Programming the Web(10CS73) IAT 1 –Sept 2016 –Scheme and Solution

Q1 i) Create an XHTML that defines a table with 5 rows and 5 columns. The first row is a header which contains Country name, Gold Medal, Silver Medal, Bronze Medal and Total in each column respectively. Fill the table with appropriate values. After filling set red color to the background for the first row, blue for the second, yellow for the third and green for the fourth row. Use "align" and "cellspacing" appropriately.(7M)

<table bgcolor="pink" cellspacing="20" cellpadding="10">-2M

Each row 1M*5=5M

<tr bgcolor="red">

    <th>Country name   </th>

    <th>Gold Medal</th>

    <th>Silver Medal</th>

    <th>Bronze Medal</th>

</tr>

<tr bgcolor="red">

    <td>US   </td>

    <td>Gold Medal</td>

    <td>Silver Medal</td>

    <td>Bronze Medal</td>

</tr>

Q.1 ii) Write a note on character and character patterns

The "normal" characters are those that are not metacharacters, which are characters that have special meanings in some contexts in patterns. The following are metacharacters:

\ | ( ) [ ] { } ^ $ * + ? .

Any three classes 1M*3=3M

sequences of characters. For example, you could have the following character class, which matches 'a', 'b', or 'c':

`[abc]`

Also, you could have the following character class, which matches any lowercase letter from 'a' to 'h':

`[a-h]`

If a circumflex character (^) is the first character in a class, it inverts the specified set. For example, the following character class matches any character except the letters 'a', 'e', 'i', 'o', and 'u':

`[^aeiou]`

Table 4.8 Predefined character classes

Name	Equivalent Pattern	Matches
\d	[0-9]	A digit
\D	[^0-9]	Not a digit
\w	[A-Za-z_0-9]	A word character (alphanumeric)
\W	[^A-Za-z_0-9]	Not a word character
\s	[\r\t\n\f]	A whitespace character
\S	[^ \r\t\n\f]	Not a whitespace character

Q.2 i) Justify why we should use XHTML over HTML. **(5M)**

Any 5 points exaplanation 5*1M=5M

1. Quality of the code

2. Consistency of code

3. Syntactic correctness can be checked by validation tools

4. Case sensitivity makes uniform structures of a program

5. nesting of elements rules are defined.

6. Html code can be easily converted to Xhtml

Q. 2ii) Explain "request" and "response" phase of HTTP.**(5M)**

HTTP Request-Explanation 2.5M

The general form of an HTTP request is as follows:

1. HTTP method   Domain part of the URL.   HTTP version
2. Header fields
3. Blank line
4. Message body

HTTP Response Explanation-2.5M

The general form of an HTTP response is as follows:

1. Status line
2. Response header fields
3. Blank line
4. Response body

Q. 3 i)). Explain different primitive types of Javascript.**(5M)**

JavaScript has five primitive datatypes- 1M*5=5

Explanation with example

1. Number

2. String

3. Boolean

4. Undefined

4. Null

ii) Write a regular expression to validate the email of following type abc@yahoo.co.in in a JavaScript function **(5M)**

```
<script type="text/javascript"> 1M
function validateEmail(email) -1M
{
 var reg = /^[a-z]+@[a-z]+\.[a-z]{2}\.[a-z]{2}$/ -2M
 if (reg.match(email)){
 return true; }
 else{
 return false;
 }
}
</script>
```

Q.4 i) Explain screen output and keyboard input with respect to JavaScript. (**6M**)

Keyboard input –prompt ( ) with example-1.5M
Screen output- document. write( ) with example-1.5M
Screen output-alert ( ) with example-1M
Screen output - confirm ( ) with example-1M

ii) Write a JavaScript that contains a function named validate –phone no, which tests the phone number of the format ddd-dddd-ddddddd<091-8256-1234567> and display whether given number is valid or not using alert (**4M**)

```
function validate( )

{

        var  phone = document.getElementById.("phone");

var pattern=/^[0-9]{3}-[0-9]{4}-[0-9]{7}$/;

if(phone.match(pattern)

{

        alert("correct pattern");

}

Else

alert("incorrect pattern");

}//end function
```

