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QUESTION 1
APIs for dynamically registering servlets and filters can be called at:

A. Context initialization time
B. Any time
C. There is no way to dynamically register servlets and filters
D. Context destruction time
E. Injected into a servlet context

Answer: A

QUESTION 2
ServletRegistration.Dynamic can be used to configure (Choose two)

A. Filter mappings
B. add init params
C. set asyncSupported to true
D. add Listeners

Answer: BC
Explanation:
http://www.softwareengineeringsolutions.com/blogs/2010/08/01/ (3rd paragraph)

QUESTION 3
A web application wants to register a new servlet at runtime using one of the servletContext.addServlet methods.
In the implementation of which method is it legal to perform this operation?

A. AsyncListner.oncomplete
B. Servlet.init
C. ServletContextListener.contextInitialize
D. ServletrequestListener.contextInitialize

Answer: C

QUESTION 4
You want to create a filter for your web application and your filter will implement .servlet.Filter.
Which two statements are true? (Choose two)

A. Your filter class must implement an init method and a destroy method.
B. Your filter class must also implement javax.sarvlat.FilterChain.
C. When your filter chains to the next filter, it should pass the same arguments it received in its doFilter method.
D. The method that your filter invokes on the object it received that implements javax - servlet.Filterchain can invoke either another filter or a servlet.
E. Your filter class must implement a doFilter method that takes, among other things, an HttpServletRequest object and an HttpServletresponse object.

Answer: AD

QUESTION 5
You have a simple wpb application that has a single Front Controller servlet that dispatches to JSPs generate a variety of views. Several of these views require further database processing to retrieve the necessary order object using the orderID request parameter. To do this additional processing, you pass the request first to a servlet that is mapped to the URL pattern /WEB - INF / retrieveOrder.do. in the deployment descriptor. This servlet takes two request parameters, the ordered and the jspID and the jspURL. It handles the database calls to retrieve and build the complex order objects and then it dispatches to the jspURL.
Which code snippet in the Front Controller servlet dispatches the request to the order retrieval servlet?

A.
```
reques.setAttribute ("orderID", orderIS);
request.setAttribute("jspURL", jspURL);
= context.getRequestDispathcher ("/WEB - INF / retrieveOrder.do");
view.forward(request, response)
```
B.
```
reques.setAttribute ("orderID", orderIS);
request.setAttribute("jspURL", jspURL);
Dispatcher view
= request.getDispatcher (".WEB - INF / retrieveOrder.do");
View.forwardRequest (request, response);
```
C.
```
String T= "/WEB - INF / retrieveOrder.do?orderID = %&;
jspURl = %s";
String url = String.format (T, ordered, jspURL);
= context.getRequestDispatcher (url);
View.forward (request, response) ;
```
D.
```
String T= "/WEB - NF / retrieveOrder.do?orderID = %&;
jspURl = %s";
String url = String.format (T, ordered, jspURL);
= context.getRequestDispatcher (url);
View.forwardRequest (request, response) ;
```

Answer: C

QUESTION 6
Given the JavaBean class:

```
public class MyBean {
private Boolean roasted = false;
public MyBean () {}
public Boolean isRoasted () { returned roasted }
public void setRoasted (Boolean roasted) { this.roasted = roasted; ]
}
```

Assume a controller has created an instance of this bean, called setRoasted (true), and inserted the bean into the application scope using the name "myBean".
A JSP contains these two tags:

```
<jsp: useBean id = "aBean" class = "MyBean" scope = "page" \ />
<jsp: getProprty name = "aBean" property = "roasted" \ />
```

Which is true?

A. the page will include the output false
B. the page will include the output
C. the page will report that the property roasted does not exist
D. the page will report that the syntax of the useBean tag is incorrect
E. the page will report that the syntax of the getProperty tag ls incorrect

Answer: A
Explanation:
http://www.emacao.gov.mo/documents/18/06/exam.pdf (4th table from the top)

QUESTION 7
A developer chooses to avoid using singieThreadModel but wants to ensure that data If; updated in a thread safe manner.
Which two can support this design goal? (Choose two)

A. Store the data in a local variable.
B. Store the data in an instance variable.
C. Store the data in the Httpsession object.
D. Store the data in the sarvletContext object.
E. Store the data in the ServletRequest object.

Answer: AE

QUESTION 8
You have a use in your web application that adds several session-scoped attributes. At the end of the use case, one of these objects, the manage attribute, is removed and then it needs to decide which of the other session-scoped attributes to remove.
How can this goal be accomplished?

A. The object of the manager attribute should implement the HttpSessionBindingListener and it should call the removeAttribute method on the appropriate session attributes.
B. The object of the manager attribute should implement the HttpSessionListenar and it should call the removeAttribute method on the appropriate session attributes.
C. The object of the manager attribute should implement the HttpSessionBindingListener rind it should call the deleteAttribute method on the appropriate session attributes.
D. The object of the manager attribute should implement the HttpsessionListener and it should call the deleteAttribute method on the appropriate session attributes.

Answer: A

QUESTION 9
The Squeaky Beans Inc. shopping application was initially developed for a non-distributed environment. The company recently purchased the Acme Application Server, which supports distributed Httpsession objects. When deploying the application to the server, the doployer marks it as distributable in the web application deployment descriptor to take advantage of this feature.
Given this scenario, which two must be true? (Choose two)

A. The J2EE web container must support migration of objects that implement serializable.
B. The J2EE web container must use the native JVM Serialization mechanism for distributing HttpSesaion objects.
C. As per the specification, the J2EE web container ensures that distributed Httpsassion objects will be stored in a database.
D. Storing references to Enterprise JavaBeans components in the HttpSession object might NOT supported by J2EE web contain.

Answer: AD

QUESTION 10
Given an HttpServletRequest request and an httpServletResponse response:

```
41. HttpSession session = null;
42. / / insert code here
43. if (session = = null) {
44. / / do something if session does not exist
45. } else {
46. / / do something if session exists
47. }
```

To implement the design intent, which statement must be inserted at line 42?

A. session = response.getSession ();
B. session = request.getSession ();
C. session = request.getSession (true);
D. session = request.getSession (false);
E. session = request.getSession ("jsessionid");

Answer: D

QUESTION 11
Users of your web application have requested that they should be able to set the duration of their sessions. So for example, one user might want a webapp to stay connected for an hour rather than the webapp's default of fifteen minutes; another user might want to stay connected for a whole day.
Furthermore, you have a special login servlet that performs user authentication and retrieves the object from the database. You want to augment this code to set up the user's specified session duration.
Which code snippet in the login servlet will accomplish this goal?

A. `User user = / / retrieves the user objects object from the database session.setDurationInterval (user.getSessionDuration());`
B. `User user = / / retrieves the User objects from the database session.setInactiveInterval (user.getSessionDuration());`
C. `User user = / / retrieves the user objects object from the database session.setInactiveInterval (user.get.SessionDuration());`
D. `User user = / / retrieves the user objects object from the database session.setDuration (user.getSessionDuration());`
E. `User user = / / retrieves the user objects object from the database`

```
session.setMaxInactiveInterval (user.getSessionDuration());
```

F. `User user = / / retrieves the user objects object from the database`
`session.setMaxDurationInterval (user.getSessionDuration());`

Answer: E

QUESTION 12
Which interface must a class implement so that instances of the class are notified after any object added to a session?

A. javax.servlet.http.HttpSessionListener
B. javax.servlet.http.HttpSessionValueListener
C. javax.servlet.http.HttpSessionBindingListener
D. javax.servlet.http.HttpSessionAttributeListener

Answer: D

QUESTION 13
Which statement is true about web container session management?

A. Access to session-scoped attributes is guaranteed to be thread-safe by the web container.
B. To activate URL rewriting, the developer must use the HttpServletResponse.setURLRewriting method.
C. If the web application uses HTTPS, then the web container may use the data on the HTTPS request stream to identify the client.
D. The JSESSIONID cookie is stored permanently on the client so that a user may return to the web application and the web container will rejoin that session.

Answer: C

QUESTION 14
A method call inside your servlet has thrown an IOException resulting from a lost network connection to a necessary resource. The servlet has determined that it will be unable to operate successfully fen few minutes, but expects to be able to resume operation after that period. How should this situation handled?

A. The servlet should re-throw the exception to the web container.
B. The servlet should throw a servletException to the web container.
C. The servlet should throw an unavailableException to the web container.
D. The servlet should redirect to an error page that reports the exception message.
E. The servlet should retry the request until the method returns successfully.

Answer: C
Explanation:
http://jcp.org/aboutJava/communityprocess/first/jsr053/servlet23_PFD.pdf (page 26, topic: 2.3.3.2, first paragraph)

QUESTION 15

During initialization, a servlet finds that the database connection it requires is unavailable. As the system designer, you know that the database start up completes several minutes after the web-container initializes the servlet. How should this be handled?

A. Retry the connection until it is successful, then allow the init () method to complete.
B. Throw a ServletException
C. Throw the IOException
D. Throw an UnavailableException

Answer: D
Explanation:
http://java.sun.com/j2ee/tutorial/1_3-fcs/doc/Servlets6.html

QUESTION 16
A servlet wishes to indicate that it is unable to initialize at the present time, but that the initialization might succeed at some future time. Which is true?

A. This cannot be expressed. A servlet either initializes correctly or fails.
B. This expression is not necessary. If a servlet fails to initialize, the container will try again later each time a request is received that attempts to invoke that servlet.
C. The servlet should delay until it is ready to complete initialization successfully.
D. The servlet should throw an UnavailableException
E. The servlet should throw a servletException

Answer: D

QUESTION 17
In a jsp-centric shopping cart application cart application to move a client's home address of Customer object into the shipping address of the order object. The address data is stored in a value object class called Address with properties for: street address, city, province, country, and postal code.
Which two code snippets can be used to accomplish this goal?

A.
```
<c:set var='order' property='shipAddress'
value='${client.homeAddress}' />
```
B.
```
<c:set target='${order}' property='shipAddress'
value='${client.homeAddress}' />
```
C.
```
<jsp:setProperty name='${order}' property='shipAddress'
value='${client.homeAddress}' />
```
D.
```
<c:set var='order' property='shipAddress'>
<jsp:getProperty name='client' property='homeAddress' />
</c:store>
```
E.
```
<c:set target='${order}' property='shipAddress'>
<jsp:getProperty name='client' property='homeAddress' /> </c:set>
```
F.
```
<c:setProperty name='${order}' property='shipAddress'>
<jsp:getProperty name='client' property='homeAddress' />
</c:setProperty>
```

Answer: BE

QUESTION 18
You are creating a JSP page to display a collection of data. This data can be displayed in several different ways so the architect on your project decided to create a generic servlet that generates a comma delimited string so that various pages can render the data in different ways. This servlet takes on request parameter: objoctID. Assume that this servlet is mapped to the URL pattern:

```
/WEB-INF/data.
```

In the JSP you are creating, you need to split this string into its elements separated by commas and generate an HTML <ul> list from the data.
Which JSTL code snippet will accomplish this goal?

A.
```
<c:import varReader='dataString' url='/WEB-INF/data'>
<c:param name='objectID' value='${currentOID}' />
</c:import>
<ul>
<c:forTokens items'${dataString.split(",")}' var='item'>
<li>${item}</li>
</c:forTokens>
</ul>
```

B.
```
<c:import varReader='dataString' url='/WEB-INF/data'>
<c:param name='objectID' value='${currentOID}' />
</c:import>
<ul>
<c:forTokens items'${dataString}' delims=',' var='item'>
<li>${item}</li>
</c:forTokens>
</ul>
```

C.
```
<c:import var='dataString' url='/WEB-INF/data'>
<c:param name='objectID' value='${currentOID}' />
</c:import>
<ul>
<c:forTokens items'${dataString.split(",")}' var='item'>
<li>${item}</li>
</c:forTokens>
</ul>
```

D.
```
<c:import var='dataString' url='/WEB-INF/data'>
<c:param name='objectID' value='${currentOID}' />
</c:import>
<ul>
<c:forTokens items'${dataString}' delims=',' var='item'>
<li>${item}</li>
</c:forTokens>
</ul>
```

Answer: D

QUESTION 19
Which JSP standard action can be used to import content from a resource called foo.jsp?

A. <jsp:import file='foo.jsp' />
B. <jsp:import page='foo.jsp' />

C. <jsp:include page='foo.jsp' />
D. <jsp:include file='foo.jsp' />
E. <jsp:import>foo.jsp</jsp:import>
F. <jsp:include>foo.jsp</jsp:include>

Answer: C

QUESTION 20
A web application allows the HTML title banner to be set using a context initialization parameter called titlestr.
Which two properly set the title in the scenario? (Choose two)

A. <title> $ {titlestr} </title>
B. <title> $ {initparam.titlestr}</title>
C. <title> $ {param [0]. titlestr} </title>
D. <title> $ {paramValues.titleStr} </title>
E. <title> $ {initParam [`titleStr'] } </title>
F. <title> $ {servletParams.titleStr} </title>
G. <title> $ {request.get ("titleStr") } </title>

Answer: BE

QUESTION 21
Refer to the Exhibit. Assuming the tag library in the exhibit is imported with the prefix forum, which custom tag invocation procedures a transaction error in a jsp page?

```
 1. <?xml version="1.0" encoding="UTF-8" ?>
 2.
 3. <taglib
xmlns="http://java.sun.com/xml/ns/j2ee"
 4.    xmlns:xsi="http://www.w3.org/2001/XMLSchem
a-instance"
 5.    xsi:schemaLocation="http://java.sun.com/xm
l/ns/j2ee web-jsptaglibrary_2_0.xsd"
 6.    version="2.0">
 7.    <tlib-version>1.0</tlib-version>
 8.    <short-name>forum</short-name>
 9.    <uri>http://example.com/tld/forum</uri>
10.    <tag>
11.      <name>message</name>
12.
<tag-class>com.example.MessageTag</tag-class>
13.
<body-content>scriptless</body-content>
14.      <attribute>
15.        <name>from</name>
16.        <rtexprvalue>true</rtexprvalue>
17.      </attribute>
18.      <attribute>
19.        <name>subject</name>
20.        <required>false</required>
21.        <rtexprvalue>true</rtexprvalue>
22.      </attribute>
23.    </tag>
24. </taglib>
```


A. `<forum:message from="My Name" subject="My Subject" />`

B.
```
<forum:message subject="My Subject">
My message body.
</forum:message>
```

C.
```
<forum:message from="My Name" subject="${param.subject}">
${param.body}
</forum:message>
```

D.
```
<forum:message from="My Name" subject="My Subject">
<%= request.getParameter( "body" ) %>
</forum:message>
```

E.
```
<forum:message from="My Name"
subject="<%= request.getParameter( "subject" ) %>">
My message body.
</forum:message>
```

Answer: D

QUESTION 22
Given the element from the web application deployment descriptor:

```
<jsp -property -gro>t;
<url -patter>;/main/page1.js<;/url -patte>t;
<scripting -invali>;tru<;/scripting -inval>t;
```

```
</jsp--property--group>
```

And given that /main/page1.jsp contains:

```
<% int i = 12; %>
<b> <%= i %> </b>
```

What is the result?

A.
B. l2
C. The JSP fails to execute.
D. <% int i = 12 %>
 <%= i % > < b>

Answer: C

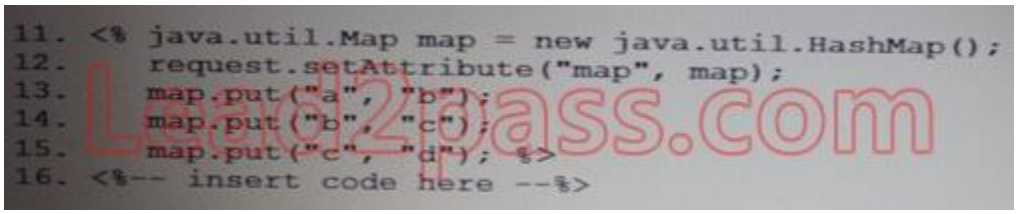
QUESTION 23
Which three EL expressions, inserted at line 15, are valid and evaluate to "3"? (Choose three)

```
11. <%
12. request.setAttribute ("vals", new String[] {"1", "2", "3", "4"});
13. request.setAttribute ("index", "2");
14. %>
15. <% - - insert code here - - %>
```

A. ${vals.2}
B. ${vals ["2"] }
C. ${vals.index}
D. ${vals[index] }
E. ${vals} [index]
F. ${vals. (vals.index) }
G. ${vals [vals[index-1]] }

Answer: BDG

QUESTION 24
Which three EL expressions, inserted at line 16, are valid and evaluate to "d"? (Choose three)



A. ${map.c}
B. ${map.[c]}
C. ${map.["c"]}

D. `${map.map.b}`
E. `${map.[map.b]}`
F. `${map. (map.b)}`

Answer: ACE

QUESTION 25
You are building a dating service web site. Part of the form to submit a client's profile is a group of radio buttons for the person's hobbies:

```
20. <input type = `radio' name = `hobbyEnum' value = `HIKING'> Hiking
<br>
21. <input type = `radio' name = `hobbyEnum' value = `SKING'> Sking
<br>
22. <input type = `radio' name = `hobbyEnum' value = `SCUBA'> SCUBA
<br>
23. <! - - and more options - - >>
```

After the user submits this form, a confirmation screen is displayed with these hobbies listed. Assume that an application-scoped hobbies, holds a map between the hobby enumerated type and the display name.
Which EL code snippet will display Nth element of the user's selected hobbles?

