

Java JSP Questions

1. Which of the following is legal JSP syntax to print the value of i. Select the one correct answer

A. `<%int i = 1;%>`
`<%= i; %>`

B. `<%int i = 1;`
`i; %>`

C. `<%int i = 1%>`
`<%= i %>`

D. `<%int i = 1;%>`
`<%= i %>`

E. `<%int i = 1%>`
`<%= i; %>`

2. A JSP page called test.jsp is passed a parameter name in the URL using **`http://localhost/test.jsp?name="John"`**. The test.jsp contains the following code.

```
<%! String myName=request.getParameter();%>
<% String test= "welcome" + myName; %>
<%= test%>
```

1. The program prints "Welcome John"

2. The program gives a syntax error because of the statement
`<%! String myName=request.getParameter();%>`

3. The program gives a syntax error because of the statement
`<% String test= "welcome" + myName; %>`

4. The program gives a syntax error because of the statement
`<%= test%>`

3. Which of the following correctly represents the following JSP statement. Select the one correct answer.

`<%=x%>`

A. `<jsp:expression=x/>`

B. `<jsp:expression>x</jsp:expression>`

C. `<jsp:statement>x</jsp:statement>`

D. `<jsp:declaration>x</jsp:declaration>`

E. `<jsp:scriptlet>x</jsp:scriptlet>`

4. Which of the following correctly represents the following JSP statement. Select the one correct answer.

`<%x=1;%>`

1. `<jsp:expression x=1;/>`

2. `<jsp:expression>x=1;</jsp:expression>`

3. `<jsp:statement>x=1;</jsp:statement>`

4. `<jsp:declaration>x=1;</jsp:declaration>`

5. `<jsp:scriptlet>x=1;</jsp:scriptlet>`

5. What gets printed when the following JSP code is invoked in a browser. Select the one correct answer.

```
<%= if(Math.random() < 0.5) %>
hello
<%= } else { %>
hi
<%= } %>
```

1. The browser will print either hello or hi based upon the return value of random.
2. The string hello will always get printed.

3. The string hi will always get printed.

4. The JSP file will not compile.

6. Which of the following are correct. Select the one correct answer.

1. JSP scriptlets and declarations result in code that is inserted inside the `_jspService` method.

2. The JSP statement `<%! int x; %>` is equivalent to the statement `<jsp:scriptlet>int x;</jsp:scriptlet%>`.

3. The following are some of the predefined variables that maybe used in JSP expression – `httpSession`, `context`.

4. To use the character `%>` inside a scriptlet, you may use `%>` instead.

7. What gets printed when the following is compiled. Select the one correct answer.

```
<% int y = 0; %>
<% int z = 0; %><% for(int x=0;x<3;x++) { %>
<% z++;++y;%>
<% }%><% if(z<y) {%>
```

```
<%= z%>
<% } else {%>
<%= z - 1%>
<% }%>
```

1. 0

2. 1

3. 2

4. 3

5. The program generates compilation error.

8. Which of the following JSP variables are not available within a JSP expression. Select the one correct answer.

1. out
2. session
3. request
4. response
- 5. httpsession**
6. page

9. A bean with a property color is loaded using the following statement

<jsp:usebean id="fruit" class="Fruit"/>

- 1.

Which of the following statements may be used to print the value of color property of the bean. Select the one correct answer.

1. <jsp:getColor bean="fruit"/>
2. <jsp:getProperty id="fruit" property="color"/>
3. <jsp:getProperty bean="fruit" property="color"/>
- 4. <jsp:getProperty name="fruit" property="color"/>**
5. <jsp:getProperty class="Fruit" property="color"/>

10. A bean with a property color is loaded using the following statement

<jsp:usebean id="fruit" class="Fruit"/>

- 1.

Which of the following statements may be used to set the of color property of the bean. Select the one correct answer.

1. <jsp:setColor id="fruit" property="color" value="white"/>
2. <jsp:setColor name="fruit" property="color" value="white"/>

3. `<jsp:setValue name="fruit" property="color" value="white"/>`
4. `<jsp:setProperty name="fruit" property="color" value="white">`
5. `<jsp:setProperty name="fruit" property="color" value="white"/>`
6. `<jsp:setProperty id="fruit" property="color" value="white">`

11. A bean with a property color is loaded using the following statement

`<jsp:usebean id="fruit" class="Fruit"/>`

What happens when the following statement is executed. Select the one correct answer.

`<jsp:setProperty name="fruit" property="*" />`

1. This is incorrect syntax of `<jsp:setProperty/>` and will generate a compilation error. Either value or param must be defined.
2. All the properties of the fruit bean are initialized to a value of null.
3. All the properties of the fruit bean are assigned the values of input parameters of the JSP page that have the same name.
4. All the properties of the fruit bean are initialized to a value of *.

12. Is the following statement **true** or false. If the `isThreadSafe` attribute of the page directive is false, then the generated servlet implements the `SingleThreadModel` interface.

Ans: **true**

13. Which of the following represents a correct syntax for usebean. Select the two correct answers.

1. `<jsp:usebean id="fruit" scope="page"/>`
2. `<jsp:usebean id="fruit" type="String"/>`
3. `<jsp:usebean id="fruit" type="String" beanName="Fruit"/>`
4. `<jsp:usebean id="fruit" class="Fruit" beanName="Fruit"/>`

14. Name the default value of the scope attribute of <jsp:usebean>.

1. page
2. application
3. session
4. request

15. Which of the following statements are true for <jsp:usebean>. Select the two correct answers.

1. The id attribute must be defined for <jsp:usebean>.
2. The scope attribute must be defined for <jsp:usebean>.
3. The class attribute must be defined for <jsp:usebean>.
4. The <jsp:usebean> must include either type or class attribute or both.

16. Which of these are legal attributes of page directive. Select the two correct answers.

1. include
2. scope
5. errorPage
6. session
3. debug

17. Which of the following represents the XML equivalent of this statement <%@include file="a.jsp"%>. Select the one correct statement

1. <jsp:include file="a.jsp"/>
2. <jsp:include page="a.jsp"/>
7. <jsp:directive.include file="a.jsp"/>
3. There is no XML equivalent of include directive.

