

CS8651 - INTERNET PROGRAMMING**Unit- I****Part - A****1. What is web 2.0?**

A Web 2.0 site may allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to Web sites where people are limited to the passive viewing of content. Examples of Web 2.0 include social networking sites, blogs, wikis, folksonomies, video sharing sites, hosted services, Web applications, and mashups.

2. Define RIA.

A rich Internet application (RIA) is a Web application designed to deliver the same features and functions normally associated with desktop applications. RIAs generally split the processing across the Internet/network divide by locating the user interface and related activity and capability on the client side, and the data manipulation and operation on the application server side.

3. Define collaboration.

Collaboration is a process defined by the recursive interaction of knowledge and mutual learning between two or more people who are working together, in an intellectual endeavour, toward a common goal which is typically creative in nature.

4. What are the collaborative processes.

- Team Creation
- Idea Generation
- Decision-Making
- Work or Production
- Evaluation or Recap

5. Define Web services.

A *Web service* is a method of communication between two electronic devices over a network. It is a software function provided at a network address over the Web with the service *always on* as in the concept of utility computing.

6. Define Website.

A website is hosted on at least one web server, accessible via a network such as the Internet or a private local area network through an Internet address known as a uniform resource locator (URL). All publicly accessible websites collectively constitute the World Wide Web

7. Differences between web sites and web server.**Website:**

A website is a set of linked documents associated with a particular person, organization or topic that is held on a computer system and can be accessed as part of the world wide web. (Not to be confused with: Web page, a document on the world wide web written in HTML and displayed in a web browser.)

Web server:

The web server on the other side is a computer program, which delivers content, such as websites or web pages, for example, over the world wide web from a web server to your computer.

11. Define internet.

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to link several billion devices worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies.

12. Differentiate between internet and intranet.

- Internet is general to PCs all over the world whereas Intranet is specific to few PCs.
- Internet has wider access and provides a better access to websites to large population whereas Intranet is restricted.
- Internet is not as safe as Intranet as Intranet can be safely privatized as per the need.

13. Define HTML.

HTML is a simple web page description language, which enables document creation for the web. HTML is the set of mark-up symbols or codes placed in a file intended for display on the web browser page. These mark-up symbol and codes identify structural elements such as paragraphs, heading, and lists. HTML can be used to place media (such as graphics, video, and audio) on the Web page and describe fill-in-forms. A method is an implementation of an objects behavior.

14. Explain about HTTP Connection.

It is a communication channel between web browser and web server. It begins on the client side with the browser sending a request to the web server for a document. Request Header Fields are

1. From
2. Reference
3. If_modified_since process and the by clicking on the message log hyperlink in the actions area.
4. Pragma
5. User Agent

15. Define cascading.

Cascading refers to a certain set of rules that browsers use, in cascading order, to determine how to use the style information. Such a set of rules is useful in the event of conflicting style information because the rules would give the browser a way to determine which style is given precedence.

16. State the use of web server logs and list the contents of a message log. (APR/MAY 2011)

A server log is a log file (or several files) automatically created and maintained by a server of activity performed by it. A typical example is a web server log which maintains a history of page requests. The W3C maintains a standard format (the Common Log Format) for web server log files, but other proprietary formats exist.

The message log is used by a number of processes to provide debugging and troubleshooting information. You can view the message log from the process monitor

after clicking on the details hyperlink for a process and the by clicking on the message log hyperlink in the actions area.

18. How will you create a password field in a HTML form? (NOV/DEC 2011)

```
<input type="password" name="pwd" size="15">
```

19. List any four common browsers. (NOV/DEC 2011)

- Google Chrome
- Netscape Navigator
- Microsoft Internet Explorer
- Mozilla

20. State the uses of internet protocol. (APR/MAY 2012)

- IP function: transfer data from source device to destination device
- IP source software creates a packet representing the data
- Header: source and destination IP addresses, length of data, etc.
- Data: Data itself

21. Define Tags. What are the two different types of tags?

Tags signal the browser to inform about the formatting details.ie how the content should be displayed in the browser screen. Tags are enclosed between "<" and ">"

Standalone tag only start tag is present and no end tag. Example
 and container tag have start and end tag will be present .Example <html>.... </html>

22. What are the rules to define a tag?

Attributes should be placed inside start tag, appears as Name-value pairs separated by blank spaces, Attributes should have only one value, values should be enclosed within either single (') or double (") quotes.

23. Differentiate between standalone and container tag.

S.no	Standalone	Container
1	Only start tag is present and no end tag.	Both start and end tag will be present
2	Can have only attributes and no parameters	Can have both attributes and parameters.
3	Example: 	Example:<html>....</html>

24. What is the use of <pre> tag in HTML?

The pre tag can be used to preserve the white spaces and lines in the text.

25. What is cellpadding and cell spacing attributes?

The cellpadding allows to have some space between the contents of each cell and its borders. The distance between each cell is called cell spacing.

26. What is the need of using form in HTML?

Form is a typical layout on the web page by which user can interact with the web page. The components that can be placed on the form are text box, check box, radio buttons, and push buttons and so on. Thus form is typically used to create an interactive Graphical User Interface.

27. What is the purpose of using frames in HTML?

The HTML frames allows the web designer to present the web document in multiple views. Using multiple views one can keep the formation visible and at the same time other views can be scrolled or replaced.

