

A - Which of the following statements are correct about the status of the Http response? Select the one correct answer

- A. A status of 200 to 299 signifies that the request was successful.
- B. A status of 300 to 399 is informational messages.
- C. A status of 400 to 499 indicates an error in the server
- D. A status of 500 to 599 indicates an error in the client.

A - Classes HttpServlet and GenericServlet implement the ____ interface.

- A. Servlet
- B. Http
- C. HttpServletRequest
- D. HttpServletResponse

A - You have to send a gif image to the client as a response to a request. Which of the following calls will you have to make?

- A. response.setContentType("image/gif");
- B. response.setType("application/gif");
- C. response.setContentType("application/bin");
- D. response.setType("image/gif");

C - Consider the code of ReportServlet servlet of a web application. Assuming generateReport() is valid method and have no problems, which of the following statement about these servlet is true?

- A. ReportServlet will throw exception at runtime.
- B. ReportServlet.java won't compile.
- C. ReportServlet.java will compile and run without any problems.

A - Which method of ReportGeneratorServlet will be called when the user clicks on the URL shown by the following HTML.

Assume that ReportGeneratorServlet does not override the service(HttpServletRequest, HttpServletResponse) method of the HttpServlet class.

(Choose one)

- A. doGet(HttpServletRequest, HttpServletResponse);
- B. doPost(HttpServletRequest, HttpServletResponse);
- C. doHead(HttpServletRequest, HttpServletResponse);
- D. doOption(HttpServletRequest, HttpServletResponse);

E - What will be the outcome of executing the following code?

```
public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    response.setContentType("text/plain");
    response.setContentLength(6);
    PrintWriter out = response.getWriter();
    out.write("What's your name? ");
    out.write("'" + response.isCommitted());
}
```

- A. Won't execute because of a compilation error.
- B. An IllegalArgumentException is thrown.
- C. An IllegalStateException is thrown.
- D. A blank page is returned to the client.
- E. "What's" is returned to the client.
- F. "What's your name?" is returned to the client.

C - Following is the code for doGet() and doPost() methods of TestServlet.

Which of the statement is correct?

- A. This will only work for HTTP GET requests
- B. This will only work for HTTP POST requests
- C. This will work for HTTP GET as well as POST requests.
- D. It'll throw an exception at runtime, as you cannot call doGet() from doPost().
- E. It'll throw an exception at runtime only if a POST request is sent to it.

A - Which of the following is indicated by URL, which is used on the Internet?

- A. Information resources(sources) on the Internet
- B. E-mail addresses for use in the Internet
- C. IP addresses of servers connected to the Internet
- D. Owners of PCs connected to the Internet

D - Identify correct statement about a WAR file.(Choose one)

- A. It is an XML document.
- B. It cannot be unpackaged by the container.
- C. It is used by web application developer to deliver the web application in a single unit.
- D. It contains web components such as servlets as well as EJBs.

A - See the extract from web.xml of web application "mywebapp" on server named myserver, runs on port 8080:

```
<servlet-mapping>
<servlet-name>ServletA</servlet-name>
<url-pattern>/</url-pattern>
</servlet-mapping>
<servlet-mapping>
<servlet-name>ServletB</servlet-name>
<url-pattern>/bservlet.html</url-pattern>
</servlet-mapping>
<servlet-mapping>
<servlet-name>ServletC</servlet-name>
<url-pattern>*.servletC</url-pattern>
</servlet-mapping>
<servlet-mapping>
<servlet-name>ServletD</servlet-name>
<url-pattern>/dservlet/*</url-pattern>
</servlet-mapping>
```

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.)

http://myserver:8080/mywebapp

- A. ServletA
- B. ServletB
- C. ServletC
- D. ServletD

A - A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible to all the servlets of the webapp.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible only to the servlet it is defined for.

A - A manages the threading for the servlets and JSPs and provides the necessary interface with the We

b server.

- A. Web Container
- B. EJB Container
- C. Servlets
- D. Applets

A - A _____ has a name, a single value, and optional attributes such as a comment, path and domain qualifiers, a maximum age, and a version number.

- A. Cookie
- B. Session
- C. Request
- D. Response

D - Which of the following method calls can be used to retrieve an object from the session that was stored using the name "roleName"?

- A. getObject("roleName");
- B. getValue("roleName");
- C. get("roleName");
- D. getAttribute("roleName");
- E. getParameter("roleName");

D - Which is NOT a standard technique for a session be definitely invalidated?