18. Assume that you need to write a JSP page that adds numbers from one to ten, and then print the output.

```
<% int sum = 0;
for(j = 0; j < 10; j++) { %>
// XXX — Add j to sum
<% } %>
// YYY — Display ths sum
```

Which statement when placed at the location XXX can be used to compute the sum. Select the one correct statement

1. <% sum = sum + j %>
- 2. <% sum = sum + j; %>**
3. <%= sum = sum + j %>
4. <%= sum = sum + j; %>

19. Now consider the same JSP example as last question. What must be added at the location YYY to print the sum of ten numbers. Select the one correct statement

1. <% sum %>
2. <% sum; %>
- 3. <%= sum %>**
4. <%= sum; %>

20. JSP pages have access to implicit objects that are exposed automatically. One such object that is available is request. The request object is an instance of which class?

1. HttpRequest
2. ServletRequest
3. Request

4. HttpServletRequest

21. JSP pages have access to implicit objects that are exposed automatically. Name the implicit object that is of type HttpSession.

1. session

2. application

3. httpSession

4. httpsession

22. A Java bean with a property color is loaded using the following statement

```
<jsp:usebean id="fruit" class="Fruit"/>
```

What is the effect of the following statement.

```
<jsp:setproperty name="fruit" property="color"/>
```

Select the one correct answer.

1. An error gets generated because the value attribute of setAttribute is not defined.

2. The color attribute is assigned a value null.

3. The color attribute is assigned a value "".

4. If there is a non-null request parameter with name color, then its value gets assigned to color property of Java Bean fruit.

23. The page directive is used to convey information about the page to JSP container. Which of these are legal syntax of page directive. Select the two correct statement

1. <% page info="test page" %>

2. <%@ page info="test page" session="false"%>

3. <%@ page session="true" %>

4. `<%@ page isErrorPage="errorPage.jsp" %>`
5. `<%@ page isThreadSafe=true %>`

24. Is the following JSP code legal? Select the one correct statement.

```
<%@page info="test page" session="false"%>  
<%@page session="false"%>
```

1. Yes. This is legal JSP syntax.
2. No. This code will generate syntax errors.

25. A JSP page needs to generate an XML file. Which attribute of page directive may be used to specify that the JSP page is generating an XML file.

1. **contentType**
2. generateXML
3. type
4. outputXML

26. A JSP page uses the `java.util.ArrayList` class many times. Instead of referring the class by its complete package name each time, we want to just use `ArrayList`. Which attribute of page directive must be specified to achieve this. Select the one correct answer.

1. extends
2. **import**
3. include
4. package
5. classpath

27. Which of these are true. Select the two correct answers.

1. The default value of `isThreadSafe` attribute of page directive is true.

2. If `isThreadSafe` attribute of `page` directive is set to `true`, then JSP container dispatches request for the page sequentially.

3. When `isThreadSafe` attribute of `page` directive is set to `true`, a thread is created for each request for the page.

4. Setting `isThreadSafe` attribute to `true` for JSP pages, can lead to poor performance.

28. Which of the following are examples of JSP directive. Select the two correct answers.

1. `include`

2. `exclude`

3. `import`

4. `taglibrary`

5. `servlet`

6. `page`

29. Which of these is true about `include` directive. Select the one correct answer.

1. The included file must have `.jspf` extension.

2. The XML syntax of `include` directive is `<jsp:include file="fileName"/>`.

3. The content of file included using `include` directive, cannot refer to variables local to the original page.

4. When using the `include` directive, the JSP container treats the file to be included as if it was part of the original file.

30. Name the implicit variable available to JSP pages that may be used to access all the other implicit objects.

1. `page`

2. `pageContext`

3. context
4. object
5. jspPave

Java Servlets Questions

1. The method `getWriter` returns an object of type `PrintWriter`. This class has `println` methods to generate output. Which of these classes define the `getWriter` method? Select the one correct answer.

1. `HttpServletRequest`
2. **`HttpServletResponse`**
3. `ServletConfig`
4. `ServletContext`

2. Name the method defined in the `HttpServletResponse` class that may be used to set the content type. Select the one correct answer.

1. `setType`
2. `setContent`
3. **`setContentType`**
4. `setResponseContentType`

3. Which of the following statement is correct. Select the one correct answer.

1. The response from the [dedicated server](#) to a HEAD request consists of status line, content type and the document. **(does not contain the document)**

2. The response from the server to a GET request does **not contain** a document. (**contains document**)
3. The setStatus method defined in the **HttpServletRequest** class takes an int as an argument and sets the status of Http response (**HttpServletResponse**)
4. The **HttpServletResponse** defines constants like **SC_NOT_FOUND** that may be used as a parameter to setStatus method.

4. The **sendError** method defined in the **HttpServlet** class is equivalent to invoking the **setStatus** method with the following parameter. Select the one correct answer.

1. **SC_OK**
2. **SC_MOVED_TEMPORARILY**
3. **SC_NOT_FOUND** (sendError(String URL) is equivalent to sending **SC_NOT_FOUND (404)**)
4. **SC_INTERNAL_SERVER_ERROR**
5. **ESC_BAD_REQUEST**

5. The **sendRedirect** method defined in the **HttpServlet** class is equivalent to invoking the **setStatus** method with the following parameter and a Location header in the URL. Select the one correct answer.

1. **SC_OK**
2. **SC_MOVED_TEMPORARILY**
3. **SC_NOT_FOUND**
4. **SC_INTERNAL_SERVER_ERROR**
5. **ESC_BAD_REQUEST**

6. Which of the following statements are correct about the **status of the Http response**. Select the one correct answer.

1. **A status of 200 to 299 signifies that the request was successful.**

2. A status of 300 to 399 are informational messages.
3. A status of 400 to 499 indicates an error in the server.
4. A status of 500 to 599 indicates an error in the client.

Status Code	Purpose
100-199	Informational
200-299	Request was successful
300-399	Request file has moved.
400-499	Client error
500-599	Server error.

7. To send binary output in a response, the following method of `HttpServletResponse` may be used to get the appropriate `Writer/Stream` object. Select the one correct answer.

1. `getStream`
- 2. `getOutputStream`**
3. `getBinaryStream`
4. `getWriter`

8. To send text output in a response, the following method **of `HttpServletResponse`** may be used to get the appropriate `Writer/Stream` object. Select the one correct answer.