- 28. What is the need for special character in HTML?**
There are some symbols that cannot be used directly in HTML document. For example <(less than) because this symbol is also used along with the tag. Hence this is called a special symbol and can be denoted with the help of entity reference.
- 29. State how an unrecognized element or attribute treated by the HTML document?**
If any unrecognized element or attribute is written then the HTML document simply displays the contents. For example <title>testing</title> will display the string “testing” on the web page. It will not display it as a title of the web page.
- 30. What is the use of hyperlink tag in HTML?**
The hyperlink tag is used to link logically with other page. Using this tag a web link can be specified. The <a> tag is used to specify the hyperlink in HTML.
- 31. What are the uses of hyperlink in HTML?**
To logically link one page with another, use of link to enhance readability of the web document, the navigation from one page to another is possible.
- 32. What is BODY in HTML document?**
The effects which we want in the window are mentioned with the help of tags in the body. It is the place where the actual data is written in html. All the changes can be viewed by changing the tags content in the body whereas the head part is the introduction part and the body is the actual content part.<BODY>data content</BODY>
- 33. What is an image map?**
An image map allows you to link to several web pages through one image. Simply define shapes within images and link these to the pages you want. Here’s a video to help you learn more about images and links in HTML.
- 34. What are style sheets?**
The style sheets are the collection of styles that can be either embedded within the HTML documents or can be externally applied. The Cascading style sheet is a markup language used to apply the styles to HTML elements.
- 35. What is selector string? Specify any three forms of selectors.**
The rule set in CSS consists of selector string which is basically an HTML element. These selectors can be defined with the help of properties and values.
- 36. What is the use of Universal Selector?**
Using the universal selector the values can be defined for all the elements in the document. It is denoted by *.
- 37. What is generic class selector?**
The generic class applied to any tag in the HTML document. And thus the values defined within that generic selector can be applied to the corresponding tag. The class selector must be preceded by the dot operator.
- 38. What are the advantages of External style sheet?**
When we use external style sheet then the style is defined in one file and actual contents of the web are defined in another file. Hence if we want to change the

style of presentation of web page then we can simply modify the file in which the style is defined.

39. What is the difference the external style sheet and embedded style sheet?

The external style sheet is a kind of style sheet in which the styles are defined in a separate.css file and this file is mentioned at the beginning of the HTML document. When we need to apply the particular style to more than one web documents then the external style sheet is used. The embedded style sheet is a method in which the style is specified within the HTML document itself. It is not defined in separate file. Due to embedded style sheet unique style can be applied to all the elements.

40. What do you mean by the term inline element?

The inline elements are those elements that do not form new blocks of content. The content is distributed in lines.

41. What are the various style sheets?

Inline, external, imported and embedded are the different types of style sheets.

42. Explain inline, embedded and external style sheets. Inline

If only a small piece of code has to be styled then inline style sheets can be used.

Embedded

Embedded style sheets are put between the <head></head> tags.

External

If you want to apply a style to all the pages within your website by changing just one **style sheet, then external style sheets can be used.**

43. Give example for inline style sheet. (APR/MAY 2013)

```
<h2>InLINE CSS</h2>
```

```
<p style="color:sienna;margin-left:20px">
```

```
The style ATTRIBUTE we are able to modify the appearance of HTML elements </p>
```

44. How will you embed the external style sheet? (May 2014)

In external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an entire Web site by changing just one file.Each page must include a link to the style sheet with the <link> tag. The <link> tag goes inside the head section:

```
<head>
```

```
<link rel="stylesheet" type="text/css"
```

```
href="mystyle.css"> </head>
```

An external style sheet can be written in any text editor. The file should not contain any html tags. The style sheet file must be saved with a .css extension.

An example of a style sheet file is shown below: "**myStyle.css**":

```
body {
```

```
background
```

```
-color:
```

```
lightblue;} h1
```

```
{
```

```
color: navy;
```

```
margin-left: 20px;}
```

45. How will you include CSS in a web site? (MAY/JUNE 2014) Inline

Inline styles are when you just insert the type of style you want inside another tag, using the style attribute. This is usually the least useful way to use CSS.

```
<p style="width:100%; color:#660099; text-align:right; background-color:#ffcc00;" >
```

Embedded

Styles can also be placed in the document using the <style> tag. The <style> tag is usually placed in the head section of the document, where it will apply to the whole document.

```
<style><!--
    p { color:#009900;
        font-family:"comic
        sans ms",sans-serif; }
    h1 { color:#660000;
        font-size:12pt; }
</style>
```

External styles

Styles can also be set in an external style sheet which is linked to the page with a <link> tag. For example the style sheet for this site is included like this:

```
<link rel="stylesheet" type="text/css" href="class.css" />
```

46. What is the purpose of CSS Box Model and mention its parts also.

The CSS box model is essentially a box that wraps around HTML elements, and it consists of: margins, borders, padding, and the actual content.

The different parts are:

- Margin
- Border
- Padding
- Content

Part-B

1. Explain WWW and HTTP Protocol.
2. Discuss the structure of the HTTP request message. (NOV/DEC 2012)
3. Discuss the structure of the HTTP response message.[8] (NOV/DEC 2012)
4. Explain HTML elements in detail also State the types of lists supported by HTML and explain them in detail. (APR/MAY 2011)
5. Discuss the various features available in HTML to format the text with example.
6. i) Explain how tables can be inserted into HTML document with example.
ii) What is the significance of using forms on the web page?
7. Discuss how to create list and frame using HTML. Give Example.
8. Explain the capabilities of Web Server (APR/MAY 2013)
9. Explain about the XHTML DTD with an Example.

10. Explain the significance of XHTML with the help of a real time application. Write necessary code snippets (MAY/JUNE 2014)
11. Explain about Style Rule Cascading and Inheritance
12. Explain any eight CSS text properties.
13. Explain about the various style sheets with examples. (Internal,External,Inline) (APR/MAY 2013)
14. Difference between web browser and web server
15. Difference between internet and intranet.
16. Building Advanced Web 2.0 Applications.

