

# WEB TECHNOLOGY INSEM. MAR-2020

## MODEL ANSWER PAPER.

Q.1 a) Write atleast any 5 difference bet XML & XSLT. 5-M.  
 Ans →

Sl No.	XML	Sl No.	XSLT
1.	XML stands for Extensible Markup language	1.	XSLT stands for Extensible Stylesheet Language. Transform
2.	XML is used for storing data in a structured format	2.	it is used for transforming & also formatting XML file.
3.	XML does not Perform transformation of data	3.	XSLT Perform transformation of one xml document into different xml document/HTML <sup>docu.</sup>
4.	XML document does not have format.	4.	XSLT adds formatting to xml document
5.	<?xml> tag used for xml prog.	5.	<XSL:stylesheet> tag. used for XSLT <sup>prog</sup>
6.	XML not used for Presentation purpose	6.	XSLT used for Presentation Purpose.
7.	Xpath is not used by XML	7.	Xpath is used by XSLT
8.	file save with .xml extension.	8.	file save with .xsl extension

Prepared By: Prof. Anand Ghary

Q.1 b) What is stylesheet? How do you create a multi colour text on web page using CSS? — 5 Marks

→

### \* Stylesheet :

Stylesheet is a simple design scripting language intended to simplify the process of making the web page attractive with high level formatting.

- CSS is used to manage the look and feel of web pages
- CSS is used to control the color of text, style of font, diff. background images and colour, layout etc.
- CSS is easy to understand
- CSS is integrated with markup lang like HTML or XHTML.
- CSS is nothing but declaration of stylesheet which can be repeatedly used.

### Advantages of CSS :

- 1) Saves time
- 2) Page load faster
- 3) Easy maintenance
- 4) Offline browsing
- 5) Platform independence.
- 6) Multiple device compatibility.

\*

- you need HTML as base. First of all, you should put your text in an HTML (h1) & give it class name "multicolor text"

```
<h1 class = "multicolortext"> Multicolor Text </h1>
```

- Now you need the CSS background color property which adds a gradient background to your text with help of linear gradient function, where you put name of color.

• multicolortext {

```
background-image : linear-gradient (to left, violet, indigo, blue, green, yellow, red);
```

```
-webkit-background-clip : text ;
```

```
-webkit-background-clip : text ;
```

```
-moz-background-clip : text ;
```

```
background-clip : text ;
```

```
color : transparent ;
```

```
}
```

Prepared By: Prof. Anand Ghosh

Create a multi-color text on a web page using CSS.

```
<html>
```

```
<head>
```

```
<title> CSS multicolor web page </title>
```

```
<style>
```

```
body.multicolortext {
```

```
background-image: linear-gradient(to left, violet, indigo, blue,  
green, yellow, orange, red);
```

```
-webkit-background-clip: text;
```

```
-ms-moz-background-clip: text;
```

```
background-clip: text;
```

```
color: transparent;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>
```

```
<span class="multicolortext"> Multicolor Text </span>
```

```
</h1>
```

```
</body>
```

```
</html>
```

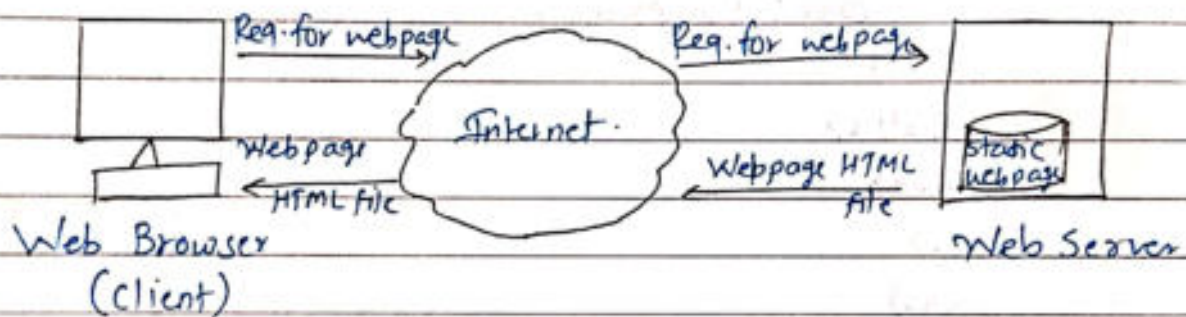
Prepared By: Prof. Anand Ghosh

Q.2 a) what is use of static & dynamic web page? 5-Mark

Enlist applications of static & dynamic web page?