- A. The container is shutdown and brought up again.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls invalidate() on a session object.
- D. If the session time out is set to 0 using setMaxInactiveInterval() method.

A - Which method can be invoked on a session object so that it is never invalidated by the servlet container automatically?

- A. setMaxInactiveInterval(-1)
- B. setTimeout(Integer.MAX_INT)
- C. setMaxInactiveInterval(Integer.MAX_INT)
- D. setTimeout(-1)

A - Session death is more likely to come about through a time-out mechanism. If there is no activity on a session for a predefined length of time, the web container invalidates the session.

- A. True
- B. False

A - What are the different scope values for the <jsp:useBean>? (Choose one correct answer)

- A. session, page, application, request
- B. session, page, application, global
- C. session, page, application, context
- D. session, page, response, request

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

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

What is the output?

- A. The page display "Welcome John"

- B. The program gives a syntax error because of the statement
`<% String myName=request.getParameter("name");%>`
- C. The program gives a syntax error because of the statement
`<% String test= "Welcome " + myName; %>`
- D. The program gives a syntax error because of the statement
`<%=test%>`

A - Name the default value of the scope attribute of `<jsp:useBean>`

- A. page
- B. session
- C. application
- D. request

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

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

What is the output?

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement `<%! String myName=request.getParameter();%>`
- C. The program gives a syntax error because of the statement `<% String test= "welcome" + myName; %>`
- D. The program gives a syntax error because of the statement `<%= test%>`

A - Select the correct directive statement insert into the first line of following lines of code (1 insert code here):

- A. `<%@page import='java.util.*' %>`
- B. `<%@import package='java.util.*' %>`
- C. `<%@ package import ='java.util.*' %>`
- D. `<%! page import='java.util.*' %>`

A - For JSP scopes of request and page, what type of object is used to store the attributes?

- A. `HttpServletRequest` and `ServletContext` respectively.
- B. `ServletRequest` and `ServletConfig` respectively.
- C. `ServletRequest` and `PageContext` respectively.
- D. `HttpServletRequest` and `PageContext` respectively.
- E. `ServletConfig` for both.

B - Which of the following correctly represents the following JSP statement? Select one correct answer.

```
<%=x%>
```

- A. `<jsp:expression=x/>`
- B. `<jsp:expression>x</jsp:expression>`
- C. `<jsp:statement>x</jsp:statement>`
- D. `<jsp:declaration>x</jsp:declaration>`
- E. `<jsp:scriptlet>x</jsp:scriptlet>`

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

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

<%= } %>

- A. The browser will print either hello or hi based upon the return value of random.
- B. The string hello will always get printed.
- C. The string hi will always get printed.
- D. The JSP file will not compile.

B - Which technique is likely to return an initialization parameter for a JSP page?

- A. <%= request.getParameter("myParm") %>
- B. <% String s = getInitParameter("myParm"); %>
- C. <% = application.getInitParameter("myParm") %>
- D. <%= getParameter("myParm") %>
- E. <% String s = getAttribute("myParm"); %>

A - A JSP _____ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the `_jspService` method that is called by service to process the request).

- A. declaration
- B. scriptlet
- C. expression

E - Which jsp tag can be used to set bean property?

- A. `jsp:useBean`
- B. `jsp:useBean.property`
- C. `jsp:useBean.setProperty`
- D. `jsp:property`
- E. `jsp:setProperty`

C - Which statements are BEST describe param attribute of `<jsp:setProperty param=.... />` Action?

- A. The ID of the JavaBean for which a property (or properties) will be set.
- B. The name of the property to set. Specifying "*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- C. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- D. The value to assign to a bean property. The value typically is the result of a JSP expression.

D - Which statements are BEST describe value attribute of `<jsp:setProperty value=... />` action?

- A. The ID of the JavaBean for which a property (or properties) will be set.
- B. The name of the property to set. Specifying "*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- C. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- D. The value to assign to a bean property. The value typically is the result of a JSP expression.

A - Which statements are BEST describe id attribute of `<jsp:useBean id=..... />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is case sensitive.
- B. The scope in which the Java object is accessible—page, request, session or application. The default scope is page.
- C. The fully qualified class name of the Java object.
- D. The name of a bean that can be used with method `newInstance` of class `java.beans.Beans` to load a JavaBean into memory.
- E. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. A `ClassCastException` occurs if the Java object is not of the type specified with attribute type.

A - Which statements are BEST describe errorPage attribute of `<%@ page errorPage=....%>` directive?

- A. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- B. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.
- C. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- D. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.