1. getStream
2. getOutputStream
3. getBinaryStream

4. getWriter .

8. Is the following statement **true** or false. URL rewriting may be used when a browser is disabled. In URL encoding the session id is included as part of the URL.

Ans: true

10. Name the class that includes the **getSession** method that is used to get the **HttpSession** object.

1. HttpServletRequest

2. HttpServletResponse
3. SessionContext .
4. SessionConfig .

11. Which of the following are correct statements? Select the two correct answers.

1. The getRequestDispatcher method of ServletContext class takes the full path of the servlet, whereas the getRequestDispatcher method of HttpServletRequest class takes the path of the servlet relative to the ServletContext.

2. The include method defined in the RequestDispatcher class can be used to access one servlet from another. But it can be invoked only if no output has been sent to the server.

3. The getRequestDispatcher(String URL) is defined in both ServletContext and HttpServletRequest method

4. The getNamedDispatcher(String) defined in HttpServletRequest class takes the name of the servlet and returns an object of RequestDispatcher class.

12. A user types the URL <http://www.javaprep.com/scwd/index.html> . Which HTTP request gets generated. Select the one correct answer.

1. GET method

- 2. POST method
- 3. HEAD method
- 4. PUT method

13. Which HTTP method gets invoked when a user clicks on a link? Select the one correct answer.

1. GET method

- 2. POST method
- 3. HEAD method
- 4. PUT method

14. When using HTML forms which of the following is true for POST method? Select the one correct answer.

- 1. POST allows users to bookmark URLs with parameters.
- 2. The POST method should not be used when large amount of data needs to be transferred.
- 3. POST allows secure data transmission over the http method.

4. POST method sends data in the body of the request.

15. Which of the following **is not a valid** HTTP/1.1 method. Select the one correct answer.

1. CONNECT method

2. COMPARE method

3. OPTIONS method

4. TRACE method

16. Name the http method **used to send resources to the server**. Select the one correct answer.

1. FTP method

2. PUT method (PUT method is used to send resources from client to server.)

3. WRITE method

4. COPY method

17. Name the http method **that sends the same response as the request**. Select the one correct answer.

1. DEBUG method

2. TRACE method (TRACE method is used for debugging)

3. OPTIONS method

4. HEAD method

18. Which three digit **error codes represent an error in request from client**? Select the one correct answer.

1. Codes starting from 200

2. Codes starting from 300

3. Codes starting from 400

4. Codes starting from 500

19. Name the location of compiled class files within a **war file**? Select the one correct answer.

1. /META-INF/classes

2. /classes

3. /WEB-INF/classes

4. /root/classes

Servlets

37.1 Which of the following statements are true?

- ☒ A. Static information is preprocessed and stored in a file. The information in the files can be updated, but at any given time every request for the same document returns exactly the same result.
- ☒ B. Dynamic information is not stored in a file. It is generated dynamically and sent directly to the client.
- ☒ C. Common GateWay Interface provides a standard framework for Web servers to interact with external programs, known as CGI programs.
- ☐ D. CGI programs are all written in Perl.

Your answer is correct 

The correct answer is ABC

37.2 In a URL query string, the _____ symbol separates the program from the parameters.

- ☒ A. ?
- ☐ B. =
- ☐ C. &
- ☐ D. +
- ☐ E. -

Your answer is correct



The correct answer is A

37.3 In a URL query string, the parameter name and value are associated using the ____ symbol.

- ☐ A. ?
- ☒ B. =
- ☐ C. &
- ☐ D. +
- ☐ E. -

Your answer is correct



The correct answer is B

37.4 In a URL query string, parameter pairs are separated using the ____ symbol.

- ☐ A. ?
- ☐ B. =
- ☒ C. &
- ☐ D. +
- ☐ E. -

Your answer is correct



The correct answer is C

37.5 In a URL query string, the ____ symbol denotes a space character.

- ☐ A. ?
- ☐ B. =
- ☐ C. &
- ☒ D. +
- ☐ E. -

Your answer is correct
The correct answer is D



37.6 The GET and POST methods are specified in _____.

- ☐ A. a CGI program
- ☐ B. a Java program
- ☒ C. an HTML form
- ☐ D. a URL string

Your answer is correct
The correct answer is C



37.7 Which of the following statements are true?

- ☒ A. When issuing a request from an HTML form, either a GET method or a POST method can be used. The form explicitly specifies which of the two is used.
- ☒ B. If the GET method is used, the data in the form are appended to the request string as if they were submitted using a URL.
- ☒ C. If the POST method is used, the data in the form are packaged as part of the request file. The server program obtains the data by reading the file.
- ☒ D. The POST method always triggers the execution of the corresponding CGI program. The GET method may not cause the CGI program to be executed if the previous same request is cached in the Web browser.

Your answer is correct
The correct answer is ABCD



37.8 The _____ method ensures that a new Web page is generated.

- ☐ A. GET
- ☒ B. POST
- ☐ C. DELETE
- ☐ D. UPDATE

Your answer is correct 

The correct answer is B

37.9 If your request is not time-sensitive, such as finding the address of a student in the database, use the _____ method to speed up the performance.

- ☒ A. GET
- ☐ B. POST
- ☐ C. DELETE
- ☐ D. UPDATE

Your answer is correct 

The correct answer is A

37.10 Java servlets are better than the CGI programs because _____.

- ☒ A. servlets are written in Java while CGI programs are written in Perl or other languages. you can develop servlets with the support of Java API for accessing databases and network resources
- ☐ B. servlets are dynamically executed
- ☒ C. for each CGI execution, the Web browser spawns a new process to execute a CGI program. However, all servlets are executed within the servlet engine. Each execution of a servlet is handled as a thread by the servlet engine. So, servlets runs faster than CGI programs
- ☐ D. servlet programs can run on any Web server

Your answer is correct 

The correct answer is AC

Explanation: Both CGI and servlets are dynamically executed. Servlet programs can run only on Web server with Java servlet engine

37.11 Apache Tomcat is a _____.

- ☐ A. Servlet

- ☐ B. Java program
- ☐ C. Web server
- ☒ D. Web server that is capable of running Java programs

Your answer is correct
The correct answer is D



37.12 A servlet is an instance of _____.

- ☐ A. the Object class
- ☐ B. the Applet class
- ☒ C. the HttpServlet class
- ☐ D. the HTTPServlet class

Your answer is correct
The correct answer is C



37.13 To compile a Java servlet program, the _____ file must be in the classpath.

- ☐ A. TomcatRootDir\servlet.jar
- ☐ B. TomcatRootDir\common\servlet.jar
- ☒ C. TomcatRootDir\common\lib\servlet.jar
- ☐ D. TomcatRootDir\common\bin\lib\servlet.jar

Your answer is correct
The correct answer is C



37.14 If your servlet class file does not have a package statement, the servlet .class file must be placed in _____ by default.

