UNIT – I

1. Write HTML code to create the following table.

The basic structure of an HTML table consists of the following tags:
☐ Table tags: **<TABLE> </TABLE>**
☐ Row tags: **<TR> </TR>**
☐ Cell tags: **<TD> </TD>**

2. List the different basic protocol used in Internet.

☐ TCP/IP
☐ UDP
☐ DNS
☐ Domain Names

3. State the function of DNS and the protocol used.

Domain Name Service (DNS) is the service used to convert human readable names of hosts to IP addresses. Host names are not case sensitive and can contain alphabetic or numeric letters or the hyphen. Avoid the underscore. DNS resolvers first attempt to use UDP for transport, then use TCP if UDP fails.

4. Write HTML code to display an image?

HTML. <center></center>
UBB. [center][img]http:// URL HERE[/img][/center]

5. List any four common browsers.

The four most popular web browsers include Firefox 4, internet explorer 9, Google Chrome popularly known as Beta and Opera. Web browsers are software programs that enable you connect to the world through the internet.

6. Define URL.

URL stands for **Uniform Resource Locator**. A URL is a formatted text string used by Web browsers, email clients and other software to identify a *network resource* on the Internet. Network resources are files that can be plain Web pages, other text documents, graphics, or programs.

7. **How does one link external style sheet in a XHTML document?**

External style sheets allow you to define your styles in one place and use the same styles on different pages of your Web site. It is easy to link to an external style sheet. First, save your style sheet to a location on your Web server.
http://www.yourserver.com/styles.css
Then link to it in the <head> of your document.
<head>
<link rel="stylesheet" href="http://www.yourserver.com/styles.css"
type="text/css"/>
</head>

8. **Mention the benefits of java scripts.**

☐ JavaScript will allow many page effects Some page effects that JavaScript allows are:
☐ User's time on page
☐ Popups and tooltips
☐ Collapsing text
☐ Page timeout
☐ Color changes and fades
☐ Fontsizing and fades
☐ Ultimate fader
☐ JavaScript will add user interactivity
☐ JavaScript will provide seamless integration with user plug-ins
☐ JavaScript will allow client-side user form validation
☐ JavaScript will allow access to some system information

9. **How will you create a password field in a HTML form?**

Password Field
<input type="password"> defines a password field:
<form>
Password: <input type="password" name="pwd">
</form>

10. **State the uses of internet protocol.**

IP is the core of the TCP/IP protocol suite. IP provides the fundamental mechanism using which data is delivered between devices which may or may not be in the same network.

PART – B

1. Define elements in HTML and also explain the types of elements in detail

2. Define markup language. Explain in detail about the versions of HTML

3. Explain in detail about how table is created in HTML and mention all the tags used in HTML

4. Write in detail about the working of HTTP. Also elaborate in detail about HTTP request message

5. Explain different types of lists used in HTML. Give an example for each

UNIT – II

PART – A

1. Give some advantages of using cascading style sheets.

☐ Making changes to the layout
☐ File Size
☐ Search Engines
☐ Accessibility
☐ Consistency

2. **State the types of java script statements with examples.**

☐ Conditional Statements
☐ Loop Statements
☐ Object Manipulation Statements
☐ Comment Statements
☐ Exception Handling Statements

3. **Give example for inline sheet.**

Inline style sheets is a term that refers to style sheet information being applied to the *current* element.
Example:
<p style="font-size: x-large; color: #ff9900">Using inline style sheets - or is that inline styles?</p>

4. List the ways of positioning an element within a browser window.

☐ Positioning
☐ Static Positioning
☐ Fixed Positioning
☐ Relative Positioning
☐ Absolute Positioning

5. Mention the need for cascading style sheets.

A CSS (cascading style sheet) file allows you to separate your web sites (X)HTML
content from it's style. As always you use your (X)HTML file to arrange the content, but all of
the presentation (fonts, colors, background, borders, text formatting, link effects & so on…)
are accomplished within a CSS.

6. What do you mean by host objects?

A host object is a COM object that represents the ActiveX control container supplied
by ATL for a particular window. The host object subclasses the container window so that it
can reflect messages to the control, it provides the necessary container interfaces to be used by
the control, and it exposes the IAxWinHostWindow and IAxWinAmbientDispatch interfaces
to allow you to configure the environment of the control.