A - Action _____ has the ability to match request parameters to properties of the same name in a bean by specifying "*" for attribute property.

- A. `<jsp:setProperty>`
- B. `<jsp:getProperty>`
- C. `<jsp:useBean>`
- D. `<jsp:include>`

B - Which of the following are potentially legal lines of JSP source?

- A. `<jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />`
- B. `<% String className = "a.b.MyBean"; %>`
`<jsp:useBean id="beanName2" class="<%=className%%" />`
- C. `<% String beanName = "beanName3"; %>`
`<jsp:useBean id="<%=beanName3%%" class="a.b.MyBean" />`
- D. `<% String propName = "soleProp"; %>`
`<jsp:getProperty name="beanName1" property="<%=propName%%" />`
`/>`

B - What sub element of `<attribute>` tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. `<attribute-name>`
- B. `<name>`
- C. `<attributename>`
- D. `<param-name>`

B - What should be the value of `<body-content>` subelement of element `<tag>` in a TLD file if the tag should not have any contents as its body?

- A. blank
- B. empty
- C. null
- D. false

E - Identify the correct element is required for a valid `<taglib>` tag in web.xml (Choose one)

- A. `<uri>`
- B. `<tag-uri>`
- C. `<uri-name>`
- D. `<uri-location>`
- E. `<taglib-uri>`

C - Given the following JSP and tag handler code, what is the result of accessing the JSP?

JSP Page Source

```
<html>
<body>
<%@taglib uri="test_taglib" prefix="myTag"%>
<% session.setAttribute("first", "first"); %>
```

```

<myTag:TestTag/>
<br>
<%=session.getAttribute("second")%>
</body>
</html>

```

Tag Handler Code for <myTag:TestTag />

```

package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
    private PageContext pageContext;
    public void setPageContext(PageContext page){
        this.pageContext=page;
    }

    public int doStartTag() throws JspException {
        try{
            String first=pageContext.getSession().getAttribute("first").toString();
            pageContext.getOut().write(first);
            pageContext.setAttribute("second", "second",PageContext.PAGE_SCOPE);
        }
        catch(IOException i)
        {
            throw new JspException(i.getMessage());
        }
        return SKIP_BODY;
    }

    public int doEndTag() throws JspException{
        return EVAL_PAGE;
    }
    public void release(){}

}

```

Assume *.tld and web.xml files are correct.

- A. first
null
- B. second
null
- C. first
second
- D. second
first

D - Which of these is legal return types of the doAfterBody method defined in a class that extends TagSupport class ?.

- A. EVAL_PAGE

- B. EVAL_BODY
- C. EVAL_PAGE_AGAIN
- D. SKIP_BODY
- E. SKIP_PAGE

A - Which of the following elements defines the properties of an attribute that a tag needs?

- A. attribute
- B. tag-attribute
- C. tag-attribute-type
- D. attribute-type

A - Which element defined within the taglib element of taglib descriptor file is required? Select one correct answer.

- A. Tag
- B. Description
- C. Validator
- D. Name

D - Which of the following is a properly formatted taglib element occurring in web.xml?

- A. <taglib>
<uri>/graph</uri>
<location>/WEB-INF/Charts.tld</location>
</taglib>
- B. <taglib>
<lib-uri>/graph</lib-uri>
<lib-location>/WEB-INF/Charts.tld</lib-location>
</taglib>
- C. <taglib>
<taglib-name>/graph</taglib-name>
<taglib-location>/WEB-INF/Charts.tld</taglib-location>
</taglib>
- D. <taglib>
<taglib-uri>/graph</taglib-uri>
<taglib-location>/WEB-INF/Charts.tld</taglib-location>
</taglib>

c - Study the statements:

- 1) URL rewriting may be used when a browser is disabled cookies.
- 2) In URL encoding the session id is included as part of the URL

Which is the correct option ?

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true
- D. Both 1 and 2 are not true

d - A JSP page will not have access to session implicit variable if.

- A. the user has closed all his/her browser windows.
- B. the request is the first request from the user.
- C. the user's browser does not support URL rewriting.
- D. the session attribute of page directive is set to false.

d - Which statements are BEST describe type attribute of <jsp:useBean type=_. /> action?

- A. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is call..

- B. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- C. The fully qualified class name of the Java object
- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. AClassCai
- E. The scope in which the Java object is accessible-page, request session or application. The default scope is page.

d - (Choose 1 answer)

HttpServletRequest.getSession() method returns a _____ object.