A. ${hobbies [hobbyEnum[N]}
B. ${hobbies [paramValues.hobbyEnum[N]]}
C. ${hobbies [paramValues @ `hobbyEnum' @N]
D. ${hobbies.get(paramValues.hobbyEnum[N]) }
E. ${hobbies [paramValues.hobbyEnum.get(N)] }

Answer: B

QUESTION 26
What is the result?

```
1. <% int[] nums = {42,420,4200};
2. request.setAttribute("foo", nums); %>
3. ${5 + 3 It 6}
4. S(requestScope['foo'][0] ne 10 div0>
5. ${10 div 0}
```

A. true true
B. false true
C. false true 0
D. true true Infinity
E. false true Infinity
F. An exception is thrown
G. Compilation or translation fails

Answer: E

QUESTION 27
You are building a web application with a scheduling component. On the JSP, you need to show the current date, the date of the previous week, and the date of the next week.
To help you present this information, you have created the following EL functions in the `d' namespace:

```
- Name : curData; signature: java.util.utilDate CurrentDate()
- Name : curData; signature: java.util.utilDate addweek
(java.util.Date, int)
- Name: dateString; signature: java.util.String getDataString
(jave.util.Data)
```

Which EL code snippet will generate the string for the previous week?

A. ${d:dateString(affWeek(curDate(), -1)) }
B. ${d:dateString [addWeek[curDate[], -]] }
C. ${d:dateString [d:addWeek[d:curDate[], - 1]] }
D. ${d:dateString (d:addWeek(d:curDate(), -1)) }

Answer: D

QUESTION 28
Given a header in an HI IP request:

```
X-Retries: 4
```

A Which two retrieve the value of the header from a given HttpServletRequest request? (Choose two)

A. request-getHeader("X-Retries")
B. request.getlntHeader("X-Retries")
C. request.getRequestHeader("X-Retries")
D. request.getHeaders{"X-Retries").get(0)
E. request.getRequestHeaders("X-Retries").get(0)

Answer: AB

QUESTION 29
Given an HttpServletRequestrequest and HttpResponseresponse, which sets a cookie "username" with the value "joe" in a servlet?

A. request.addCookie("username", "joe")
B. request.setCookie("username", "joe")
C. response.addCookie("username", "joe")
D. request.addHeader(new Cookie("username", "joe"))
E. request.addCookie(new Cookie("username", "joe"))
F. response.addCookie(new Cookie("username", "joe"))
G. response.addHeader(new Cookie("username", "joe"))

Answer: F

QUESTION 30
Which annotation enables a servlet to efficiently process requests of typo multipart/form-data that involve large files being uploaded by the client?

A. @AcceptMultipart
B. @MultiPartConfig
C. @MultiPartFormData
D. @WebServlet (multipart = true)

Answer: B
Explanation:
http://www.scribd.com/ilinchen2008/d/38764279-Servlet3-0-Specs (page 22, last paragraph)

QUESTION 31
You are implementing a model component. You realize that an IOException might arise if you lose connection to the database. How should you address this?

A. Implement multipathing to provide redundant connectivity to the database, thereby avoiding that risk of connection failure.
B. Provide an error handler page, and use the page directive in the invoking ISP to redirect to that page if the error arises.
C. Use the JSTL <c:catch> tag to take control if the exception arises.
D. Surround the problem area with a try/catch block and implement appropriate recovery or fallback behavior.

Answer: C
Explanation:
http://www.ibm.com/developerworks/java/library/j-jstl0318/ (topic: exception handling)

QUESTION 32
Which is a valid value for the enum EmptyRoleSemantic in Javax.servlet.annotation.ServletSecurity?

A. ADMIT
B. PERMIT
C. EXCLUDE
D. DENYALL
E. ALLOWALL

Answer: B
Explanation:
http://tomcat.apache.org/tomcat-7.0-doc/servletapi/javax/servlet/annotation/ServletSecurity.EmptyRoleSemantic.html

QUESTION 33
In which two locations can library dependencies be defined for a web application? (Choose two)

A. the web application deployment descriptor
B. the /META-INF/dependencies.xml file
C. the /META-INF/MANIFEST.MF manifest file
D. the /META-INF/MANIFEST.MF manifest of a JAR in the web application classpath

Answer: CD

QUESTION 34
The jquery_1_3_2.jar file contains the JQuery Ajax framework in its META-INF/ resources directory. Where should the jar file be placed inside the web application to ensure the resources it contains are accessible by clients?

A. WEB-INF/classes
B. WEB-INF/jar
C. WEB-INF/lib
D. WEB INF/resources

Answer: C
Explanation:
http://www.ibm.com/developerworks/websphere/library/techarticles/0112_deboer/deboer.html (topic: web modules, third paragraph)

QUESTION 35
Given a jar file packaged with three web fragments with names X, Y and Z respectively.
Which of the following deployment descriptor, web.xml, snippets correspond to the web fragment processing orders of X, Y, Z?

```
(i) <absolute-ordering>
<name>X</name>
<name>Y</name>
<name>Z</name>
</absolute-ordering>

(ii) <absolute-ordering>
<name>X</name>
<name>Y</name>
</absolute-ordering>

(iii) <absolute-ordering>
</others>
<name>Y</name>
<name>Z</name>
</absolute-ordering>

(iv) <absolute-ordering>
<name>X</name>
</others>
<name>Z</name>
</absolute-ordering>
```

```
(v) <absolute-ordering>
<name>X</name>
<name>Y</name>
</others>
</absolute-ordering>
```

A. (i) only
B. (i) and (ii)
C. (i) and (iv)
D. (i), (iii), (iv) and (v)

Answer: D
Explanation:
http://blogs.oracle.com/swchan/entry/servlet_3_0_web_fragment

QUESTION 36
Which defines the welcome files in a web application deployment descriptor?

A.
```
<welcome>
<welcome- file >/ welcome - jsp</welcome-file>
</welcome>
<welcome>
<welcome-file>/index-html</welcome-file>
</welcome>
```
B.
```
<welcome-file-list>
<welcome-file> welcome .jsp</welcome-file>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
```
C.
```
<welcome>
<welcome-file>welcome.jsp</welcome </welcome >
</welcome >
<welcome-file>index.html</welcome-file>
</welcome >
```
D.
```
<welcome-file-list>
<welcome-file> welcome .jsp</welcome-file>
<welcome-file>/index.html</welcome-file>
</welcome-file-list>
```
E.
```
<welcome>
<welcome-file>
<welcome-name> welcome </welcome-name>
<location> welcome.jsp </location>
</welcome-file>
<welcome-file>
<welcome-name>index</welcome-name>
<location> index </location>
</welcome-file>
</welcome>
```

Answer: B

QUESTION 37

Which code snippet specifies the metadata for a servlet with:

```
(i) url mapping "/mytest"'
(ii) Initial parameter with name "debug" and value "10"'
(iii) Support asynchronous operation?
```

A.
```
@WebServlet("/mytest")
@InitParam(name-"debug" va1ue = "10")
@Asynchronous
public class TestServlet extends HttpServlet {}
```
B.
```
@WebServlet ("/myset")
@WebParam(name = "debug" value = "10")
Public class testServlet {}
```
C.
```
@WebServlet (urlPatterns = { / "mytest"},
Initparams = {@InitParam (name = "debug", value = "10") },
supportAsync = true) public class TestServlet extends
HttpServlet {}
```
D.
```
@WebServlet (urlPatterns = { / "mytest"},
Initparams = {@InitParam (name = "debug", value= "10") },
asyncSupported = true) public class TestServlet extends
HttpServlet {}
```
E.
```
@WebServlet (urlPatterns = { / "mytest"},
Initparam = @WebInitParam (name = "debug", value = "10"),
supportAsync = true) public class testServlet {}
```

Answer: D

QUESTION 38
Which annotation specifies the metadata as a javax.servlet.http.HttpSessionListener?

A. @Listener
B. @WebListener
C. @WebSessionListener
D. @HttpSessionListener

Answer: B
Explanation:
http://docs.oracle.com/cd/E12840_01/wls/docs103/webapp/annotateservlet.html (table 8-1, third row)

QUESTION 39
You are creating a new ISP page and you need to execute some code that acts when the- page is first executed, but only once.
Which three are possible mechanisms for performing this initialization code? (Choose three)

A. In the init method.
B. In the jspInit method.
C. In the constructor of the JSP's Java code.
D. In a JSP declaration, which includes an initializer block.
E. In a JSP declaration, which includes a static initializer block.

Answer: BDE

QUESTION 40
You are creating a web form with this HTML:

```
11. <form action="sendOrder.jsp">
12. <input type="text" name="creditCard">
13. <input type="text" name="expirationDate">
14. <input type="submit">
15. </form>
```

Which HTTP method is used when sending this request from the browser?

A. GET
B. PUT
C. POST
D. SEND
E. FORM

Answer: A

QUESTION 41
Your web application requires the ability to load and remove web files dynamically to the web container's file system?
Which two HTTP methods are used to perform these actions? (Choose two)

A. PUT
B. POST
C. SEND
D. DELETE
E. REMOVE
F. DESTROY

Answer: AD

QUESTION 42
A web application wants to expose to its clients an operation that results in a transaction being performed across several systems, for example the transfer of money from one bank account to another.
Which HTTP method should it use?

A. GET
B. HEAD
C. OPT IONS
D. POST

Answer: D
Explanation:

http://en.wikipedia.org/wiki/POST_(HTTP)

QUESTION 43
A Client wants to retrieve a representation of a resource, e.g. an XML document, localized according to the preferences of the user. Each user is allowed to specify one or more languages, in order of preference. Such preferences are application independent.
How can the Client send language preference Information to the Server using a standard HTTP facility?

A. In the request body
B. In a request header
C. In the request line
D. In the request URL

Answer: B
Explanation:
http://www.w3.org/International/questions/qa-lang-priorities.en.php (Check the answer, first paragraph)

QUESTION 44
Which JSTL code snippet can be used to import content from another web resource?

A. <c:import url = "foo.jsp"/>
B. <c:import page = "foo.jsp"/>
C. <c:include url = "foo.jsp"/>
D. <c:include page = "foo.jsp"/>
E. Importing cannot be done in JSTL. A standard action must be used instead.

Answer: A

QUESTION 45
In ServletContext.getNamedDispatcher(string arg0) arg0 is the

A. url of a servlet relative to the ServletRequest
B. url of a servlet relative to the Context
C. name of a servlet
D. absolute url to any servlet in any Context

Answer: C

QUESTION 46
When using Servlet asynchronous API if you want to dispatch the request back to a particular url - "/url" within the same Servlet Context which of the following API would you use?

A. ASyncContext.dispatch();
B. AsyncContext.dispatch("/url");
C. AsyncContext.dispatch(servletContext, "/url");

D. AsyncContext.start(runnable);
E. RequestDispatcher.fotward("/url");
F. RequestDispatcher.forward(servletContext, "/url");
G. RequestDispatcher.include("/url");

Answer: B
Explanation:
http://blogs.oracle.com/enterprisetechtips/entry/asynchronous_support_in_servlet_3 (Topic: AsyncContext Class, third paragraph)

QUESTION 47
Refer to the Exhibit. A servlet sets a session-scoped attribute product with an instance of com.example.product an forward to a JSP.
Which two output the name of the product in the response? (Choose two)

```
1. package com.example;
2.
3. public class Product {
4.   private String name;
5.   private double price;
6.
7.   public Product() {
8.     this( "Default", 0.0 );
9.   }
10.
11.  public Product( String name, double
price ) {
12.    this.name = name;
13.    this.price = price;
14.  }
15.
16.  public String getName() {
17.    return name;
18.  }
19.
20.  public void setName(String name) {
21.    this.name = name;
22.  }
23.
24.  public double getPrice() {
25.    return price;
26.  }
27.
28.  public void setPrice(double price) {
29.    this.price = price;
30.  }
31. }
```


A. `<%= product.getName() %>`
B. `<jsp:useBean id="product" class="com.example.Product" /> <%= product.getName() %>`
C. `<jsp:useBean id="com.example.Product" scope="page"> <%= product.getName() %>`

```
</jsp:useBean>
```

D.
```
<jsp:useBean id="product" type="com.example.Product"
scope="page" />
<%= product.getName() %>
```

E.
```
<jsp:useBean id="product" type="com.example.Product">
<%= product.getName() %>
</jsp:useBean>
```

Answer: BC

QUESTION 48
Which describes a trigger that causes a call to an AsyncListener?

A. Completion of processing
B. Receipt of a new request from the same client
C. Addition of a new filter to the processing stream for this request
D. Completion of each timer interval

Answer: A

QUESTION 49
You need to create a JavaBean object that is used only within the current ISP page. It must NOT be accessible to any other page including those that this page might import.
Which JSP standard action < .in accomplish this goal?

A. `<jsp:useBean id = `pageBean' type = `com.example.MyBean' />`
B. `<jsp:useBean id = `pageBean' class = `com.example.MyBean' />`
C. `<jsp:makeBean id = `pageBean' type = `com.example.MyBean' />`
D.
```
<jsp:makeBean id = `pageBean' class = `com.example.MyBean'
/>
```
E. `<jsp:useBean id = `pageBean' class = `com.example.MyBean' />`
F.
```
<jsp:makeBean id = `pageBean' class = `com.example.MyBean'
/>
```

Answer: B

QUESTION 50
Click the Exhibit button. Given the HTML form:

```
1. <html>
2. <body>
3. <form action="submit.jsp">
4. Name: <input type="text" name="i1"><br>
5. Price: <input type="text" name="i2"><br>
6. <input type="submit">
7. </form>
8. </body>
9. </html>
```

Assume the product attribute does NOT yet exist in any scope.
Which code snippet, in submit.jsp, instantiates an instance of com.example.Product that contains the results of the form submission?

```
1. package com.example;
2.
3. public class Product {
4.   private String name;
5.   private double price;
6.
7.   public Product() {
8.     this( "Default", 0.0 );
9.   }
10.
11.  public Product( String name, double
price ) {
12.    this.name = name;
13.    this.price = price;
14.  }
15.
16.  public String getName() {
17.    return name;
18.  }
19.
20.  public void setName(String name) {
21.    this.name = name;
22.  }
23.
24.  public double getPrice() {
25.    return price;
26.  }
27.
28.  public void setPrice(double price) {
29.    this.price = price;
30.  }
31. }
```


A.
```
<jsp:useBean id="com.example.Product" />
<jsp:setProperty name="product" property="*" />
```

B.
```
<jsp:useBean id="product" class="com.example.Product" />
${product.name = param.i1}
${product.price = param.i2}
```

C.
```
<jsp:useBean id="product" class="com.example.Product">
<jsp:setProperty name="product" property="name"
param="i1" />
<jsp:setProperty name="product" property="price"
param="i2" />
</jsp:useBean>
```

D.
```
<jsp:useBean id="product" type="com.example.Product">
<jsp:setProperty name="product" property="name"
value="<%= request.getParameter( "i1" ) %>" />
<jsp:setProperty name="product" property="price"
value="<%= request.getParameter( "i2" ) %>" />
</jsp:useBean>
```

Answer: C

QUESTION 51
Given the annotation for MyServlet:

```
@WebServlet{"/abc")
@ServletSecurity (value=@HttpConstraint)
public class Myservlet extends Httpservlet {
```

Which two are true? (Choose two)

A. No protection of user data must be performed by the transport.
B. All user data must be encrypted by the transport.
C. Access is to be denied independent of authentication state and identity.
D. Only authenticated users are to be permitted.
E. Access is to be permitted independent of authentication state and identity.

