

# VIDYALANKAR SCHOOL OF INFORMATION TECHNOLOGY

## October 2018 ATKT Examination

F.Y.B.Sc.I.T. – SEM - II

Subject: Web Programming (Solution by Pallavi Tawde)

Q1	Attempt any three of the following	
A	Write a short note on File Transfer Protocol	
Ans	<p>File Transfer Protocol service (known as FTP in short) enables an Internet user to move a file from one computer to another on the Internet. A file may contain any type of digital information—text document, image, artwork, movie, sound, software, etc. Moving a file from a remote computer to ones own computer is known as <i>downloading</i> the file, and moving a file from ones own computer to a remote computer is known as <i>uploading</i> the file.</p> <p>By using FTP service, a file transfer takes place in following manner:</p> <ol style="list-style-type: none"><li>A user executes the <i>ftp</i> command on his/her local computer, specifying address of the remote computer as a parameter.</li><li>An FTP process running on user's computer (called FTP client process) establishes a connection with an FTP process running on remote computer (called FTP server process).</li><li>The system then asks the user to enter his/her login name and password on the remote computer to ensures that the user is authorized to access the remote computer.</li><li>After successful login, desired file(s) are downloaded or uploaded by using <i>get</i> (for downloading) and <i>put</i> (for uploading) commands. User can also list directories, or move between directories of the remote computer, before deciding which file(s) to transfer.</li></ol> <p>The user needs access rights for a remote computer to transfer files to/ from it. With this restriction, it is almost impossible to provide access rights to the vast number of users on the Internet to a computer that contains sharable information. The concept of anonymous FTP site is used to overcome this problem. An anonymous FTP site is a computer allowing a user to log in with a username of anonymous and a password that is user's e-mail address. The user can then download files that have been stored on it for sharing. Such sites are called publicly accessible sites because any user on the Internet can access them.</p> <p>Of course, FTP service is also used for more secure file transfer operations. In such cases, a user needs a valid username and password to access a particular computer. This is common; for example, for organizations that wish to let only certain people access their computer.</p>	
B	Explain the working of a web server.	
Ans	<p><b>Internet Information Services (IIS)</b> – formerly called <b>Internet Information Server</b> – is a web server application and set of feature extension modules created by Microsoft for use with Microsoft Windows. It is the second most used web server behind Apache HTTP Server</p> <p>The <b>Apache HTTP Server</b>, commonly referred to as <b>Apache</b> is web server software notable for playing a key role in the initial growth of the World Wide Web. In 2009 it became the first web server software to surpass the 100 million web site milestone. Apache was the first viable alternative to the Netscape Communications</p>	