- A. HttpSessionSession.
- B. HttpServletResponseSession.
- C. HttpRequestSession.
- D. HttpSession.

a - (Choose 1 answer)

You need to make sure that the response stream of your web application is secure. Which factor will you look at? (Choose one)

- A. data integrity
- B. authentication
- C. authorization

b - Class HttpServlet defines the methods _____ and _____ to response to get and post request from a client.

- A. DoGet, DoPost
- B. doGet, doPost
- C. doGET, doPOST
- D. Get, Post

c - (Choose 1 answer)

Which of the elements defined within the taglib element of taglib descriptor file are required? Select one correct answer.

- A. taguri
- B. info
- C. taglib-location
- D. display-name

c - (Choose 1 answer)

Which of the following method calls can be used to retrieve an object from the session that was stored using the name "userid"?

- A. `getValue("userid");`
- B. `get("userid");`
- C. `getAttribute("userid");`
- D. `getParameter("userid");`
- E. `getObject("userid");`

c - (Choose 1 answer)

Consider the following `doGet` method code of a servlet

```
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
    String command = req.getParameter("command"); if("remove".equals(command))
    {
        HttpSession session = req.getSession();

        //insert code here

    }
}
```

If the command equals `remove`, you want to unbind an attribute named `"user"` from the session. Which of the following option will you use? (Choose one)

- A. `session.deleteAttribute("user");`
- B. `session.unbind("user");`
- C. `session.removeAttribute("user");`
- D. `session.remove("user");`

c - (Choose 1 answer)

Which Java technology provides a standard API for publish-subscribe messaging model?

- A. JNDI
- B. UDDI
- C. JMS

D. JSP

c - (Choose 1 answer)

Which of the following statements are correct about HTTP Basic authentication mechanism?

A. HTML FORM is used to capture username and password.

B. Password is transmitted in an encrypted form.

C. Password is transmitted as text

D. Password is transmitted either in encrypted text or in plain text depending on the browser.

a - (Choose 1 answer)

Which is NOT true about stateless session beans?

A. They are used to represent data stored in a RDBMS

B. They are used to implement business logic

C. They are an Enterprises Beans

D. They are CANNOT hold client state

a - (Choose 1 answer)

JSP_let you insert arbitrary code into the servlet's JspService method (which is called by service).

A. scriptlets

B. expressions

C. declarations

c - (Choose 1 answer)

Which component can use a container-managed entity manager with an extended persistent context?

A. Session beans and web components

B. Only stateless session beans

C. Only stateful session beans

D. Any EJB component

a - (Choose 1 answer)

Which statements are BEST describe <jsp:include> Action?

A. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and pro

cessed.

B. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.

C. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean.

D. Forwards request processing to another JSP, servlet or static page. This action terminates the current JSP's execution.

ae - (Choose 2 answer)

Which of these is legal return types of the doEndTag method defined in a class that extends TagSupport class?

A. EVAL_PAGE

B. EVAL_BODY

C. EVAL_PAGE_INCLUDE

D. EVAL_BODY_INCLUDE

E. SKIP_BODY

c - (Choose 1 answer)

A developer must implement a 'shopping cart' object for a web-based application. The shopping cart must be able to maintain the state of the cart but the state is not stored persistently. Which JEE (J2EE) tech

A. JMS

B. Stateless session beans

C. Stateful session beans

D. Entity beans

b - (Choose 1 answer)

Which is the correct sequence?

A. jsp page is compiled-->Jsp page is translated ~>jspInit is called ->JspService is called ->jspDestroy is called

B. Jsp page is translated -->jsp page is compiled-->jspInit is called ->JspService is called -->jspDestroy is called

C. Jsp page is translated -->jsp page is compiled-->jspService is called ->jspInit is called ->JspDestroy is called

D. jsp page is compiled-->Jsp page is translated --> JspService is called -->jspInit is called -->jspDestroy is called

c - (Choose 1 answer)

Which statement is true about the EJB 3.0 stateful session beans?

- A. Its conversational state is lost after passivation unless the bean class saves it to a database
- B. Its conversational state is retained across method invocations but NOT across transaction boundaries
- C. Its conversational state is retained across method invocations and transactions

a - (Choose 1 answer)

Consider the following tag declaration in a TLD file:

```
<tag>

<name>simpleInterest</name>

<tag-class>SimpleInterestTag</tag-class>

//1

</tag>
```

SimpleInterestTag calculates simple interest for any amount and requires two attributes 'amount' and 'rate'.

Which of the following sub elements would you need to add inside the <tag> element in the TLD in place of //1 as shown above? Two separate <attribute> elements.

