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Q.P. Code: 55107

SYBSc Semester III 2018-19 Regular Examination
Web programming Answer Key NEW SET 01
(2½ Hours)

[Total Marks: 75]

- N.B.
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

| Q. 1 | Attempt All(Each of 5Marks) | |
|------|--|---------------|
| (a) | Multiple Choice Questions i. The attribute of <form> tag is _____ A. Method B. Action C. Both (a) & (b) D. None of these ii. Which of the following is the correct way to apply Styles? A. inside an HTML element B. inside the section of an HTML page C. in an external CSS file D. all of the mentioned iii. We can declare all type of variables in JavaScript with the keyword _____ A. var B. obj C. jvar D. None of these iv. What is the correct syntax of the declaration which defines the XML version?: A. <xml version="A.0" /> B. <?xml version="A.0"?> C. <?xml version="A.0" /> D. None of the above v. A PHP script is written under:- A. <? php php ?> B. <? > C. <?php> D. <?php ?> | (15M) (5M) |
| (b) | Fill in the blanks (fieldset (i), cellpadding(ii), server, // (iv), 0 (v), fieldgroup, cellspacing, client (iii), /*... */ (1)) i. <legend> is used to assign a caption to a set of form fields as defined by a _____ element. ii. _____ attribute used in <table> element sets the width, in pixels, between the edge of a cell and its content. iii. JavaScript is _____ side scripting language. iv. We can use _____ to comment a single line in JavaScript. v. PHP's numerically indexed array begins with position _____. | (5M) |
| (c) | Write Answers in two lines. i. List two new input types provided by HTML 5 for forms. Search, email, url, tel, date, time, number, range. ii. What do you mean by Inline CSS. Inlining CSS simply means putting your CSS into your HTML file instead of an external CSS file. iii. List any four data types supported in JavaScript. Boolean, Null, Undefined, Number, String. | (5M) |

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| | <p>iv. What is XML Element? An XML element is everything from (including) the element's start tag to (including) the element's end tag. Eg. <price>100.11</price> An element can contain:</p> <ul style="list-style-type: none">• text• attributes• other elements• or a mix of the above <p>v. What is the meaning of selectors in jQuery? jQuery selectors allow you to select and manipulate HTML element(s). jQuery selectors are used to "find" (or select) HTML elements based on their name, id, classes, types, attributes, values of attributes and much more.</p> | |
| Q. 2 | Attempt the following (Any THREE)(Each of 5Marks) | (15M) |
| (a) | <p>Explain any five tags used in head section in HTML5. (each 1 marks)</p> <ul style="list-style-type: none">• Title tag• Meta tag• Script tag• NoScript tag• Base tag• | |
| (b) | <p>List the global attributes of HTML5. Explain any four. (Any five each 1 marks) <u>accesskey</u> , <u>class</u> , <u>hidden</u> , <u>id</u> , <u>lang</u> , <u>style</u> , <u>tabindex</u> , <u>title</u> , <u>translate</u></p> | |
| (c) | <p>What is image map? Explain client side image map with example. (Image map 2 marks, Example 3 marks) An image map is a list of coordinates relating to a specific image, created in order to hyperlink areas of the image to different destinations (as opposed to a normal image link, in which the entire area of the image links to a single destination)..</p> <pre> <map name="pmap"> <area shape="rect" coords="0,0,82,126" href="sun.htm" alt="Sun"> <area shape="circle" coords="90,58,3" href="mercur.htm" alt="Mercury"> <area shape="circle" coords="124,58,8" href="venus.htm" alt="Venus"> </map></pre> | |
| (d) | <p>Give the complete HTML code for webpage as given below :</p> | |

| Time | Topic |
|---------------|--------------|
| 18:00 - 20:30 | Registration |
| 20:30 - 23:00 | Keynote |

Sign Up!

Name:

Email:

Location:

Gender: Female Male

Experience:

[Twitter](#) | [Facebook](#) | [Flickr](#)

(Table 2 marks, form and link 3 marks)

(e) Differentiate between: - i) TextArea & Textfield ii) Radiobutton & Checkbox.

i) **TextArea**: The `<textarea>` tag defines a multi-line text input control. A text area can hold an unlimited number of characters, and the text renders in a fixed-width font.