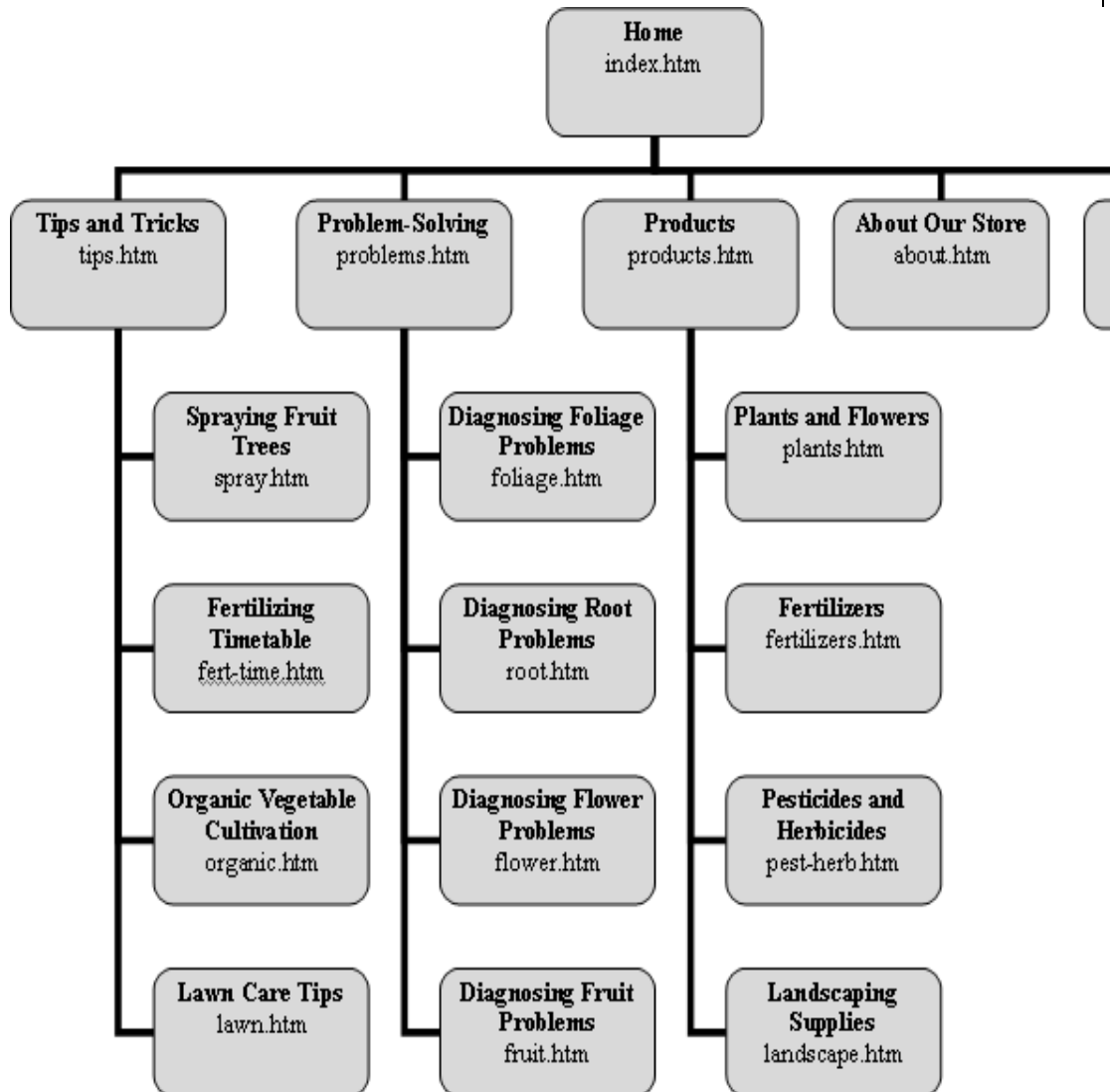
	<p>Corporation web server (currently known as Oracle iPlanet Web Server), and has since evolved to rival other Unix-based web servers in terms of functionality and performance. The majority of web servers using Apache run a Unix-like operating system.</p> <p>Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. The application is available for a wide variety of operating systems, including Unix, GNU, FreeBSD, Linux, Solaris, Novell NetWare, Mac OS X, Microsoft Windows, OS/2, TPF, and eComStation. Released under the Apache License, Apache is characterized as open-source software.</p>	
C	Write a short note on E-mail.	
Ans	<p>1. <b>E-Mail:-</b> It is the most widely used application on the net. You can also carry on live "conversations" with other computer users, using Internet Relay Chat (IRC). More recently, Internet telephony hardware and software allows realtime voice conversations.</p> <p>E-mail is an asynchronous form of communication, meaning that the person whom you want to read your message doesn't have to be available at the precise moment you send your message. This is a great convenience for both you and the recipient.</p> <p>Functionality of email programs:</p> <ul style="list-style-type: none"> <li>• send and receive mail messages</li> <li>• save your messages in a file</li> <li>• print mail messages</li> <li>• reply to mail messages</li> <li>• attach a file to a mail message</li> </ul> <p>Messages in e-mail service can contain not only text documents but also image, audio, and video data. Only restriction is that the data must be digitized, that is, converted to a computer-readable format.</p> <p>With e-mail service, the Internet has proved to be a rapid and productive communication tool for millions of users. As compared to paper mail, telephone, and fax many prefer e-mail because of its following advantages:</p> <ol style="list-style-type: none"> <li>It is faster than paper mail.</li> <li>Unlike telephone, the persons communicating need not be available at the same time.</li> <li>Unlike fax documents, e-mail documents can be stored in a computer, and can be edited easily using editing programs.</li> </ol>	
D	Explain the following CSS Properties with suitable example: <b>i. background-color ii. text-align iii. letter-spacing</b>	
Ans	<p><b>background-color</b></p> <ul style="list-style-type: none"> <li>• Denotes page's background color. Specify the color in hex or word codes, or use "transparent"</li> <li>• BODY {background-color: #ffffff}</li> </ul> <p><b>text-align</b></p> <ul style="list-style-type: none"> <li>• Justifies the alignment of text. Specify as left, center, or right</li> <li>• H1 {text-align: center}</li> </ul> <p><b>letter-spacing</b></p> <ul style="list-style-type: none"> <li>• Denotes space between letters.</li> </ul>	

	<p>Specify in points (pt), inches (in), centimeters (cm), pixels (px), or percentage (%).</p> <ul style="list-style-type: none"> <li>• P {letter-spacing: 2pt}</li> </ul> <pre> p {background-color: rgba(255, 0, 0, 0.3);} /* red with opacity */ p{   text-align: center;   border: 3px solid green; } h1 {   letter-spacing: 3px; }  h2 {   letter-spacing: 2px; }  h3 {   letter-spacing: -1px; } </pre>										
E	How are Ordered Lists created in HTML? Explain with the help of an example.										
Ans	<p><b>Ordered Lists</b></p> <p>An ordered list is also a list of items. The list items are marked with numbers. An ordered list starts with the &lt;ol&gt; tag. Each list item starts with the &lt;li&gt; tag.</p> <pre> &lt;ol&gt; &lt;li&gt;Coffee&lt;/li&gt; &lt;li&gt;Milk&lt;/li&gt; &lt;/ol&gt; </pre> <p>Here is how it looks in a browser:</p> <ol style="list-style-type: none"> <li>Coffee</li> <li>Milk</li> </ol> <p>Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc.</p> <p><b>Optional Attributes</b></p> <table> <tr> <th>Attribute</th><th>Value</th><th>Description</th></tr> <tr> <td>Start</td><td><i>number</i></td><td>Specifies the start point in a list</td></tr> <tr> <td>Type</td><td>decimal (1, 2, 3, 4 (the default)) decimal-leading-zero (01, 02, 03, 04) lower-roman (i, ii, iii, iv) upper-roman (I, II, III, IV) lower-alpha (a, b, c, d) upper-alpha (A, B, C, D) none(nothing)</td><td>Specifies which kind of bullet points</td></tr> </table>	Attribute	Value	Description	Start	<i>number</i>	Specifies the start point in a list	Type	decimal (1, 2, 3, 4 (the default)) decimal-leading-zero (01, 02, 03, 04) lower-roman (i, ii, iii, iv) upper-roman (I, II, III, IV) lower-alpha (a, b, c, d) upper-alpha (A, B, C, D) none(nothing)	Specifies which kind of bullet points	
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F	Write HTML code to design a web page using any five formatting tags.										
Ans	<ul style="list-style-type: none"> <li>• I - Italics</li> <li>• B - Bold</li> <li>• U - Underline</li> <li>• STRIKE - Strikeout</li> <li>• BIG - Larger text</li> <li>• SMALL - Smaller text</li> <li>• SUB - Subscript</li> <li>• SUP - Superscript</li> </ul> <pre> &lt;html&gt; </pre>										