7. How does one access cookie in a JavaScript?

Cookies can be read like this:
var x = document.cookie;
Change a cookie the same way as you create it:
document.cookie="username=John Smith; expires=Thu, 18 Dec 2013
12:00:00 GMT; path=/";
Deleting a cookie is very simple. Just set the expires parameter to a passed date:
document.cookie = "username=; expires=Thu, 01 Jan 1970 00:00:00 GMT";

8. Define Event Bubbling.
The Internet Explorer 4 or later and Netscape 6 event model mechanism that propagates
events from the target element upward through the HTML element hierarchy. After the event
is processed (at the scripter's option) by the target element, event handlers higher up the
hierarchy may perform further processing on the event. Event propagation can be halted at any
point via the cancelBubble property or, in Netscape 6, the stopPropagation( ) method.

9. **What is the use of Blur Filter?**

This is a set of filters that blur images, or parts of them, in various ways. If there is a selection, only the selected parts of an image will be blurred. There may, however, be some leakage of colors from the unblurred area into the blurred area. To help you pick the one you want, we will illustrate what each does when applied to the image shown at right. These are, of course, only examples: most of the filters have parameter settings that allow you to vary the magnitude or type of blurring.

10. **List and explain any two java script built in objects.**

The **String object** is used to manipulate a stored piece of text.
Examples of use:
The following example uses the length property of the String object to find the
length of a string:
var txt="Hello world!"
document.write(txt.length)
The **Date object** is used to work with dates and times. We define a Date object with the
new keyword. The following code line defines a Date object called myDate:
var myDate=new Date()

PART – B

1. Explain in detail about different type of operators in Java Script

2. Discuss about Java Script debugging

3. List and describe the CSS Border Style Properties in detail with illustration.

4. Explain in detail about style rule cascading and inheritance

5. Discuss in detail about Java Script literals and Keyword

UNIT – III

1.   What is meant by Intrinsic event handling?

An event is an occurrence of something potentially interesting to a script:
        Ex: mouseover and mouseout events

An HTML intrinsic event attribute is used to specify a script to be called when an event occurs some of the HTML intrinsic event attributes.

onload, onclick, ondblclick, onmousedown, onmouseup, onmousemove, onfocus, onblur, onkeypress, onkeydown, onselect, onchange, onsubmit, onreset etc.

2.   What is a cookie? List the methods of cookie class

A cookie is a name-value pair that a web server sends to a client machine as part of an HTTP response, specifically through the Set-cookie header field. Cookies are some little information that can be left on your computer by the other computer when we access an internet.

    Cookie, getName(), getValue(), setMaxAge()

3.   Define DOM

DOM (Document Object Model) is an API that defines how JavaScript programs can access and manipulate the HTML document currently displayed by a browser. It includes the definition of the properties of document object, many of which are themselves objects with their own properties.

4.   How is session tracking achieved by URL rewriting?

In URL rewriting the server passes a session ID by adding it to every
servlet URL appearing in any page sent to the client. It involves rewriting every URL referencing the servlet in the href attribute of any anchor and the action attribute of any form output by the servlet

5.   Write a short note on java servlet lifecycle

A servlet life cycle can be defined as the entire process from its creation till the destruction.

    The following are the paths followed by a servlet.

    ☐ The servlet is initialized by calling the **init ()** method.
    ☐ The servlet calls **service()** method to process a client's request.
    ☐ The servlet is terminated by calling the **destroy()** method.

6. Compose any two mouse events

Event instances associated with the six DOM2 mouse events—click, mousedown, mouseup, mousemove, mouseover, mouseout

7. Differentiate client side scripting from server side scripting

Client-side scripting	Server-side scripting
Source code is visible to the user.	Source code is not visible to the user because its output of server-sideside is an HTML page.
Its main function is to provide the requested output to the end user.	Its primary function is to manipulate and provide access to the respective database as per the request.
It usually depends on the browser and its version.	In this any server-side technology can be used and it does not depend on the client.
It runs on the user's computer.	It runs on the webserver.