The size of a text area can be specified by the columns and rows attributes

Text Field: input elements of type "text" create basic single-line text fields.

PIN: `<input type="text" name="pin" maxlength="4" size="4">
`

ii) In a **checkbox** group, a user can select more than one option. Each checkbox operates individually, so a user can toggle each response "on" and "off."

`<input type="checkbox" name="vehicle" value="Bike"> car
`

`<input type="checkbox" name="vehicle" value="Car" checked> bike
`

Radio buttons, however, operate as a group and provide mutually exclusive selection values.

`<input type="radio" name="gender" value="male" checked> Male
`

`<input type="radio" name="gender" value="female"> Female
`

(Each 2 1/2 Marks)

(f) Explain with an example properties used to set the font style of the text in HTML5.

The font-style property specifies the font style for a text.

The font family of a text is set with the font-family property.

```
{ font-family: "Times New Roman", Times, serif; }
```

(Explanation of properties 3, example 2 marks)

Q. 3 Attempt the following (Any THREE) (Each of 5Marks)

(a) Write a Java Script code to accept lower and upper range in number. Display sum of all even numbers between the ranges.
(logic 3 marks, proper code 2 marks)

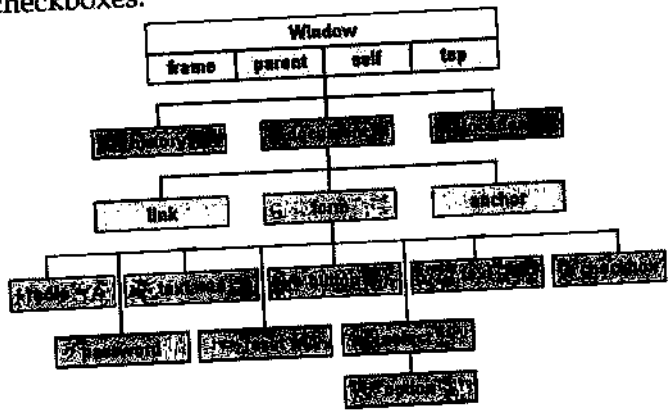
(15M)

(b) **What is location object? Explain its two methods with example.**
 (Location object 1 marks)
 (Methods with example 4 marks)
 The location object contains information about the current URL.
 The location object is part of the window object and is accessed through the window.location property.

- assign() Loads a new document
- reload() Reloads the current document
- replace() Replaces the current document with a new one

(c) **Discuss Document Object Model.**
 Every web page resides inside a browser window which can be considered as an object. A Document object represents the HTML document that is displayed in that window. The Document object has various properties that refer to other objects which allow access to and modification of document content. The way document content is accessed and modified is called the **Document Object Model, or DOM**. The Objects are organized in a hierarchy. This hierarchical structure applies to the organization of objects in a Web document.

- **Window object** – Top of the hierarchy. It is the outmost element of the object hierarchy.
- **Document object** – Each HTML document that gets loaded into a window becomes a document object. The document contains the contents of the page.
- **Form object** – everything enclosed in the <form>...</form> tags sets the form object.
- **Form control elements** – the form object contains all the elements defined for that object such as text fields, buttons, radio buttons, and checkboxes.



(1 mark DOM + 4 objects)

(d) **Explain the uses of Window object methods: - i) Prompt ii) Alert.**
 i) Prompt

The prompt() method displays a dialog box that prompts the visitor for input.
A prompt box is often used if you want the user to input a value before entering a page.

```
var person = prompt("Please enter your name", "Harry Potter");

if (person != null) {
  document.getElementById("demo").innerHTML = "Hello " + person + "! How are you today?";
}
```

ii) Alert

An alert dialog box is mostly used to give a warning message to the users. For example, if one input field requires to enter some text but the user does not provide any input, then as a part of validation, you can use an alert box to give a warning message

```
<head>
<script type="text/javascript">
function GetName () {
  var answer = prompt ("What is your name?", "Anonymus");
  // undefined == null, but " != null
  if (answer == null) {
    alert ("Your did not specify your name!");
  }
  else {
    alert ("Your name is: " + answer);
  }
}
</script>
</head>
<body>
<button onclick="GetName ()">Specify your name!</button>
</body>
(each 2 1/2 marks)
```

(e) Describe the features of XML.
(each 1 marks)

1. XML is heavily used as a format for document storage and processing, both online and offline.
2. Content-based XML markup enhances searchability, making it possible for agents and search engines to categorize data instead of wasting processing power on context-based full-text searches.
3. The XML document which uses the DTD has the XML tags in it. It is in the XML document, the tags or the elements are defined for the data.