- A. One <attribute> element with sub-elements
- B. One <attribute-list> element with sub-elements
- C. One <amount> element and one <rate> element

c - (Choose 1 answer)

Which statement about an entity instance lifecycle is correct?

- A. A removed entity instance is NOT associated with a persistence context
- B. A new entity instance is an instance with a fully populated state.
- C. A managed entity instance is the instance associated with a persistence context
- D. A detached entity instance is an instance with no persistent identity.

d - (Choose 1 answer)

Which of the following are potentially legal lines of JSP source?

- A. <jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />
- B. <% String propName = "soleProp": %>
- C. <jsp:getProperty name="beanName1" property="<%=propName%>" />
- D. />

C. `<% String beanName = "beanName3"; %>`

`<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />`

D. `<% String className = "a.b.MyBean"; %>`

`<jsp:useBean id="beanName2" class="<%=className%>" />`

e - (Choose 1 answer)

You want to use a bean that is stored in com/enthu/GUI.ser file. Which of following statements correctly defines the tag that accesses the bean?

A. `<jsp:useBean id="pref" type="com/enthu/GUI.ser"/>`

B. `<jsp:useBean id="pref" name="com/enthu/GUI.ser"/>`

C. `<jsp:useBean id="pref" class="com.enthu.GUI.ser"/>`

D. `<jsp:useBean id="pref" name="com.enthu.GUr"/>`

E. `<jsp:useBean id="pref" beanName="com.enthu.GUI" type="com.enthu.GUI"/>`

b - (Choose 1 answer)

Which is NOT Enterprise Beans?

A. Message-Driven Beans

B. Business Beans

C. Entity Beans

D. Session Beans

a - (Choose 1 answer)

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

A. `<%@page contentType='text/xml'>`

B. `<%@page contentType='xml'>`

C. `<%@page contentType='text/html*>`

D. `<%@page contentType='html/xml*>`

c - (Choose 1 answer)

Review the following scenario: then identify which security mechanisms would be important to fulfill the requirement (Choose one.)

An online magazine company wishes to protect part of its website content to make that part available only to users w

ho pay a monthly subscription. The company wants to keep client network, and server processing overheads down: Theft of content is unlikely to be an issue, as is abuse of user IDs and passwords through network snooping.

- A. Client certification
- B. Confidentiality
- C. Authorization and Authentication
- D. Indication
- E. Data integrity

e - (Choose 1 answer)

Which Java technology provides a unified interface to multiple naming and directory services?

- A. JNI
- B. JDBC
- C. EJB
- D. JavaMail
- E. JNDI

c - (Choose 1 answer)

What sub element of <attribute> tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. <attribute-name>
- B. <attributename>
- C. <name>
- D. <param-name>

c - (Choose 1 answer)

Which statement is NOT true about JMS?

- A. JSM support an event oriented approach to message reception.
- B. JMS support both synchronous and asynchronous message passing
- C. JMS does NOT depend on MOM (Messaging-Oriented Middleware) products
- D. JMS provides common way for Java programs to access an enterprise messaging system's message

b - (Choose 1 answer)

Your servlet may receive a request, which the servlet cannot handle. In such cases, you want to redirect the request to another resource which may or may not be a part of the same web application. Which of the following options can be used to achieve this objective?

- A. `RequestDispatcher rd = request.getRequestDispatcher("some url");
rd.forward(request, response);`
- B. `response.sendRedirect("some url");`
- C. `request.sendRedirect("some url");`
- D. `RequestDispatcher rd = this.getServletContext().getRequestDispatcher("some url");
rd.forward(request, response);`

b - (Choose 1 answer)

Which of the following elements are used for error handling and are child elements of `<web-app>` of a deployment descriptor?

- A. `<error_page>`
- B. `<error-page>`
- C. `<error-location>`
- D. `<error>`

b - (Choose 1 answer)

A JSP file uses a tag as `<myTaglib:myTag>`. The `myTag` element here should be defined in the which element of the `taglib` element in the tag library descriptor file ?

- A. `tagname`
- B. `name`
- C. `tag`
- D. `prefix`

b - Consider the Servlet definition in a `web.xml` file below.
(see picture)

What will the following line of code return if present in the `init()` method of `TestServlet`?
`getInitParameter(1);`

- A. It will return "US".
- B. Compilation error.
- C. It will return null.
- D. It will return "eastern".
- E. Runtime error.

b - (Choose 1 answer)

Which of the following statement is true for <jsp:useBean> ?