Unit 2 & Unit 3

Part – A

1. **What is JavaScript?**
JavaScript is a platform-independent, event-driven, interpreted client-side scripting language developed by Netscape Communications Corp. and Sun Microsystems.
2. **What are the primitive data types in javascript?**
JavaScript supports five primitive data types: number, string, Boolean, undefined, and null. These types are referred to as primitive types because they are the basic building blocks from which more complex types can be built. Of the five, only number, string, and Boolean are real data types in the sense of actually storing data. Undefined and null are types that arise under special circumstances.
3. **What are the Escape Codes Supported in JavaScript?**
The Escape codes supported in javascript are \b Backspace, \t Tab (horizontal), \n Linefeed (newline), \v Tab (vertical), \f Form feed, \r Carriage return, \" Double quote, \' Single quote, \\ Backslash.
4. **What is JavaScript name spacing? How and where is it used?**
Using global variables in JavaScript is evil and a bad practice. That being said, namespacing is used to bundle up all your functionality using a unique name. In JavaScript, a namespace is really just an object that you've attached all further methods, properties and objects. It promotes modularity and code reuse in the application.
5. **How many looping structures can you find in javascript?**
If you are a programmer, you know the use of loops. It is used to run a piece of code multiple times according to some particular condition. Javascript being a popular scripting language supports the following loops for, while, do-while loop
6. **Mention the various Java Script Object Models.**
Math Object, String Object, Date Object, Boolean and Number Object, Document Object Window Object.
7. **How Scripting Language Is Differs from HTML?**
HTML is used for simple web page design, HTML with FORM is used for both form design and Reading input values from user, Scripting Language is used for Validating the given input values whether it is correct or not, if the input value is incorrect, the user can pass an error message to the user, Using form concept various controls like

Text box, Radio Button, Command Button, Text Area control and List box can be created.

8. What are the different types of objects in JavaScript?

Type	Example	Implementation Provided By	Governing Standard
User-defined	Programmer defined Customer or Circle	Programmer	None
Built-in	Array, Math	The browser via engine its JavaScript	ECMA-262
Browser	Window, Navigator	The browser	None (though some portions adhere to an adhoc standard)
Document	Image, HTMLInputElement	The browser via its DOM engine	W3C DOM

9. Justify “JavaScript” is an event-driven programming”

Javascript supports event driven programming. when user clicks the mouse or hit the keys on the keyboard or if user submits the form then these events and response to them can be handled using javascript. Hence javascript

is mainly used in web programming for validating the data provided by the user.

10. What is the use of pop up boxes in java script?

There are three types of popup boxes used in javascript. Using these popup boxes the user can interact with the web application.

11. What is DOM?

Document Object Model (DOM) is a set of platform independent and language neutral application interface (API) which describes how to access and manipulate the information stored in XML, XHTML and javascript documents.

12. Enlist any four mouse events.

The MouseEvent are-mousedown, mouseup, mouseover, mousemove, mouseout.

13. List ad various level of document object modeling. Various levels of DOM are DOM0, Dom1, Dom2, and Dom3

14. What are they validation properties and methods?

Validation properties and methods are checkvalidity (), validaionMessage, customerror, patternMismatch, rangeOverflow, rangeUnderflow, tooLong.

15. Define event bubbling.

Suppose, there is an element present inside another element. Then during the event handling, if the event which is present in the inner element is handled and then the event of the outer element is handled. This process of event handling is called event bubbling

16. How to create arrays in Javascript?

We can declare an array like this
 Var scripts = new Array(); We can add elements to this array like this
 scripts[0] = "PHP";
 scripts[1] = "ASP";
 scripts[2] = "JavaScript";
 scripts[3] = "HTML";

Now our array scrips has 4 elements inside it and we can print or access them by using their index number. Note that index number starts from 0. To get the third element of the array we have to use the index number 2. Here is the way to get the third element of an array. document. write (scripts[2]); We also can create an array like this var no_array = new Array(21, 22, 23, 24, 25);

17. Write a simple program in JavaScript to validate the email-id.

```
<!DOCTYPE html>
<html>
<head>
<script>
function validateForm() {
var x = document.forms["myForm"]["email"].value;
var atpos = x.indexOf("@");
var dotpos = x.lastIndexOf(".");
if (atpos<1 || dotpos<atpos+2 ||
dotpos+2>=x.length)
{ alert("Not a valid e-mail
address");
return false;}}
</script> </head>
<body>
<form name="myForm" action="demo_form.asp" onsubmit="return
validateForm();" method="post"> Email: <input type="text"
name="email">
<input
type="submit"
value="Submit">
</form>
</body>
</html>
```

18. Write short notes on JDBC.

JDBC standard is intended for people developing industrial-strength database applications. JDBC makes java effective for developing enterprise information system. java.sql is the JDBC package that contains classes & interfaces that enable a java program to interact with a database.

19. Write short notes on JDBC drivers.

A JDBC driver is basically an implementation of the function calls specified in the JDBC API for a particular vendor's RDBMS. Hence, a java program with JDBC function calls can access any RDBMS that has a JDBC driver available. A driver manager is used to keep track of all the installed drivers on the system. The operations of driver manager are getDriver, registerDriver, deregisterDriver.

20. What are the advantages of servlet over CGI?

- ▲ Performance is significantly better, servlet execute within the address space of a web server.
- ▲ Servlets are platform independent
- ▲ The java security manager on the server enforces a set of restrictions to protect the resources on a server machine.