→ \* Static Web Page :

- Static web pages are also known as flat web page.
- They are loaded on the client's browser as exactly they are stored on server (web server). Such web pages contain only static information.
- User can only read information but can't do modification.
- Static web pages are created using HTML.
- Static web pages are only used when info is no more required to be modified.



\* Dynamic Web Page :

- Dynamic web page show diff. info at different point of time.
- It is possible to change portion of a web page without loading the entire web page.
- It has been made possible using AJAX technology.
- Dynamic web page is created by using server side scripting.

\* Applications of static web page

- 1) creation of rich formatted email.
- 2) for Security Purpose.
- 3) to build website without Backend
- 4) to develop website using HTML code.
- 5) improve performance of end user
- 6) To develop Blogs.

\* Applications of Dynamic web page.

- 1) to build interactive web sites
- 2) to build website with backend
- 3) to develop website using CSS, PHP etc
- 4) used for server side scripting
- 5) E-commerce web sites.
- 6) Blogs (Dynamic Websites)
- 7) website that requires updation.
- 8) To access database.

Q.2 b) Describe any 3 HTML tags from foll. with simple example

→ i) head      iii) form      v) Marquee.      [5]-Mark.

ii) body      iv) table

→

1] head =

- head tags contains metadata (docu. title, Char set, links, styles, scripts), specific info about web page that is not displayed to user.

- head include <title>, <style>, <base>, <link>, <script> tags.

Syntax ÷

```
<head> - - - - - </head>
```

Example ÷

```
<head>
  <title> Welcome to PVG </title>
</head>
```

2] body =

- body tags defines the document body

- <body> tags contains all the content of HTML document, such as text, hyperlink, images, table, list etc.

Syntax ÷

```
<body> - - - - - </body>
```

Example ÷

```
<body>
  <h1> PVG COE NASHIK </h1>
  <a href = a.html > CLICK HERE </a>
</body>
```

3] Marquee ÷

- <marquee> tag defines a scrolling text area in HTML document that moves across page i.e. Horizontal/vertical direction.

Example ÷

```
<marquee> - Welcome to PVG </marquee>
```

Q. 2 b)

iv) form :-

- form tag is used to create an HTML form for user input.
- form element <form> can contain one/more foll. form element.  
<input>, <text area>, <button>, <label>, <select> etc.

Example :-

```
<form>
<label for = "fname" > FIRSTNAME:</label>
<input type = "text" id = "fname" name = "fname" > <br > <br >
<input type = "Submit" value = "Submit" >
</form>
```

v) table :-

- The <table> tag defines an HTML table.
- <table> tag consist of one/more <tr>, <th> & <td> element.
- The more complex table may include.  
<caption>, <col>, <thead>, <tbody>, <tfoot> etc.
- Table should not be used for page layout

Example :-

```
<table>
  <tr>
    <th> FIRST NAME </th>
    <th> LAST NAME </th>
  </tr>
  <tr>
    <td> ANAND </td>
    <td> GHARU </td>
  </tr>
</table>
```

Q.3 a) Explain with example how to access value of textbox of form using Javascript? 5-Marks.

```
→ <html>
  <head>
    <title> Access value of Textbox. </title>
  </head>

  <body>
    <input type="text" placeholder="Type something" id="myinput">
    <button type="button" onclick="getInputValue();" > Get Value </button>

    <script>
      function getInputValue() {
        var inputVal = document.getElementById("myinput").value;
        // displaying the value.
        alert(inputVal);
      }
    </script>
  </body>
</html>
```

Explanation :-

- In above example, you can see In body section. One input field is taken to accept input from user and one button element is defined i.e. Get value. to perform click event.
- To access value from input box using javascript, we need to write script code as function.
- Which is defined in script tag as function getInputValue();
- In that by using getElementById property, value is reading & storing in another variable.
- Finally, just display the alert to access value of textbox.

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Q.3 b) Write a Program of your choice to demonstrate the use of DOM. 5-Marks

```
<html>
  <head>
    <title> DOM </title>
    <script language = "Javascript">

      function cube()
      {
        var no = document.getElementById ("num").value;
        alert.(no * no * no);
      }
    </script>
  </head>

  <body>
    <font size = 6 >
    <form >
      Enter Number : <input type = "text" id = "num" name = "num" > <br > <br >
      <input type = "button" value = "Display Cube" onclick = "cube()" >
    </form >
  </body >
</html >
```

Output :-

Enter Number :

This page says
27
<input type="button" value="OK"/>

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Q.4 a) Explain the foll. document Object Properties with Proper Syntax & give one example.

i) document.getElementById()

-5-Mark

ii) document.getElementsByClassName()

iii) document.getElementsByTagName()

→

1) document.getElementById()

→ - This returns the element of specified id.

