $_Files Array, Reading/Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design.	5	L5	L5	Action Verb : Apply	Lecture	Assignment and Slip Test
4	Error Handling and Validation, What are Errors andExceptions?, PHP Error Reporting, PHP Error and Exception Handling	5	L5	L5	Action Verb : Show	Lecture	Assignment
5	Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization,Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery,JavaScript Pseudo-Classes, jQuery Foundations,	5	L4	L4	Action Verb : Display	Lecture	Assignment
5	AJAX, Asynchronous FileTransmission, Animation, Backbone MVC Frameworks, XML Processing and Web Services, XML Processing, JSON, Overview of Web Services.	5	L6	L6	Action Verb : Explain	Lecture and Tutorial	Assignment

2. Concepts and Outcomes:

Table 2: Concept to Outcome – Example Course

| Module-# | Learning or Outcome from study of the Content or Syllabus | Identified Concepts from Content | Final Concept | Concept Justification (What all Learning Happened from the study of Content / Syllabus. A short word for learning or outcome) | CO Components (1.Action Verb, 2.Knowledge, 3.Condition / Methodology, 4.Benchmark) | Course Outcome

Student Should be able to ... |
|---|---|---|---|---|---|---|
| A | I | J | K | L | M | N |
| 1 | HTML tags , properties, attributes for the basic HTML documents / Static HTML | Static / Basic HTML Documents | HTML DOCUMENTS | Will be able to understand and apply the different sections of Static HTML | Action Verb : Apply Knowledge : HTML Pages Condition: Static Benchmark:NA | Apply HTML syntax and semantics to build web page |

1	Styling to HTML pages at different levels and understanding the Space occupied by each element	Styling using CSS and Box Model	CSS DOCUMENTS	Will be able to apply Styling at different levels(tag, embedded ,extrenal)	Action Verb : Illustrat Knowledge :Styling Condition: CSS Benchmark: NA	Illustrate CSS syntax and semantics to build web page
2	Static pages with Tables and forms with different elements	Tables, forms of HTML with styling	develop HTML Forms	Design the Static pages with table ,buttons and text boxes	Action Verb : Design Knowledge : form and tables Condition: Static Benchmark: NA	Design HTML forms to build web page
2	HTML pages with response and positioning and muliple columns	Split the pages with different columns	develop CSS Forms	Demonstrate the splitting of HTML pages with responses.	Action Verb : Demonstrate Knowledge : Positioning Condition: NA Benchmark: NA	Demonstrate CSS layout to build web page
3	Client Side scripting with Javascript and adding functions for different actions	JavaScript with Functions and actions	Client-Side Scripting	Validating the actions of different tags like input type	Action Verb : Develop Knowledge : HTML tags, Client Side Scripting Condition: JavaScript Benchmark:NA	Develop a client – side javascript scripting to build web page
3	Server Side Scripting with PHP error handling and run time execution	PHP,try catch block , multi thread	Server-Side Scripting	Demonstrating server side scripting with PHP and executing the code even with few errors	Action Verb : Demonstrate Knowledge : Server Side scripting Condition: PHP Benchmark:NA	Demonstrate server – side script using PHP to generate and dilsplay the content dynamically.
4	Array of objects and superglobal and writing the contents to files	File writing and array global	PHP Arrays	Applying the basic concepts of arrays with files and server side scripting	Action Verb : Apply Knowledge : files and arrays Condition: server side scripting Benchmark: NA	Apply object oriented concepts in PHP to build web page
4	Exception and error handling at higher level with reporting	Error exception handling with reporting	PHP Exception	Demonstrate the concepts of Reporting and exceptional handling	Action Verb : Demonstrate Knowledge : SSS and try catch Condition: PHP Benchmark:	Show different Exception and error handling methods in order to validate web page
5	Accessing the data from the database and applying session management along with serialization	Serializati on , session managem ent and jQuery	Memory management	Report memory management serialization and jQuery	Action Verb : Knowledge : Condition: Benchmark:	Report small memory management using cookies and URL in web application

5	XML processing, MVC architecture with web services	JSON, MVC architecture / Framework	Pseudo-Classes	Demonstrating XML and	Action Verb : Knowledge : Condition: Benchmark:	Explain the concept of AJAX and Jquery for web services