- ▲ The full functionality of java class libraries is available to a servlet.

21. Write down the methods of servlet interface

void destroy() –called when the servlet is unloaded.

ServletConfig getServletConfig() –returns a ServletConfig object that contains any initialization parameters.

String getServletInfo() – returns a string describing the servlet.

void init(ServletConfig sc) throws ServletException –called when the servlet is initialized .

Initialization parameters for servlet can be obtained from sc. An unavailable exception should be thrown if the servlet is not initialized.

Void Service(ServletRequest req,ServletResponse res) throws ServletException, IOException- Called to process a request from a client. The request from the client can be read from req. response to the client can be written to res. An exception is generated if a servlet or IO problem occurs.

22. What is the difference between CGI and servlets?

- ▲ Performance is significantly better, servlet execute within the address space of a web server.
- ▲ Servlets are platform independent
- ▲ The java security manager on the server enforces a set of restrictions to protect the resources on a server machine.
- ▲ The full functionality of java class libraries is available to a servlet.

23. Define Servlet Life Cycle?

- ▲ **init()** method - invoked when the servlet is first loaded into memory
- ▲ **service()** - called for each HTTP request (for processing)
- ▲ **destroy()** - unloads the servlet from its memory.

24. What is JSP?

JavaServer Pages (JSP) is a technology for developing web pages that support dynamic content which helps developers insert java code in HTML pages by making use of special JSP tags, most of which start with <% and end with %>.

25. What are advantages of using JSP?

- Performance is significantly better because JSP allows embedding Dynamic Elements in HTML Pages itself.
- JSP are always compiled before it's processed by the server unlike CGI/Perl which requires the server to load an interpreter and the target script each time the page is requested.


26. Explain lifecycle of a JSP.


- Compilation
- Initialization
- Execution
- Cleanup

26. What are the types of directive tags?

The types directive tags are as follows:

■ **<%@ page ... %>** : Defines page-dependent attributes, such as scripting language, error page, and buffering requirements.

 `<%@ include ... %>` : Includes a file during the translation phase.

 `<%@ taglib ... %>` : Declares a tag library, containing custom actions, used in the page.

27. What are JSP actions?

JSP actions use constructs in XML syntax to control the behavior of the servlet engine. You can dynamically insert a file, reuse JavaBeans components, forward the user to another page, or generate HTML for the Java plugin.

Part - B

1. How to write function using Java Script? Give Example.
2. Explain sub classes and super classes in Javascript.
3. Discuss Javascript objects in detail with suitable examples. (NOV/DEC 2012, MAY/JUNE 2014)
4. Discuss about Javascript debugging. Explain how local and global functions can be written using java script (MAY/JUNE 2012)
5. Explain the way in which java script handles arrays with example. (MAY/JUNE 2012)
6.
 - i) Write a Java script to find the factorial of the given number.
 - ii) Write a Java script to find the prime number between 1 and 100.
7. Write a servlet program which displays the different content each time the user visits the page
8. Write a Java script program to create Popup box, alert and confirm box.
9. Write a Java script program to print the numbers from 0 to 50. b. Write a Java Script program to create table.
10. Write a Java script program to create user registration form.
11.
 - i) Explain any two validation function in java script.(4)
 - ii) Write a script to demonstrate the use of Date object.(6)
 - iii) Write a java script program to generate Fibonacci series using do while loop.(6)
12.
 - i) Explain JavaScript & document object model (DOM) with example.(8)
 - ii) Explain in details the JDBC CONNECTIVITY with example program.(8)
13. Explain the JDBC database access in detail. Write a java servlet to conduct online examination. (APR/MAY 2013)
14. What is a servlet? Explain briefly the Servlet life cycle and Servlet HTTP package?
15. List out the classes and interfaces available in javax.servlet.http package?
16. Write short notes on the following servlet classes
17. Write a servlet program which displays the different image each time the user visits the page and the images are links

18. Explain in detail about Servlet Database Connectivity with an example of Student database.
19. Explain in detail about JSP with an example of current date and simple message.
20. Discuss in detail about Action elements in JSP with an example of display current time and color.
21. Explain about JSP object in detail.

Unit – IV
Part - A

1. What is PHP?

PHP - Hypertext Preprocessor -one of the most popular server-side scripting languages for creating dynamic Web pages.

- an open-source technology
- platform independent

2. List the data types used in PHP.

Data types	Description
Integer	Whole numbers (i.e., numbers without a decimal point)
Double	Real numbers (i.e., numbers containing a decimal point)
String	Text enclosed in either single (") or double (") quotes.
Boolean	True or false
Array	Group of elements of the same type
Object	Group of associated data and methods
Resource	An external data source

3. How type conversion is done in PHP?

In PHP, data-type conversion can be performed by passing the data type as an argument to function settype. Function settype takes two arguments: The variable whose data type is to be changed and the variable 's new data type.