- ☐ A. the same directory with the .java file.
- ☐ B. TomcatRootDir\webapps\WEB-INF\classes
- ☐ C. TomcatRootDir\webapps\examples\WEB-INF

- ☒ D. TomcatRootDir\webapps\examples\WEB-INF\classes

Your answer is correct



The correct answer is D

37.15 If your servlet class file has a package statement package chapter33, the servlet .class file must be placed in _____ by default.

- ☐ A. the same directory with the .java file.
- ☐ B. TomcatRootDir\webapps\WEB-INF\classes
- ☐ C. TomcatRootDir\webapps\examples\WEB-INF\classes
- ☒ D. TomcatRootDir\webapps\examples\WEB-INF\classes\chapter33

Your answer is correct



The correct answer is D

37.16 Before starting Tomcat, you have to set the environment variable JAVA_HOME to _____

- ☒ A. JDKHomeDir
- ☐ B. JDKHomeDir/bin
- ☐ C. JDKHomeDir/bin/java
- ☐ D. JDKHomeDir/java

Your answer is correct



The correct answer is A

37.17 To start the Tomcat servlet engine, use the command _____ from the TomcatRootDir\bin directory.

- ☐ A. java TomcatServlet
- ☐ B. start Tomcat
- ☐ C. start
- ☒ D. startup

Your answer is correct 

The correct answer is D

37.18 By default, Tomcat runs on port _____.

- ☒ A. 8080
- ☐ B. 80
- ☐ C. 1080
- ☐ D. 8888

Your answer is correct 

The correct answer is A

37.19 Suppose the servlet class named Test does not have the package statement, by default, you use _____ to invoke it.

- ☒ A. http://localhost:8080/examples/servlet/Test
- ☐ B. http://localhost:8080/examples/servlet/test
- ☐ C. http://localhost:8080/Test
- ☐ D. http://localhost:8080/test

Your answer is correct 

The correct answer is A

37.20 The _____ interface defines the methods that all servlets must implement.

- ☒ A. javax.servlet.Servlet
- ☐ B. HttpServlet
- ☐ C. ServletRequest
- ☐ D. ServletResponse

Your answer is correct 

The correct answer is A

37.21 The _____ method is called when the servlet is first created, and is not called again as long as the servlet is not destroyed.

- ☒ A. init
- ☐ B. service
- ☐ C. destroy
- ☐ D. getServletInfo

Your answer is correct



The correct answer is A

37.22 The _____ class defines a servlet for the HTTP protocol.

- ☒ A. javax.servlet.http.HttpServlet
- ☐ B. Servlet
- ☐ C. HttpServletRequest
- ☐ D. HttpServletResponse

Your answer is correct



The correct answer is A

37.23 _____ is a subinterface of ServletRequest.

- ☒ A. HttpServletRequest
- ☐ B. HttpServletResponse
- ☐ C. HttpServlet
- ☐ D. Servlet

Your answer is correct



The correct answer is A

37.24 Every doXxx method in the HttpServlet class has a parameter of the _____ type, which is an object that contains HTTP request information, including parameter name and values, attributes, and an input stream.

- ☒ A. HttpServletRequest
- ☐ B. HttpServletResponse
- ☐ C. HttpSession
- ☐ D. Cookie

Your answer is correct



The correct answer is A

37.25 Every doXxx method in the HttpServlet class has a parameter of the _____ type, which is an object that assists a servlet in sending a response to the client.

- ☐ A. HttpServletRequest
- ☒ B. HttpServletResponse
- ☐ C. HttpSession
- ☐ D. Cookie

Your answer is correct



The correct answer is B

37.26 Suppose the two parameters in the doGet or doPost method are request and response. To specify HTML content type sent to the client, invoke _____.

- ☒ A. response.setContentType("text/html")
- ☐ B. request.setContentType("text/html")
- ☐ C. response.setContentType("html")
- ☐ D. request.setContentType("html")

Your answer is correct



The correct answer is A

37.27 Suppose the two parameters in the doGet or doPost method are request and response. To send output to a client, create a PrintWriter using _____.

- ☒ A. response.getWriter()
- ☐ B. response.getPrintWriter()
- ☐ C. response.writer()
- ☐ D. response.getWrite()

Your answer is correct



The correct answer is A

37.28 Which of the following creates a text field in an HTML form?

- ☒ A. `<input type="text" name="mi" size="1">`
- ☐ B. `<input type="radio" name="gender" value="M" checked>`
- ☐ C. Major `<elect name="major" size="1"> <option value="CS">Computer Science<option value="Math">Mathematics<option>English<option>Chinese</select>`
- ☐ D. `<input type="checkbox" name="tennis"> Tennis`
- ☐ E. `<textarea name="remarks" rows="3" cols="56"></textarea>`


Your answer is correct



The correct answer is A


37.29 Which of the following creates a radio button in an HTML form?

- ☐ A. `<input type="text" name="mi" size="1">`
- ☒ B. `<input type="radio" name="gender" value="M" checked>`
- ☐ C. Major `<select name="major" size="1"> <option value="CS">Computer Science<option value="Math">Mathematics<option>English<option>Chinese</select>`
- ☐ D. `<input type="checkbox" name="tennis"> Tennis`
- ☐ E. `<textarea name="remarks" rows="3" cols="56"></textarea>`