Answer: AE

QUESTION 52
Which of the following annotations relate to security in a servlet?

```
(i) @WebSecurity
(ii) @RolesAllowed
(iii) @WebConstraint
(iv) @HttpConstraint
(v) @Servletsecurity
```

A. (i) only
B. (i) and (iii)
C. (iv) and (v)
D. (iii) and (v)
E. (ii) and (iv)

Answer: C

QUESTION 53
Which element of a web application deployment descriptor <web-resource-collection> element is used to specify a HTTP method to which the corresponding <security-constraint> will not apply?

A. <exclude-http-method>
B. <neglect-http-method>
C. <http-method-omission>
D. <http-method-excluded>
E. <exceptional-http-method>

Answer: C
Explanation:

http://java.sun.com/xml/ns/javaee/web-common_3_0.xsd (search http-method- omission)

QUESTION 54
Which two statements are true about the security-related tags in a valid Java EE deployment descriptor? (Choose two)

A. Every <security-constraint> tag must have at least one <http-method> tag.
B. A <security-constraint> tag can have many <web-resource-collection> tags.
C. A given <auth-constraint> tag can apply to only one <web-resource-collection> tag.
D. A given <web-resource-collection> tag can contain from zero to many <url-pattern> tags.
E. It is possible to construct a valid <security-constraint> tag such that, for a given resource user roles can access that resource.

Answer: BE

QUESTION 55
A cookie may be set to be an HttpOnly cookie. Setting a cookie to be HttpOnly results in (Choose two)

A. Client to not expose the cookie to client side scripting code
B. Does not work with https protocol
C. prevent certain types of cross-site scripting attacks
D. There is no such thing as an HttpOnly cookie

Answer: AC
Explanation:
http://docs.oracle.com/javaee/6/api/javax/servlet/http/Cookie.html

QUESTION 56
A popular Ajax framework and its companion widget library contain several hundreds of files of different types (.js, .ess, .html). Your company has mandated that all its web applications use only specific versions of this framework approved by IT and repackaged internally as jar files. Furthermore, web applications should only include the entire jar, without subsetting or modification.
Where should the framework's files be placed inside a jar file to enable this kind of reuse?

A. under resources
B. under META-INF/resources
C. under META-INF/web-contents
D. under WEB-INF/resources

Answer: B
Explanation:
http://ocpsoft.com/opensource/create-common-facelets-jar/ (check the box with the update)

QUESTION 57
Which two actions protect a resource file from direct HTTP access within a web application? (Choose two)

A. placing it in the /secure directory
B. placing it in the /WEB-INF directory
C. placing it in the /META-INF/secure directory
D. creating a <web-resource> element within the deployment descriptor
E. creating a <secure-resource> element within the deployment descriptor

Answer: BC

QUESTION 58
A developer is designing a multi-tier web application and discovers a need to log each incoming client request. Which two patterns, taken independently, provide a solution for this problem? (Choose two.)

A. Transfer Object
B. Service Locator
C. Front Controller
D. Intercepting Filter
E. Business Delegate
F. Model-View-Controller

Answer: CD

QUESTION 59
Which three are true about the HttpServletRequestWrapper class? (Choose three.)

A. The HttpServletRequestWrapper is an example of the Decorator pattern.
B. The HttpServletRequestWrapper can be used to extend the functionality of a servlet request.
C. A subclass of HttpServletRequestWrapper CANNOT modify the behavior of the getReader method.
D. An HttpServletRequestWrapper may be used only by a class implementing the javax.servlet.Filter interface.
E. An HttpServletRequestWrapper CANNOT be used on the request passed to the RequestDispatcher.include method.
F. An HttpServletRequestWrapper may modify the header of a request within an object implementing the javax.servlet.Filter interface.

Answer: ABF

QUESTION 60
Which two are valid values for the <transport-guarantee> element inside a <securityconstraint> element of a web application deployment descriptor? (Choose two.)

A. NULL
B. SECURE
C. INTEGRAL
D. ENCRYPTED
E. CONFIDENTIAL

Answer: CD

QUESTION 61
Given a web application in which the request parameter productID contains a product identifier. Which two EL expressions evaluate the value of the productID? (Choose two.)

A. ${productID}
B. ${param.productID}
C. ${params.productID}
D. ${params.productID[1]}
E. ${paramValues.productID}
F. ${paramValues.productID[0]}
G. ${pageContext.request.productID}

Answer: BF

QUESTION 62
Given the function invocation expression ${my:reverse("42")}, and that the function reverse is mapped into a Java method called reverse, which two are valid signatures for the Java method reverse? (Choose two.)

A. public int reverse(String val)
B. public String reverse(String val)
C. public static int reverse(String val) D. public static String reverse(int val)
D. private static double reverse(double val)
E. public int reverse(String value, String name)
F. public static int reverse(int value, String name)

Answer: CD

QUESTION 63
For an HttpServletResponse response, which two create a custom header? (Choose two.)

A. response.setHeader("X-MyHeader", "34");
B. response.addHeader("X-MyHeader", "34");
C. response.setHeader(new HttpHeader("X-MyHeader", "34"));
D. response.addHeader(new HttpHeader("X-MyHeader", "34"));
E. response.addHeader(new ServletHeader("X-MyHeader", "34"));
F. response.setHeader(new ServletHeader("X-MyHeader", "34"));

Answer: AB

QUESTION 64
For a given ServletResponse response, which two retrieve an object for writing text data? (Choose two.)

A. response.getWriter()
B. response.getOutputStream()
C. response.getOutputWriter()
D. response.getWriter().getOutputStream()
E. response.getWriter(Writer.OUTPUT_TEXT)

Answer: AB

QUESTION 65
Given an HttpServletRequest request and HttpServletResponse response, which sets a cookie "username" with the value "joe" in a servlet?

A. request.addCookie("username", "joe")
B. request.setCookie("username", "joe")
C. response.addCookie("username", "joe")
D. request.addHeader(new Cookie("username", "joe"))
E. request.addCookie(new Cookie("username", "joe"))
F. response.addCookie(new Cookie("username", "joe"))
G. response.addHeader(new Cookie("username", "joe"))

Answer: F

QUESTION 66
Your company has a corporate policy that prohibits storing a customer's credit card number in any corporate database. However, users have complained that they do NOT want to re-enter their credit card number for each transaction. Your management has decided to use client-side cookies to record the user's credit card number for 120 days.
Furthermore, they also want to protect this information during transit from the web browser to the web container; so the cookie must only be transmitted over HTTPS. Which code snippet creates the "creditCard" cookie and adds it to the out going response to be stored on the user's web browser?

A.
```
10. Cookie c = new Cookie("creditCard", usersCard);
11. c.setSecure(true);
12. c.setAge(10368000);
13. response.addCookie(c);
```
B.
```
10. Cookie c = new Cookie("creditCard", usersCard);
11. c.setHttps(true);
12. c.setMaxAge(10368000);
13. response.setCookie(c);
```
C.
```
10. Cookie c = new Cookie("creditCard", usersCard);
11. c.setSecure(true);
12. c.setMaxAge(10368000);
13. response.addCookie(c);
```
D.
```
10. Cookie c = new Cookie("creditCard", usersCard);
11. c.setHttps(true);
12. c.setAge(10368000);
13. response.addCookie(c);
```
E.
```
10. Cookie c = new Cookie("creditCard", usersCard);
11. c.setSecure(true);
```

```
12. c.setAge(10368000);
13. response.setCookie(c);
```

Answer: C

QUESTION 67
You are creating a servlet that generates stock market graphs. You want to provide the web browser with precise information about the amount of data being sent in the response stream.Which two HttpServletResponse methods will you use to provide this information? (Choose two.)

A. response.setLength(numberOfBytes);
B. response.setContentLength(numberOfBytes);
C. response.setHeader("Length", numberOfBytes);
D. response.setIntHeader("Length", numberOfBytes);
E. response.setHeader("Content-Length", numberOfBytes);
F. response.setIntHeader("Content-Length", numberOfBytes);

Answer: BF

QUESTION 68
Which two prevent a servlet from handling requests? (Choose two.)

A. The servlet's init method returns a non-zero status.
B. The servlet's init method throws a ServletException.
C. The servlet's init method sets the ServletResponse's content length to 0.
D. The servlet's init method sets the ServletResponse's content type to null.
E. The servlet's init method does NOT return within a time period defined by the servlet container.

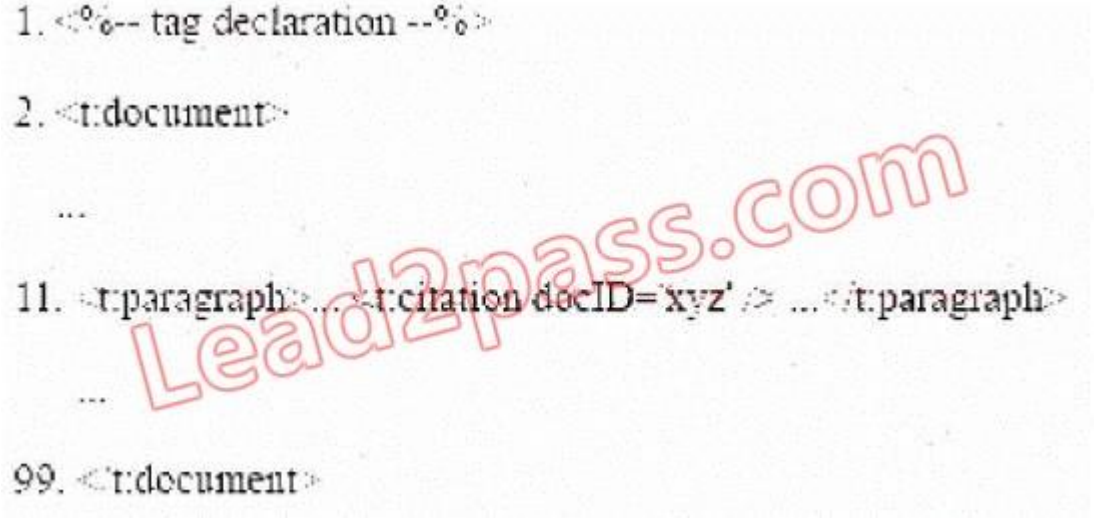
Answer: BE

QUESTION 69
Given an HttpSession session, a ServletRequest request, and a ServletContext context, which retrieves a URL to /WEB-INF/myconfig.xml within a web application?

A. session.getResource("/WEB-INF/myconfig.xml")
B. request.getResource("/WEB-INF/myconfig.xml")
C. context.getResource("/WEB-INF/myconfig.xml")
D. getClass().getResource("/WEB-INF/myconfig.xml")

Answer: C

QUESTION 70
You are creating a content management system (CMS) with a web application front-end. The JSP that displays a given document in the CMS has the following general structure:



The citation tag must store information in the document tag for the document tag to generate a reference section at the end of the generated web page.The document tag handler follows the Classic tag model and the citation tag handler follows the Simple tag model. Furthermore, the citation tag could also be embedded in other custom tags that could have either the Classic or Simple tag handler model. Which tag handler method allows the citation tag to access the document tag?

A.
```
public void doTag() {
JspTag docTag = findAncestorWithClass(this, DocumentTag.class);
((DocumentTag)docTag).addCitation(this.docID);
}
```
B.
```
public void doStartTag() {
JspTag docTag = findAncestorWithClass(this, DocumentTag.class);
((DocumentTag)docTag).addCitation(this.docID);
}
```
C.
```
public void doTag() {
Tag docTag = findAncestor(this, DocumentTag.class);
((DocumentTag)docTag).addCitation(this.docID);
}
```
D.
```
public void doStartTag() {
Tag docTag = findAncestor(this, DocumentTag.class);
((DocumentTag)docTag).addCitation(this.docID);
}
```

Answer: A

QUESTION 71
Assume the tag handler for a st:simple tag extends SimpleTagSupport. In what way can scriptlet code be used in the body of st:simple?

A. set the body content type to JSP in the TLD
B. Scriptlet code is NOT legal in the body of st:simple.
C. add scripting-enabled="true" to the start tag for the st:simple element
D. add a pass-through Classic tag with a body content type of JSP to the body of st:simple, and place

the scriptlet code in the body of that tag

Answer: B

QUESTION 72
Under what two circumstances is the setJspBody method NOT called in a tag class that implements the SimpleTag interface? (Choose two.)

A. The tag is invoked without a body.
B. The doTag method throws an exception.
C. The <body-content> element has the value empty.
D. The tag is called with the attribute skip-body=true.

Answer: AC

QUESTION 73
Click the Exhibit button. As a maintenance feature, you have created this servlet to allow you to upload and remove files on your web server. Unfortunately, while testing this servlet, you try to upload a file using an HTTP request and on this servlet, the web container returns a 404 status. What is wrong with this servlet?

```
1. package com.example;
2.
3. import javax.servlet.http.*;
4.
5. public class MyWebDAV extends HttpServlet {
6. private String resourceDirectory;
7.
8. public MyWebDAV(String resDir) {
9. this.resourceDirectory = resDir;
10. }
11. public void doPut(HttpServletRequest req,
12. HttpServletResponse resp) {
13. // store file to resourceDirectory (code not shown)
20. }
21. public void doDelete(HttpServletRequest req,
22. HttpServletResponse resp) {
23. // remove file from resourceDirectory (code not shown)
30. }
31. }
```


A. HTTP does NOT support file upload operations.
B. The servlet constructor must NOT have any parameters.
C. The servlet needs a service method to dispatch the requests to the helper methods.
D. The doPut and doDelete methods do NOT map to the proper HTTP methods.

Answer: B

QUESTION 74

You are building a web application that will be used throughout the European Union; therefore, it has significant internationalization requirements.
You have been tasked to create a custom tag that generates a message using the jav a.text.MessageFormat class.
The tag will take the resourceKey attribute and a variable number of argument attributes with the format, arg<N>. Here is an example use of this tag and its output:

```
<t:message resourceKey='diskFileMsg' arg0='MyDisk' arg1='1247' />
generates: The disk "MyDisk" contains 1247 file(s).
```

Which Simple tag class definition accomplishes this goal of handling a variable number of tag attributes?

A.
```
public class MessageTag extends SimpleTagSupport implements
VariableAttributes
{ private Map attributes = new HashMap();
public void setVariableAttribute(String uri, String name, Object value)
{ this.attributes.put(name, value); }
// more tag handler methods
}
```

B. The Simple tag model does NOT support a variable number of attributes.

C.
```
public class MessageTag extends
SimpleTagSupport
implements DynamicAttributes {
private Map attributes = new HashMap();
public void
putAttribute(String name, Object value) {
this.attributes.put(name, value);
}
// more tag handler methods
}
```

D.
```
public class MessageTag extends SimpleTagSupport implements
VariableAttributes
{ private Map attributes = new HashMap();
public void putAttribute(String name, Object value)
{ this.attributes.put(name, value);
}
// more tag handler methods
}
```

E.
```
public class MessageTag extends SimpleTagSupport implements
DynamicAttributes
{ private Map attributes = new HashMap();
public void setDynamicAttribute(String uri, String name, Object value)
{ this.attributes.put(name, value);
}
// more tag handler methods
}
```

Answer: E

QUESTION 75
A developer is designing a web application that must verify for each request: The originating request is from a trusted network.

The client has a valid session.
The client has been authenticated.
Which design pattern provides a solution in this situation?

A. Transfer Object
B. Session Facade
C. Intercepting Filter
D. Template Method
E. Model-View-Controller

Answer: C

QUESTION 76
A developer is designing a web application that makes many fine-grained remote data requests for each client request. During testing, the developer discovers that the volume of remote requests significantly degrades performance of the application. Which design pattern provides a solution for this problem?

A. Flyweight
B. Transfer Object
C. Service Locator
D. Dispatcher View
E. Business Delegate
F. Model-View-Controller

Answer: B

QUESTION 77
A developer is designing the presentation tier for a web application that relies on a complex session bean. The session bean is still being developed and the APIs for it are NOT finalized. Any changes to the session bean API directly impacts the development of the presentation tier. Which design pattern provides a means to manage the uncertainty in the API?

A. View Helper
B. Front Controller
C. Composite View
D. Intercepting Filter
E. Business Delegate
F. Chain of Responsibility

Answer: E

QUESTION 78
A developer is designing a web application which extensively uses EJBs and JMS. The developer finds that there is a lot of duplicated code to build the JNDI contexts to access the beans and queues. Further,because of the complexity, there are numerous errors in the code. Which J2EE design pattern provides a solution for this problem?

A. Command
B. Transfer Object
C. Service Locator
D. Session Facade
E. Business Delegate
F. Data Access Object

Answer: C

QUESTION 79
A developer is designing the presentation tier for a web application which requires a centralized request handling to complete common processing required by each request.
Which design pattern provides a solution to this problem?