Q.5 i) List out the major difference between JAVA and Javascript. (**5M**)
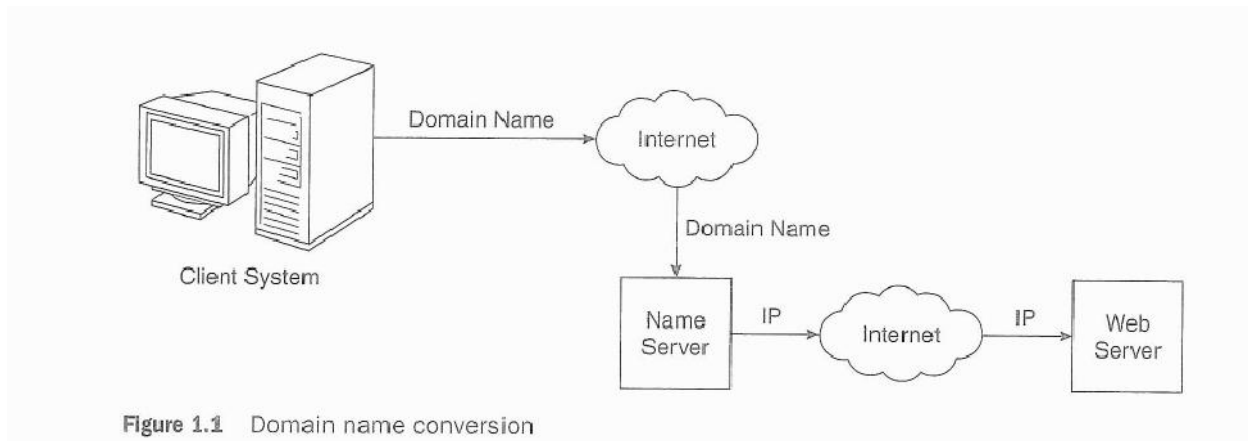**Any five differences 1M*5=5M**

Although JavaScript's name appears to connote a close relationship with Java, JavaScript and Java are actually very different. One important difference is support for object-oriented programming. Although JavaScript is sometimes said to be an object-oriented language, its object model is quite different from that of Java and C++, as you will see in Section 4.2. In fact, JavaScript does not support the object-oriented software development paradigm.

Java is a strongly typed language. Types are all known at compile time, and operand types are checked for compatibility. Variables in JavaScript need not be declared and are dynamically typed, making compile-time type checking impossible. One more important difference between Java and JavaScript is that objects in Java are static in the sense that their collection of data members and methods is fixed at compile time. JavaScript objects are dynamic—the number of data members and methods of an object can change during execution.

ii) With a neat diagram, explain the task of Domain Name System.**(5M)**
diagram - 3M

Figure 1.1 Domain name conversion

Explanation-2M

Q.6 i) Write an XHTML to describe nested ordered list of your favorite movies. Each Element of the movie entry must have nested actor names 5M

Each movie element 1M*5=5

 Sultan

Salman Khan

Anushka Sharma

3 Idiots

    Aamir khan

    Kareena Kapoor

ii) Explain all controls that can be created with <input> tag. Justify each with an example. **(5M)**
Five tags with example 1M*5=5
<input type="text" name="a" size="20"/>
<input type="submit" name="submit" value="Submit" />
<input type="reset" name="reset" value="Reset" />
<input type="radio" name="gender" value="male">
<input type="checkbox" name="vehicle" value="Bike">

Q.7 i) Describe the two ways an array object can be created. Explain the array methods with suitable example for each. **(5M)**
Any two methods with example 1m*2=2M

```
var my_list = new Array(1, 2, "three", "four");

 var your_list = new Array(100);

 var my_list_2 = [1, 2, "three", "four"];
```

Any three Array methods with example 1M*3=3M

```
   var names = new Array["Mary", "Murray",
                         "Murphy", "Max"];
   ...
   var name_string = names.join(" : ");
names.sort();
 var names = new Array["Mary", "Murray",
                        "Murphy", "Max"];
 ...
 var new_names = names.concat("Moo", "Meow");
```

```
var list = [2, 4, 6, 8, 10];
...
var list2 = list.slice(1, 3);
   var list = ["Dasher", "Dancer", "Donner", "Blitzen"];
   var deer = list.pop();       // deer is "Blitzen"
   list.push("Blitzen");
      // This puts "Blitzen" back on list
  var deer = list.shift();     // deer is now "Dasher"
  list.unshift("Dasher");
     // This puts "Dasher" back on list
```

Q.7 ii) Describe the two ways an array object can be created. Explain the array methods with suitable example for each. **(5M)**

ii)Explain the following tags with syntax and an example for each: **(5M)**
   a) <frameset>   b) <pre>   c) <sup>   d)<code>   e) <blockquote>
Each tag 1M*5=5M

a) <frameset cols="25%,*,25%">
 <frame src="frame_a.htm">
 <frame src="frame_b.htm">
 <frame src="frame_c.htm">
</frameset>

b) <pre>
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both   spaces and
line breaks
</pre>

c) <p>This text contains ^{superscript} text.</p>

output=

This text contains $^{\text{superscript}}$ text.

d) <code>A piece of computer code</code>

e) The <blockquote> tag specifies a section that is quoted from another source.

Browsers usually indent <blockquote> elements.

<blockquote cite="http://www.worldwildlife.org/who/index.html">
For 50 years, WWF has been protecting the future of nature. The world's leading conservation organization, WWF works in 100 countries and is supported by 1.2 million members in the United States and close to 5 million globally.
</blockquote>