Syntax :-

document.getElementById("id");

By using above syntax, we can access the value of input textbox.

2) document.getElementsByClassName()

→ - This method returns a set of all the elements of the document with given class name, as a NodeList Object.

- The nodelist object issued to represent set of nodes.

- The nodes are accessed using index numbers which start from 0.

Syntax :-

document.getElementsByClassName("class");

3) document.getElementsByTagName()

→ - This method returns all the element of given name.

Syntax :-

document.getElementsByTagName("Name");

Example :- i) getElementById()

```
<html>  
<body>
```

```
<p id="pvg"> </p>
```

```
<script>
```

```
document.getElementById("pvg").innerHTML = "Welcome";
```

```
</script>
```

```
</body>
```

```
</html>
```

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Q.4 a) ii) Example of getElementByClass()

→ <html>

<body>

<p> Welcome to pvg </p>

<p class="intro"> The DOM is very useful </p>

<p class="intro"> This example shows the

<b> getElementByClassName </b> method </p>

<p id="demo"> </p>

<script>

var x = document.getElementsByClassName("intro");

document.getElementById("demo").innerHTML =

The first Paragraph (index 0) with class="intro": ' + x[0].innerHTML;

</script>

</body>

</html>

ii) Example of getElementByName()

→ <html>

<body>

<p> Welcome to pvg </p>

<p> The DOM is very useful </p>

<p> This example shows the

<b> getElementByName </b> method </p>

<p id="demo">

<script>

var x = document.getElementsByTagName("p");

document.getElementById("demo").innerHTML =

The first Paragraph (index 0) is: ' + x[0].innerHTML;

</script>

</body>

</html>

Q.4 b) Explain how to call Javascript from HTML Page?

write a prog. to validate atleast one textfield for empty value

→ + How to call Javascript from HTML = 5-marks

- The code inside a javascript function will executes when something invokes it.

- First of all create myfile.js file as javascript fu<sup>n</sup>.

```
function msg()
{
    alert("welcome to PVG");
}
```

} External file

- Then create simple HTML file, and just call javascript file within HTML code using OnClick () parameter.

Example :-

```
<html>
<head>
<script language="Javascript" src="myfile.js">
</script>
</head>
<body>
<p> Welcome to PVG </p>
<form>
<input type="button" value="Click Here"
        OnClick="msg()" >
</form>
</body>
</html>
```

Q.4 b) Write a prog. to validate atleast one textfield for Empty value  
→ <html>

<head>

<title> FORM VALIDATION </title>

<script type = "text/javascript">

function validate ()

{

if (document.myform.Name.value = "")

{

Alert (" Please provide your name");

document.myform.Name.focus();

return false;

}

return (true);

}

</script>

</head>

<body>

<form action = "/cgi-bin/test.cgi" name = "myform" Onsubmit = "return  
(validate());">

<table cellspacing = "2" cellpadding = "2" border = "1">

<tr>

<td align = "right"> Name </td>

<td><input type = "text" name = "Name"> </td>

</tr>

<tr>

<td align = "right"> </td>

<td><input type = "submit" value = "Submit"> </td>

</tr>

</table>

</form>

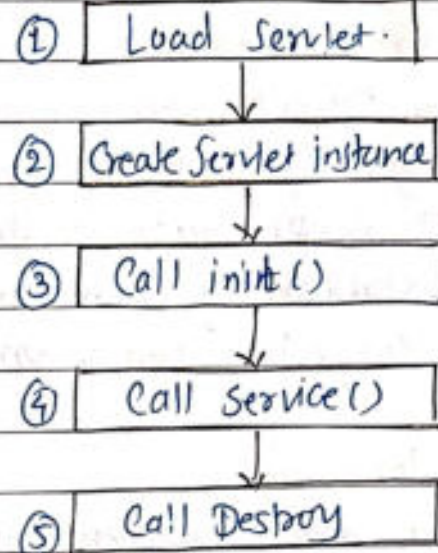
</body>

</html>

Q.5 a) Explain Lifecycle of Servlet. Write simple Servlet to Print "Hello, Good Day". 5-Marks