A. Remote Proxy
B. Front Controller
C. Service Activator
D. Intercepting Filter
E. Business Delegate
F. Data Access Object

Answer: B

QUESTION 80
A developer is designing a web application that must support multiple interfaces, including: an XML web service for B2B HTML for web-based clients WML for wireless customers .Which design pattern provides a solution for this problem?

A. Session Facade
B. Business Delegate
C. Data Access Object
D. Model-View-Controller
E. Chain of Responsibility

Answer: D

QUESTION 81
A developer has created a web application that includes a servlet for each use case in the application. These servlets have become rather difficult to maintain because the request processing methods have become very large. There is also common processing code in many servlets because these use cases are very similar. Which two design patterns can be used together to refactor and simplify this web application?(Choose two.)

A. Proxy
B. View Helper
C. Front Controller
D. Session Facade
E. Business Delegate

F. Model-View-Controller

Answer: CF

QUESTION 82
A developer has created a special servlet that is responsible for generating XML content that is sent to a data warehousing subsystem. This subsystem uses HTTP to request these large data files, which are compressed by the servlet to save internal network bandwidth. The developer has received a request from management to create several more of these data warehousing servlets. The developer is about to copy and paste the compression code into each new servlet.Which design pattern can consolidate this compression code to be used by all of the data warehousing servlets?

A. Facade
B. View Helper
C. Transfer Object
D. Intercepting Filter
E. Composite Facade

Answer: D

QUESTION 83
Squeaky Beans Inc. hired an outside consultant to develop their web application. To finish the job quickly, the consultant created several dozen JSP pages that directly communicate with the database. The Squeaky business team has since purchased a set of business objects to model their system, and the Squeaky developer charged with maintaining the web application must now refactor all the JSPs to work with the new system. Which pattern can the developer use to solve this problem?

A. Transfer Object
B. Service Locator
C. Intercepting Filter
D. Business Delegate

Answer: D

QUESTION 84
Which two are characteristics of the Intercepting Filter pattern? (Choose two.)

A. It provides centralized request handling for incoming requests.
B. It forces resource authentication to be distributed across web components.
C. It reduces coupling between presentation-tier clients and underlying business services.
D. It can be added and removed unobtrusively, without requiring changes to existing code.
E. It allows preprocessing and postprocessing on the incoming requests and outgoing responses.

Answer: DE

QUESTION 85

Which two are characteristics of the Front Controller pattern? (Choose two.)

A. It simplifies remote interfaces to distributed objects.
B. It promotes cleaner application partitioning and encourages reuse.
C. It provides an initial point of contact for handling all related requests.
D. It reduces maintainability due to the increased complexity of the design.
E. It provides loosely coupled handlers that can be combined in various permutations.

Answer: BC

QUESTION 86
Which two are characteristics of the Service Locator pattern? (Choose two.)

A. It encapsulates component lookup procedures.
B. It increases source code duplication and decreases reuse.
C. It improves client performance by caching context and factory objects.
D. It degrades network performance due to increased access to distributed lookup services.

Answer: AC

QUESTION 87
Which two are characteristics of the Transfer Object design pattern? (Choose two.)

A. It reduces network traffic by collapsing multiple remote requests into one.
B. It increases the complexity of the remote interface by removing coarse-grained methods.
C. It increases the complexity of the design due to remote synchronization and version control issues.
D. It increases network performance introducing multiple fine-grained remote requests which return very small amounts of data.

Answer: AC

QUESTION 88
A developer is designing a multi-tier web application and discovers a need to hide the details of establishing and maintaining remote communications from the client. In addition, the application needs to find, in a transparent manner, the heterogeneous business components used to service the client's requests. Which design patterns, working together, address these issues?

A. Business Delegate and Transfer Object
B. Business Delegate and Service Locator
C. Front Controller and Business Delegate
D. Intercepting Filter and Transfer Object
E. Model-View-Controller and Intercepting Filter

Answer: B

QUESTION 89
A developer is designing a multi-tier web application and discovers a need to hide the details of

establishing and maintaining remote communications from the client. In addition, because the business and resource tiers are distributed, the application needs to minimize the inter-tier network traffic related to servicing client requests. Which design patterns, working together, address these issues?

A. Front Controller and Transfer Object
B. Front Controller and Service Locator
C. Business Delegate and Transfer Object
D. Business Delegate and Intercepting Filter
E. Model-View-Controller and Intercepting Filter

Answer: C

QUESTION 90
The Squeaky Bean company has decided to port their web application to a new J2EE 1.4 container. While reviewing the application, a developer realizes that in multiple places within the current application,nearly duplicate code exists that finds enterprise beans.Which pattern should be used to eliminate this duplicate code?

A. Transfer Object
B. Front Controller
C. Service Locator
D. Intercepting Filter
E. Business Delegate
F. Model-View-Controller

Answer: C

QUESTION 91
In an n-tier application, which two invocations are typically remote, not local? (Choose two.)

A. JSP to Transfer Object
B. Service Locator to JNDI
C. Controller to request object
D. Transfer Object to Entity Bean
E. Controller to Business Delegate
F. Business Delegate to Service Locator

Answer: BC

QUESTION 92
You are designing an n-tier Java EE application. You have already decided that some of your JSPs will need to get data from a Customer entity bean. You are trying to decide whether to use a Customer stub object or a Transfer Object. Which two statements are true? (Choose two.)

A. The stub will increase network traffic.
B. The Transfer Object will decrease data staleness.
C. The stub will increase the logic necessary in the JSPs.

D. In both cases, the JSPs can use EL expressions to get data.
E. Only the Transfer Object will need to use a Business Delegate.
F. Using the stub approach allows you to design the application without using a Service Locator.

Answer: AD

QUESTION 93
Which defines the welcome files in a web application deployment descriptor?

A.
```
<welcome>
<welcome-file>/welcome.jsp</welcome-file>
</welcome>
<welcome>
<welcome-file>/index.html</welcome-file>
</welcome>
```
B.
```
<welcome-file-list>
<welcome-file>welcome.jsp</welcome-file>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
```
C.
```
<welcome>
<welcome-file>welcome.jsp</welcome-file>
</welcome>
<welcome>
<welcome-file>index.html</welcome-file>
</welcome>
```
D.
```
<welcome-file-list>
<welcome-file>/welcome.jsp</welcome-file>
<welcome-file>/index.html</welcome-file>
</welcome-file-list> E. <welcome>
<welcome-file>
<welcome-name>Welcome</welcome-name>
<location>welcome.jsp</location>
</welcome-file>
<welcome-file>
<welcome-name>Index</welcome-name>
<location>index.html</location>
</welcome-file>
</welcome>
```

Answer: B

QUESTION 94
Which three web application deployment descriptor elements allow web components to gain references to resources or EJB components? (Choose three.)

A. ejb-ref
B. jdbc-ref
C. servlet-ref
D. resource-ref
E. javamail-ref
F. ejb-remote-ref

G. resource-env-ref

Answer: ADG

QUESTION 95
Which three are true about servlet filters? (Choose three.)

A. A filter must implement the destroy method.
B. A filter must implement the doFilter method.
C. A servlet may have multiple filters associated with it.
D. A servlet that is to have a filter applied to it must implement the javax.servlet.FilterChain interface.
E. A filter that is part of a filter chain passes control to the next filter in the chain by invoking the FilterChain.forward method.
F. For each <filter> element in the web application deployment descriptor, multiple instances of a filter may be created by the web container.

Answer: ABC

QUESTION 96
A web component accesses a local EJB session bean with a component interface of com.example.Account with a home interface of com.example.AccountHome and a JNDI reference of ejb/Account.Which makes the local EJB component accessible to the web components in the web application deployment descriptor?

A.
```
<env-ref>
<ejb-ref-name>ejb/Account</ejb-ref-name>
<ejb-ref-type>Session</ejb-ref-type>
<local-home>com.example.AccountHome</local-home>
<local>com.example.Account</local>
</env-ref>
```
B.
```
<resource-ref>
<ejb-ref-name>ejb/Account</ejb-ref-name>
<ejb-ref-type>Session</ejb-ref-type>
<local-home>com.example.AccountHome</local-home>
<local>com.example.Account</local>
</resource-ref>
```
C.
```
<ejb-local-ref>
<ejb-ref-name>ejb/Account</ejb-ref-name>
<ejb-ref-type>Session</ejb-ref-type>
<local-home>com.example.AccountHome</local-home>
<local>com.example.Account</local>
</ejb-local-ref>
```
D.
```
<ejb-remote-ref>
<ejb-ref-name>ejb/Account</ejb-ref-name>
<ejb-ref-type>Session</ejb-ref-type>
<local-home>com.example.AccountHome</local-home>
<local>com.example.Account</local>
</ejb-remote-ref>
```

Answer: C

QUESTION 97
Within the web application deployment descriptor, which defines a valid JNDI environment entry?

A.
```
<env-entry>
<env-entry-type>java.lang.Boolean</env-entry-type>
<env-entry-value>true</env-entry-value>
</env-entry>
```
B.
```
<env-entry>
<env-entry-name>param/MyExampleString</env-entry-name> <env-entry-
value>This is an Example</env-entry-value> </env-entry>
```
C.
```
<env-entry>
<env-entry-name>param/MyExampleString</env-entry-name> <env-entry-
type>int</env-entry-type>
<env-entry-value>10</env-entry-value>
</env-entry>
```
D.
```
<env-entry>
<env-entry-name>param/MyExampleString</env-entry-name> <env-entry-
type>java.lang.String</env-entry-type>
<env-entry-value>This is an Example</env-entry-value> </env-entry>
```

Answer: D

QUESTION 98
You have built a web application with tight security. Several directories of your webapp are used for internal purposes and you have overridden the default servlet to send an HTTP 403 status code for any request that maps to one of these directories. During testing, the Quality Assurance director decided that they did NOT like seeing the bare response page generated by Firefox and Internet Explorer. The director recommended that the webapp should return a more user-friendly web page that has the same look-and-feel as the webapp plus links to the webapp's search engine. You have created this JSP page in the /WEB-INF/jsps/error403.jsp file.
You do NOT want to alter the complex logic of the default servlet.
How can you declare that the web container must send this JSP page whenever a 403 status is generated?

A.
```
<error-page>
<error-code>403</error-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
```
B.
```
<error-page>
<status-code>403</status-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
```
C.
```
<error-page>
<error-code>403</error-code>
<location> /WEB-INF/jsps/error403.jsp</location>
</error-page>
```
D.
```
<error-page>
<status-code>403</status-code>
<location>/WEB-INF/jsps/error403.jsp</location>
</error-page>
```

Answer: C

QUESTION 99
You have created a servlet that generates weather maps. The data for these maps is calculated by a remote host. The IP address of this host is usually stable, but occasionally does have to change as the corporate network grows and changes. This IP address used to be hard coded, but after the fifth change to the IP address in two years, you have decided that this value should be declared in the deployment descriptor so you do NOT have the recompile the web application every time the IP address changes. Which deployment descriptor snippet accomplishes this goal?

A.
```
<serlvet-param>
<name>WeatherServlet.hostIP</name>
<value>127.0.4.20</value>
</servlet-param>
```
B.
```
<init-param>
<name>WeatherServlet.hostIP</name>
<value>127.0.4.20</value>
</init-param>
```
C.
```
<servlet>
<!-- servlet definition here -->
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</servlet>
```
D.
```
<init-param>
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</init-param>
```
E.
```
<serlvet-param>
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</servlet-param>
```

Answer: D

QUESTION 100
Given the web application deployment descriptor elements:

```
11.  <filter>
12.     <filter-name>ParamAdder</filter-name>
13.      <filter-class>com.example.ParamAdder</filter-class>
14.  </filter>
...
24.  <filter-mapping>
25.     <filter-name>ParamAdder</ filter-name>
26.     <servlet-name>MyServlet</servlet-name>
27.     <!-- insert element here -->
28.  </filter-mapping>
```


Which element, inserted at line 27, causes the ParamAdder filter to be applied when MyServlet is invoked by another servlet using the RequestDispatcher.include method?

A. <include/>
B. <dispatcher>INCLUDE</dispatcher>
C. <dispatcher>include</dispatcher>
D. <filter-condition>INCLUDE</filter-condition>
E. <filter-condition>include</filter-condition>

Answer: B

QUESTION 101
Which is true about the web container request processing model?

A. The init method on a filter is called the first time a servlet mapped to that filter is invoked.
B. A filter defined for a servlet must always forward control to the next resource in the filter chain.
C. Filters associated with a named servlet are applied in the order they appear in the web application deployment descriptor file.
D. If the init method on a filter throws an UnavailableException, then the container will make no further attempt to execute it.

Answer: C

QUESTION 102

You want to create a filter for your web application and your filter will implement javax.servlet.Filter. Which two statements are true? (Choose two.)

A. Your filter class must implement an init method and a destroy method.
B. Your filter class must also implement javax.servlet.FilterChain.
C. When your filter chains to the next filter, it should pass the same arguments it received in its doFilter method.
D. The method that your filter invokes on the object it received that implements javax.servlet. FilterChain can invoke either another filter or a servlet.
E. Your filter class must implement a doFilter method that takes, among other things, an HTTPServletRequest object and an HTTPServletResponse object.

Answer: AD

QUESTION 103
For which three events can web application event listeners be registered? (Choose three.)

A. when a session is created
B. after a servlet is destroyed
C. when a session has timed out
D. when a cookie has been created
E. when a servlet has forwarded a request
F. when a session attribute value is changed

Answer: ACF

QUESTION 104
A developer wants a web application to be notified when the application is about to be shut down. Which two actions are necessary to accomplish this goal? (Choose two.)

A. include a listener directive in a JSP page
B. configure a listener in the TLD file using the <listener> element
C. include a <servlet-destroy> element in the web application deployment descriptor
D. configure a listener in the application deployment descriptor, using the <listener> element
E. include a class implementing ServletContextListener as part of the web application deployment
F. include a class implementing ContextDestroyedListener as part of the web application deployment
G. include a class implementing HttpSessionAttributeListener as part of the web application deployment

Answer: DE

QUESTION 105
Your web site has many user-customizable features, for example font and color preferences on web pages. Your IT department has already built a subsystem for user preferences using Java SE's lang.util.prefs package APIs and you have been ordered to reuse this subsystem in your web application.You need to create an event listener that stores the user's Preference object when an HTTP session is created. Also, note that user identification information is stored in an HTTP cookie. Which partial listener class can accomplish this goal?

A.
```
public class UserPrefLoader implements HttpSessionListener
{ public void sessionCreated(HttpSessionEvent se)
{ MyPrefsFactory myFactory = (MyPrefsFactory)
se.getServletContext().getAttribute("myPrefsFactory");
User user = getUserFromCookie(se);
myFactory.setThreadLocalUser(user);
Preferences userPrefs = myFactory.userRoot();
se.getSession().setAttribute("prefs", userPrefs);
}
// more code here
}
```

B.
```
public class UserPrefLoader implements SessionListener
{ public void sessionCreated(SessionEvent se)
{ MyPrefsFactory myFactory = (MyPrefsFactory)
se.getContext().getAttribute("myPrefsFactory");
User user = getUserFromCookie(se);
myFactory.setThreadLocalUser(user);
Preferences userPrefs = myFactory.userRoot();
se.getSession().addAttribute("prefs", userPrefs);
}
// more code here
}
```

C.
```
public class UserPrefLoader implements HttpSessionListener
{ public void sessionInitialized(HttpSessionEvent se)
{ MyPrefsFactory myFactory = (MyPrefsFactory)
se.getServletContext().getAttribute("myPrefsFactory");
User user = getUserFromCookie(se);
myFactory.setThreadLocalUser(user);
Preferences userPrefs = myFactory.userRoot();
se.getHttpSession().setAttribute("prefs", userPrefs); }
// more code here
}
```

D.
```
public class UserPrefLoader implements SessionListener
{ public void sessionInitialized(SessionEvent se)
{ MyPrefsFactory myFactory = (MyPrefsFactory)
se.getServletContext().getAttribute("myPrefsFactory");
User user = getUserFromCookie(se);
myFactory.setThreadLocalUser(user);
Preferences userPrefs = myFactory.userRoot();
se.getSession().addAttribute("prefs", userPrefs);
}
// more code here
}
```

Answer: A

QUESTION 106
Which interface must a session attribute implement if it needs to be notified when a web container persists a session?