	<pre> &lt;body&gt; &lt;b&gt;This text is bold&lt;/b&gt;&lt;br&gt; &lt;strong&gt;This text is strong&lt;/strong&gt;&lt;br&gt; &lt;big&gt;This text is big&lt;/big&gt;&lt;br&gt; &lt;em&gt;This text is emphasized&lt;/em&gt;&lt;br&gt; &lt;i&gt;This text is italic&lt;/i&gt;&lt;br&gt; &lt;small&gt;This text is small&lt;/small&gt;&lt;br&gt; This text contains&lt;sub&gt;subscript&lt;/sub&gt;&lt;br&gt; This text contains&lt;sup&gt;superscript&lt;/sup&gt; &lt;/body&gt; &lt;/html&gt; </pre>													
Q2	Attempt any three of the following													
A	How is a clickable area (hotspot) created in a client-side image map? Explain with an example.													
Ans	<p><b>HTML &lt;area&gt; tag</b></p> <p><b>Definition and Usage</b> The &lt;area&gt; tag defines an area inside an image-map (an image-map is an image with clickable areas).</p> <p>The area element is always nested inside a &lt;map&gt; tag.</p> <table border="1"> <thead> <tr> <th>Attribute</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>shape</td><td>rect, circle, poly</td><td>Specifies the shape of area</td></tr> <tr> <td>coords</td><td>number</td><td>Specifies the co-ordinates of particular shape</td></tr> <tr> <td>href</td><td>url</td><td>Specifies the page that will be displayed on the click</td></tr> </tbody> </table> <pre> &lt;img src="planets.gif" width="145" height="126" alt="Planets" usemap="#planetmap" /&gt; &lt;map name="planetmap"&gt;   &lt;area shape="rect" coords="0,0,82,126" href="sun.htm" alt="Sun" /&gt;   &lt;area shape="circle" coords="90,58,3" href="mercur.htm" alt="Mercury" /&gt;   &lt;area shape="circle" coords="124,58,8" href="venus.htm" alt="Venus" /&gt; &lt;/map&gt; </pre>	Attribute	Value	Description	shape	rect, circle, poly	Specifies the shape of area	coords	number	Specifies the co-ordinates of particular shape	href	url	Specifies the page that will be displayed on the click	
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B	Write a short note on Navigation Bar.													
Ans	<p><b>Creating navigational aids</b></p> <p>One way to make your Web site easily accessible is to place a consistent navigation bar on each page. A navigation bar is a set of hyperlinks that connect to the major pages of your Web site. These hyperlinks can be either text-based or graphical.</p> <p><b>Planning Your Site's Organization</b></p> <ul style="list-style-type: none"> <li>• Before building your navigation bar, create a diagram that outlines the site's planned structure.</li> <li>• A navigation bar should contain links to the most important sections of the Web site, plus a link to the Home page.</li> <li>• The navigation bar should not contain hyperlinks to every page in the site</li> </ul>													

unless the site is extremely small and simple.

- The navigation bar should contain minimum four and maximum seven hyperlinks.
- The organization of The Garden Company's site is shown below



- In the figure above , the level directly below the Home page consists of five pages.
- The navigation bar will contain hyperlinks to each of these pages. Three of these are introductory pages for larger sections of content; the introductory pages of those sections will link to each page within that section.
- This Web site is modest in scope initially, but there is plenty of room for future expansion.
- You could add dozens of additional tips, problem-solving techniques, and products.
- You could even create subsections within one of the main areas if the content becomes too overwhelming for a single page.

C Explain the following Semantic Tags with example.

i. <footer> ii. <article> iii. <nav>

Ans i. **<footer>**: Defines the text at the bottom of a page, such as the copyright or

