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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
 (An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: V THEORY EXAMINATION DECEMBER-2023-24

Subject : Web Technology

Max. Marks: 100

Time: 3 Hours

General Instructions:

- IMP:** Verify that you have received question paper with correct course, code, branch etc.
1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
 2. Maximum marks for each question are indicated on right hand side of each question.
 3. Illustrate your answers with neat sketches wherever necessary.
 4. Assume suitable data if necessary.
 5. Preferably, write the answers in sequential order.
 6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION – A

20

1. Attempt all parts: - 1
 - 1-a. Choose the primary function of a web server. [CO1] 1
 - (a) Send and receive emails
 - (b) Host and serve web pages to clients
 - (c) Manage network security
 - (d) Conduct online transactions
 - 1-b. Which organization oversees the allocation of IP addresses and domain names? 1

[CO1]

 - (a) W3C (World Wide Web Consortium)
 - (b) IETF (Internet Engineering Task Force)
 - (c) ICANN (Internet Corporation for Assigned Names and Numbers)
 - (d) ISO (International Organization for Standardization)
 - 1-c. What is the purpose of the <header> element in HTML5? [CO2] 1
 - (a) It defines the main heading of the document.
 - (b) It represents introductory content at the beginning of a section or article.
 - (c) It is used to define a top-level navigation menu.
 - (d) It represents a side note or tangentially related content.

- 1-d. Which HTML5 element is used to group related form elements together and provide a label for the group? [CO2] 1
(a) <label>
(b) <fieldset>
(c) <inputset>
(d) <group>
- 1-e. Which of the following is not a valid CSS3 selector? [CO3] 1
(a) .class-selector
(b) #id-selector
(c) @media-selector
(d) element-selector
- 1-f. In Bootstrap, which class is used to create a responsive, collapsible navigation menu? [CO3] 1
(a) .nav-collapse
(b) .menu-toggle
(c) .navbar-toggler
(d) .collapse-menu
- 1-g. Choose the correct purpose of event handler in JavaScript. [CO4] 1
(a) A method for declaring variables
(b) A function that specifies how to respond to user actions or browser events
(c) A module for handling server-side requests
(d) A form of data encryption
- 1-h. Which keyword is used to declare variables in JavaScript with block scope? [CO4] 1
(a) var
(b) let
(c) const
(d) function
- 1-i. What is the purpose of PHP's "include" and "require" statements? [CO5] 1
(a) To add external CSS files to a web page
(b) To include JavaScript libraries
(c) To load other PHP files or scripts into the current script
(d) To display images in an HTML document
- 1-j. Which PHP superglobal array is used to retrieve data from HTML forms? [CO5]
(a) \$_GET

- (b) \$_POST
- (c) \$_REQUEST
- (d) \$_SESSION

Subject Code: ACSE0505/ACSEH0505

2.	Attempt all parts:-	2
2.a.	Explain three-tier web architecture with neat diagram. [CO1]	2
2.b.	Describe the significance of using HTML5 semantic elements in web development. Justify with the sample code. [CO2]	2
2.c.	Explain the role of the Bootstrap framework in web development and mention the key component of button dropdown menus it provides with code. [CO3]	2
2.d.	Provide an example of a scenario where JavaScript's asynchronous programming is beneficial. [CO4]	2
2.e.	How does PHP differ from HTML, and what role does it play in dynamic web page creation, explain with steps. [CO5]	30
SECTION – B		
3.	Answer any <u>five</u> of the following-	6
3-a.	Explain the fundamental concepts of the web hosting, its types and the role of hosting platforms in web development. [CO1]	6
3-b.	Explain the difference between manual testing and automated testing in the context of web applications. [CO1]	6
3-c.	Create a XML document of 5 students of B.tech final year.(i)add marks in 5 subjects,(ii)Roll NO.(iii)Percentage .Give a valid DTD for the following document. [CO2]	6
3-d.	Explain how to validate an HTML form. Construct a program to check the following validation: (i) Checking all input field for non-empty (ii) Length of first name and last name must be less than 20 characters. (iii)Mobile number should be a number & 10 digit length.(iv)Email validation (v)Password validation (vi)Date validation(Not equal to the current date) [CO2]	6
3-e.	Design a web page using following styles. (a)H1 tag has to green, and underlined, (b) p has to be enclosed with border with text font italic, font family Helvetica, font size 15px and font color red, (c) unordered list text blue, text bold. Add these features by using an external css file and then refers this file in HTML document. [CO3]	6
3-f.	Elaborate the variable naming conventions in JavaScript in detail. [CO4]	6
3-g.	Explain cookies in PHP. How can a user create cookies with PHP and also write syntax of it? [CO5]	6
SECTION – C		
4.	Answer any <u>one</u> of the following-	50
4-a.	Provide an in-depth explanation of the client-server architecture in the context of web technology. Discuss the roles of clients and servers and the flow of information. [CO1]	10
4-b.	Elaborate on the role of DNS (Domain Name System) in web technology. Explain how DNS translates human-readable domain names to IP addresses, facilitating the navigation of the internet. [CO1]	10
5.	Answer any <u>one</u> of the following-	
5-a.	Create a HTML document that divides the browser screen frame into two frames. The frame on the left will be a menu consisting of a hyperlink. Clicking on any one of	10

these links will lead to new page open in the target frame, which is on the right hand side. [CO2]

- 5-b. Explain below with example in HTML: [CO2] 10
- 1. Ordered Lists
 - 2. Unordered Lists
 - 3. Image Handling
 - 4. Anchor tags
 - 5. Frames
6. Answer any one of the following- 10
- 6-a. How many types of layouts are there in Bootstrap. Explain uses of each layout in detail? [CO3]
- 6-b. Elaborate on the concept of CSS Flexbox and its role in layout design. Provide examples of how Flexbox can be used to create flexible and responsive page layouts, and discuss its advantages over traditional layout methods. [CO3] 10
7. Answer any one of the following- 10
- 7-a. Write a JavaScript code to display a welcome web page when submit button of an html form is pressed. [CO4]
- 7-b. Explore the concept of call back functions in JavaScript. Explain with coding example. [CO4] 10
8. Answer any one of the following- 10
- 8-a. Discuss the concept of sessions in PHP and their importance in web applications. Explain how sessions are initiated, maintained, and utilized to store user-specific information across multiple pages. [CO5]
- 8-b. Explain with code in PHP the process of opening the file, closing the file, copying and deleting the data from file. [CO5] 10