- A. The class attribute must be defined for <jsp:useBean>.
- B. The id attribute must be defined for <jsp:useBean>.
- C. The scope attribute must be defined for <jsp:useBean>.

c - (Choose 1 answer)

Which statement is correct about the Java Persistence API support for the SQL queries?

- A. SQL queries are expected to be portable across database
- B. SQL queries are NOT allowed to use parameters.
- C. The result of a SQL query is not limited to entities
- D. Only SELECT SQL queries are required to be supported

b - (Choose 1 answer)

Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

- A. SSL Sessions
- B. HTTP is already a stateful protocol.
- C. Cookies
- D. URL rewriting

a - (Choose 1 answer)

A(n)_enables a web application to obtain a Connection to a database.

- A. DataSource
- B. Netbean
- C. Eclipse
- D. Web server

b - (Choose 1 answer)

Which is a valid PostConstruct method in a message-driven bean class?

- A. @PostConstruct
public boolean init() {return true;}

B. @PostConstruct
private void init() {};

C. @PostConstruct
private static void init() {}

D. @PostConstruct
public static void init() {}

b - (Choose 1 answer)

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

A. SC_NOT_FOUND

B. SC_MOVED_TEMPORARILY

C. SC_INTERNAL_SERVER_ERROR

D. SC_BAD_REQUEST

E. SC_OK

a - (Choose 1 answer)

Which is NOT provided by the EJB tier in a multitier JEE (J2EE) application?

A. XML Parsing

B. Concurrency control

C. Transaction management

D. Security

e - (Choose 1 answer)

Which type of JEE (or J2EE) component is used to store business data persistently?

A. Stateful session beans

B. Java Server Pages

C. Stateless session beans

D. Java Beans

E. Entity Bean

a - (Choose 1 answer)

What is the purpose of JNDI?

- A. To access various directory services using a single interface
- B. To register Java Web Start applications with a web server
- C. To parse XML documents
- D. To access native code from Java application

a - Which of the following is true about Data Integrity?

- A. The information/data is not tampered with, in transit from host to client.
- B. The information/data is not read by parties other than its intended recipients.
- C. The information/data is never modified.
- D. The information/data is accessible only to users who are authenticated.

C - (Choose 1 answer)

Which of the following statement is correct? (choose one)

- A. Authentication means determining whether one has access to a particular resource or not.
- B. Confidentiality and Authorization are one and the same thing.
- C. Authorization means determining whether one has access to a particular resource or not

d - (Choose 1 answer)

Which is true about JDBC?

- A. The JDBC API is an extension of the ODBC API
- B. All JDBC drivers are pure Java.
- C. JDBC is used to connect to MOM (Message-Oriented Middleware Product)
- D. The JDBC API is included in J2SE

A - (Choose 1 answer)

In which of the following cases will the method doEndTag() of a tag handler be invoked?

- A. It will be invoked in all case even if doStartTag() or doAfterBody() throw an exception.
- B. This method is invoked if doStartTag() method returns true.
- C. It will be invoked only if doStartTag() and doAfterBody() complete successfully.
- D. It will be invoked only if doStartTag() or doAfterBody() return Tag.DO_END_TAG.

d - (Choose 1 answer)

Data Integrity is the biggest issue for your web application. What will you do? (Choose one)

- A. Use HTTPS instead of HTTP.
- B. Use LDAP to store user credentials.
- C. Use HTTP digest authentication.
- D. Use form-based authentication.

c - (Choose 1 answer)

Which jsp tag is needed to ensure that implicit variable 'exception' is available in the page that is meant to be an error page? (Choose one)

- A. `<%@isErrorPage="true"%>`
- B. `<%@ page errorPage="this"%>`
- C. `<%@ page isErrorPage="true"%>`
- D. `<%@errorPage="true"%>`

c - (Choose 1 answer)

Where the bean is declared using the following useBean tag accessible? `<jsp:useBean id="jbean" class="com.jclass.JBean" />`

- A. within other servlets and JSP pages of the same web applications.
- B. throughout all future invocations of the JSP as long as the servlet engine is running.
- C. Throughout the remainder of the page.
- D. throughout all future invocations of the JSP as long as the session is not expired

d - (Choose 1 answer)

Which of the following statement correctly set a cookie from a servlet code? (Choose one)

Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. `requestsetCookie("mycookie". "value");`
- B. `response.addCookiefmycookie". "value");`
- C. `response.setCookie("mycookie". "value");`
- D. `response.addCookie(newCookie("mycookie". "value"));`

a - (Choose 1 answer)

Which statements are BEST describe contentType attribute of `<%@ page contentType=_.%>` directive?