A. javax.servlet.http.HttpSessionListener
B. javax.servlet.http.HttpSessionBindingListener
C. javax.servlet.http.HttpSessionAttributeListener

D. javax.servlet.http.HttpSessionActivationListener

Answer: D

QUESTION 107
Which interface must a class implement so that instances of the class are notified after any object is added to a session?

A. javax.servlet.http.HttpSessionListener
B. javax.servlet.http.HttpSessionValueListener
C. javax.servlet.http.HttpSessionBindingListener
D. javax.servlet.http.HttpSessionAttributeListener

Answer: D

QUESTION 108
What code, inserted at line 21, is called prior to a session being migrated to a different JVM assuming the web application containing MyExample is deployed in a container which supports distributed applications?

```
20. public class MyExample implements HttpSessionActivationListener {
21.     // insert code here
22.
}
```


A. public void valueUnbound(HttpSessionEvent ev) {...}
B. public void sessionPassivated(HttpSessionEvent ev) {...}
C. public void sessionDidActivate(HttpSessionEvent ev) {...}
D. public void sessionWillPassivate(HttpSessionEvent ev) {...}

Answer: D

QUESTION 109
Your web application requires the adding and deleting of many session attributes during a complex use case. A bug report has come in that indicates that an important session attribute is being deleted too soon and a NullPointerException is being thrown several interactions after the fact. You have decided to create a session event listener that will log when attributes are being deleted so you can track down when the attribute is erroneously being deleted.
Which listener class will accomplish this debugging goal?

A. Create an HttpSessionAttributeListener class and implement the attributeDeleted method and log the attribute name using the getName method on the event object.
B. Create an HttpSessionAttributeListener class and implement the attributeRemoved method and log

the attribute name using the getName method on the event object.

C. Create an SessionAttributeListener class and implement the attributeRemoved method and log the attribute name using the getAttributeName method on the event object.

D. Create an SessionAttributeListener class and implement the attributeDeleted method and log the attribute name using the getAttributeName method on the event object.

Answer: B

QUESTION 110
A developer for the company web site has been told that users may turn off cookie support in their browsers. What must the developer do to ensure that these customers can still use the web application?

A. The developer must ensure that every URL is properly encoded using the appropriate URL rewriting APIs.
B. The developer must provide an alternate mechanism for managing sessions and abandon the Http Session mechanism entirely.
C. The developer can ignore this issue. Web containers are required to support automatic URL rewriting when cookies are not supported.
D. The developer must add the string ?id=<sessionid> to the end of every URL to ensure that the conversation with the browser can continue.

Answer: A

QUESTION 111
Which statement is true about web container session management?

A. Access to session-scoped attributes is guaranteed to be thread-safe by the web container.
B. To activate URL rewriting, the developer must use the HttpServletResponse.setURLRewriting method.
C. If the web application uses HTTPS, then the web container may use the data on the HTTPS request stream to identify the client.
D. The JSESSIONID cookie is stored permanently on the client so that a user may return to the web application and the web container will rejoin that session.

Answer: C

QUESTION 112
What is the purpose of session management?

A. To manage the user's login and logout activities.
B. To store information on the client-side between HTTP requests.
C. To store information on the server-side between HTTP requests.
D. To tell the web container to keep the HTTP connection alive so it can make subsequent requests without the delay of making the TCP connection.

Answer: C

QUESTION 113

Which two are required elements for the <web-resource-collection> element of a web application deployment descriptor? (Choose two.)

A. <realm-name>
B. <url-pattern>
C. <description>
D. <web-resource-name>
E. <transport-guarantee>

Answer: BD

QUESTION 114
Given the two security constraints in a deployment descriptor:

```
101. <security-constraint>
102.    <!--a correct url-pattern and http-method goes here-->
103.    <auth-constraint><role-name>SALES</role-name></auth-
103.    <auth-constraint>
104.       <role-name>SALES</role-name>
105.    </auth-constraint>
106. </security-constraint>
107. <security-constraint>
108.    <!--a correct url-pattern and http-method goes here-->
109.       <!-- Insert an auth-constraint here -->
110. </security-constraint>
```


If the two security constraints have the same url-pattern and http-method, which two, inserted independently at line 109, will allow users with role names of either SALES or MARKETING to access this resource? (Choose two.)

A. `<auth-constraint/>`
B.
```
<auth-constraint>
<role-name>*</role-name>
</auth-constraint>
```
C.
```
<auth-constraint>
<role-name>ANY</role-name>
</auth-constraint>
```
D. `<auth-constraint>`

```
<role-name>MARKETING</role-name>
</auth-constraint>
```

Answer: BD

QUESTION 115
Given the security constraint in a DD:

And given that "MANAGER" is a valid role-name, which four are true for this security constraint? (Choose four.)

A. MANAGER can do a GET on resources in the /Bar/Baz directory.
B. MANAGER can do a POST on any resource in the /Bar/Baz directory.
C. MANAGER can do a TRACE on any resource in the /Bar/Baz directory.
D. DEVELOPER can do a GET on resources in the /Bar/Baz directory.
E. DEVELOPER can do only a POST on resources in the /Bar/Baz directory.
F. DEVELOPER can do a TRACE on any resource in the /Bar/Baz directory.

Answer: ACDF

QUESTION 116
Which element of a web application deployment descriptor <security-constraint> element is required?

A. <realm-name>
B. <auth-method>
C. <security-role>
D. <transport-guarantee>
E. <web-resource-collection>

Answer: E

QUESTION 117
Which ensures that a JSP response is of type "text/plain"?

A. <%@ page mimeType="text/plain" %>
B. <%@ page contentType="text/plain" %>
C. <%@ page pageEncoding="text/plain" %>
D. <%@ page contentEncoding="text/plain" %>
E. <% response.setEncoding("text/plain"); %>
F. <% response.setMimeType("text/plain"); %>

Answer: B

QUESTION 118
You are writing a JSP that includes scriptlet code to declare a List variable and initializes that variable to an ArrayList object.Which two JSP code snippets can you use to import these list types?

A. <%! import java.util.*; %>
B. <%! import java.util.List; import java.util.ArrayList; %>
C. <%@ page import='java.util.List' import='java.util.ArrayList' %>
D. <%@ import types='java.util.List' types='java.util.ArrayList' %>
E. <%@ page import='java.util.List,java.util.ArrayList' %>
F. <%@ import types='java.util.List,java.util.ArrayList' %>

Answer: CE

QUESTION 119
Every page of your web site must include a common set of navigation menus at the top of the page. This menu is static HTML and changes frequently, so you have decided to use JSP's static import mechanism. Which JSP code snippet accomplishes this goal?

A. <%@ import file='/common/menu.html' %>
B. <%@ page import='/common/menu.html' %>
C. <%@ import page='/common/menu.html' %>

D. <%@ include file='/common/menu.html' %>
E. <%@ page include='/common/menu.html' %>
F. <%@ include page='/common/menu.html' %>

Answer: D

QUESTION 120
You have created a JSP that includes instance variables and a great deal of scriptlet code. Unfortunately, after extensive load testing, you have discovered several race conditions in your JSP scriptlet code. To fix these problems would require significant recoding, but you are already behind schedule.Which JSP code snippet can you use to resolve these concurrency problems?

A. <%@ page isThreadSafe='false' %>
B. <%@ implements SingleThreadModel %>
C. <%! implements SingleThreadModel %>
D. <%@ page useSingleThreadModel='true' %>
E. <%@ page implements='SingleThreadModel' %>

Answer: A

QUESTION 121
Which two are valid and equivalent? (Choose two.)

A. <%! int i; %>
B. <%= int i; %>
C. <jsp:expr>int i;</jsp:expr>
D. <jsp:scriptlet>int i;</jsp:scriptlet>
E. <jsp:declaration>int i;</jsp:declaration>

Answer: AE

QUESTION 122
To take advantage of the capabilities of modern browsers that use web standards, such as XHTML and CSS, your web application is being converted from simple JSP pages to JSP Document format. However, one of your JSPs, /scripts/screenFunctions.jsp, generates a JavaScript file. This file is included in several web forms to create screen-specific validation functions and are included in these pages with the following statement:

```
10. <head>
11.    <script> src='/scripts/screenFunctions.jsp'
12.          language='javascript'
13.          type='application/javascript'> </script>
14. </head>
15. <!—body of the web form -->
```

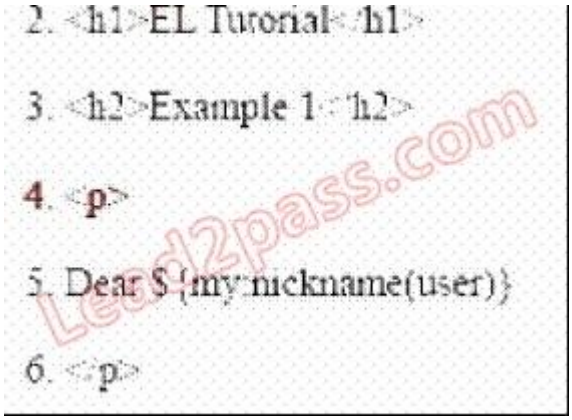
Which JSP code snippet declares that this JSP Document is a JavaScript file?

A. <%@ page contentType='application/javascript' %>

B. <jsp:page contentType='application/javascript' />
C. <jsp:document contentType='application/javascript' />
D. <jsp:directive.page contentType='application/javascript' />
E. No declaration is needed because the web form XHTML page already declares the MIME type of the /scripts/screenFunctions.jsp file in the <script> tag.

Answer: D

QUESTION 123
Given tutorial.jsp:



Which, when added to the web application deployment descriptor, ensures that line 5 is included verbatim in the JSP output?

A.
```
<jsp-config>
<url-pattern>*.jsp</url-pattern>
<el-ignored>true</el-ignored>
</jsp-config>
```
B.
```
<jsp-config>
<url-pattern>*.jsp</url-pattern>
<isELIgnored>true</isELIgnored>
</jsp-config>
```
C.
```
<jsp-config>
<jsp-property-group>
<el-ignored>*.jsp</el-ignored>
</jsp-property-group>
</jsp-config>
```
D.
```
<jsp-config>
<jsp-property-group>
<url-pattern>*.jsp</url-pattern>
<el-ignored>true</el-ignored>
</jsp-property-group>
</jsp-config>
```
E.
```
<jsp-config>
<jsp-property-group>
<url-pattern>*.jsp</url-pattern>
<isElIgnored>true</isElIgnored>
</jsp-property-group>
```

```
</jsp-config>
```

Answer: D

QUESTION 124
For manageability purposes, you have been told to add a "count" instance variable to a critical JSP Document so that a JMX MBean can track how frequent this JSP is being invoked. Which JSP code snippet must you use to declare this instance variable in the JSP Document?

A.
```
<jsp:declaration>
int count = 0;
<jsp:declaration>
```
B.
```
<%! int count = 0; %>
```
C.
```
<jsp:declaration.instance>
int count = 0;
<jsp:declaration.instance>
```
D.
```
<jsp:scriptlet.declaration>
int count = 0;
<jsp:scriptlet.declaration>
```

Answer: A

QUESTION 125
You have built a collection of custom tags for your web application. The TLD file is located in the file: /WEB-INF/myTags.xml. You refer to these tags in your JSPs using the symbolic name: myTags. Which deployment descriptor element must you use to make this link between the symbolic name and the TLD file name?

A.
```
<taglib>
<name>myTags</name>
<location>/WEB-INF/myTags.xml</location>
</taglib>
```
B.
```
<tags>
<name>myTags</name>
<location>/WEB-INF/myTags.xml</location>
</tags>
```
C.
```
<tags>
<tags-uri>myTags</taglib-uri>
<tags-location>/WEB-INF/myTags.xml</tags-location>
</tags>
```
D.
```
<taglib>
<taglib-uri>myTags</taglib-uri>
<taglib-location>/WEB-INF/myTags.xml</taglib-location>
</taglib>
```

Answer: D

QUESTION 126
You have a new IT manager that has mandated that all JSPs must be refactored to include no scritplet code. The IT manager has asked you to enforce this.

Which deployment descriptor element will satisfy this constraint?

A.
```
<jsp-property-group>
<url-pattern>*.jsp</url-pattern>
<permit-scripting>false</permit-scripting>
</jsp-property-group>
```
B.
```
<jsp-config>
<url-pattern>*.jsp</url-pattern>
<permit-scripting>false</permit-scripting>
</jsp-config>
```
C.
```
<jsp-config>
<url-pattern>*.jsp</url-pattern>
<scripting-invalid>true</scripting-invalid>
</jsp-config>
```
D.
```
<jsp-property-group>
<url-pattern>*.jsp</url-pattern>
<scripting-invalid>true</scripting-invalid>
</jsp-property-group>
```

Answer: D

QUESTION 127
Which EL expression evaluates to the request URI?

A. ${requestURI}
B. ${request.URI}
C. ${request.getURI}
D. ${request.requestURI}
E. ${requestScope.requestURI}
F. ${pageContext.request.requestURI}
G. ${requestScope.request.requestURI}

Answer: F

QUESTION 128
Given: http://com.example/myServlet.jsp?num=one&num=two&num=three Which two produce the output "one, two and three"? (Choose two.)

A. `${param.num[0],[1] and [2]}`
B. `${paramValues[0],[1] and [2]}`
C. `${param.num[0]}, ${param.num[1]} and ${param.num[2]}`
D. `${paramValues.num[0]}, ${paramValues.num[1]} and ${paramValues.num[2]}`
E. `${paramValues["num"][0]}, ${paramValues["num"][1]} and ${paramValues["num"][2]}`
F. `${parameterValues.num[0]}, ${parameterValues.num[1]} and ${parameterValues.num[2]}`
G. `${parameterValues["num"]["0"]}, ${parameterValues["num"]["1"]} and ${parameterValues["num"]["2"]}`

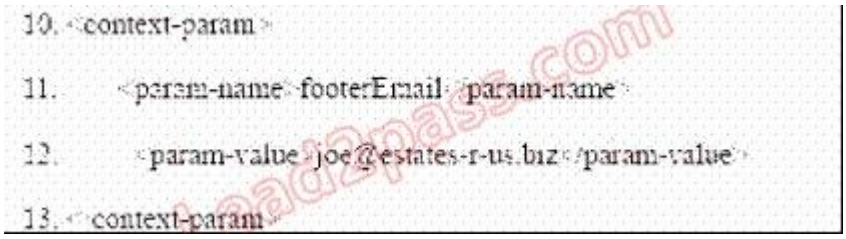
Answer: DE

QUESTION 129
A web application allows the HTML title banner to be set using a servlet context initialization parameter called titleStr.Which two properly set the title in this scenario? (Choose two.)

A. <title>${titleStr}</title>
B. <title>${initParam.titleStr}</title>
C. <title>${params[0].titleStr}</title>
D. <title>${paramValues.titleStr}</title>
E. <title>${initParam['titleStr']}</title>
F. <title>${servletParams.titleStr}</title>
G. <title>${request.get("titleStr")}</title>

Answer: BE

QUESTION 130
You have created a web application that you license to real estate brokers. The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:



Which EL code snippet will insert this context parameter into the footer?

A. `<a href='mailto:${footerEmail}'>Contact me</a>`
B. `<a href='mailto:${initParam@footerEmail}'>Contact me</a>`
C. `<a href='mailto:${initParam.footerEmail}'>Contact me</a>`
D. `<a href='mailto:${contextParam@footerEmail}'>Contact me</a>`
E. `<a href='mailto:${contextParam.footerEmail}'>Contact me</a>`

Answer: C

QUESTION 131
You are creating an error page that provides a user-friendly screen whenever a server exception occurs. You want to hide the stack trace, but you do want to provide the exception's error message to the user so the user can provide it to the customer service agent at your company. Which EL code snippet inserts this error message into the error page?

A. Message: ${exception.message}
B. Message: ${exception.errorMessage}
C. Message: ${request.exception.message}
D. Message: ${pageContext.exception.message}

E. Message: ${request.exception.errorMessage}
F. Message: ${pageContext.exception.errorMessage}

Answer: D

QUESTION 132
Which three EL expressions, inserted at line 15, are valid and evaluate to "3"? (Choose three.)

```
11. <%
12.     request.setAttribute("vals", new String[]{"1","2","3","4"});
13.     request.setAttribute("index", "2");
14. %>
15. <%-- insert code here --%>
```

A. ${vals.2}
B. ${vals["2"]}
C. ${vals.index}
D. ${vals[index]}
E. ${vals}[index]
F. ${vals.(vals.index)}
G. ${vals[vals[index-1]]}

Answer: BDG

QUESTION 133
Which three EL expressions, inserted at line 16, are valid and evaluate to "d"? (Choose three.)

```
11. <% java.util.Map map = new java.util.HashMap();
12.     request.setAttribute("map", map);
13.     map.put("a", "b");
14.     map.put("b", "c");
15.     map.put("c", "d"); %>
16. <%-- insert code here --%>
```

A. ${map.c}
B. ${map[c]}
C. ${map["c"]}
D. ${map.map.b}
E. ${map[map.b]}
F. ${map.(map.b)}

Answer: ACE

QUESTION 134
Given a web application in which requests must have an HTTP header SEQUENCE that always contains two values, which EL expression will return the second value for the SEQUENCE header?