Your answer is correct 
The correct answer is B


37.30 Which of the following creates a list in an HTML form?

- ☐ A. `<input type="text" name="mi" size="1">`
- ☐ B. `<input type="radio" name="gender" value="M" checked>`
- ☒ C. Major `<select name="major" size="1"> <option value="CS">Computer Science<option value="Math">Mathematics<option>English<option>Chinese</select>`
- ☐ D. `<input type="checkbox" name="tennis"> Tennis`
- ☐ E. `<textarea name="remarks" rows="3" cols="56"></textarea>`

Your answer is correct 
The correct answer is C

37.31 Which of the following creates a check box in an HTML form?

- ☐ A. `<input type="text" name="mi" size="1">`
- ☐ B. `<input type="radio" name="gender" value="M" checked>`
- ☐ C. Major `<select name="major" size="1"> <option value="CS">Computer Science<option value="Math">Mathematics<option>English<option>Chinese</select>`
- ☒ D. `<input type="checkbox" name="tennis"> Tennis`
- ☐ E. `<textarea name="remarks" rows="3" cols="56"></textarea>`

Your answer is correct 
The correct answer is D

37.32 Which of the following creates a text area in an HTML form?

- ☐ A. `<input type="text" name="mi" size="1">`
- ☐ B. `<input type="radio" name="gender" value="M" checked>`

- ☐ C. Major <select name="major" size="1"> <option value="CS">Computer Science<option value="Math">Mathematics<option>English<option>Chinese</select>
- ☐ D. <input type="checkbox" name="tennis"> Tennis
- ☒ E. <textarea name="remarks" rows="3" cols="56"></textarea>

Your answer is correct
The correct answer is E



37.33 The code for loading a JDBC driver and connecting to a database should be invoked from _____ in a servlet.

- ☒ A. the init method
- ☐ B. the doGet method
- ☐ C. the doPut method
- ☐ D. the destroy method

Your answer is correct
The correct answer is A



37.34 To access Oracle or MySQL from servlet, where the Oracle and MySQL jar files should be placed?

- ☐ A. in the class directory of the servlet source code
- ☐ B. in the class directory of the servlet class code
- ☐ C. TomcatRootDir\webapps\WEB-INF\classes
- ☒ D. TomcatRootDir\common\lib


Your answer is correct
The correct answer is D



37.35 You can use _____ to implement session tracking in servlets.


- ☒ A. HTML hidden values in a form
- ☒ B. the Cookie class

- ☒ C. the HttpSession class

Your answer is correct 
The correct answer is ABC


37.36 To store a hidden value for lastName as Smith in an HTML form, use _____.

- ☐ A. <input type=?text? name=?lastName? value=?Smith?>
- ☐ B. <input type=?text area? name=?lastName? value=?Smith?>
- ☐ C. <input type=?radio? name=?lastName? value=?Smith?>
- ☐ D. <input type=?checkbox? name=?lastName? value=?Smith?>
- ☒ E. <input type=?hidden? name=?lastName? value=?Smith?>

Your answer is correct 
The correct answer is E

37.37 To create a cookie for lastName with value Smith, use _____.

- ☐ A. new Cookie("Smith", "lastName");
- ☐ B. new Cookie(Smith, lastName);
- ☒ C. new Cookie("lastName", "Smith");
- ☐ D. new Cookie(lastName, \Smith);

Your answer is correct 
The correct answer is C

37.38 Suppose the two parameters in the doGet or doPost method are request and response. To send a cookie to a client, use _____.

- ☒ A. response.addCookie(cookie)
- ☐ B. response.sendCookie(cookie)
- ☐ C. request.addCookie(cookie)
- ☐ D. request.sendCookie(cookie)

Your answer is correct 

The correct answer is A

37.39 Suppose the two parameters in the doGet or doPost method are request and response. To retrieve a cookie from a client, use _____.

- ☐ A. response.retrieveCookie()
- ☐ B. response.getCookie()
- ☒ C. You have to use request.getCookies() to obtain all cookies in an array
- ☐ D. You have to use request.getCookie() to obtain a cookie

Your answer is correct 

The correct answer is C

37.40 For an instance of Cookie, say cookie, to retrieve the name of the cookie, use _____.

- ☐ A. cookie.getValue()
- ☒ B. cookie.getName()
- ☐ C. You have to use cookie.getNames() to obtain all values in an array.
- ☐ D. You have to use cookie.getValues() to obtain all values in an array.

Your answer is correct 

The correct answer is B

37.41 By default, how long does a cookie last?

- ☐ A. 24 hours
- ☐ B. 30 days
- ☐ C. 365 days
- ☒ D. By default, a newly created cookie persists until the browser exits.

Your answer is correct 

The correct answer is D

Explanation: You can use the `setMaxAge` method to set a time for a cookie on a local client.

37.42 Suppose the two parameters in the `doGet` or `doPost` method are request and response. To create an HTTP session, use _____.

- ☐ A. `request.createSession()`
- ☒ B. `request.getSession()`
- ☐ C. `response.createSession()`
- ☐ D. `response.getSession()`

Your answer is correct 

The correct answer is B

Explanation: `request.getSession()` obtains the session or creates a new session if the client does not have a session on the server.

37.43 For a `HttpSession`, say session, how do you set an attribute pair with name `lastName` and value `Smith`?

- ☐ A. `session.setValue("lastName", "Smith")`
- ☒ B. `session.setAttribute("lastName", "Smith")`
- ☐ C. `session.value("lastName", "Smith")`
- ☐ D. `session.attribute("lastName", "Smith")`

Your answer is correct 

The correct answer is B

37.44 For a `HttpSession`, say session, how do you get its attribute?

- ☐ A. `session.getValue("lastName")`
- ☒ B. `session.getAttribute("lastName")`
- ☐ C. `session.value("lastName")`
- ☐ D. `session.attribute("lastName")`

Your answer is correct 

The correct answer is B

Java Taglibrary Questions

1. When implementing a tag, if the tag just includes the body verbatim, or if it does not include the body, then the tag handler class must extend the BodyTagSupport class. Is this statement true or false.

false.

2. Fill in the blanks. A tag handler class must implement the **javax.servlet.jsp.tagext.Tag** interface. This is accomplished by extending the class TagSupport or another class named in one of the options below. Select the one correct answer.

1. IterationTag
2. TagClass
3. BodyTag
4. BodyTagSupport

3. Is this statement true or false. The deployment descriptor of a web application must have the name web.xml . In the same way the tag library descriptor file must be called taglib.xml .