8. List and explain any four HTML intrinsic event attributes.

☐ onload = *script* [CT]
The onload event occurs when the user agent finishes loading a window or all frames within a FRAMESET. This attribute may be used with BODY and FRAMESET elements.
☐ onunload = *script* [CT]
The onunload event occurs when the user agent removes a document from a window or frame. This attribute may be used with BODY and FRAMESET elements.
☐ onclick = *script* [CT]
The onclick event occurs when the pointing device button is clicked over an element. This attribute may be used with most elements.
☐ ondblclick = *script* [CT]
The ondblclick event occurs when the pointing device button is double clicked over an element. This attribute may be used with most elements.

9. **Compare Servlet and JSP.**

JSP	Servlets
JSP is a webpage scripting language that can generate dynamic content.	Servlets are Java programs that are already compiled which also creates dynamic web content.
Servlets run faster compared to JSP.	JSP run slower compared to Servlet. JSP compiles into Java Servlets.
It's easier to code in JSP than in Java Servlets.	Its little much code to write here.
In MVC, jsp act as a view.	In MVC, servlet act as a controller.
JSP are generally preferred when there is not much processing of data required.	servlets are best for use when there is more processing and manipulation involved.
The advantage of JSP programming over servlets is that we can build custom tags which can directly call Java beans.	There is no such facility in servlets.
We can achieve functionality of JSP at client side by running JavaScript at client side.	There are no such methods for servlets.

10. **Write code to return the full URL of a document.**

To do so, you can try e.g. to get node according to document´s GUID, culture code and site name. Document GUID number (Node GUID) can be found in CMSDesk -> Content -> select document -> Properties -> General, or in database.

First, you need to create new node using:

```
CMS.TreeEngine.TreeProvider tp = new CMS.TreeEngine.TreeProvider(); TreeNode tn =
tp.SelectSingleNode(Guid, CultureCode, SiteName);
```

11. List the types of event listeners in DOM2.

☐ addEventListener()
☐ removeEventListener()
☐ Event.CAPTURING_PHASE,
☐ Event.AT_TARGET,
☐ Event.BUBBLING_PHASE

PART - B

1. Write a java servlet to display net salary of employee.

2. Explain about architecture of Servlet

3. Explain the Servlet operation in detail with a sample Servlet program

4. Explain about the document tree in detail

5. Explain the purpose of the following DOM method and properties

       (a) getElement By Id
       (b) create Element
       (c) create Text Node
       (d) append child
       (e) Parent Node

6. Explain DOM event handling in detail

UNIT – IV

1. What is meant by an XML namespace?

XML namespaces are used for providing uniquely named elements and attributes in an XML document. They are defined in a W3C recommendation. An XML instance may contain element or attribute names from more than one XML vocabulary. If each vocabulary is given a namespace, the ambiguity between identically named elements or attributes can be resolved

2. Compare DOM and SAX in XML processing.

DOM Stands for **Document Object Model** and it represent an XML Document into tree format which each element representing tree branches.

SAX Stands for **Simple API for XML Parsing**. This is an event based XML Parsing and it *parse XML file step by step* so much suitable for large XML Files.

Here are few high level **differences between DOM parser and SAX Parser** in Java:

 DOM parser loads whole xml document in memory while SAX only loads small part of XML file in memory.
 DOM parser is faster than SAX because it access whole XML document in memory.
 SAX parser in Java is better suitable for large XML file than DOM Parser because

it doesn't require much memory.
☐ DOM parser works on Document Object Model while SAX is an event based xml parser.

3. What is an XPath?

XPath, the **XML Path Language**, is a query language for selecting nodes from an XML document. In addition, XPath may be used to compute values (e.g., strings, numbers, or Boolean values) from the content of an XML document. XPath was defined by the World Wide Web Consortium (W3C).

4. Give the advantages of using JSP for server side programming.

☐ Provide Dynamic Contents from data storage:
☐ Provide uniform user compatibility:
☐ Provide better security
☐ Upgrading and Maintenance is easy

5. How is XML parsing done with SAX?

A parser that implements SAX (i.e., *a SAX Parser*) functions as a stream parser, with an event-driven API. The user defines a number of callback methods that will be called when events occur during parsing.