	<p>contact information. Again, it is typically repeated on every page of the site</p> <pre> &lt;footer&gt; &lt;p&gt;Copyright &amp;copy; 2012 The Garden Company&amp;trade;&lt;br&gt; No material may be reproduced without written permission&lt;br&gt; &lt;a href="mailto:webmaster@contoso.com?subject=Question/Comment" title= "webmaster@contoso.com"&gt;Contact the Webmaster&lt;/a&gt;&lt;/p&gt; &lt;/footer&gt; </pre> <p>ii. <b>&lt;article&gt;</b> : Defines a block of text that represents a single article, story, or message. An article can be distinguished from other text in that it can logically stand alone. <b>For example</b>, on a news site, each news story is an article.</p> <pre> &lt;article&gt; &lt;p&gt;&lt;b&gt;Fruit trees are now in stock! &lt;/b&gt;We have just received a large shipment of peach, pear, apple, and plum trees with sturdy root systems and healthy foliage, with prices as low as \$29.99. Visit the &lt;a href= "products.htm"&gt;Products&lt;/a&gt; page for details.&lt;/p&gt; &lt;/article&gt; </pre> <p>iii. <b>&lt;nav&gt;</b> : HTML5 includes a &lt;nav&gt; tag to place the code for a navigation bar. The &lt;nav&gt; tag is designed to help browsers and style sheets identify sets of links as a navigational element, and handle them appropriately.</p> <pre> &lt;nav&gt; &lt;hr&gt; &lt;a href="index.htm"&gt;&lt;img src="images/btn_home.gif" style="border:none"&gt;&lt;/a&gt; &lt;a href="tips.htm"&gt;&lt;img src="images/btn_tips.gif" style="border:none"&gt;&lt;/a&gt; &lt;a href="problems.htm"&gt;&lt;img src="images/btn_problem.gif" style="border:none"&gt;&lt;/a&gt; &lt;hr&gt; &lt;/nav&gt; </pre>	
D	<p>Explain the tags / attributes with suitable example for applying following effects in a table:</p> <p>i. Creating header cell ii. Increasing space between cells iii. Adding border</p>	
Ans	<p>i. <b>Creating header cell</b> Table row can also contain &lt;th&gt; tag i.e. table heading.</p> <p>ii. <b>Increasing space between cells : Cellspacing Attribute</b>: Specifies the width of the border between individual cells of a table and the border of the table itself.</p> <p>iii. <b>Adding border : Border Attribute</b> :Specifies the width of the border of the table. If the value of the attribute is not set, then the table will have no border.</p> <pre> &lt;table border="1" Cellspacing =12&gt; &lt;caption&gt;Table Caption&lt;/caption&gt; &lt;tr&gt; &lt;th&gt;Heading&lt;/th&gt; &lt;th&gt;Another Heading&lt;/th&gt; &lt;/tr&gt; &lt;tr&gt; &lt;td&gt;row 1, cell 1&lt;/td&gt; </pre>	

	<pre> &lt;td&gt;row 1, cell 2&lt;/td&gt; &lt;/tr&gt; &lt;/table&gt; </pre>																															
E	Write HTML code to design the following web page:																															
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F	Explain the <video> tag with all its attributes.																															
Ans	<p><b>&lt;video&gt; tag</b></p> <p>The &lt;video&gt; tag specifies video, such as a movie clip or other video streams.</p> <p>Currently, there are 3 supported video formats for the &lt;video&gt; element: MP4, WebM, and Ogg:</p> <ul style="list-style-type: none"> <li>• MP4 = MPEG 4 files with H264 video codec and AAC audio codec</li> <li>• WebM = WebM files with VP8 video codec and Vorbis audio codec</li> <li>• Ogg = Ogg files with Theora video codec and Vorbis audio codec</li> </ul> <table> <thead> <tr> <th>Attribute</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td><u>autoplay</u></td><td>autoplay</td><td>Specifies that the video will start playing as soon as it is available.</td></tr> <tr> <td><u>controls</u></td><td>controls</td><td>Specifies that video controls should be displayed (play/pause button etc).</td></tr> <tr> <td><u>height</u></td><td>pixels</td><td>Sets the height of the video player</td></tr> <tr> <td><u>loop</u></td><td>loop</td><td>Specifies that the video will start over again, even if it has finished</td></tr> <tr> <td><u>muted</u></td><td>muted</td><td>Specifies that the audio output of the video should be muted</td></tr> <tr> <td><u>poster</u></td><td>URL</td><td>Specifies an image to be shown while the video is loading or until the user hits the play button</td></tr> <tr> <td><u>preload</u></td><td>auto metadata none</td><td>Specifies if and how the author thinks the video should be loaded when the page loads</td></tr> <tr> <td><u>src</u></td><td>URL</td><td>Specifies the URL of the video file</td></tr> <tr> <td><u>width</u></td><td>pixels</td><td>Sets the width of the video player</td></tr> </tbody> </table> <p><b><u>Example</u></b></p> <pre> &lt;html&gt; &lt;body&gt;  &lt;video width="320" height="240" controls&gt;   &lt;source src="movie.mp4" type="video/mp4"&gt; </pre>	Attribute	Value	Description	<u>autoplay</u>	autoplay	Specifies that the video will start playing as soon as it is available.	<u>controls</u>	controls	Specifies that video controls should be displayed (play/pause button etc).	<u>height</u>	pixels	Sets the height of the video player	<u>loop</u>	loop	Specifies that the video will start over again, even if it has finished	<u>muted</u>	muted	Specifies that the audio output of the video should be muted	<u>poster</u>	URL	Specifies an image to be shown while the video is loading or until the user hits the play button	<u>preload</u>	auto metadata none	Specifies if and how the author thinks the video should be loaded when the page loads	<u>src</u>	URL	Specifies the URL of the video file	<u>width</u>	pixels	Sets the width of the video player	
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Q3	Attempt any three of the following	
A	Explain short-circuit evaluation in JavaScript.	
Ans	<p>The 3 logical operators</p> <p>There are three logical operators in JavaScript:</p> <p>Logical AND &amp;&amp;  Logical OR     Logical NOT !</p> <p>Two important aspects of logical operators in JavaScript is that they evaluate from left to right, and they short-circuit.</p> <p>Logical AND</p> <p>In JavaScript, the logical AND operator will return true if both operands are true. It returns false in any other scenario. Here are a few simple examples:</p> <pre> true &amp;&amp; true // true  true &amp;&amp; false // false  false &amp;&amp; false // false </pre> <p>Logical OR (  ): When a certain condition evaluates to true, the corresponding condition(s) is/are not evaluated as they would be true when the    operator is used.</p>	
B	Write a JavaScript program to print Fibonacci Series.	
Ans	<pre> &lt;html&gt; &lt;head&gt; &lt;title&gt;Fibonacci series Demo&lt;/title&gt; &lt;script language="javascript"&gt; var a=0,b=1,c,n,i; n=parseInt(prompt("Enter limit for fibonacci series:", "")); document.write("&lt;h2&gt; Fibonacci series: &lt;/h2&gt;&lt;br&gt;"); document.write(a+" "+b+" "); for(i=2;i&lt;n;i++) {     c=a+b;     document.write(c+" "); </pre>	