4. A JSP file that uses a tag library must declare the tag library first. The tag library is defined using the taglib directive – **<%= taglib uri="..." prefix="..."%>**

Which of the following specifies the correct purpose of prefix attribute. Select the one correct answer.

1. The prefix defines the name of the tag that may be used for a tag library.
2. The prefix attribute defines the location of the tag library descriptor file.

3. The prefix attribute should refer to the short name attribute of the tag library file that is defined by the uri attribute of taglib directive.

4. The prefix attribute is used in front of a tagname of a tag defined within the tag library.

5. A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the tag library descriptor file in the tag element using which element. Select the one correct answer.

A. tagname

B. name

C. tag

D. prefix

6. Which of the elements defined within the taglib element of taglib descriptor file are required. Select the two correct answers.

A. tlib-version

B. short-name

C. uri

D. display-name

7. Which of the elements defined within the taglib element of taglib descriptor file are required. Select the two correct answers.

A. name

B. description

C. validator

D. tag-class

E. display-name

8. Name the element within the tag element that defines the name of the class that implements the functionality of tag. Select the one correct answer.

1. class-name

2. tag

3. class

4. tag-class

5. tei-class

9. Which of these are legal return types of the **doStartTag** method defined in a class that extends **TagSupport** class. Select the two correct answers.

- A. EVAL_PAGE
- B. EVAL_BODY
- C. EVAL_PAGE_INCLUDE
- D. EVAL_BODY_INCLUDE
- E. SKIP_PAGE
- F. SKIP_BODY
- G. SKIP_PAGE_INCLUDE
- H. SKIP_BODY_INCLUDE

10. Which of these are legal return types of the **doAfterBody** method defined in a class that extends **TagSupport** class. Select the two correct answers.

- A. EVAL_PAGE
- B. EVAL_BODY
- C. EVAL_PAGE_AGAIN
- D. EVAL_BODY_AGAIN
- E. SKIP_PAGE
- F. SKIP_BODY
- G. SKIP_PAGE_AGAIN
- H. SKIP_BODY_AGAIN

11. Which of these are legal return types of the **doEndTag** method defined in a class that extends **TagSupport** class. Select the two correct answers.

- A. EVAL_PAGE
- B. EVAL_BODY
- C. EVAL_PAGE_INCLUDE
- D. EVAL_BODY_INCLUDE
- E. SKIP_PAGE
- F. SKIP_BODY
- G. SKIP_PAGE_INCLUDE
- H. SKIP_BODY_INCLUDE

1. What gets printed when the following expression is evaluated? Select the one correct answer. `${(1==2) ? 4 : 5}`

1. 1

2. 2

3. 4

4. 5

2. What gets printed when the following expression is evaluated? Select the one correct answer. `${4 div 5}`

1. 0

2. 0.8

3. 1

4. -1

3. What gets printed when the following expression is evaluated? Select the one correct answer. `${12 % 4}`

1. 0

2. 3

3. 8

4. 16

4. What is the effect of executing the following JSP statement, assuming a class with name Employee exists in classes package.

```
<%@ page import = "classes.Employee" %> <jsp:useBean  
id="employee" class="classes.Employee" scope="session"/>  
<jsp:setProperty name="employee" property="*" />
```

1. The code does not compile as there is no property attribute of setProperty tag.
2. The code does not compile as property attribute cannot take * as a value.
3. The code sets value of all properties of employee bean to "*".

4. The code sets the values of all properties of employee bean to matching parameters in request object.

5. What is the effect of evaluation of following expression? Select the one correct answer.

`${(5*5) ne 25}`

1. true

2. false

3. 25

4. The expression does not compile as ne is not a valid operator.

6. What is the effect of evaluation of following expression? Select the one correct answer.

`${'cat' gt 'cap'}`

1. true

2. false

3. catcap

4. The expression does not compile as gt operator cannot be applied on strings.

7. How many numbers are printed, when the following JSTL code fragment is executed? Select the one correct answer.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:forEach var="item" begin="0" end="10" step="2">
  ${item}
</c:forEach>
```

1. 1

2. 5

3. 6

4. 11

8. What gets printed when the following JSTL code fragment is executed? Select the one correct answer.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
```

```
<c:set var="item" value="2"/>
<c:if test="{var==1}" var="result" scope="session">
<c:out value="{result}"/>
</c:if>
```

1. The JSTL code does not compile as attribute for if tag are not correct.
2. true
3. false

4. Nothing gets printed.

9. What gets printed when the following JSTL code fragment is executed?
Select the one correct answer.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:set var="item" value="2"/>
<c:forEach var="item" begin="0" end="0" step="2">
<c:out value="{item}" default="abc"/>
</c:forEach>
```

1. The JSTL code does not compile as an attribute for forEach tag is not correct.

2. 0

3. 2

4. ABC

5. Nothing gets printed as c.out statement does not get executed.

10. How many numbers gets printed when the following JSTL code fragment is executed? Select the one correct answer.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:set var="item" value="2"/>
<c:choose>
<c:when test="{item>0}">
<c:out value="1"/>
</c:when>
```

```
<c:when test="{item==2}">
<c:out value="2"/>
</c:when>
<c:when test="{item<2}">
<c:out value="3"/>
</c:when>
<c:otherwise>
<c:out value="4"/>
</c:otherwise>
</c:choose>
```

1. No number gets printed.
2. One number gets printed.
3. Two numbers gets printed.
4. Three numbers gets printed.
5. Four numbers gets printed.