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| | <p>4. XML does not allow References to external data entities. Named character references are not allowed in XML. XML does not allow empty comment declaration.</p> <p>5. XML is extensible, because it only specifies the structural rules of tags. No specification on tags them self.</p> | |
| (f) | <p>Write DTD and XML code for describing invoice, each invoice includes:</p> <ul style="list-style-type: none"> • Invoice number • Date of purchase • Billing address • Name of purchaser • List of items giving code number, quantity ordered, price • Total amount of the order. <p>(DTD 2 code marks, XML code 3 marks)</p> | |
| Q. 4 | Attempt the following (Any THREE) (Each of 5Marks) | (15M) |
| (a) | <p>Write a program in Ajax to display the last access date of a text file. (Logic 2 marks , proper code 3 marks)</p> | |
| (b) | <p>Explain any two methods of XMLHttpRequest object. There are only 6 methods that the XMLHttpRequest can call.</p> <ul style="list-style-type: none"> • abort() This cancels the current request as expected. • getAllResponseHeaders() Returns all the response headers as a key / value pair. • getResponseHeader(header) This returns the value of the specified header. • open(method, url) This prepares the XMLHttpRequest object for a call to the server. Method can either be POST, GET, or PUT. Url can be relative or absolute, but it should be known that you can't make cross domain calls for security reasons. If you need to make cross domain calls, you will have to do some work on the server side to make it happen correctly. If you are passing parameters with via GET, you can append them to the URL here. • send(body) This method actually sends the request to the server. The body parameter can be used to pass any POST parameters that you would like. You can format your POST parameters just like a GET querystring. • setRequestHeader(header, value) The final method allows you to set the specified header with the given value. You will most often use this function for setting the content type of the request. <p>(Any two each 2 1/2 marks)</p> | |
| (c) | <p>How to create arrays in PHP? Explain with example. In PHP, the array() function is used to create an array:</p> <pre>array(); <?php \$scars = array("Volvo", "BMW", "Toyota"); echo "I like " . \$scars[0] . ", " . \$scars[1] . " and " . \$scars[2] . " ."; ?></pre> | |

(1 mark for array function + 4 marks example with explanation)

(d)

Give if structures in PHP. Explain with an example.
In PHP we have the following conditional statements:

- **if statement** - executes some code if one condition is true
- **if...else statement** - executes some code if a condition is true and another code if that condition is false
- **if...elseif....else statement** - executes different codes for more than two conditions
- **switch statement** - selects one of many blocks of code to be executed

```
<?php
$t = date("H");
if ($t < "20") {
    echo "Have a good day!";
} else {
    echo "Have a good night!";
}
?>
```

```
<?php
$t = date("H");
if ($t < "10") {
    echo "Have a good morning!";
} elseif ($t < "20") {
    echo "Have a good day!";
} else {
    echo "Have a good night!";
}
?>
```

(Explanation 3 marks, example 2 marks.)

(e)

What is the use of session in PHP? Explain any three functions of it.
Session in PHP

A session is a way to store information (in variables) to be used across multiple pages. Session variables solve this problem by storing user information to be used across multiple pages (e.g. username, favorite color, etc). By default, session variables last until the user closes the browser. So; Session variables hold information about one single user, and are available to all pages in one application.

PHP session functions

A session is started with the `session_start()` function. Session variables are set with the PHP global variable: `$_SESSION`.

To remove all global session variables and destroy the session, use `session_unset()` and `session_destroy()`.

`isset()` function to check if session variable is already set or not.

(2 mar for PHP session + 3 marks for any any 3 functions)

(f)

Discuss jQuery methods for traversing.