This XML document, when passed through a SAX parser, will generate a sequence of events like the following:
☐ XML Element start, named *DocumentElement*, with an attribute *param* equal to "value"
☐ XML Element start, named *FirstElement*
☐ XML Text node, with data equal to "¶ Some Text" (note: certain white spaces can be changed)
☐ XML Element end, named *FirstElement*
Processing Instruction event, with the target *some_pi* and data *some_attr="some_value"*
(the content after the target is just text; however, it is very common to imitate the syntax of XML attributes, as in this example)
☐ XML Element start, named *SecondElement*, with an attribute *param2* equal to "something"
☐ XML Text node, with data equal to "Pre-Text"
☐ XML Element start, named *Inline*
☐ XML Text node, with data equal to "Inlined text"
☐ XML Element end, named *Inline*
☐ XML Text node, with data equal to "Post-text."
☐ XML Element end, named *SecondElement*
☐ XML Element end, named *DocumentElement*

6. Explain in brief about Java Script.

JavaScript is most commonly used as a client side scripting language. This means that JavaScript code is written into an HTML page. When a user requests an HTML page with JavaScript in it, the script is sent to the browser and it's up to the browser to do something with it.

7. **Compare DTD and XML schema.**

XML is a very handy format for storing and communicating your data between disparate systems in a platform-independent fashion. XML is more than just a format for computers — a guiding principle in its creation was that it should be Human Readable and easy to create.

DTD – The Document Type Definition – The first method used to provide this definition was the DTD, or Document Type Definition. This defines the elements that may be included in your document, what attributes these elements have, and the ordering and nesting of the elements.

8. **State the purpose of SAX.**

SAX (Simple API for XML) is an application program interface (API) that allows a programmer to interpret a Web file that uses the Extensible Markup Language (XML) - that is, a Web file that describes a collection of data. SAX is an alternative to using the Document Object Model (DOM) to interpret the XML file. As its name suggests, it's a simpler interface than DOM and is appropriate where many or very large files are to be processed, but it contains fewer capabilities for manipulating the data content.

9. What are Applets?

A program designed to be executed from within another application. Unlike an application, applets cannot be executed directly from the operating system. With the growingpopularity of OLE (object linking and embedding), applets are becoming more prevalent. Awell-designed applet can be invoked from many different applications. Web browsers, who are often equipped with Java virtual machines, can interpret applets from Web servers. Because applets are small in files size, cross-platformcompatible, andhighly secure (can't be used to access users\' hard drives), they are ideal for small Internet applications accessible from a browser.

10. What do you mean by Server-side?

Occurring on the server side of a client-server system. For example, on the World Wide Web, CGI scripts are server-side applications because they run on the Web server. In contrast, JavaScript scripts are client-side because they are executed by your browser (the client). Java Applets can be either server-side or client- side depending on which computer (the server or the client) executes them.

12. What are the common mechanisms used for session tracking?
- Cookies
- SSL sessions
- URL- rewriting

13. . Explain the life cycle of an Applet.

An applet may undergo the following states: • Init: An applet is initialized each time is loaded. • Start: Begin the execution of an applet. • Stop: Stop the execution of an applet. • Destroy: Perform a final cleanup, before unloading the applet.

PART – B

1. Explain MVC architecture?
2. What is the significance of java Beans classes in context of JSP
3. Write a short note on event oriented parsing
4. Explain JDBC database access in database
5. Explain the role of XML Namespace with example
6. Explain the features of XML Path language?

UNIT – V

1. Explain the term XML schema.

An **XML schema** is a description of a type of XML document, typically expressed in terms of constraints on the structure and content of documents of that type, above and beyond the basic syntactical constraints imposed by XML itself. These constraints are generally expressed using some combination of grammatical rules governing the order of elements, Boolean predicates that the content must satisfy, data types governing the content of elements and attributes, and more specialized rules such as uniqueness and referential integrity constraints.

2. Give some uses of WSDL.

WSDL is often used in combination with SOAP and XML Schema to provide web services over the Internet. A client program connecting to a web service can read the WSDL to determine what functions are available on the server. Any special datatypes used are embedded in the WSDL file in the form of XML Schema. The client can then use SOAP to actually call one of the functions listed in the WSDL.