E.g., settype(\$testString, "double");

4. Write the uses of text manipulation with regular expression in PHP.

- PHP processes text data easily and efficiently, enabling straightforward searching, substitution, extraction and concatenation of strings.
- Text manipulation in PHP is usually done with regular expressions — a series of characters that serve as pattern-matching templates (or search criteria) in strings, text files and databases.
- This feature allows complex searching and string processing to be performed using relatively simple expressions

5. List the important characteristics of PHP.

- PHP is web-specific and open source
- Scripts are embedded into static HTML files
- Fast execution of scripts

- Fast access to the database tier of applications
- Supported by most web servers and operating systems
- Supports many standard network protocols libraries available for IMAP, NNTP, SMTP, POP3
- Supports many database management systems libraries available for UNIX DBM, MySQL, Oracle,
- Dynamic Output any text, HTML XHTML and any other XML file.
- Also Dynamic Output images, PDF files and even Flash movies
- Text processing features, from the POSIX Extended or Perl regular expressions to parsing XML documents.
- A fully featured programming language suitable for complex systems development

6. How to Include PHP in a Web Page?

There are 4 ways of including PHP in a web page

1. `<?php echo("Hello world"); ?>`
2. `<script language = "php"> echo("Hello world"); </script>`
3. `<? echo("Hello world"); ?>`
4. `<% echo("Hello world"); %>`

we can also use print instead of echo

- Method (1) is clear and unambiguous
- Method (2) is useful in environments supporting mixed scripting languages in the same HTML file

Methods (3) and (4) depend on the server configuration

7. Write a simple PHP Script.

Here is PHP script which is embedded in HTML using level one header with the PHP output text. The name of this file is called hello.php.

```
<html>
<head>
<title>Hello
world</
title>
</head>
<body>
<h1><?php echo("Hello world"); ?></h1>
<h1><?php print("This prints the
same thing!");?></h1> </body>
</html>
```

8. How do you include comments in PHP?

PHP supports three types of comments:

1. Shell style comments - denoted `#THIS IS A COMMENT`
2. C++ style comments - denoted `THIS IS A COMMENT—`
3. C style comments - denoted `/* ALL THIS COMMENTED! */`

9. What are variables in PHP?

Variables start with the \$ symbol. E.g.:

```
$myInteger = 3;
$myString
= "Hello
world";
$myFloat
= 3.145;
```

10. How do you declare a variable using PHP data types?

Data types are not explicitly defined:

- Variable type is determined by assignment
- Strings can be defined with single (') and double (") quotes.
- PHP has a Boolean type:

Defined as false

- An integer or float value of 0 or
- The keyword false
- The empty string "" or the string "0"
- An empty array or object
- The NULL value

Defined as true

- Any non-zero integer or float value
- The keyword true

- Standard operators with standard syntax applied to variables

How do you declare and initialize an array in PHP

Two ways of declaring and initializing an array:

a) Individual element initialization in an array

```
$myArray[0]= "Apples";
$myArray[1]= "Bananas";
```

b) Arrays can be constructed using the array() keyword

```
$person =
array("Dave", "Adam", "Ralph");
```

12. What are associative arrays in PHP?

```
$myArray["Monday"]= "Apples";
$myArray["Tuesday"]= "Bananas";
```

Associative Arrays can also be constructed using the array() keyword.

```
$food =
array("Monday"=>"Apples","Tuesday"=>
"Bananas");
```

The symbol => delimits the hash name from the hash value.

13. What is the scope of variables in PHP?

Once PHP variables have been defined they are known for the rest of the Web page:

- Obeying standard scoping rules of course.
- Variables can be local to functions etc, much like any languages.

14. List some built in functions in PHP.

Mathematical functions:- abs, ceil, cos, log, min, rand, sqrt

File handling:- fopen, flock, feof, fgets, fputs, fclose

15. List the PHP standard Flow controls statements

if,
if/else
switch
while
for

**16. \$a=3;
Function what()**

```
{
++$a;
echo "a=$a\n";
}
what();
echo "a=$a\n";
```

What is the output?

1 3

17. List the functions to create a pattern.

Preg_match,
Preg_matchall,
Preg_replace,
Preg_split

18. Write a PHP script to set the background colour to blue on Tuesday in a given date. <?php

```
if(date("D") ==
"Tue") $colour =
"blue"; else $colour =
"red";
```

```
?>
```

```
<html>
```

```
<head>
```

```
<title>Welcome</title>
```

```
</head>
```

```
<body bgcolor = <?php echo($colour) ?>>
```

```
<h1>Welcome</h1>
```

```
</body>
```

```
</html>
```

19. What is cookie? Give example in PHP

A cookie is a text string stored on the client machine by your script (to track users and manage transactions). Cookies are automatically returned (by the client), and can be accessed using a variable of the same name

- The following script reads and displays a cookie, and sets it with a new value (string) that was passed to the script as a parameter.
- The cookie will expire after 20 minutes (1200 seconds)

```
<?php setCookie("CookieTest", $val, time()+1200); ?>
<html>
<head><title>Welcome</title></head>
<body>
<?php echo("<h2>The cookie is: $CookieTest</h1>";
</body>
</html>
```

20. What is XML ?

Extensible markup language. It offer a standard, flexible and inherently extensible data format, XML significantly reduces the burden of deploying the many technologies needed to ensure the success of Web services.

21. Define XML attributes

- XML elements can have attributes in the start tag, just like HTML.
- Attributes are used to provide additional information about elements.
- Attributes cannot contain multiple values (child elements can)
- Attributes are not easily expandable (for future changes)

22. Write the main difference between XML and HTML.

Main Difference between XML and HTML

XML was designed to carry data.

XML is not a replacement for HTML.

XML and HTML were designed with different goals:

XML was designed to describe data and to focus on what data is.

HTML was designed to display data and to focus on how data looks.