- A. Specifies the MIME type of the data in the response to the client The default type is text/html.
- B. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- C. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.
- D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception.

a - (Choose 1 answer)

The following line of code exists in the doGet method of Servlet String sid = request.getParameter("jsessionid");

Which of the option is NOT a standard technique for retrieving the HttpSession associated with the request? (Assume that the session has already been created.)

- A. HttpSession session = request.getSession(sid);
- B. HttpSession session = request.getSession();
- C. HttpSession session = request.getSession(false);
- D. HttpSession session = request.getSession(true);

C - (Choose 1 answer)

Which is NOT the main type of JSP constructs that you embed in a page?

- A. directives
- B. scripting elements
- C. HTML code
- D. actions

a - (Choose 1 answer)

A web application named webmail has a file named folderview.jsp which the user should be able access directly. Which of the following directory may contain this file? (Choose one)

- A. /webmail/jsp
- B. /webmail/web-inf/jsp
- C. /webmail/WEB-INF/lib/jsp
- D. /webmail/WEB-INF/jsp

c - (Choose 1 answer)

Servlet Container calls the init method on a servlet instance_

- A. For each request to the servlet
- B. For each request to the servlet that causes a new thread to be created.
- C. Only once in the life time of the servlet instance.
- D. If the request is from the user whose session has expired.

d - Choose 1 answer)

Which of the following XML fragments correctly defines a role named "manager" in webxml?

- A. `<security-role>manager</security-role>`
- B. `<security-role rolename=manager></security-role>`
- C. `<security>`
`<role-name>manager</role-name>`
`</security>`
- D. `<security-role>`
`<role-name>manager</role-name>`
`</security-role>`

c - (Choose 1 answer)

Which of the following lines of code are correct?

- A. `@EntityBean`

```
public class Employees{  
...  
}
```

- B. `class Employees{`

`@Entity`

```
private class Address{  
...  
}  
...  
}
```

- C. `@Entity`

```
public class Employees{  
}
```

d - The requirements for an online shopping application are:

It must support millions of customers. The invocations must be transactional. The shopping cart must be persistent. Which technology is required to support these requirements?

- A. JMX
- B. JNI
- C. JMS
- D. EJB

c - (Choose 1 answer)

Which method would you use to put the session id into the URL to support sessions using URL rewriting?

- A. `encodeURL()` of `HttpServlet`
- B. `rewriteURL()` of `HttpServletResponse`
- C. `encodeURL()` of `HttpServletResponse`
- D. `encodeURL()` of `HttpServletRequest`

b - (Choose 1 answer)

Which syntax is correct for JSP Declarations?

- A. `<%=code%>`
- B. `<%! code %>`
- C. `<%code%>`

a - (Choose 1 answer)

Which of the following is NOT a valid attribute for a `useBean` tag?

- A. `className`
- B. `beanName`
- C. `scope`

b - (Choose 1 answer)

What is the implementation specification of EJB 3 session bean classes?

- A. a session bean class must be final or abstract
- B. a session bean class must be marked with `@Stateless` or `@Stateful`
- C. a session bean class can't extend other classes

c - (Choose 1 answer)

Given a stateless session bean with container-managed transaction demarcation, from which method can a developer access another enterprise bean?

- A. bean constructor
- B. PreDestroy lifecycle callback method
- C. business method from the business interface

c - (Choose 1 answer)

Which statements are BEST describe name attribute of `<jsp:setProperty name=_ ./>` action?

- A. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- B. The value to assign to a bean property. The value typically is the result of a JSP expression.
- C. The ID of the JavaBean for which a property (or properties) will be set.
- D. The name of the property to set. Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.

d - (Choose 1 answer)

Which is NOT responsibility of the business tier in a multitier web-based application with web, business, and EIS tiers?

- A. To participate in transactions
- B. To integrate with the legacy applications
- C. To provided business logic
- D. To generate dynamic content

c - (Choose 1 answer)

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

- A. request
- B. response
- C. pageContext
- D. out
- E. page

b - (Choose 1 answer)

Which statements are BEST describe scope attribute of `<jsp:useBean scope=_.. />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is `ca`
- B. The scope in which the Java object is accessible-page, request session or application. The default scope is page.
- C. The name of a bean that can be used with method `instantiate` of class `java.beans.Beans` to load a `JavaBean` into memory.
- D. The type of the `JavaBean`. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute `class`. `AClassCai`
- E. The fully qualified class name of the Java object

b - (Choose 1 answer)

Which statement(s) about Servlet Life Cycle is(are) correct? (Choose one)

- A. When the servlet is first created, its `init` method is invoked, so that is where you put one-time setup code.
- B. All the others
- C. Servlet can implement a special interface that stipulates that only a single thread is permitted to run at any one time.
- D. When the server decides to unload a servlet it first calls the servlet's `destroy` method.
- E. Each user request results in a thread that calls the service method of the previously created instance.
- F. Multiple concurrent requests normally result in multiple threads calling service simultaneously.

c - (Choose 1 answer)

Which is true about RMI?