	<pre>a=b; b=c; } &lt;/script&gt; &lt;/head&gt; &lt;body&gt; &lt;/body&gt; &lt;/html&gt;</pre>									
C	Explain the different conditional statements used in JavaScript.									
Ans	<p><b>Conditional Statements</b></p> <p>Very often when you write code, you want to perform different actions for different decisions. You can use conditional statements in your code to do this.</p> <p>In JavaScript we have the following conditional statements:</p> <ul style="list-style-type: none"><li>• <b>if statement</b> - use this statement to execute some code only if a specified condition is true</li><li>• <b>if...else statement</b> - use this statement to execute some code if the condition is true and another code if the condition is false</li><li>• <b>if...else if....else statement</b> - use this statement to select one of many blocks of code to be executed</li><li>• <b>switch statement</b> - use this statement to select one of many blocks of code to be executed</li></ul> <p><b>If Statement</b></p> <p>Use the if statement to execute some code only if a specified condition is true.</p> <p><b>Syntax</b></p> <pre>if (condition) {     code to be executed if condition is true }</pre> <p>Note that if is written in lowercase letters. Using uppercase letters (IF) will generate a JavaScript error!</p> <p>Example</p> <pre>&lt;script type="text/javascript"&gt; //Write a "Good morning" greeting if //the time is less than 10 var d=new Date(); var time=d.getHours(); if (time&lt;12) {     document.write("&lt;b&gt;Good morning&lt;/b&gt;"); } &lt;/script&gt;</pre>									
D	List and explain the methods of Date Object.									
Ans	<p>The Date object is used to work with dates and times. Date objects are created with new Date().</p> <table><tr><th>Method</th><th>Description</th></tr><tr><td>getDate()</td><td>Returns the day of the month (from 1-31)</td></tr><tr><td>getDay()</td><td>Returns the day of the week (from 0-6)</td></tr><tr><td>getFullYear()</td><td>Returns the year (four digits)</td></tr></table>	Method	Description	getDate()	Returns the day of the month (from 1-31)	getDay()	Returns the day of the week (from 0-6)	getFullYear()	Returns the year (four digits)	
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setTime()	Sets a date to a specified number of milliseconds after/before January 1, 1970																													
E	What is a Regular Expression? Explain the bracket expressions used with RegExp Object.																													
Ans	<p><b>JavaScript RegExp Object</b></p> <p>RegExp, is short for regular expression. Regular expression is an object that describes a pattern of characters. When you search in a text, you can use a pattern to describe what you are searching for.</p> <p>A simple pattern can be one single character.</p> <p>A more complicated pattern can consist of more characters, and can be used for parsing, format checking, substitution and more.</p> <p>Regular expressions are used to perform powerful pattern-matching and "search-and-replace" functions on text.</p> <p><b>Syntax</b></p> <pre>var txt=new RegExp(pattern,modifiers); or more simply: var txt=/pattern/modifiers;</pre> <ul style="list-style-type: none"><li>• pattern specifies the pattern of an expression</li><li>• modifiers specify if a search should be global, case-sensitive, etc.</li></ul> <pre>&lt;html&gt;  &lt;head&gt;   &lt;title&gt;JavaScript RegExp exec Method&lt;/title&gt; &lt;/head&gt;  &lt;body&gt;    &lt;script type="text/javascript"&gt;     var str = "Javascript is an interesting scripting language";     var re = new RegExp( "script", "g" );      var result = re.exec(str);</pre>																													

	<pre>document.write("Test 1 - returned value : " + result);  re = new RegExp( "pushing", "g" );  var result = re.exec(str); document.write("&lt;br /&gt;Test 2 - returned value : " + result); &lt;/script&gt;  &lt;/body&gt; &lt;/html&gt; Output  Test 1 - returned value : script Test 2 - returned value : null</pre>	
F	What are event handlers? List and explain various types of form events	
Ans	<p>Events are actions that can be detected by JavaScript.</p> <p>By using JavaScript, we have the ability to create dynamic web pages. Events are actions that can be detected by JavaScript.</p> <p>Every element on a web page has certain events which can trigger a JavaScript. For example, we can use the onClick event of a button element to indicate that a function will run when a user clicks on the button. We define the events in the HTML tags.</p> <p>Examples of events:</p> <ul style="list-style-type: none"> <li>• A mouse click</li> <li>• A web page or an image loading</li> <li>• Mousing over a hot spot on the web page</li> <li>• Selecting an input field in an HTML form</li> <li>• Submitting an HTML form</li> <li>• A keystroke</li> </ul> <p>Note: Events are normally used in combination with functions, and the function will not be executed before the event occurs!</p> <p>onLoad and onUnload</p> <p>The onLoad and onUnload events are triggered when the user enters or leaves the page. The onLoad event is often used to check the visitor's browser type and browser version, and load the proper version of the web page based on the information.</p> <p>Both the onLoad and onUnload events are also often used to deal with cookies that should be set when a user enters or leaves a page. For example, you could have a popup asking for the user's name upon his first arrival to your page. The name is then stored in a cookie. Next time the visitor arrives at your page, you could have another popup saying something like: "Welcome John Doe!".</p> <p>onFocus, onBlur and onChange</p> <p>The onFocus, onBlur and onChange events are often used in combination with validation of form fields.</p> <p>Below is an example of how to use the onChange event. The checkEmail() function will be called whenever the user changes the content of the field:</p> <pre>&lt;input type="text" size="30" id="email" onchange="checkEmail()"&gt;</pre> <p>onSubmit</p>	