→

- 1) Load servlets load its class definition & Tomcat apache server get started.
- 2) after that, it create instance of Servlet to handles all client request.
- 3) call init() initialize the Servlet class using init() methods.
- 4) call service() method has 2 parameters ServletRequest & ServletResponse to provide service to client.
- 5) call destroy() used to destroy all classes & object which are initialized by init() methods.



```
import java.io.*;           → packages
import java.servlet.*;
public class abc extends GenericServlet → inherited from GenericServlet
{
    public void service (ServletRequest Req, ServletResponse Res)
        throws ServletException, IOException {
        Res.setContentType("text/html");
        PrintWriter out = Res.getWriter(); → Object to use HTML tag & print message.
        Out.println (" <html>");
        Out.println (" <head>");
        Out.println (" <title> " + Servlet + "</title>");
        Out.println (" </head>");
        Out.println (" <body>");
        Out.println (" <font color = red>");
        Out.println (" Hello, Good Day"); // Display message.
        Out.println (" </font>");
        Out.println (" </body>");
        Out.println (" </html>");
        Out.close();
    }
}
```

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Q.5 b) Explain any 2 from foll. JDBC API Component 5-Mark

1) DriverManager 3) Connection 5) ResultSet

2) SQLException 4) Statement

→ 1) DriverManager :-

- The DriverManager class is the traditional management layer of JDBC, working bet<sup>w</sup> users & Drivers.

- It keeps track of driver that are available & handles establishing connection bet<sup>w</sup> database & appropriate driver.

e.g. Connection con = DriverManager.getConnection(" ", " ", " ");

2) Connection :-

- The JDBC connection class java.sql.Connection, represent a database connection to a relational database.

- Before you can read/write data from & to a database via JDBC, you need to open connection to databases.

- Connection object control the connection to a database.

3) SQLException :-

- An SQL exception can occur both in the driver & the databases. When such exception occurs, an object of type SQLException will be passed to the catch clause.

- SQLException object has foll. methods

1) getErrorCode() 2) getMessage() 3) getSQLState() etc

4) Statement :-

- The statement interface provides methods to execute query with database

- The statement interface is a factory of ResultSet

it provides factory method to get object of ResultSet.

5) ResultSet :-

The object of ResultSet maintain a cursor pointing to a row of table. Initially, cursor points to before the row.

By default, ResultSet Object can be moved forward only and it is not updatable.

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Q6 a) Draw & Discuss MVC architecture in details 5-Marks

→ \* Model View Controller (MVC) :

- MVC stands for Model View Controller and it's SW architecture design.
- The main goal of this architecture is to separate functionality, logic and the interfaces of an application to promote organized programming.
- It allows multiple developers to work on the same project.
- It is used for Desktop Graphical User Interface, this pattern has become popular for designing web application.
- Swift is MVC framework that are used for web & mobile appli.

1) Model :

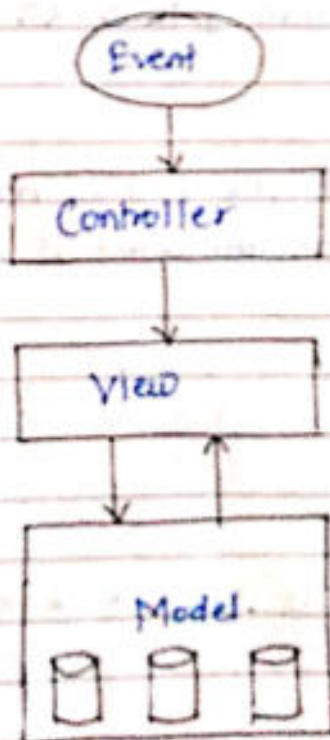
The lowest level of the pattern which is responsible for maintaining data.

2) View :

This is responsible for displaying all or portion of data to user.

3) Controller :

Software code that controls the interaction between model & view.



Model View Controller.

Q.6 b) Write a JSP Program to demonstrate any two Component from (Page directive, scriptlet, Expression and Comment)

→ <html>

<head>

<title> Scriptlet, Comment, Expression </title>

<%!

scriptlet { private int n=1;  
%;

</head>

<body>

<font size = 6>

<%

while (n <= 10)  
{

out.println("<br> Welcome to PVG");  
n++;

}

%>

expression { <br> Now the value of n is <%= n %>  
</font>

comment { <h2> Welcome to the PVGCOE NASIK </h2>

<%-- This is comment, which is invisible in the page --%>

</body>

</html>

\*\*\*\*\* THE END \*\*\*\*\*