A. ${header[2].SEQUENCE}
B. ${header.SEQUENCE[2]}
C. ${headers.SEQUENCE}[1]
D. ${headers.SEQUENCE[2]}
E. ${headers[1].SEQUENCE}
F. ${headerValues.SEQUENCE[1]}
G. ${headerValues.SEQUENCE}[2]

Answer: F

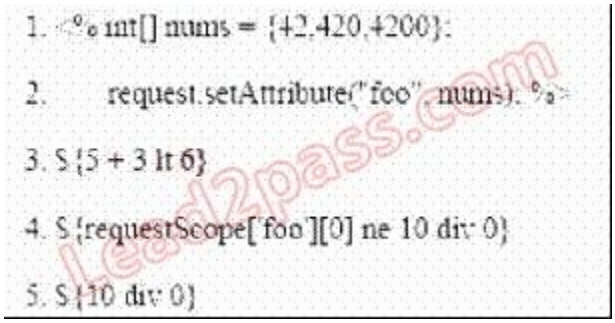
QUESTION 135
Which two successfully translate and result in a value of true? (Choose two.)

```
6. <% int[] nums = {42, 420, 4200};
7. request.setAttribute("foo", nums); %>
```

A. ${true or false}
B. ${requestScope[foo][0] > 500}
C. ${requestScope['foo'][1] = 420}
D. ${(requestScope['foo'][0] lt 50) && (3 gt 2)}

Answer: AD

QUESTION 136
What is the result?



A. true true
B. false true
C. false true 0
D. true true Infinity

E. false true Infinity
F. An exception is thrown.
G. Compilation or translation fails.

Answer: E

QUESTION 137
You are building a dating web site. The client's date of birth is collected along with lots of other information. The Person class has a derived method, getAge():int, which returns the person's age calculated from the date of birth and today's date. In one of your JSPs you need to print a special message to clients within the age group of 25 through 35.Which two EL code snippets will return true for this condition? (Choose two.)

A. ${client.age in [25,35]}
B. ${client.age between [25,35]}
C. ${client.age between 25 and 35}
D. ${client.age <= 35 && client.age >= 25}
E. ${client.age le 35 and client.age ge 25}
F. ${not client.age > 35 && client.age < 25}

Answer: DE

QUESTION 138
A developer wants to use EL to invoke a function using ${my:bloof("foof")}. Which is always true?

A. The method invoked by this function must be static.
B. The function class must implement the Function interface.
C. The expression is NOT a valid EL expression for invoking a function.
D. The function must be declared in a web.xml file using the <function> element.
E. The function class must have a method with the signature: void bloof(java.lang.Strings)

Answer: A

QUESTION 139
Which is a valid TLD element for a function named my using myMethod?

```
1. package com.example;
2. import java.util.*;
3. public class MyFunction {
4.     public static Map myMethod(int num) { /* method code */ }
5. }
```


A. The myMethod method is not valid for use as a function.
B.
```
<function>
<name>my</name>
```

```
<class>com.example.MyFunction</class>
<signature>Map myMethod(int)</signature>
</function>
```

C.
```
<function>
<name>my</name>
<class>com.example.MyFunction</class>
<signature>java.util.Map myMethod(int)</signature>
</function>
```

D.
```
<function>
<name>my</name>
<function-class>com.example.MyFunction</function-class> <function-
signature>
java.util.Map myMethod(int)
</function-signature>
</function>
```

E.
```
<function>
<function-name>my</function-name>
<function-class>com.example.MyFunction</function-class> <function-
signature>
java.util.Map myMethod(int)
</function-signature>
</function>
```

Answer: D

QUESTION 140
Given an EL function foo, in namespace func, that requires a long as a parameter and returns a Map, which two are valid invocations of function foo? (Choose two.)

A. ${func(1)}
B. ${foo:func(4)}
C. ${func:foo(2)}
D. ${foo(5):func}
E. ${func:foo("easy")}
F. ${func:foo("3").name}

Answer: CF

QUESTION 141
You are building a dating web site. The client's date of birth is collected along with lots of other information. You have created an EL function with the signature:

`calcAge(java.util.Date):int and it is assigned to the name, age, in the namespace, funct.`

In one of your JSPs you need to print a special message to clients who are younger than 25. Which EL code snippet will return true for this condition?

A. ${calcAge(client.birthDate) < 25}
B. ${calcAge[client.birthDate] < 25}
C. ${funct:age(client.birthDate) < 25}

D. ${funct:age[client.birthDate] < 25}
E. ${funct:calcAge(client.birthDate) < 25}
F. ${funct:calcAge[client.birthDate] < 25}

Answer: C

QUESTION 142
You have built your own light-weight templating mechanism. Your servlets, which handle each request, dispatch the request to one of a small set of template JSP pages. Each template JSP controls the layout of the view by inserting the header, body, and footer elements into specific locations within the template page. The URLs for these three elements are stored in request-scoped variables called, headerURL, bodyURL,and footerURL, respectively. These attribute names are never used for other purposes.
Which JSP code snippet should be used in the template JSP to insert the JSP content for the body of the page?

A. `<jsp:insert page='${bodyURL}' />`
B. `<jsp:insert file='${bodyURL}' />`
C. `<jsp:include page='${bodyURL}' />`
D. `<jsp:include file='${bodyURL}' />`
E. `<jsp:insert page='<%= bodyURL %>' />`
F. `<jsp:include page='<%= bodyURL %>' />`

Answer: C

QUESTION 143
Your web application views all have the same header, which includes the <title> tag in the <head> element of the rendered HTML. You have decided to remove this redundant HTML code from your JSPs and put it into a single JSP called /WEB-INF/jsp/header.jsp.
However, the title of each page is unique, so you have decided to use a variable called pageTitle to parameterize this in the header JSP, like this:

```
10. <title>${param.pageTitle}<title>
```

Which JSP code snippet should you use in your main view JSPs to insert the header and pass the pageTitle variable?

A.
```
<jsp:insert page='/WEB-INF/jsp/header.jsp'>
${pageTitle='Welcome Page'}
</jsp:insert>
```
B.
```
<jsp:include page='/WEB-INF/jsp/header.jsp'>
${pageTitle='Welcome Page'}
</jsp:include>
```
C.
```
<jsp:include file='/WEB-INF/jsp/header.jsp'>
${pageTitle='Welcome Page'}
</jsp:include>
```
D.
```
<jsp:insert page='/WEB-INF/jsp/header.jsp'>
<jsp:param name='pageTitle' value='Welcome Page' />
</jsp:insert>
```
E.
```
<jsp:include page='/WEB-INF/jsp/header.jsp'>
```

```
<jsp:param name='pageTitle' value='Welcome Page' />
</jsp:include>
```

Answer: E

QUESTION 144
Which JSTL code snippet produces the output "big number" when X is greater than 42, but outputs "small number" in all other cases?

A.
```
<c:if test='<%= (X > 42) %>'>
<c:then>big number</c:then>
<c:else>small number</c:else>
</c:if>
```
B.
```
<c:if>
<c:then test='<%= (X > 42) %>'>big number</c:then>
<c:else>small number</c:else>
</c:if>
```
C.
```
<c:choose test='<%= (X > 42) %>'>
<c:then>big number</c:when>
<c:else>small number</c:otherwise>
</c:choose>
```
D.
```
<c:choose test='<%= (X > 42) %>'>
<c:when>big number</c:when>
<c:otherwise>small number</c:otherwise>
</c:choose>
```
E.
```
<c:choose>
<c:when test='<%= (X > 42) %>'>big number</c:when>
<c:otherwise>small number</c:otherwise>
</c:choose>
```

Answer: E

QUESTION 145
Assume the scoped attribute priority does NOT yet exist.Which two create and set a new request-scoped attribute priority to the value "medium"? (Choose two.)

A. ${priority = 'medium'}
B. ${requestScope['priority'] = 'medium'}
C. <c:set var="priority" value="medium" />
D. <c:set var="priority" scope="request">medium</c:set>
E. <c:set var="priority" value="medium" scope="request" />
F. <c:set property="priority" scope="request">medium</c:set>
G. <c:set property="priority" value="medium" scope="request" />

Answer: DE

QUESTION 146
Which two are true about the JSTL core iteration custom tags? (Choose two.)

A. It may iterate over arrays, collections, maps, and strings.
B. The body of the tag may contain EL code, but not scripting code.
C. When looping over collections, a loop status object may be used in the tag body.
D. It may iterate over a map, but only the key of the mapping may be used in the tag body.
E. When looping over integers (for example begin='1' end='10'), a loop status object may not be used in the tag body.

Answer: AC

QUESTION 147
Which JSTL code snippet can be used to perform URL rewriting?

A. <a href='<c:url url="foo.jsp"/>' />
B. <a href='<c:link url="foo.jsp"/>' />
C. <a href='<c:url value="foo.jsp"/>' />
D. <a href='<c:link value="foo.jsp"/>' />

Answer: C

QUESTION 148
Which two JSTL URL-related tags perform URL rewriting? (Choose two.)

A. url
B. link
C. param
D. import
E. redirect

Answer: AE

QUESTION 149
Which JSTL code snippet can be used to import content from another web resource?

A. <c:import url="foo.jsp"/>
B. <c:import page="foo.jsp"/>
C. <c:include url="foo.jsp"/>
D. <c:include page="foo.jsp"/>
E. Importing cannot be done in JSTL. A standard action must be used instead.

Answer: A

QUESTION 150
Given that a scoped attribute cart exists only in a user's session, which two, taken independently, ensure the scoped attribute cart no longer exists? (Choose two.)

A. ${cart = null}
B. <c:remove var="cart" />

C. <c:remove var="${cart}" />
D. <c:remove var="cart" scope="session" />
E. <c:remove scope="session">cart</c:remove>
F. <c:remove var="${cart}" scope="session" />
G. <c:remove scope="session">${cart}</c:remove>

Answer: BD

QUESTION 151
Assume the custom tag my:errorProne always throws a jav a.lang.RuntimeException with the message "File not found."An error page has been configured for this JSP page. Which option prevents the exception thrown by my:errorProne from invoking the error page mechanism,and outputs the message "File not found" in the response?

A.
```
<c:try catch="ex">
<my:errorProne />
</c:try>
${ex.message}
```
B.
```
<c:catch var="ex">
<my:errorProne />
</c:catch>
${ex.message}
```
C.
```
<c:try>
<my:errorProne />
</c:try>
<c:catch var="ex" />
${ex.message}
```
D.
```
<c:try>
<my:errorProne />
<c:catch var="ex" />
${ex.message}
</c:try>
```
E.
```
<my:errorProne>
<c:catch var="ex">
${ex.message}
</c:catch>
</my:errorProne>
```

Answer: B

QUESTION 152
Assume a JavaBean com.example.GradedTestBean exists and has two attributes. The attribute name is of type java.lang.String and the attribute score is of type java.lang.Integer. An array of com.example.GradedTestBean objects is exposed to the page in a request-scoped attribute called results. Additionally, an empty java.util.HashMap called resultMap is placed in the page scope. A JSP page needs to add the first entry in results to resultMap, storing the name attribute of the bean as the key and the score attribute of the bean as the value.
Which code snippet of JSTL code satisfies this requirement?

A. `${resultMap[results[0].name] = results[0].score}`
B. `<c:set var="${resultMap}" key="${results[0].name}"`

```
value="${results[0].score}" />
```

C.
```
<c:set var="resultMap" property="${results[0].name}">
 ${results[0].value}
</c:set>
```

D.
```
<c:set var="resultMap" property="${results[0].name}"
value="${results[0].score}" />
```

E.
```
<c:set target="${resultMap}" property="${results[0].name}"
value="${results[0].score}" />
```

Answer: E

QUESTION 153
You have been contracted to create a web site for a free dating service. One feature is the ability for one client to send a message to another client, which is displayed in the latter client's private page. Your contract explicitly states that security is a high priority.
Therefore, you need to prevent cross-site hacking in which one user inserts JavaScript code that is then rendered and invoked when another user views that content.
Which two JSTL code snippets will prevent cross-site hacking in the scenario above? (Choose two.)

A. `<c:out>${message}</c:out>`
B. `<c:out value='${message}' />`
C. `<c:out value='${message}' escapeXml='true' />`
D. `<c:out eliminateXml='true'>${message}</c:out>`
E. `<c:out value='${message}' eliminateXml='true' />`

Answer: BC

QUESTION 154
Which is a benefit of precompiling a JSP page?

A. It avoids initialization on the first request.
B. It provides the ability to debug runtime errors in the application.
C. It provides better performance on the first request for the JSP page.
D. It avoids execution of the _jspService method on the first request.

Answer: C

QUESTION 155
A web browser need NOT always perform a complete request for a particular page that it suspects might NOT have changed. The HTTP specification provides a mechanism for the browser to retrieve only a partial response from the web server; this response includes information, such as the Last-Modified date but NOT the body of the page.
Which HTTP method will the browser use to retrieve such a partial response?

A. GET
B. ASK
C. SEND
D. HEAD

E. TRACE
F. OPTIONS

Answer: D

QUESTION 156
A Client wants to retrieve a representation of a resource, for example an HTML page, allowing a cached version to be returning by an intermediary such a proxy server.
Which HTTP method should it use?

A. GET
B. PUT
C. POST
D. DELETE

Answer: A
Explanation:
The first version of the HTTP protocol had only one method, namely GET, which would request a page from a server. The response from the server was always an HTML page

QUESTION 157
View the exhibit. Assume the tag library in the exhibit is placed in a web application in the path /WEB- INF/tld/example.tld.

```
 1. <?xml version="1.0" encoding="UTF-8" ?>
 2.
 3. <taglib
xmlns="http://java.sun.com/xml/ns/j2ee"
 4.    xmlns:xsi="http://www.w3.org/2001/XMLSchem
a-instance"
 5.    xsi:schemaLocation="http://java.sun.com/xm
l/ns/j2ee web-jsptaglibrary_2_0.xsd"
 6.    version="2.0">
 7.    <tlib-version>1.0</tlib-version>
 8.    <short-name>ex</short-name>
 9.
<uri>http://example.com/tld/example</uri>
10.    <tag>
11.      <name>hello</name>
12.
<tag-class>com.example.HelloTag</tag-class>
13.
<body-content>scriptless</body-content>
14.    </tag>
15. </taglib>
```

```
1.
2. <ex:hello />
```

Which JSP code, inserted at line 1, completes the JSP code to invoke the hello tag?

A. `<%@ taglib prefix="ex" uri="/WEB-INF/tld" %>`
B. `<%@ taglib uri="/WEB-INF/tld/example.tld" %>`
C. `<%@ taglib prefix="ex" uri:="http://localhost:8080/tld/example.tld" %>`
D. `<%@ taglib prefix="ex" uri:="http://example.com/tld/example" %>`

Answer: D

QUESTION 158
You are building your own layout mechanism by including dynamic content for the page's header and footer sections. The footer is always static, but the header generates the <title> tag that requests the page name to be specified dynamically when the header is imported.
Which JSP code snippet performs the import of the header content?

A.
```
<jsp:include page=`/WEB-INF/jsp/header.jsp'>
<jsp:param name=`pageName' value=`Welcome Page' />
</jsp:include>
```
B.
```
<jsp:import page=`/WEB-INF/jsp/header.jsp'>
<jsp:param name=`pageName' value=`Welcome Page' />
</jsp:import>
```
C.
```
<jsp:include page=`/WEB-INF/jsp/header.jsp'>
www.braindumps.com 37
Oracle 1z0-899 Exam
<jsp:attribute name=`pageName' value=`Welcome Page' />
</jsp:include>
```
D.
```
<jsp:import page=`/WEB-INF/jsp/header.jsp'>
<jsp:attribute name=`pageName' value=`Welcome Page' />
</jsp:import>
```

Answer: A

QUESTION 159
You are working on a JSP that is intended to inform users about critical errors in the system. The JSP code is attempting to access the exception that represents the cause of the problem, but your IDE is telling you that the variable does not exist.
What should you do to address this problem?