HTML is about displaying information, while XML is about describing information

23. What is meant by a XML namespace? (APR/MAY 2011)

XML Namespaces provide a method to avoid element name conflicts. When using prefixes in XML, a so-called **namespace** for the prefix must be defined. The namespace is defined by the **xmlns attribute** in the start tag of an element. The namespace declaration has the following syntax. **xmlns:prefix="URI"**.

```
<root><h:table
xmlns:h="http://www.w3.org/TR/html
4/"> <h:tr>
<h:td>Apples</h:td>
<h:td>Bananas</h:td>
</h:tr></h:table>
<f:table
xmlns:f="http://www.w3schools.com/
furniture"> <f:name>African Coffee
Table</f:name>
<f:width>80</f:width>
<f:length>120</f:length></f:table></root>
```


24. What is XML namespace? (NOV/DEC 2012)

XML allows document authors to create custom elements.

- This extensibility can result in naming collisions (i.e. different elements that have the same name) among elements in an XML document.

An XML namespace is a collection of element and attribute names. Each namespace has a unique name that provides a means for document authors to unambiguously refer to elements with the same name (i.e. prevent collisions).

25. What is the purpose of namespace? (MAY/JUNE 2014)

XML Namespaces provide a method to avoid element name conflicts. In XML, element names are defined by the developer. This often results in a conflict when trying to mix XML documents from different XML applications.

26. Compare DOM and SAX in XML processing. (MAY/JUNE 2013)

DOM	SAX
DOM is an interface-oriented Application Programming Interface.	SAX parser works incrementally and generates events that are passed to the application.
It allows for navigation of the entire document.	DOM parser reads the whole XML document and returns a DOM tree representation of xml document.
DOM allows you to read and write.	SAX is essentially an API for reading XML

27. What are complex types?

complex types are an important aspects of xml schema that allow application developers to define application-specific data types that can be checked by programs that check XML document for validity. XML schema divides complex types into two categories: those with *simple content* & those with *complex content*.

28. What are all the Transformation techniques?

- XSLT - it is an XML- based languages used to transform XML documents into others format such as HTML for web display.
- XLINK - highlighting that element or taking the user directly to that point in the document.
- XPATH - xpath gets its name from its use of a payh notation to navigate through the hierarchical tree structure of an XML document
- XQUERY - it is W3C initiative to define a standard set of constructs for querying & searching XML document.

29. What is XSLT?

- XSLT stands for XSL Transformations
- XSLT is the most important part of XSL
- XSLT transforms an XML document into another XML document
- XSLT uses XPath to navigate in XML documents

XSLT is a W3C Recommendation

30. Define the term DTD.

A Document Type Definition (DTD) defines the legal building blocks of an XML document. It defines the document structure with a list of legal elements and attributes.

31. List two types of DTD declaration

DTD stands for Document Type Definition which is used to structure the XML document. The type of DTD are as follows i) Internal Declaration ii) External Declaration.

32. How to declare DTD attributes?

An attribute declaration has the following syntax:

```
<!ATTLIST element-name attribute-name
attribute-type default-value>
```

DTD example:

```
<!ATTLIST payment type CDATA "check">
```

XML example:

```
<payment type="check" />
```

33. What is XML schema?

An XML schema is itself an XML document. It provides more detail about the kind of data that can appear as part of an XML document.

34. What is the purpose of XML schema? (APR/MAY 2013)

- The schemas are more specific and provide the support for data types.
- The schema is aware of namespace
- The XML Schema is written in XML itself and has a large number of built-in and derived types.
- The xml schema is the W3C recommendation. Hence it is supported by various XML validator and XML Processors.

35. What are the disadvantages of schema?

- The XML schema is complex to design and hard to learn
- The XML document cannot be if the corresponding schema file is absent.
- Maintaining the schema for large and complex operations sometimes slows down the processing of XML document

36. Explain DTD for XML Schemas.

- XML documents are processed by applications
- Applications have assumptions about XML documents
- DTDs allow to formalize some of these constraints
- Part of the constraint checking must still be programmed

37. List some browsers that support XML and XSL

Mozilla Firefox

As of version 1.0.2, Firefox has support for XML and XSLT (and CSS).

Mozilla: Mozilla includes Expat for XML parsing and has support to display XML + CSS. Mozilla also has some support for Namespaces. Mozilla is available with an XSLT implementation.

Netscape: As of version 8, Netscape uses the Mozilla engine, and therefore it has the same XML / XSLT support as Mozilla.

Opera: As of version 9, Opera has support for XML and XSLT (and CSS). Version 8 supports only XML + CSS.

Internet Explorer: As of version 6, Internet Explorer supports XML, Namespaces, CSS, XSLT, and XPath. Version 5 is NOT compatible with the official W3C XSL Recommendation.

38. What is XML presentation technique?

XML presentation technologies provide a modular way to deliver and display content to a variety of devices. There are different presentation technologies used in XML to display the content. Eg: CSS

39. List some of presentation technologies.

Presentation technologies provide a modular way to deliver and display content to a variety of devices.

i) CSS ii) XSL iii) XFORMS iv) XHTML

40. Write about DOM.

DOM is W3c supported standard application programming interface(API) that provides a platform and language- neutral interface to allow developers to programmatically access and modify the content and structure documents.

41. What is SAX?

SAX is an example of a grass- roots development effort to provide a simple; Java based API for processing XML.

42. What are the levels of DOM?

DOM provides a platform and language- neutral interface to allow developers to programmatically access and modify the content and structure documents. It has Level 0, Level 1, Level 2, Level 3

43. Compare CSS and XSL.

CSS can be used with HTML. But XSL can't be used in HTML

Both can be used in XML

CSS is not a transformation language but XSL.

