

Pune Institute of Computer Technology, Pune-43
DEPARTMENT OF INFORMATION TECHNOLOGY
(Academic Year – 2021-22)
UNIT TEST - I

Subject : Web Application Development
Class : TE Div: IX, X, XI
Date : 22 / 3 /2022 Day: Tuesday

Subject Code : 314453
[Max. Marks : 30]
Duration : 1 Hour

Instructions to the candidate:

1. Solve any TWO questions.
2. Draw a neat diagram wherever necessary.

SET - A

Que. No.	Questions	Max Marks	CO Mapped	Bloom's Learning Level
1-a	<p>Describe any three HTML tags from the following with a simple example? i) head ii) body iii) form iv) table v) marquee</p> <p>Answer:</p> <p>HTML <head> Tag</p> <p>The <head> tag in HTML is used to define the head portion of the document which contains information related to the document.</p> <p>The <head> tag contains other head elements such as <title>, <meta>, <link>, <style> <link> etc.</p> <p>Syntax :</p> <pre><head> <title>Title of the document</title> </head></pre> <p>HTML <body> Tag</p> <p>The <body> tag defines the document's body.</p> <p>The <body> element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.</p>	5	CO1	L1

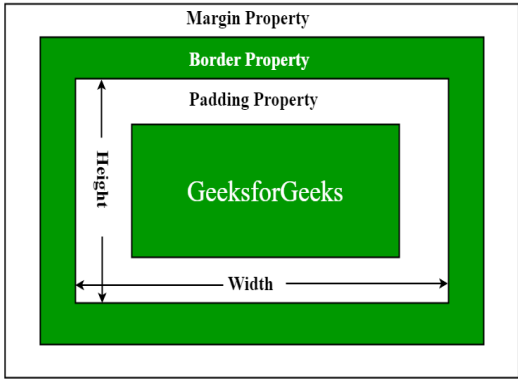
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	<p>There can only be one <code><body></code> element in an HTML document.</p> <p>Example</p> <p>A simple HTML document:</p> <pre><html> <head> <title>Title of the document</title> </head> <body> <h1>This is a heading</h1> <p>This is a paragraph.</p> </body> </html></pre> <p>HTML <code><form></code> Tag</p> <p>The <code><form></code> tag is used to create an HTML form for user input. The <code><form></code> element can contain one or more of the following form elements:</p> <ul style="list-style-type: none">• <code><input></code>, <code><textarea></code>, <code><button></code>, <code><select></code>• <code><option></code>, <code><optgroup></code>, <code><fieldset></code>, <code><label></code>• <code><output></code> <p>An HTML form with two input fields and one submit button:</p> <pre><form action="/action_page.php" method="get"> <label for="fname">First name:</label> <input type="text" id="fname" name="fname">

 <label for="lname">Last name:</label> <input type="text" id="lname" name="lname">

 <input type="submit" value="Submit"> </form></pre>			
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1-b	<p>Explain CSS Box Model.</p> <p>Answer:</p> <p>The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content.</p> <p style="text-align: center;">CSS Box-Model Property</p>  <p>The diagram illustrates the CSS Box Model with four nested rectangles. The outermost rectangle is labeled 'Margin Property'. Inside it is the 'Border Property' rectangle. Inside the border is the 'Padding Property' rectangle. The innermost rectangle is the 'Content' area, labeled 'GeeksforGeeks'. Arrows indicate the 'Height' and 'Width' of the content area.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Content Area: This area consists of content like text, images, or other media content. It is bounded by the content edge and its dimensions are given by content-box width and height. <input type="checkbox"/> Padding Area: It includes the element's padding. This area is actually the space around the content area and within the border-box. Its dimensions are given by the width of the padding-box and the height of the padding-box. <input type="checkbox"/> Border Area: It is the area between the box's padding and margin. Its dimensions are given by the width and height of the border. <input type="checkbox"/> Margin Area: This area consists of space between border and margin. The dimensions of the Margin area are the margin-box width and the margin-box height. 	3	CO1	L1

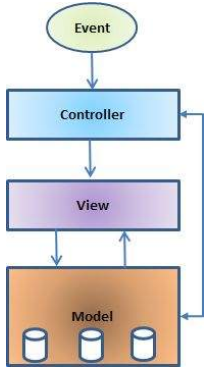
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1-c	<p>What is a Bootstrap Container, and how does it work?</p> <p>Answer:</p> <p>In Bootstrap, container is used to set the content's margins dealing with the responsive behaviors of your layout. It contains the row elements and the row elements are the container of columns (known as grid system). The container class is used to create boxed content.</p> <p>Basically, there are three types of container classes available in bootstrap:</p> <p>1. Default-Container: The default container uses 'container' class. It provides a responsive fixed-width container.</p> <p>Syntax:</p> <pre><div class="container"> <!-- Content here --> </div></pre> <p>2. Responsive-Container: Responsive containers are responsive in nature. Responsive containers allow you to specify a class that is wide until the specified breakpoint is reached, after which we apply max-widths for each of the higher breakpoints.</p> <p>Syntax:</p> <pre><div class="container-sm">Wide for small breakpoint</div> <div class="container-md">Wide for medium breakpoint</div> <div class="container-lg">Wide for large breakpoint</div></pre> <p>Fluid-Container: Fluid-container uses the 'container-fluid' class. It is used for a full-width container, spanning the entire width of the viewport.</p> <p>Syntax:</p> <pre><div class="fluid-container"> <!-- Content here --> </div></pre>	2	CO1	L1

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2-a	Explain with example how to access values of textbox of form using JavaScript?	3	CO2	L2
2-b	How do I submit a form or a part of a form without a Page Refresh?	3	CO2	L3
2-c	What is JSON file format and explain the usage of JSON	2	CO2	L1
2-d	What is the difference between ID and Class selector in JQuery? Explain with example	2	CO2	L3

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3-a	<p>Draw and discuss MVC architecture in details.</p> <p>Answer:</p> <p>The Model-View-Controller (MVC) architectural pattern separates an application into three main components: the model, the view, and the controller.</p> <p>MVC is popular as it isolates the application logic from the user interface layer and supports separation of concerns. Here the Controller receives all requests for the application and then works with the Model to prepare any data needed by the View. The View then uses the data prepared by the Controller to generate a final presentable response. The MVC abstraction can be graphically represented as follows.</p>  <pre> graph TD Event([Event]) --> Controller[Controller] Controller --> View[View] View --> Model[Model] Model --> View View --> Controller </pre> <p>Model</p> <p>The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data. For example, a Customer object will retrieve the customer information from the database, manipulate it and update it data back to the database or use it to render data.</p> <p>View</p> <p>The View component is used for all the UI logic of the application. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.</p> <p>Controller</p>	4	CO3	L1
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	Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output.			
3-b	<p>Explain Modules in TS.</p> <p>Answer:\</p>	2	CO3	L3
3-c	Discuss Webframework and its types.	3	CO3	L2
3-d	<p>Explain in Short</p> <p>i) Data Binding in Angular</p> <p>ii) Angular CLI</p>	3	CO3	L2

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