A. Add a page directive stating that this page is an error handler
B. Add scriptlet code to create a variable that refer to the exception
C. Add a <jsp:useBean tag to declare the and access the exception>
D. Perform the error handling in a servlet rather than in the JSP
E. Edit the page that caused the error to ensure that it specifies this page as its error handler

Answer: A

QUESTION 160
All of your JSPs need to have a link that permits users to email the web master. This web

application is licensed to many small businesses, each of which have a different email address for the web master. You have decided to use a context parameter that you specify in the deployment descriptor, like this:

```
42. <context-param>
43. <param-name>webmasterEmail</param-name>
44. <param-value>master@example.com</param-value>
45. </context-param>
```

Which JSP code snippet creates this email link?

A. contact us
B. contact us
C. contact us
D. contact us

Answer: D

QUESTION 161
Given an EL function declared with:

```
11. <function>
12.    <name>spin</name>
13.  <function-class>com.example.Spinner</function-class>
14.  <function-signature>
15.        java.lang.String spinIt ()
16.  </ function-signature>
17. </function>
```

Which two are true? (Choose two)

A. The function method must have the signature:
public String spin().
B. The method must be mapped to the logical name "spin" in the web.xml file.
C. The function method must have the signature:
public String spinIt().
D. The function method must have the signature:
public static String spin().
E. The function method must have the signature:
public static String spinIt().
F. The function class must be named Spinner, and must be in the package com.example.

Answer: EF

QUESTION 162
Which EL expression returns true if no session has been established with current client?

A. `${not(pageContext.session)}`

B. `${not(requestScope.session)}`
C. `${requestScope.sessions.this}`
D. `${sessionScope.empty}`

Answer: A
Explanation:
Note:
* A session is never null. The session is always present in JSP EL, unless you add
<%@page session="false" %>
* If you'd like to check if the session is new or has already been created, use
HttpSession#isNew() instead.
<c:if test="${not pageContext.session['new']}">
You've already visited this site before.
</c:if>
<c:if test="${pageContext.session['new']}">
You've just started the session with this request! </c:if>

QUESTION 163
Your web application uses a simple architecture in which servlets handle requests and then forward to a JSP using a request dispatcher.
You need to pass information calculated in the servlet to the JSP for view generation. This information must NOT be accessible to any other servlet, JSP or session in the webapp.
Which two techniques can you use to accomplish this goal? (Choose two)

A. Add attributes to the session object.
B. Add attributes on the request object.
C. Add parameters on the request object.
D. Use the pageContext object to add request attributes.
E. Add parameters to the JSP's URL when generating the request dispatcher.

Answer: BE

QUESTION 164
A web application for business expense reporting allows uploading expense receipts. Multiple receipts can be uploaded single step using one HTTP request. The servlet that processes the request has been marked with the @MultipartConfig annotation.
Which method should the servlet use to access the uploaded files?

A. HttpServletRequest.getParts()
B. HttpServletRequest.getData()
C. servletRequest.getParts()
D. servletRequest.getAllParts()

Answer: A
Explanation:
The request.getParts() method returns collections of all Part objects. If you have more than one input of type file, multiple Part objects are returned. Since Part objects are named, the getPart(String name) method can be used to access a particular Part. Alternatively, the getParts() method, which returns an Iterable<Part>, can be used to get an Iterator over all the Part objects.

QUESTION 165
To add a servlet to a context that has not been declared either via annotation or via the descriptor, during context initialization time the following API can be used (Choose three.)

A. `servletContext.addServlet("myServletName", "MyServlet");`
B. `servletContext.addServlet( (<Class extends Servlet>)getClass().getClassLoader().getClassLoader().loaderClass("MyServlet"));`
C. `servletContext.addServlet(myServlet);`
D. `servletContext.addServlet( ("myServletName", <Class extends Servlet>)gerClass().getClassLoader().loaderClass("myServlet"));`
E. `servletContext.addServlet("myServletName", MyServlet);`

Answer: ADE
Explanation:
addServlet
ServletRegistration.Dynamic addServlet(java.lang.String servletName, java.lang.Class<? extends Servlet> servletClass)
Adds the servlet with the given name and class type to this servlet context.
The registered servlet may be further configured via the returned ServletRegistration object.
Parameters:
servletName - the name of the servlet
servletClass - the class object from which the servlet will be instantiated

QUESTION 166
ServletContextListeners are invoked in

A. Random order
B. contextInitialized and contextDestroyed are invoked in the order in which they are declared in the web.xml
C. contextInitialized method are invoked in the order in which they are declared in the web.xml and the contextDestroyed method is invoked in the reverse order in which they are declared in the web.xml
D. contextInitialized and contextDestroyed are invoked in the reverse order of which they are declared in the web.xml

Answer: C
Explanation:
public interface ServletContextListener
extends java.util.EventListener
Interface for receiving notification events about ServletContext lifecycle changes.
In order to receive these notification events, the implementation class must be either declared in the deployment descriptor of the web application, annotated with WebListener, or registered via one of the addListener methods defined on ServletContext.
Implementations of this interface are invoked at their contextInitialized(javax.servlet.ServletContextEvent) method in the order in which they have been declared, and at their contextDestroyed(javax.servlet.ServletContextEvent) method in reverse order.

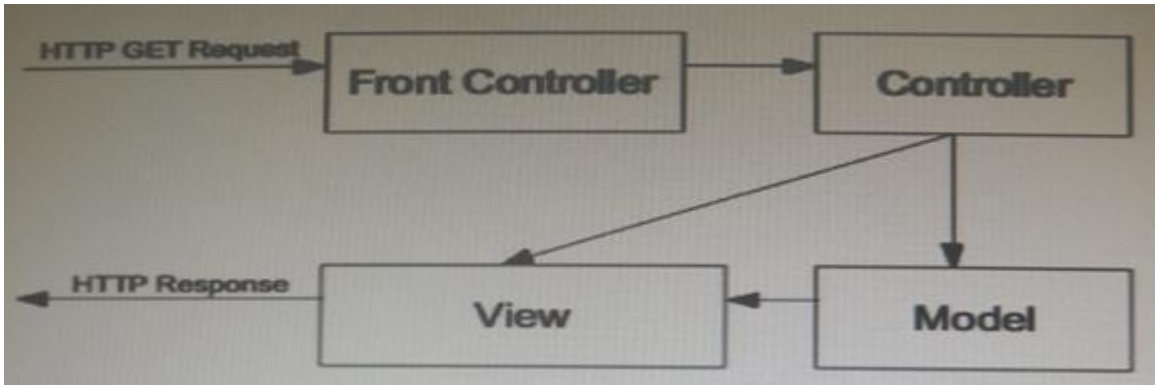
QUESTION 167
A servlet class is injected with a JDBC data source. After injection has occurred, the servlet needs to create a cache out of some of the data in the database, so as to improve

responsiveness.
Which two methods can host the cache creation code? (Choose two)

A. Servlet.init()
B. Servlet.destroy()
C. A method annotated with @Init
D. A method annotated with @PostConstruct
E. A method annotated with @PreDestroy
F. A method annotated with @Resource

Answer: AD
Explanation:
A: Because the Servlet init() method is invoked when the servlet instance is loaded, it is the perfect location to carry out expensive operations that need only be performed during initialization. By definition, the init() method is thread-safe. The results of operations in the HttpServlet.init() method can be cached safely in servlet instance variables, which become read-only in the servlet service method.
D: Example:
@PostConstruct
private void init() {
cached = (Cached) ctx.lookup(EJB_PATH + Cached.class.getSimpleName());

QUESTION 168
View the Exhibit. Which two technologies would be suitable for use as Front Controller elements? (Choose two)



A. JSP
B. Servlet
C. Filter
D. POJO
E. Custom Tag

Answer: AB
Explanation:
* Servlet only. Works well when:
Output is a binary type. E.g.: an image
There is no output. E.g.: you are doing forwarding or redirection as in Search Engine example.
Format/layout of page is highly variable. E.g.: portal.

* JSP only. Works well when:
Output is mostly character data. E.g.: HTML
Format/layout mostly fixed.
* Combination (MVC architecture). Needed when:
A single request will result in multiple substantially differentlooking results.
You have a large development team with different team members doing the Web development and the business logic.
You perform complicated data processing, but have a relatively fixed layout

Incorrect:
Not D: In computing software, POJO is an acronym for Plain Old Java Object. The name is used to emphasize that a given object is an ordinary Java Object, not a special object. The term "POJO" is mainly used to denote a Java object which does not follow any of the major Java object models, conventions, or frameworks. The term continues the pattern of older terms for technologies that do not use fancy new features.

QUESTION 169
View the Exhibit.

```
// Source Servlet : Source.java
10.  public class Source extends HttpServlet {
11.    public void service(HttpServletRequest request,
12.                        HttpServletResponse response)
13.                 throws ServletException, IOException {
14.      RequestDispatcher rd =
15.        request.getRequestDispatcher("/dest/Destination");
16.      rd.forward(request, response);
17.    }
18.  }

// Filter : ParamAdder.java
12.  public class ParamAdder implements Filter {
       // ...
23.    public void doFilter(ServletRequest request,
24.                         ServletResponse response,
25.                         FilterChain chain)
26.          throws ServletException, IOException {
27.      request.setAttribute("filterAdded", "addedByFilter");
28.      chain.doFilter(request, response);
29.    }
       // ...
50.  }

//  Destination Servlet Destination.java
10.  public class Destination extends HttpServlet {
11.    public void service(HttpServletRequest request,
12.                        HttpServletResponse response)
13.                 throws ServletException, IOException {
14.      String filterParam =
15.         (String) request.getAttribute("filterAdded");
16.      response.getWriter().println("filterAdded = "
17.                                   + filterParam);
18.    }
19.  }
```

Given the web application deployment descriptor elements:

```
11. <filter>
12. <filter-name>ParamAdder</filter-name>
13. <filter-class>com.example.ParamAdder</filter-class>
14. </filter>
...
31. <filter-mapping>
32. <filter-name>ParamAdder</filter-name>
33. <servlet-name>Destination</servlet-name>
34. </filter-mapping>
...
55. <servlet-mapping>
56. <servlet-name>Destination</servlet-name>
57. <url-pattern>/dest/Destination</url-pattern>
58. </servlet-mapping>
```

What is the result of a client request of the Source servlet with no query string?

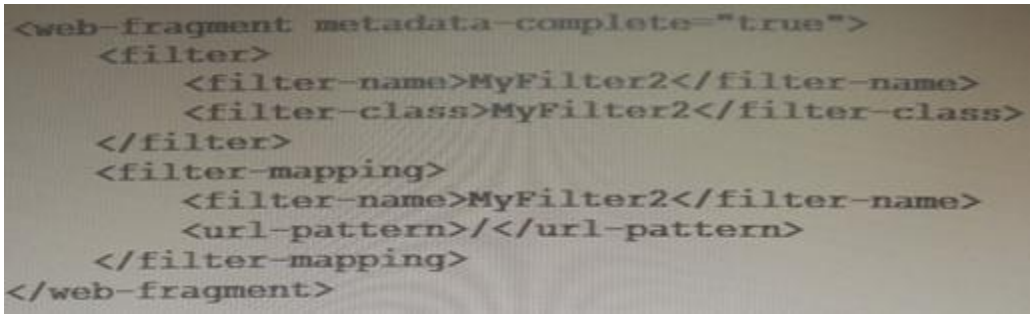
A. The output "filterAdded = null" is written to the response stream.
B. The output "filterAdded = addedByFilter" is written to the response stream.
C. An exception is thrown at runtime within the service method of the Source servlet.
D. An exception is thrown at runtime within the service method of the Destination servlet.

Answer: A

QUESTION 170
Given a war file with the following structure

```
| - WEB-INF/classes/Myservlet.class
| - WEB-INF/lib/wf.jaf
```

Where wf.jar contains a valid web-fragment.xml and the following two classes: MyFilter1.class and MyFiler2.class.
The web-fragment.xml is as follows:



The following are some code snippets:

```
(i)  @WebServlet("/")
     public class MyServlet extends HttpServlet {}
(ii) @WebFilter(urlPatterns={"/"})
     public class MyFilter1 implements Filter {}
(iii) @WebFilter(urlPatterns={"/abc"})
     public class MyFilter2 implements Filter {}
```

When one access "/" of the above web application, which filters will be executed?

A. No filters will be executed.
B. MyFilter1
C. MyFilter2
D. MyFilter1 and MyFilter2

Answer: C
Explanation:
Note:
* <filter-mapping>
This tag specifies a filter name, and either a URL mapping or servlet name, for a filter that has been defined with the <filter> tag.
Multiple <filter-mapping> tags can be specified for a single <filter>, providing different URL patterns. See the <url-pattern> tag for examples.
The <filter-mapping> has two required elements:
<filter-name> - the filter name, as specified in the <filter-name> element of the <filter> tag Either a <url-pattern> or a <servlet-name>.
If a servlet name is specified, the filter will be called whenever the specific servlet is called.

QUESTION 171
Which three are true about the HttpServletRequestWrapper class? (Choose three.)

A. The HttpServletRequestWrapper is an example of the Decorator pattern.
B. The HttpServletRequestWrapper can be used to extend the functionality of a servlet request.
C. A subclass of HttpServletRequestWrapper CANNOT modify the behavior of the getReader method.
D. An HttpServletRequestWrapper may be used only by a class implement the javax.servlet.Filter interface.
E. An HttpServletRequestWrapper CANNOT be used on the request passed to the RequestDispatcher.interface.
F. An HttpServletRequestWrapper may modify the header of a request within an object implementing the javax.servlet.Filter interface.

Answer: ABF

QUESTION 172
Servlet A forwarded a request to servlet B using the forward method of RequestDispatcher.
What attribute in B's request object contains the URI of the original request received by servlet A?

A. REQUEST_URI
B. javax.servlet.forward.request_uri
C. javax.servlet.forward.REQUEST_URI
D. javax.servlet.request_dispatcher.request_uri
E. javax.servlet.request_dispatcher.REQUEST_URI

Answer: B

QUESTION 173
A session-scoped attribute is stored by a servlet, and then servlet forwards to a JSP page. Which three jsp:useBean attributes must be used to access this attribute in the JSP page? (Choose three.)

A. id
B. name
C. bean
D. type
E. scope
F. beanName

Answer: ADE

QUESTION 174
View the Exhibit.

```
1.  package com.example;
2.
3.  public class Product {
4.    private String name;
5.    private double price;
6.
7.    public Product() {
8.      this( "Default", 0.0 );
9.    }
10.
11.   public Product( String name, double price ) {
12.     this.name = name;
13.     this.price = price;
14.   }
15.
16.   public String getName() {
17.     return name;
18.   }
19.
20.   public void setName(String name) {
21.     this.name = name;
22.   }
23.
24.   public double getPrice() {
25.     return price;
26.   }
27.
28.   public void setPrice(double price) {
29.     this.price = price;
30.   }
31. }
```

Assume the product attribute does NOT yet exist in any scope.
Which two create an instance of com.example.Product and initialize the name and price properties to the name and price request parameters? (Choose two)

A. <jsp:useBean id="product" class="com.example.Product" />
<jsp:setProperty name="product" property="*" />
B. <jsp:useBean id="product" class="com.example.Product" />
<% product.setName(request.getParameter("name"));
%>
<% product.setPrice(request.getParameter("price"));
%>
C. <jsp:useBean id="product" class="com.example.Product" />
<jsp:setProperty name="product" property="name"
value="${param.name}" />
<jsp:setProperty name="product" property="price"
value="${param.price}" />
D. <jsp:useBean id="product" class="com.example.Product">
<jsp:setProperty name="product" property="name"
value="${name}" />
<jsp:setProperty name="product" property="price"
value="${price}" />
</jsp:useBean>

Answer: AC

QUESTION 175
View the Exhibit.

```
 1. package com.example;
 2.
 3. public class Product {
 4.   private String name;
 5.   private double price;
 6.
 7.   public Product() {
 8.     this( "Default", 0.0 );
 9.   }
10.
11.   public Product( String name, double
price ) {
12.     this.name = name;
13.     this.price = price;
14.   }
15.
16.   public String getName() {
17.     return name;
18.   }
19.
20.   public void setName(String name) {
21.     this.name = name;
22.   }
23.
24.   public double getPrice() {
25.     return price;
26.   }
27.
28.   public void setPrice(double price) {
29.     this.price = price;
30.   }
31. }
```

Given:

```
10. <form action=`create_product.jsp'>
11. Product Name: <input type= `text' name=`productName'/><br/>
12. Product Price: <input type= `text' name=`productPrice'/><br/>
13. </form>
```

For a given product instance, which three jsp:set Property attributes must be used to initialize its properties from the HTML form? (Choose three.)