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| | <p>prev() Returns the previous sibling element of the selected element</p> <p>prevAll() Returns all previous sibling elements of the selected element</p> <p>prevUntil() Returns all previous sibling elements between two given arguments</p> <p>siblings() Returns all sibling elements of the selected element</p> <p>add() Adds elements to the set of matched elements</p> <p>(1m ark for any 5 methods)</p> | |
|--|---|--|

Q. 5 Attempt the following (Any THREE) (Each of 5Marks) (15M)

(a) **What is the purpose of audio and video tags in HTML5? Give example.**
The <audio> tag defines sound, such as music or other audio streams.

```
<audio controls>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/mpeg">  
  Your browser does not support the audio tag.  
</audio>
```

The <video> tag specifies video, such as a movie clip or other video streams.

```
<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">  
  Your browser does not support the video tag.  
</video>
```

(each 2 1/2 marks)

(b) **Write JavaScript function to calculate age from the date of birth.**

```
<html>  
<head>  
<script type="text/javascript">  
  function ageCount() {  
    var date1 = new Date();  
    var dob= document.getElementById("dob").value;  
    var date2=new Date(dob);  
    var pattern = /^\\d{1,2}\\/\\d{1,2}\\/\\d{4}$/; //Regex to validate date  
    format (dd/mm/yyyy)  
    if (pattern.test(dob)) {  
      var y1 = date1.getFullYear(); // getting current year  
      var y2 = date2.getFullYear(); // getting dob year  
      var age = y1 - y2; //calculating age  
      document.write("Age : " + age);  
      return true;  
    } else {  
      alert("Invalid date format. Please Input in (dd/mm/yyyy) format!");  
      return false;  
    }  
  }  
</script>  
</head>  
</html>
```


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| | <pre></script> </head> <body> Date of Birth(dd/mm/yyyy): <input type="text" name="dob" id="dob" /> <input type="submit" value="Age" onclick="ageCount();"> </body> </html></pre> | |
| (c) | <p>(2 mark for click event + 3 marks for function)</p> <p>Give PHP code to create / retrieve a cookie, with following condition:-</p> <ol style="list-style-type: none">Cookie name should be 'demouser' with values 'demo' (3 marks)It should expire after 10 days. (2 marks) <p>The setcookie() function is used to set a cookie in PHP. Make sure you call the setcookie() function before any output generated by your script otherwise cookie will not set.</p> <pre><?php // Setting a cookie setcookie("username", "demouser", time()+10*24*60*60); ?> <?php // Accessing an individual cookie value echo \$_COOKIE["username"]; ?></pre> | |
| (d) | <p>Explain the following elements in XSLT:-</p> <ol style="list-style-type: none">xsl:templatexsl:import <p>i. The <xsl:template> element is used to build templates. The match attribute is used to associate a template with an XML element. The match attribute can also be used to define a template for the entire XML document. The value of the match attribute is an XPath expression (i.e. match="/" defines the whole document).</p> <pre><?xml version="1.0" encoding="UTF-8"?> <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"> <xsl:template match="/"> <html> <body> <h2>My CD Collection</h2> <table border="1"> <tr bgcolor="#9acd32"> <th>Title</th> <th>Artist</th> </tr> <tr> <td>.</td> <td>.</td> </tr></pre> | |

```

</table>
</body>
</html>
</xsl:template>
</xsl:stylesheet>

```

ii. The <xsl:import> element is a top-level element that is used to import the contents of one style sheet into another.

```

<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html>
<body>
<h2>My CD Collection</h2>
<table border="1">
<tr bgcolor="#9acd32">
<th>Title</th>
<th>Artist</th>
</tr>
<tr>
<td><xsl:value-of select="catalog/cd/title"/></td>
<td><xsl:value-of select="catalog/cd/artist"/></td>
</tr>
</table>
</body>
</html>
</xsl:template>
</xsl:stylesheet>

```

A second style sheet called "cdcatalog_import.xsl" imports "cdcatalog_ex3.xsl":

```

<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:import href="cdcatalog_ex3.xsl"/>
<xsl:template match="/">
<xsl:apply-imports/>
</xsl:template>
</xsl:stylesheet>

```

(each 2 1/2 marks)

(e) Discuss various features of AJAX.

- Better interactivity
- Easier navigation
- Compact
- A reactive interface
- Speed of execution