	<p>The onSubmit event is used to validate ALL form fields before submitting it. Below is an example of how to use the onSubmit event. The checkForm() function will be called when the user clicks the submit button in the form. If the field values are not accepted, the submit should be cancelled. The function checkForm() returns either true or false. If it returns true the form will be submitted, otherwise the submit will be cancelled:</p> <pre>&lt;form method="post" action="xxx.htm" onsubmit="return checkForm()"&gt;</pre> <p>onMouseOver and onMouseOut</p> <p>onMouseOver and onMouseOut are often used to create "animated" buttons. Below is an example of an onMouseOver event. An alert box appears when an onMouseOver event is detected:</p> <pre>&lt;a href="http://www.w3schools.com" onmouseover="alert('An onMouseOver event');return false"&gt;&lt;img src="w3s.gif" alt="W3Schools " /&gt;&lt;/a&gt;</pre>	
Q4	Attempt any three of the following	
A	What is type casting in PHP? Explain with the help of an example.	
Ans	<p>Type casting can cause a variable's value to be treated as a specific type.</p> <p>Syntax</p> <p>Placing the name of the desired data type in parentheses before the variable's name.</p> <pre>variableName1 = (newType)variableName2;</pre> <p>or</p> <pre>variableName1 = (newType)variableName1;</pre> <p>The second form cast to itself.</p> <pre>&lt;?PHP     \$test_var = 8.23;     echo \$test_var;           // Displays "8.23"     echo (string)\$test_var;   // Displays "8.23"     echo (int) \$test_var;     // Displays "8"     echo (float) \$test_var;   // Displays "8.23"     echo (boolean) \$test_var; // Displays "1" ?&gt;</pre>	
B	<p>Write a PHP program to display the following binary pyramid</p> <pre>1 0 1 1 0 1 0 1 0 1 1 0 1 0 1</pre>	
Ans	<pre>&lt;?php     \$k=1;     for(\$i=0;\$i&lt;5;\$i++){         for(\$j=0;\$j&lt;=\$i;\$j++){             if(\$j%2==0)             {                 \$k=0;             }             else             { </pre>	

	<pre> \$k=1; } echo \$k." "; } echo "&lt;br&gt;"; } ?&gt; </pre>	
C	Explain the difference between break statement and exit statement with the help of an example.	
Ans	<p>Break:</p> <ul style="list-style-type: none"> <li>• A break statement can be used to terminate or to come out from the loop or conditional statement unconditionally.</li> <li>• It can be used in switch statement to break and come out from the switch statement after each case expression.</li> <li>• Whenever, break statement is encounter within the program then it will break the current loop or block.</li> <li>• A break statement is normally used with if statement.</li> <li>• When certain condition becomes true to terminate the loop then break statement can be used.</li> </ul> <p>The following program demonstrates the use of break statement. Loop will be terminated as soon as the counter value becomes greater than 5.</p> <pre> &lt;?php for( \$i = 1; \$i &lt;= 10 ; \$i++ ) {     if (\$i &gt; 5)         break; // terminate loop     echo "\$i."&lt;br&gt;" ; } ?&gt; </pre> <p>Exit:</p> <ul style="list-style-type: none"> <li>• An exit statement is used to terminate the current execution flow.</li> <li>• As soon as exit statement is found, it will terminate the program.</li> <li>• It can be used to output a message and terminate the current script: for example exit("Good Bye!");</li> <li>• It can also be used with error code. For example: exit(1), exit(0376).</li> <li>• the following program demonstrates the use of exit statements.</li> </ul> <pre> &lt;?php \$filename = 'sample.txt' ; \$file = fopen(\$filename, 'r') // open file for reading </pre>	

	<pre>         or exit("unable to open file (\$filename)");     ?&gt; </pre>	
D	Explain the string functions that return the position of first and last occurrence of a string inside another string. Give suitable examples.	
Ans	<p>             strpos() - Finds the position of the first occurrence of a string inside another string (case-sensitive)              stripos() - Finds the position of the first occurrence of a string inside another string (case-insensitive)              strrpos() - Finds the position of the last occurrence of a string inside another string (case-insensitive)         </p> <pre> &lt;!DOCTYPE html&gt; &lt;html&gt; &lt;body&gt;  &lt;?php echo strpos("I love php, I love php too!","php");  echo strrpos("I love php, I love php too!","PHP"); ?&gt;  &lt;/body&gt; &lt;/html&gt;  Output: 7 19 </pre>	
E	What is an array? Explain the different types of arrays.	
Ans	<p>An array is a special variable, which can hold more than one value at a time.</p> <p>Create an Array in PHP</p> <p>In PHP, the array() function is used to create an array: array();</p> <p>In PHP, there are three types of arrays:</p> <p>Indexed arrays - Arrays with a numeric index</p> <pre> &lt;?php \$cars = array("Volvo", "BMW", "Toyota"); echo "I like " . \$cars[0] . ", " . \$cars[1] . " and " . \$cars[2] . "."; ?&gt; </pre> <p>Associative arrays - Arrays with named keys</p> <pre> &lt;?php \$age = array("Peter"=&gt;"35", "Ben"=&gt;"37", "Joe"=&gt;"43"); echo "Peter is " . \$age['Peter'] . " years old."; ?&gt; </pre> <p>Multidimensional arrays - Arrays containing one or more arrays</p> <pre> &lt;?php echo \$cars[0][0].": In stock: ".\$cars[0][1].", sold: ".\$cars[0][2]."&lt;br&gt;"; echo \$cars[1][0].": In stock: ".\$cars[1][1].", sold: ".\$cars[1][2]."&lt;br&gt;"; </pre>	