A. id
B. name
C. type
D. param
E. property
F. reqParam
G. attribute

Answer: BDE

QUESTION 176
A developer wants to make a name attribute available to all servlets associated with a particular user, across multiple requests from that user, from the same browser instance.
Which two provide this capability from within a tag handler? (Choose two)

A. pageContext.setAttribute("name", theValue);
B. pageContext.setAttribute("name", getSession());
C. pageContext.getRequest().setAttribute("name", theValue);
D. pageContext.getSession().setAttribute("name", theValue);
E. pageContext.setAttribute("name", theValue, PageContext.PAGE_SCOPE);
F. pageContext.setAttribute("name", theValue, PageContext.SESSION_SCOPE);

Answer: DF

QUESTION 177
Given that a web application consists of two HttpServlet classes, ServletA and ServletB, and the ServerletA.service method:

```
20. String key = "com.example.data";
21. session.setAttribute(key, "Hello");
22. object value = session.getAttribute(key);
23.
```

Assume session is an HttpSession, and is not referenced anywhere else in ServletA.
Which two changes, taken together, ensure that value is equal to "Hello" on line 23? (Choose two)

A. ensure that the ServletB.service method is synchronized
B. ensure that the ServletA.service method is synchronized
C. ensure that ServletB synchronizes on the session object when setting session attributes
D. enclose lines 21-22 in synchronized block:
synchronized(this) (
session.setAttribute(key, "Hello");
value = session.getAttribute(key);
)
E. enclose lines 21-22 in synchronized block:
synchronized(session) (
session.setAttribute(key, "Hello");
value = session.getAttribute(key);
)

Answer: CE

QUESTION 178
Given an HttpServletRequest request:

```
22. String id = request.getParameter("jsessionid");
23. // insert code here
24. String name = (String) session.getAttribute("name")
```

Which three can be placed at line 23 to retrieve an existing HttpSession object? (Choose three)

A. HttpSession session = request.getSession();
B. HttpSession session = request.getSession(id);
C. HttpSession session = request.getSession(true);
D. HttpSession session = request.getSession(false);
E. HttpSession session = request.getSession("jsessionid");

Answer: ACD

QUESTION 179
As a convenience feature, your web pages include an Ajax request every five minutes to a special
servlet that monitors the age of the user's session. The client-side JavaScript that handles the Ajax callback displays a message on the screen as the session ages. The Ajax call does NOT pass any cookies, but it passes the session ID in a request parameter called sessionID. In addition, assume that your webapp keeps a hasmap of session objects by the ID.
Here is a partial implementation of this servlet:

```
10. public class SessionAgeServlet extends HttpServlet {
11. public void service(HttpServletRequest request,
HttpServletResponse) throws IOException {
12. String sessionID = request.getParameter("sessionID");
13. HttpSession session = getSession(sessionID);
14. long age = // your code here
15. response.getWriter().print(age);
16. }
... // more code here
47. }
```

Which code snippet on line 14, will determine the age of the session?

A. session.getMaxInactiveInterval();
B. session.getLastAccessed().getTime() ?session.getCreationTime().getTime();
C. session.getLastAccessedTime().getTime() ?session.getCreationTime().getTime();
D. session.getLastAccessed() - session.getCreationTime();
E. session.getMaxInactiveInterval() ?session.getCreationTime();
F. session.getLastAccessedTime() ?session.getCreationTime();

Answer: F

QUESTION 180
Given the definition of Myobject and that an instance of Myobject is bound as a session attribute:

```
8. package com.example;
9. public class Myobject implements
10. javax.servlet.http.HttpSessionBindingListener {
11. // class body code here
12. }
```

Which is true?

A. Only a single instance of Myobject may exist within a session
B. The unbound method of the Myobject instance is called when the session to which it is bound times out
C. The com.example.MyObject must be declared as a servlet event listener in the web application deployment descriptor
D. The valueUnbound method of the Myobject instance is called when the session to which it is bound times out

Answer: D

QUESTION 181
Your web application requires the adding and deleting of many session attributes during a complex use case. A bug report has come in that indicates that an important session attribute is being deleted too soon and a NullPointerException is being thrown several interactions after the fact. You have decided to create a session event listener that will log when attributes are being deleted so you can track down when the attribute is erroneously being deleted.
Which listener class will accomplish this debugging goal?

A. Create an HttpSessionAttributeListener class and implement the attributeDeleted method and log the attribute name using the getName method on the event object.
B. Create an HttpSessionAttributeListener class and implement the attributeRemoved method and log the attribute name using the getName method on the event object.
C. Create an SessionAttributeListener class and implement the attributeRemoved method and log the attribute name using the getAttributeName method on the event object.
D. Create an SessionAttributeListener class and implement the attributeDeleted method and log the attribute name using the getAttributeName method on the event object.

Answer: B

QUESTION 182
Which method must be used to encode a URL passed as an argument to HttpServletResponse. sendRedirect when using URL rewriting for session tracking?

A. ServletResponse.encodeURL
B. HttpServletResponse.encodeURL
C. ServletResponse.encodeRedirectURL
D. HttpServletResponse.encodeRedirectURL

Answer: D

QUESTION 183
Which Java expression can be used to check whether the web container is currently configured to track sessions via URL rewriting?

A. servletContext.getSessionCookiesConfiq() .isHttpOnly()
B. servletContext.getSessionCookiesConfiq() .isSecure()
C. servletContext.getDefaultSessionTrackingModes() .contains(SessionTrackingMode.URL)
D. servletContext.getEffectiveSessionTrackingModes() .contains (SessionTrackingMode.URL)

Answer: D

Explanation:
Code example:
String sessionID = null;
if (request.getServletContext().getEffectiveSessionTrackingModes()
contains(SessionTrackingMode.URL)) {

// Get the session ID if there was one
sessionID = request.getPathParameter(
SessionConfig.getSessionUriParamName(
request.getContext()));
if (sessionID != null) {
request.setRequestedSessionId(sessionID);
request.setRequestedSessionURL(true);
}
}

C: getDefaultSessionTrackingModes

java.util.Set<SessionTrackingMode> getDefaultSessionTrackingModes() Gets the session tracking modes that are supported by default for this ServletContext.

QUESTION 184
Which security mechanism uses the concept of a realm?

A. authorization
B. data integrity
C. confidentiality
D. authentication

Answer: D

QUESTION 185
Which java code snippet roles "MANAGER" and "EMPLOYEE" in a given application?

```
@DeclareRole("EMPLOYEE")
```

public class MyServlet extends HttpServlet {}

A. @DeclareRoles({ "MANAGER", "EMPLOYEE" })public class MyServlet extends HttpServlet {}
B. @SecurityRoles({ "MANAGER", "EMPLOYEE" })public class MyServlet extends HttpServlet {}
C. @DeclareRoles("MANAGER")
@DeclareRoles("EMPLOYEE")public class MyServlet extends HttpServlet {}
D. @DeclareRole("MANAGER")

Answer: A
Explanation:
* The syntax for declaring more than one role is as shown in the following example:

@DeclareRoles({"Administrator", "Manager", "Employee"})

* @DeclareRoles

This annotation declares the security roles defined by the application.

* javax.annotation.security
Annotation Type DeclareRoles

@Documented
@Retention(value=RUNTIME)
@Target(value=TYPE)
public @interface DeclareRoles
Used by application to declare roles. It can be specified on a class.

QUESTION 186
Given the java code snippet in contextInitialized method of a ServletContextListner:

```
ServletRegistration.Dynamic sr =
(ServletRegistration.Dynamic)sc.addServlet
("myServlet", myServletClass);
sr.addMapping("/abc");
sr.setServletSecurityElement(servletSecurityElement);
sr.addMapping("/def");
```

Which statement is true?

A. "/abc" is mapped to "myservlet".
The servletSecurityElementy applies to both "/abc" and "/def".
B. Both "/abc" and "/def" are mapped to "myservlet".
The servletSecurityElementy applies to "/abc".
C. Both "/abc" and "/def" are mapped to "myservlet".
The servletSecurityElementy applies to "/def".
D. Both "/abc" and "/def" are mapped to "myservlet".
The servletSecurityElementy applies to both "/abc" and "/def".
E. Both "/abc" and "/def" are mapped to "myservlet".
The servletSecurityElementy applies to "/abc", but the behavior for "/def" is not specified.

Answer: D

QUESTION 187
Given:

```
3. class MyServlet extends HttpServlet {
4. public void doPut(HttpServletRequest req,
HttpServletResponse resp)
throws ServletException, IOException {
5. // servlet code here
...
26. }
27. }
```

If the DD contains a single security constraint associated with MyServlet and its only <http-method> tags and <auth-constraint> tags are:

```
<http-method>GET</http-method>
```

```
<http-method>PUT</http-method>
<auth-constrain>Admin</auth-constrain>
```

Which four requests would be allowed by the container? (Choose four)

A. A user whose role is Admin can perform a PUT.
B. A user whose role is Admin can perform a GET.
C. A user whose role is Admin can perform a POST.
D. A user whose role is Member can perform a PUT.
E. A user whose role is Member can perform a POST.
F. A user whose role is Member can perform a GET.

Answer: ABCE

QUESTION 188
Given this fragment in a servlet:

```
23. if(reg.isUserInRole("Admin")) {
24. // do stuff
25. }
```

And the following fragment from the related Java EE deployment descriptor:

```
812. <security-role-ref>
813. <role-name>Admin</role-name>
814. <role-link>Administrator</role-link>
815. </security-role-ref>
900. <security-role>
901. <role-name>Admin</role-name>
902. <role-name>Administrator</role-name>
903. </security-role>
```

What is the result?

A. Line 24 can never be reached.
B. The deployment descriptor is NOT valid.
C. If line 24 executes, the user's role will be Admin.
D. If line 24 executes, the user's role will be Administrator.
E. If line 24 executes, the user's role will NOT be predictable.

Answer: B

QUESTION 189
Which java code snippet checks whether the user is of the role "MANAGER" for a given HttpServRequest, httpServletRequest?

A. httpServletRequest.isUserInRole("MANAGER");
B. httpServletRequest.isCallerInRole("MANAGER");
C. httpServletRequest.isPrincipalInRole("MANAGER");
D. httpServletRequest.isAuthnticatedUserInRole("MANAGER");

Answer: A
Explanation:
isUserInRole
public boolean isUserInRole(java.lang.String role)
Returns a boolean indicating whether the authenticated user is included in the specified logical "role". Roles and role membership can be defined using deployment descriptors. If the user has not been authenticated, the method returns false.
Parameters:
role - a String specifying the name of the role
Returns:
a boolean indicating whether the user making this request belongs to a given role; false if the user has not been authenticated
Incorrect:
Not B: isCallerInRole is depreciated.

QUESTION 190
A web application uses a cookies to track a client as it navigates through the pages that constitutes the application.
Which code snippet can be used by the web application to reduce the chance of a cross-site scripting attack by setting some property of the cookie before returning it to the client?

A. cookie.setHttpOnly(true)
B. cookie.setMaxAge(3600)
C. cookie.setPath("/")
D. cookie.setSecure(true)

Answer: A
Explanation:
When HTTPOnly flag is assigned to a cookie, the browser will restrict the access to such Cookie from Java Script code hence the cookie would only be sent to the subsequent request to server but cannot be accessed using client side script. In such a case even if website is vulnerable to Cross Site Scripting (XSS) attacks, still the browser would safeguard the data stored into cookies flagged as HTTPOnly.
Incorrect:
Not D: If Secure flag is set for Cookie then it may only be transmitted over secure channel (SSL/HTTPS) ensuring that data is always encrypted while transmitting from client to server.

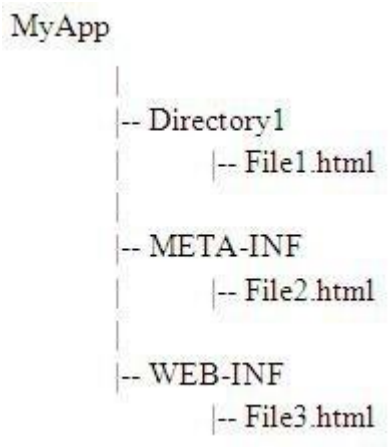
QUESTION 191
Given a web fragment jar file, where should we put the web fragment.xml inside the jar file?

A. WEB-INF
B. META-INF
C. WEB-INF/lib
D. WEB-INF/classes
E. META-INF/services

Answer: B

QUESTION 192

Given the portion of a valid Java EE web application's directory structure:



You want to know whether File1.html, File2.html, and/or File3.html is protected from direct access by your web client's browsers. What statement is true?

A. All three files are directly accessible.
B. Only File1.html is directly accessible.
C. Only File2.html is directly accessible.
D. Only File3.html is directly accessible.
E. Only File1.html and File2.html are directly accessible.
F. Only File1.html and File3.html are directly accessible.
G. Only File2.html and File3.html are directly accessible.

Answer: B
Explanation:
Note:
* WEB-INF is the folder just under the root of a WAR that holds information that you don't want to be accessible to a client via a URL request. Specifically, it holds the web.xml, classes, and lib directories, but you can put anything you want to hide from the client there.
* META-INF is what discriminates a JAR file from a plain ZIP file. It holds the manifest file and may hold other deployment information as needed.

QUESTION 193
Given the fragment from Java EE deployment descriptor:

```
341. <error-page>
342. <exception-type>java.lang.Throwable</exception-type>
343. <location>/mainError.jsp</location>
344. </error-page>
345. <error-page>
346. <exception-type>java.lang.ClassCastException</exception-type>
347. <location>/castError.jsp</location>
348. </error-page>
```

If the web application associated with the fragment above throws a ClassCastException.
Which statement is true?

A. The deployment descriptor is invalid.
B. The container invokes mainError.jsp
C. The container invokes castError.jsp
D. Neither mainError.jsp nor castError.jsp is invoked.

Answer: C

QUESTION 194
You have built a web application that you license to small businesses. The webapp uses a context parameter, called licenseExtension, which enables certain advanced features based on your client's license package. When a client pays for a specific service, you provide them with a license extension key that they insert into the <context-param> of the deployment descriptor. Not every client will have this context parameter so you need to create a context listener to set up a default value in the licenseExtension parameter.
Which code snippet will accomplish this goal?

A. You cannot do this because context parameters CANNOT be altered programmatically.
B. String ext = context.getParameter(`licenseExtension');if (ext == null)
{ context.setParameter(`licenseExtension' DEFAULT);}
C. String ext = context.getAttribute(`licenseExtension');if (ext == null)
{ context.setAttribute(`licenseExtension' DEFAULT);}
D. String ext = context.getInitParameter(`licenseExtension')if (ext == null)
{ context.resetInitParameter(`licenseExtension' DEFAULT);}
E. String ext = context.getInitParameter(`licenseExtension')if (ext == null)
{ context.setInitParameter(`licenseExtension' DEFAULT);} www.braindumps.com 67
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Answer: E

QUESTION 195
Which of the following are attributes of the annotation javax.servlet.annotation.WebFiler?

```
(i) Name
(ii) servletNames
(iii) urlPatterns
(iv) dispatcherTypes
(v) supportAsync
```

A. (iii) only
B. (iii) and (iv)
C. (ii), (iii) and (iv)
D. (iii), (iv) and (v)
E. (ii), (iii), (iv) and (v)

Answer: C

QUESTION 196
Which of following annotations can be used in a servlet class?

```
(i) @javax.annotation.Resource
(ii) @javax.annotation.PreDestroy
(iii) @javax.annotation.security.RunAs
(iv) @javax.annotation.security.RolesAllowed
(v) @javax.servlet.annotation.WebServlet
```

A. (v) only
B. (i) and (v)
C. (i), (ii), (iii) and (v)
D. (i), (ii), (iv) and (v)
E. (i), (ii), (iii), (iv) and (v)

Answer: C

QUESTION 197
When using the @WebListener annotation, the class on which the annotation is applied to must also implement at least one o the following interfaces ?(Choose two):

A. RequestListener
B. AttributeListener
C. ServletContextListener
D. HttpSessionListener
E. SessionAttributeListener
F. AsyncListener

Answer: CD
Explanation:
@WebListener
The main task of the listener is to listen the particular events and process your own task on that event. For example, if you want to initialize a database connection before your application starts, ServletContextListener will be implemented to do that. Another good example is -when you want to do some task on the creation and destruction of a session.
For this purpose you need to implement HttpSessionListener.