3. What is the purpose XML schema?
Specify:
– the *structure* of instance documents
• "this element contains these elements, which contains these other elements, etc"
– the *datatype* of each element/attribute

• "this element shall hold an integer with the range 0 to 12,000" (DTDs don't do too well with specifying datatypes like this)

4. Define the need for SOAP.

SOAP - ―SOAP was originally an acronym standing for ―Simple Object Access Protocol, but the current W3C Recommendation [W3C-SOAPFRAMEWORK-1.2] treats it as a name rather than an acronym (because SOAP is now considered to be much more than a protocol for accessing objects). SOAP is an XML vocabulary that can be used to communicate data, and in particular was originally designed for communicating structured data that might typically be found in object-oriented programs.

5. State the significance of a WSDL document.

The **Web Services Description Language** is an XML-based interface description language that is used for describing the functionality offered by a web service. A WSDL description of a web service (also referred to as a *WSDL file*) provides a machine-readable description of how the service can be called, what parameters it expects, and what data structures it returns. It thus serves a purpose that corresponds roughly to that of a method signature in a programming language.

6. Give an example of a web services registry and its function.

Service Registry: A Key Piece for Enhancing Reuse in SOA. A primary example of a web services registry technology is Universal Discovery, Description, and Integration (UDDI), which allows a web service to be described in a registry so that other developers can discover the service and potentially integrate their web service clients with it.

7. State the use of WSDL.

☐ WSDL stands for Web Services Description Language
☐ WSDL is written in XML - it is an XML-based language
☐ WSDL is an XML document
☐ WSDL is used to describe Web services (ie. the operations (or methods) the service exposes)
☐ WSDL is also used to locate Web services
☐ WSDL is not yet a W3C standard

8. What is UDDI?

UDDI is an XML-based standard for describing, publishing, and finding Web services.
☐ UDDI stands for Universal Description, Discovery and Integration.
☐ UDDI is a specification for a distributed registry of Web services.
☐ UDDI is platform independent, open framework.
☐ UDDI can communicate via SOAP, CORBA, Java RMI Protocol.
☐ UDDI uses WSDL to describe interfaces to web services.

☐ UDDI is seen with SOAP and WSDL as one of the three foundation standards of web services.
☐ UDDI is an open industry initiative enabling businesses to discover each other and define how they interact over the Internet.

9. **What is meant by WSDL?**

The **Web Services Description Language** is an XML-based interface description language that is used for describing the functionality offered by a web service. A WSDL description of a web service (also referred to as a *WSDL file*) provides a machine-readable description of how the service can be called, what parameters it expects, and what data structures it returns. It thus serves a purpose that corresponds roughly to that of a method signature in a programming language.

10. **Write down the important features of My SQL.**
   ☐ Performance & Scalability
   ☐ Developer APIs and Data Models
   ☐ 99.999% Availability & Data Integrity
   ☐ On-Line Operations
   ☐ Deployment Flexibility
   ☐ Security & Auditing

11. **What is the primary purpose of an HTTP get request?**

The GET method is used to retrieve information from the given server using a given URI. Requests using GET should only retrieve data and should have no other effect on the data.
Request format
Request = Simple-Request
Simple-Request = "GET" SP Request-URI CRLF

12. **List the scripting components of JSP.**

A JSP component is used to store a path to a JSP. When rendered within a presentation template or component design, a request to a JSP is generated and processed. SPs are comprised of standard HTML tags and JSP tags. The structure of JavaServer pages are simple and easily handled by the servlet engine. In addition to HTML, you can categorize JSPs as following -
☐ Directives
☐ Declarations
☐ Scriptlets
☐ Comments
☐ Expressions

PART – B

1. Design an online book selling application using JSP or ASP. Consider a login validation page and also a search page for searching a book.

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2. Discuss the four important methods of HTTP servlet class

3. Write a servlet program to display a 'welcome' message on the client system.

4. Briefly discuss how SOAP encodes struct data and arrays.

5. Explain the role of XML schema in building web services in detail.

6. Explain the basic concept of RPC.