Part – B

1. List and explain the XML syntax rules in detail. Explain how a XML document can be displayed on a browser. (APR/MAY 2011)
2. Explain the role of XML namespaces with examples. (MAY/JUNE 2012)
3. Given an XSLT document and a source XML document explain the XSLT transformation process that produces a single result XML document. (NOV/DEC 2012)
4. Write short notes on Event-oriented parsing (MAY/JUNE 2014)
5. Explain the following: i) XML namespace ii) XML style sheet. iii) XML attributes iv) XML Schema
6. Explain XSL with suitable example
7. Explain the architectural revolution of XML.
8. Write a program using PHP that creates the web application for result publication

9. a) Design simple calculator using PHP
b) Design application to send a email using PHP
10. Develop a shopping cart application using PHP with use of cookies.
11. Explain about the control statements in PHP with example.
12. Explain about cookies in PHP with example.
13. Describe the data base connections in PHP with suitable example.
14. Explain the steps in the PHP code for querying a database with suitable examples.
15. With example explain about XSL and XSLT transformation
16. Explain about DOM with the XML data processing.
17. Discuss in detail about the XML DTD

Unit-V

Part – A

1. What is Ajax?

Ajax is a set of client side technologies that provides asynchronous communication between user interfaces and web server. So the advantages of using Ajax are asynchronous communication, minimal data transfer and server is not overloaded with unnecessary load.

2. What technologies are being used in AJAX?

AJAX uses four technologies, which are as follows:

JavaScript, XMLHttpRequest, Document Object Model (DOM), Extensible HTML (XHTML) and Cascading Style Sheets (CSS)

3. Explain the limitations of AJAX.

It is difficult to bookmark a particular state of the application, Function provided in the code-behind file do not work because the dynamic pages cannot register themselves on browsers history engine automatically

4. Describe AJAX Control Extender Toolkit.

AJAX Control Toolkit is a set of extenders that are used to extend the functionalities of the ASP.NET controls. The extenders use a block of JavaScript code to add new and enhanced capabilities to the ASP.NET controls. AJAX Control Toolkit is a free download available on the Microsoft site. You need to install this toolkit on your system before using extenders.

5. 30) What is the syntax to create AJAX objects?

AJAX uses the following syntax to create an object:

```
Var myobject = new AjaxObject("page path");
```

The page path is the URL of the Web page containing the object that you want to call. The URL must be of the same domain as the Web page.

6. How can you find out that an AJAX request has been completed?

You can find out that an AJAX request has been completed by using the readyState property. If the value of this property equals to four, it means that the request has been completed and the data is available.

7. What are the different ways to pass parameters to the server?

We can pass parameters to the server using either the GET or POST method. The following code snippets show the example of both the methods: Get: `XmlHttpRequest.Open("GET", "file1.txt", true);` Post: `XmlHttpRequest.Open("POST", "file2.txt", true);`

8. What are the extender controls?

The extender controls uses a block of JavaScript code to add new and enhanced capabilities to ASP.NET. The developers can use a set of sample extender controls through a separate download - AJAX Control Toolkit (ACT).

9. List out the advantages of AJAX. (May 2014)

- Better interactivity
- Easier navigation
- Compact
- Backed by reputed brands

10. Define Web service? (Nov 2011)

A Web service is a method of communication between two electronic devices over the web. The W3C defines a "Web service" as "a software system designed to support interoperable machine-to-machine

interaction over a network". It has an interface described in a machine-processable format specifically Web Services Description Language (WSDL).

11. What are the different applications that could use web services??

- ☞ **Data providers**, for example, those that provide data such as a stock quote
- ☞ **Business-to-business process integrations**, such as those that send a purchase order from one company to another
- ☞ **Integration with multiple partners**, and even with competitors
- ☞ **Enterprise application integration**, for example, integration of a company's e-mail database with its human resources (HR) database

12. What are the features of web service?

Web services are having the features such as heterogeneous, interoperable, loosely coupled, and implementation-independent programs and modular design

13. What are the rules to be followed in designing the web service?

- ☞ Allow extensibility points.
- ☞ Keep your namespaces easy to version by placing dates in them.
- ☞ Don't try to solve every problem with one schema, WSDL, or other file. Break out the problem into pieces

14. What is meant by WSDL? (APR/MAY 2011)

- ☞ WSDL stands for Web Services Description Language
- ☞ WSDL is based on XML

- WSDL is used to describe Web services
- WSDL is used to locate Web services
- WSDL is an XML-based language for locating and describing Web services

15. Why do you want to describe a web service? (MAY/JUNE 2014)

Web Services Description Language (WSDL) is a document written in XML. The document describes a Web service. It specifies the location of the service and the operations (or methods) the service exposes.

16. What are the elements of WSDL?

Element Name	Description
types	A container for abstract type definitions defined using XML Schema
message	A definition of an abstract message that may consist of multiple parts, each part may be of a different type
portType	An abstract set of operations supported by one or more endpoints (commonly know as an interface); operations are defined by an exchange of messages
binding	A concrete protocol and data format specification for a particular portType
service	A collection of related endpoints, where an endpoint is defined as a combination of binding and an address (URI)

18. What is the use of web services?

- Web services encompass a set of related standards that can enable two computers
- The data is passed back and forth using standard protocols such as HTTP, the same protocol used to transfer ordinary web pages.
- Web services operate using open, text-based standards that enable components written in different languages and on different platforms to communicate.

They are ready to use pieces of software on the Internet. XML, SOAP, Web Services Description Language (WSDL) and Universal Description, Discovery and Integration (UDDI) are the standards on which web services rely.

- UDDI is another XML based format that enables developers and business to publish and locate Web services on a network.

19. State the uses of WSDL. (APR/MAY 2012)

- WSDL stands for Web Services Description Language.
- WSDL is a document written in XML.
- WSDL is an XML-based language for locating and describing Web services.