	<pre>echo \$cars[2][0].": In stock: ".\$cars[2][1].", sold: ".\$cars[2][2]."&lt;br&gt;"; echo \$cars[3][0].": In stock: ".\$cars[3][1].", sold: ".\$cars[3][2]."&lt;br&gt;"; ?&gt;</pre>	
F	How is information passed between pages in PHP using method POST? Explain with the help of an example.	
Ans	<p>The POST Method</p> <p>The POST method transfers information via HTTP headers. The information is encoded as described in case of GET method and put into a header called QUERY_STRING.</p> <p>The POST method does not have any restriction on data size to be sent.</p> <p>The POST method can be used to send ASCII as well as binary data.</p> <p>The data sent by POST method goes through HTTP header so security depends on HTTP protocol. By using Secure HTTP you can make sure that your information is secure.</p> <p>The PHP provides \$_POST associative array to access all the sent information using POST method.</p> <p>Try out following example by putting the source code in test.php script.</p> <pre>&lt;?php if( \$_POST["name"]    \$_POST["age"] ) {     if (preg_match("/^[A-Za-z'-]"/,\$_POST['name'] )) {         die ("invalid name and name should be alpha");     }     echo "Welcome ". \$_POST['name']. "&lt;br /&gt;";     echo "You are ". \$_POST['age']. " years old.";      exit(); } ?&gt; &lt;html&gt; &lt;body&gt;      &lt;form action = "&lt;?php \$_PHP_SELF ?&gt;" method = "POST"&gt;         Name: &lt;input type = "text" name = "name" /&gt;         Age: &lt;input type = "text" name = "age" /&gt;         &lt;input type = "submit" /&gt;     &lt;/form&gt;  &lt;/body&gt; &lt;/html&gt;</pre>	
Q5	Attempt any three of the following	
A	Explain the SQL queries to create a table and insert a row in the table.	
Ans	<pre>&lt;?php \$servername = "localhost"; \$username = "username"; \$password = "password";</pre>	

	<pre> \$dbname = "myDB";  // Create connection \$conn = new mysqli(\$servername, \$username, \$password, \$dbname); // Check connection if (\$conn-&gt;connect_error) {     die("Connection failed: " . \$conn-&gt;connect_error); }  // sql to create table \$sql = "CREATE TABLE MyGuests ( id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY, firstname VARCHAR(30) NOT NULL, lastname VARCHAR(30) NOT NULL, email VARCHAR(50), reg_date TIMESTAMP )";  if (\$conn-&gt;query(\$sql) === TRUE) {     echo "Table MyGuests created successfully"; } else {     echo "Error creating table: " . \$conn-&gt;error; }  \$sql = "INSERT INTO MyGuests (firstname, lastname, email) VALUES ('Pallavi', 'Tawde', 'pallavi@example.com')";  if (\$conn-&gt;query(\$sql) === TRUE) {     echo "New record created successfully"; } else {     echo "Error: " . \$sql . "&lt;br&gt;" . \$conn-&gt;error; }  \$conn-&gt;close(); ?&gt; </pre>	
B	Write a short note on cookies in PHP.	
Ans	<p>A cookie is often used to identify a user. A cookie is a small file that the server embeds on the user's computer. Each time the same computer requests a page with a browser, it will send the cookie too. With PHP, you can both create and retrieve cookie values.</p> <p>Create Cookies With PHP</p> <p>A cookie is created with the setcookie() function.</p> <p>Syntax</p> <pre>setcookie(name, value, expire, path, domain, secure, httponly);</pre> <p>Only the name parameter is required. All other parameters are optional.</p> <pre> &lt;?php \$cookie_name = "user"; \$cookie_value = "John Doe"; </pre>	



	<pre> setcookie(\$cookie_name, \$cookie_value, time() + (86400 * 30), "/"); // 86400 = 1 day ?&gt; &lt;html&gt; &lt;body&gt;  &lt;?php if(!isset(\$_COOKIE[\$cookie_name])) {     echo "Cookie named '" . \$cookie_name . "' is not set!"; } else {     echo "Cookie '" . \$cookie_name . "' is set!&lt;br&gt;";     echo "Value is: " . \$_COOKIE[\$cookie_name]; } ?&gt;  &lt;/body&gt; &lt;/html&gt; </pre>	
C	Write a PHP program to create a database named “College”. Create a table named “Student” with fields (sno, sname, percentage). Insert 3 records of your choice. Display the names of the students whose percentage is between 35 and 75 in a tabular format.	
Ans	<pre> &lt;?php \$servername = "localhost"; \$username = "username"; \$password = "password";  // Create connection \$conn = new mysqli(\$servername, \$username, \$password); // Check connection if (\$conn-&gt;connect_error) {     die("Connection failed: " . \$conn-&gt;connect_error); }  // Create database \$sql = "CREATE DATABASE College "; if (\$conn-&gt;query(\$sql) === TRUE) {     echo "Database created successfully"; } else {     echo "Error creating database: " . \$conn-&gt;error; }  // sql to create table \$sql = "CREATE TABLE Student ( sno INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY, sname VARCHAR(30) NOT NULL, percentage VARCHAR(30) NOT NULL )";  if (\$conn-&gt;query(\$sql) === TRUE) {     echo "Table created successfully"; } else {     echo "Error creating table: " . \$conn-&gt;error; } </pre>	