11. Which numbers gets printed when the following JSTL code fragment is executed? Select the two correct answers.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:set var="j" value="4,3,2,1"/>
<c:forEach items="{j}" var="item" begin="1" end="2">
<c:out value="{item}" default="abc"/>
</c:forEach>
```

1. 1
2. 2
3. 3
4. 4
5. abc
6. The program does not compile.

12. Which numbers gets printed when the following JSTL code fragment is executed? Select the two correct answers.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:set var="j" value="4,3,2,1"/>
<c:forEach items="${j}" var="item" begin="1" end="2"
varStatus="status">
<c:out value="${status.count}" default="abc"/>
</c:forEach>
```

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. abc

13. Which number gets printed when the following JSTL code fragment is executed? Select the one correct answers.

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:set var="j" value="4,3,2,1"/>
<c:forEach items="${j}" var="item" varStatus="status">
<c:if test="${status.first}">
<c:out value="${status.index}" default="abc"/>
</c:if>
</c:forEach>
```

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. abc
- 6. The program does not compile.

14. Which of these represent the correct path for the core JSTL library in JSTL version 1.1? Select the one correct answer.

- 1. <http://java.sun.com/jsp/jstl/core>
- 2. <http://java.sun.com/jsp/core>
- 3. <http://java.sun.com/core>
- 4. <http://java.sun.com/jsp/jstl1.1/core>

JavaServer Pages Standard Tag Libraries

Question 1 : How many Core tag library actions are there?

- ☒ 14
- ☐ 12
- ☐ 9
- ☐ 17

Question 2 : We can use the `target` and `property` attributes of the `</c:set>` action to assign a new property value to any object?

- ☐ true
- ☒ false

Question 3 : The `<c:remove>` tag removes a scoped object?

- ☐ true
- ☒ false

Question 4 : What type of error object is thrown from the `<c:catch>` tag?

- ☐ `java.lang.Error`
- ☐ `java.lang.Exception`
- ☒ `java.lang.Throwable`
- ☐ Any of the above

Question 5 : Which type of Java conditional statement is the `<c:choose>` tag similar to?

- ☐ if
- ☒ switch
- ☐ when

Question 6 : Which Core iterator tag allows us to iterate over the body content a set number of times?

- ☒ `<c:forEach>`
- ☐ `<c:forLoop>`
- ☐ `<c:forTokens>`
- ☐ `<c:forWhen>`

Question 7 : How many XML tag library actions are there?

- ☐ 7
- ☒ 10
- ☐ 8
- ☐ 14

Question 8 : Which XML attribute allows us to specify *XPath* expressions?

- ☐ allow
- ☒ select
- ☐ transform
- ☐ view

Question 9 : The *XPath* expression language that is global to all JSTL actions?

- ☒ false
- ☐ true

Question 10 : An *XPath* variable must reference a `java.lang.Object` instance in any of the supported scopes?

- ☒ true
- ☐ false

Question 11 : *XPath* expression bindings are mapped differently to their EL Implicit Objects counterparts?

- ☐ true
- ☒ false

Question 12 : What is the default value of the `type` attribute for the `<fmt:formatNumber>` and `<fmt:parseNumber>` actions?

- ☐ currency
- ☒ number
- ☐ percentage

Question 13 : When using the `<fmt:formatNumber>` action the numeric value to be formatted can be specified using the `value` attribute or when omitted read from where?

- ☐ The `value` attribute is mandatory and must be specified
- ☐ The action is ignored
- ☐ The `value` attribute is treated as a `null` value
- ☒ The numeric value can be read from the tag's body content

Question 14 : What is the default value of the `type` attribute for the `<fmt:formatDate>` and `<fmt:parseDate>` actions?

- ☒ date
- ☐ time
- ☐ both

Question 15 : When using the `<fmt:formatDate>` action if the `scope` attribute is specified which other attribute must also be specified?

- ☐ pattern
- ☐ type
- ☐ value
- ☒ var

Question 16 : How many time zone li8n actions are there?

- ☐ 1
- ☒ 2
- ☐ 3
- ☐ 4

Question 17 : How many Database tag library actions are there?

- ☐ 4
- ☒ 6

- ☐ 8
- ☐ 10

Question 18 : What happens if a data source is not of the `String` or `javax.servlet.jsp.jstl.sql.dataSource` types?

- ☐ The data source is set to `null`
- ☐ The data source is ignored
- ☐ The data source is used regardless of type
- ☒ An exception is thrown

Question 19 : What happens if a query using the `<sql:query>` action produces no results?

- ☐ An exception is thrown
- ☒ An empty `Result` object is returned
- ☐ No `Result` object is returned
- ☐ A `Result` object is returned containing a `null` record

Question 20 : Which Database action allows us to safeguard database integrity?

- ☐ `<sql:commit>`
- ☐ `<sql:rollback>`
- ☒ `<sql:transaction>`
- ☐ `<sql:update>`

Question 21 : Which symbol is used for parameter substitution?

- ☐ *
- ☒ ?
- ☐ +
- ☐ %

Question 22 : Which action is used for date parameterisation?

- ☐ `<sql:date>`
- ☐ `<sql:param>`
- ☒ `<sql:dateParam>`
- ☐ `<sql:value>`

Question 23 : How many Function tag library actions are there?

- ☐ 14
- ☐ 12
- ☐ 9
- ☒ 16

Question 24 : All the `Function` tag actions only work on strings?

- ☐ true
- ☒ false

Question 25 : What happens if the input to any of the `Function` tags is `null`?

- ☐ An exception occurs
- ☐ The input is treated as spaces
- ☒ The input is treated as an empty string
- ☐ The input is treated as zeros

Question 26 : When using the `fn:substring` function what happens if the `beginIndex` attribute is less than 0?

- ☐ It is set to spaces
- ☐ An exception occurs
- ☐ It is set to `null`
- ☒ It is set to 0

Question 27 : When using the `fn:replace` function what happens if the `afterSubstring` attribute is an empty string?

- ☐ The action is ignored
- ☐ An exception occurs
- ☐ All occurrences of the `beforeSubstring` attribute are removed from the `inputString` attribute
- ☒ All occurrences of the `afterSubstring` attribute are removed from the `inputString` attribute

Question 28 : Which type serves as the base type for both classic and simple tags and is mainly used for organizational and type-safety purposes?

- ☐ `BaseTag`
- ☒ `JspTag`
- ☐ `ServletTag`

- ☐ Tag

Question 29 : What is the last method called in the simple tag lifecycle?

- ☒ doTag ()
- ☐ setJspBody ()
- ☐ doSimpleTag ()
- ☐ setJspContext ()

Question 30 : Where are custom tag handlers registered?

- ☐ In the tag library registry
- ☐ We don not need to register our custom tags
- ☒ In the tag library descriptor
- ☐ In the tag library repository

Question 31 : When compiling a tag handler both the Servlet API and JSP API jars are required?

- ☒ true
- ☐ false

Question 32 : Which directive do we use that allows us to use custom tags within our JSP pages?

- ☐ customtaglib
- ☐ customlib
- ☐ customtag
- ☒ taglib

Question 33 : We can use the same TLD file for custom tags and EL functions?

- ☒ true
- ☐ false

Question 34 : EL functions use public instance methods?

- ☐ true
- ☒ false

Question 35 : We need to include the Servlet and JSP API JARs in our build path when compiling EL functions?

- ☐ yes
- ☒ no

Question 36 : We can use methods from existing classes for EL functions?

- ☒ yes
- ☐ no

Question 37 : Which directive do we use that allows us to use EL functions within our JSP pages?

- ☐ customtaglib
- ☐ eltaglib
- ☐ customeltag
- ☒ taglib

Question 38 : With tag files you have to precompile tag handlers just like you do with custom tags?

- ☐ true
- ☒ false

Question 39 : Which of these directives isn't used in tag files?

- ☐ attribute
- ☐ include
- ☐ tag
- ☒ page
- ☐ variable

Question 40 : Deployed tag files can be located by the container within `WEB-INF/tags` or a subdirectory there of, can we place tag files anywhere else?

- ☒ yes
- ☐ no

Question 41 : When we want to use a tag file within our JSP pages what directive do we use to point to the location of the tag file?

- ☐ tag
- ☐ page
- ☒ taglib
- ☐ tagfile

Question 42 : Can tag files include other sources?

☐ no

☒ yes

Expression Language

Question 1 : What is the main purpose of using EL?

- ☐ To remove XML from JSP pages
- ☐ To remove standard actions from JSP pages
- ☒ To remove Java syntax from JSP pages
- ☐ To remove complexity from JSP pages

Question 2 : You can use EL alongside Java scripting elements?

- ☒ true
- ☐ false

Question 3 : EL expressions are always evaluated from right to leftt.?

- ☐ true
- ☒ false

Question 4 : Which of the following is an invalid EL identifier?

- ☐ amy1
- ☐ \$amy1
- ☒ *amy1
- ☐ _amy1

Question 5 : Which of the following is a reserved word and so can't be used as an EL identifier?

- ☒ empty
- ☐ erase
- ☐ error
- ☐ evoke

Question 6 : What will be the output from the following expression?