20. What are the four transmission types of WSDL?

- One-way
- Request–response
- Solicit–response
- Notification

21. State the significance of a WSDL document. (NOV/DEC 2012)

The WSDL is a Web Service Descriptor Language which is based on XML.

ELEMENT	DESCRIPTION
Types	It Specifies the data types of the symbols used by the web services.
Messages	It specifies the messages used by the web services.
Porttype	It specifies the name of the operations
Binding	It specifies the name of the protocol of the web services, typically it is SOAP.

22. What is UDDI? (NOV/DEC 2011)

UDDI means Universal Description, Discovery and Integration.

UDDI - platform-independent framework for describing services, discovering businesses, and integrating business services by using the Internet.

- directory for storing information about web services
- directory of web service interfaces described by WSDL
- communicates via SOAP
- The core of UDDI is the UDDI Business Registry, a global, public, online directory.

23. What are the benefits of UDDI?

Problems the UDDI specification can help to solve:

- Making it possible to discover the right business from the millions currently online
- Defining how to enable commerce once the preferred business is discovered
- Reaching new customers and increasing access to current customers
- Expanding offerings and extending market reach
- Solving customer-driven need to remove barriers to allow for rapid participation in the global Internet economy
- Describing services and business processes programmatically in a single, open, and secure environment

24. What are the core elements of UDDI?

UDDI defines four core data elements within the data model:

- businessEntity (modeling business information)
- businessService (describing a service)
- tModel (describing specifications, classifications, or identifications)
- binding Template (mapping between a businessService and the set of tModels that describe its technical fingerprint)

25. List some examples of web services. (APR/MAY 2012)

- Geo IP: <http://www.websvcicex.net/geoipservice.aspx?op=GetGeoIP>
- Whois: <http://www.websvcicex.net/whois.aspx?op=GetWhoIS>

SMS: <http://www.websvcicex.net/sendsmsworld.aspx>

26. List out some web service technologies?

- XML

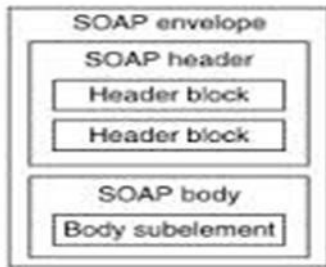


27. What is SOAP?

SOAP - Simple Object Access Protocol

- protocol specification for exchanging structured information in the implementation of Web Services in computer networks.
- relies on Extensible Markup Language (XML) for its message format, and usually relies on other Application Layer protocols, most notably Hypertext Transfer Protocol (HTTP) and Simple Mail Transfer Protocol (SMTP), for message negotiation and transmission.

28. Define SOAP structure.



The SOAP envelope

<Envelope> is the root element in every SOAP message, and contains two child elements, an optional <Header> element, and a mandatory <Body> element.

The SOAP header

<Header> is an optional sub element of the SOAP envelope, and is used to pass application-related information that is to be processed by SOAP nodes along the message path; see The SOAP header.

The SOAP body

<Body> is a mandatory sub element of the SOAP envelope, which contains information intended for the ultimate recipient of the message; see The SOAP body.

The SOAP fault

<Fault> is a sub element of the SOAP body, which is used for reporting errors; see The SOAP fault.

XML elements in <Header> and <Body> are defined by the applications that make use of them, although the SOAP specification imposes some constraints on their structure.

29. Define the need for SOAP. (APR/MAY 2013)

Simple Object Access Protocol (SOAP) is a protocol based on XML. It is used by the web services for exchange of information. The Client- Server communication is based on RPC. The HTTP does not design to handle the distributed objects that are required by the RPC. Hence another application protocol is build over HTTP which popularly known as SOAP. SOAP allows talking different applications that are running in two different operating systems.

30. What are the descriptions in SOAP service?

To describe everything a SOAP service needs to describe the following:

- The operations
- The schema for each message in an operation
- The SOAPAction headers
- The URL endpoint of the service

31. Give an example of a web services registry and its function. (NOV/DEC 2012)

It refers to a place in which service providers can impart information about their offered services and potential clients can search for services

Example: IBM - WebSphere Service Registry, Oracle Service Registry etc.,

32. Mention some of the disadvantageous of web services (MAY/JUNE 2014)

Web services standards features such as transactions are currently nonexistent or still in their infancy compared to more mature distributed computing open standards such as CORBA. Web services may suffer from poor performance compared to other distributed computing approaches such as RMI, CORBA, or DCOM.

33. What is JWSDP?

Java Web Service Developer Pack (JWSDP) is a tool. Using the JWSDP tool the simple implementation files written in java can be converted to Web Service.

34. What are the specifications of web service architecture?

The specifications are

- ↳ Standards based
- ↳ Modular
- ↳ Federated
- ↳ General purpose

Part-B

1. Explain about the object that helps AJAX reload parts of a web page without reloading the whole page. (NOV/DEC 2011, MAY/JUNE 2014)
2. Explain technologies are being used in AJAX?
3. Explain the concept of JSON concept with example.
4. Explain about Ajax Client Server Architecture.
5. Develop a web application for Airline Reservation System using AJAX.
6. With a simple example illustrate the steps to create a java web service. (NOV/DEC 2012)
7. Show the relationship between SOAP, UDDI, WSIL and WSDL
8. Explain the creation of a java web service Client in detail with examples. (MAY/JUNE 2012)
9. Describe Messaging protocol in web services with its functionalities.
10. Explain the anatomy of UDDI and WSDL.
11. Describe the major elements of SOAP. (NOV/DEC 2011, MAY/JUNE 2014) (APR/MAY 2013)