	<pre> \$sql = "INSERT INTO Student (sname, percentage) VALUES ( 'Pallavi', '99.9')";  if (\$conn-&gt;query(\$sql) === TRUE) {     echo "New record created successfully"; } else {     echo "Error: " . \$sql . "&lt;br&gt;" . \$conn-&gt;error; }  \$conn-&gt;close(); ?&gt; </pre>	
D	How mail is sent using PHP?	
Ans	<p>The mail() function allows you to send emails directly from a script.</p> <p><b>Syntax</b>  mail(to,subject,message,headers,parameters);</p> <p><b>to:</b> Required. Specifies the receiver / receivers of the email  <b>subject:</b> Required. Specifies the subject of the email. Note: This parameter cannot contain any newline characters  <b>message:</b> Required. Defines the message to be sent. Each line should be separated with a LF (\n). Lines should not exceed 70 characters.  <b>headers:</b> Optional. Specifies additional headers, like From, Cc, and Bcc.  <b>parameters:</b> Optional. Specifies an additional parameter to the sendmail program</p> <pre> &lt;?php // the message \$msg = "First line of text\nSecond line of text";  // use wordwrap() if lines are longer than 70 characters \$msg = wordwrap(\$msg,70);  // send email mail("someone@example.com","My subject",\$msg); ?&gt; </pre>	
E	What is a character class in a regular expression? List and explain the pre-defined character classes.	
Ans	<p><b>Character classes</b></p> <p>An opening square bracket introduces a character class, terminated by a closing square bracket. A closing square bracket on its own is not special. If a closing square bracket is required as a member of the class, it should be the first data character in the class (after an initial circumflex, if present) or escaped with a backslash.</p> <p>A character class matches a single character in the subject; the character must be in the set of characters defined by the class, unless the first character in the class is a circumflex, in which case the subject character must not be in the set defined by the class. If a circumflex is actually required as a member of the class, ensure it is not the first character, or escape it with a backslash.</p> <p>For example, the character class [aeiou] matches any lower case vowel, while [^aeiou] matches any character that is not a lower case vowel. Note that a circumflex is just a convenient notation for specifying the characters which are in the class by enumerating</p>	

	<p>those that are not. It is not an assertion: it still consumes a character from the subject string, and fails if the current pointer is at the end of the string.</p> <p>Character classes</p> <p>alnum letters and digits</p> <p>alpha letters</p> <p>ascii character codes 0 - 127</p> <p>blank space or tab only</p> <p>cntrl control characters</p> <p>digit decimal digits (same as \d)</p> <p>graph printing characters, excluding space</p> <p>lower lower case letters</p> <p>print printing characters, including space</p> <p>punct printing characters, excluding letters and digits</p> <p>space white space (not quite the same as \s)</p> <p>upper upper case letters</p> <p>word "word" characters (same as \w)</p> <p>xdigit hexadecimal digits</p>	
F	Design a PHP page for authenticating a user.	
Ans	<p>Login.htm</p> <pre> &lt;form name="frmUser" method="post" action="Login.php"&gt;   &lt;div class="message"&gt;&lt;?php if(\$message!="") { echo \$message; } ?&gt;&lt;/div&gt;   &lt;table border="0" cellpadding="10" cellspacing="1" width="500" align="center" class="tblLogin"&gt;     &lt;tr class="tableheader"&gt;       &lt;td align="center" colspan="2"&gt;Enter Login Details&lt;/td&gt;     &lt;/tr&gt;     &lt;tr class="tablerow"&gt;       &lt;td&gt;         &lt;input type="text" name="userName" placeholder="User Name" class="login-input"&gt;&lt;/td&gt;       &lt;td&gt;         &lt;input type="password" name="password" placeholder="Password" class="login-input"&gt;&lt;/td&gt;       &lt;/tr&gt;     &lt;tr class="tableheader"&gt;       &lt;td align="center" colspan="2"&gt;&lt;input type="submit" name="submit" value="Submit" class="btnSubmit"&gt;&lt;/td&gt;     &lt;/tr&gt;   &lt;/table&gt; &lt;/form&gt; </pre> <p>Login.php</p> <pre> &lt;?php \$message=""; if(count(\$_POST)&gt;0) {     \$conn = mysqli_connect("localhost","root","","phpspot_examples");     \$result = mysqli_query(\$conn,"SELECT * FROM users WHERE user_name='" . \$_POST["userName"] . "' and password = '" . \$_POST["password"] . "'"); </pre>	

	<pre>\$count = mysqli_num_rows(\$result); if(\$count==0) {     \$message = "Invalid Username or Password!"; } else {     \$message = "You are successfully authenticated!"; } } ?&gt;</pre>	
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