```
<%  
    request.setAttribute("a", 15);  
    request.setAttribute("b", 6);  
%>  
${a%b}
```


- ☐ 0
- ☒ 3
- ☐ -3
- ☐ 9
- ☐ -9

Question 7 : When using the Short-circuit AND (and or &&) if the first operand returns `false`, the second operand will not be checked?

- ☒ true
- ☐ false

Question 8 : When using the Short-circuit OR (or or ||) if the first operand returns `true`, the second operand will not be checked?

- ☒ true
- ☐ false

Question 9 : What will be the output from the following expression?

```
${empty ""}
```

- ☐ an exception will be thrown
- ☐ null
- ☒ true
- ☐ false

Question 10 : What will be the output from the following conditional operator?

```
<%  
request.setAttribute("a", 6);  
request.setAttribute("b", 15);  
%>  
${(requestScope.a lt requestScope.b)? "lower number" :  
"higher number"}
```

- ☐ nothing
- ☐ null
- ☒ lower number
- ☐ higher number

Question 11 : Which operator has the highest precedence?

- ☐ empty
- ☐ instanceof
- ☐ mod
- ☒ not

Question 12 : The `.` operator can be used to access JavaBeans and what other type of object?

- ☐ Array
- ☐ `java.util.List`
- ☒ `java.util.Map`

Question 13 : The first named variable (before the `.` operator) is either an attribute within one of the four scopes or what.?

- ☐ A collection
- ☐ An array
- ☒ EL implicit object
- ☐ JavaBean

Question 14 : Which type of property access operator allows us to use non-conforming Java identifiers?

- ☐ `.` operator
- ☒ `[]` operator
- ☐ neither
- ☐ both

Question 15 : We can access the property of an object, where that object itself has been returned as the property of another object?

- ☒ true
- ☐ false

Question 16 : Which type of property access operator allows us to use `java.util.Map` objects?

- ☐ `.` operator
- ☐ `[]` operator

- ☐ neither
- ☒ both

Question 17 : Which EL implicit object is not of type `java.util.Map`?

- ☐ `cookie`
- ☐ `header`
- ☐ `initParam`
- ☒ `pageContext`

Question 18 : Using array like syntax such as `${header.accept[1]}` we can access secondary header values using the `header` EL implicit object.?

- ☐ true
- ☒ false

Question 19 : The `initParam` EL implicit object allows access to servlet initialisation parameters?

- ☐ true
- ☒ false

Question 20 : When using the `cookie` EL implicit object there is no need to iterate over the `javax.servlet.http.HttpServletRequest` object to get to the required name?

- ☒ true
- ☐ false

Question 21 : Which of the following EL implicit object contains variables with the shortest scope?

- ☐ `applicationScope`
- ☒ `pageScope`
- ☐ `requestScope`
- ☐ `sessionScope`

Question 22 : Which DD element is used to define global configuration information in a web application for JSP files?

- ☐ `jsp-attune`
- ☒ `jsp-config`

- ☐ `jsp-match`
- ☐ `jsp-set`

Question 23 : You can invalidate scripting or ignore EL within a JSP page, but not both?

- ☐ true
- ☒ false

Question 24 : What happens when we try to run a JSP page that has scripting and the `scripting-invalid` sub-level element of the `jsp-property-group` DD element has been set to `true`?

- ☐ Compile error
- ☐ The scripting is output as a string literal
- ☒ Exception
- ☐ The scripting is ignored

Question 25 : What is the only mandatory sub-level element of the `jsp-property-group` element?

- ☐ `el-ignored`
- ☐ `include-coda`
- ☐ `is-xml`
- ☒ `url-pattern`

Question 26 : What happens when we try to run a JSP page that has EL elements and the `el-ignored` sub-level element of `jsp-property-group` DD element has been set to `true`?

- ☐ Compile error
- ☒ The scripting is output as a string literal
- ☐ Exception
- ☐ The scripting is ignored