- A. RMI is used to create thin web client
- B. RMI is the Java API used for executing queries on a database
- C. RMI allows objects to be send from one computer to another
- D. RMI is the transport protocol used by web servers and browsers

a - (Choose 1 answer)

Which statement is true about management of an EJB's resources?

- A. The reference to home object is obtained through JNDI to improve maintainability and flexibility.
- B. The reference to the remote object is obtained through JNDI to improve maintainability and flexibility.

b - (Choose 1 answer)

A web application is located in "helloapp" directory. Which directory should its deployment descriptor be in?

- A. helloapp
- B. helloapp/WEB-INF
- C. helloapp/WEBJNF
- D. helloapp/WEBINF

c - (Choose 1 answer)

A developer is working on a project that includes both EJB 2.1 and EJB 3.0 session beans. A lot of business logic has been implemented and tested in these EJB 2.1 session beans. Some EJB 3.0 session beans need to access this business logic.

Which design approach can achieve this requirement?

- A. Add adapted home interfaces to EJB 3.0 session beans to make EJB 3.0 and EJB 2.1 session beans interoperable.
- B. Add EJB 3.0 business interfaces to existing EJB 2.1 session beans and inject references to these business interfaces into EJB 3.0 session beans.
- C. No need to modify existing EJB 2.1 session beans. Use the `@EJB` annotation to inject a reference to the EJB 2.1 home interface into the EJB 3.0 bean class.

c - (Choose 1 answer)

Which statement is true about EJB 3.0 containers?

- A. The Java 2D API is guaranteed to be available for session beans
- B. Java Telephony API is guaranteed to be available for session and message beans
- C. `javax.naming.initialContext` is guaranteed to provide a JNDI name space

a - (Choose 1 answer)

The Java Persistent API defines the Query interface. Which statement is true about the `Query.executeUpdate` method?

- A. It must always be executed within a transaction
- B. All managed entity objects corresponding to database rows affected by the update will have their state changed to correspond with the update
- C. It throws a `PersistenceException` if no entities were updated.

b - (Choose 1 answer)

If you want to send an entity object as the pass by value through a remote interface, which of the following statements are valid? (Choose one)

A. public class Employees implements Serializable{
...
}

B. @Entity
public class Employees implements Serializable{
...
}

C. @entity
public class Employees implements Serializable{
...
}

D. @Entity
public class Employees implements SessionSynchronization{
...
}

c - (Choose 1 answer)

Which of the following lines of code, in the doPost() method of a servlet, uses the RL rewriting approach to maintaining sessions? (Choose one)

A. request.useURLRewriting();

B. out.println(response.rewrite("Click here"));

C. out.println("Click here"));

D. out.println("Click here"));

a - (Choose 1 answer)

Which syntax is correct for JSP Scriptlets?

A. <% code%>

B. <%= code%>

C. <%! code %>

d - (Choose 1 answer)

Which is correct JDBC-ODBC driver name?

a) jdbc.odbc.sun.JdbcOdbcDriver

b) sun.driver.jdbc.odbc

c) jdbc.odbc.sun.driver

d) sun.jdbc.odbc.JdbcOdbcDriver

ade - Select at (least one) answer

Choose three correct statements in JDBC

a) getObject

- b) getLine
- c) getText
- d) getInt
- e) getString

c - Which is correct sequence for a JDBC execution?

(Choose 1 answer)

- a) Connection -> Load Driver -> Statement -> ResultSet
- b) Load Driver -> Statement -> ResultSet -> Connection
- c) Load Driver -> Connection -> Statement -> ResultSet
- d) Statement -> Connection -> ResultSet -> Load Driver

ad - Which are the correct statements of Connection object? (Choose two)

- a) createStatement(int, int);
- b) createStatement(int, String);
- c) createStatement(String, int);
- d) createStatement();

ac - Which are the correct statements of ResultSet object? (Choose three)

- a) executeQueries()
- b) executeBatch()
- c) execute()
- d) executeUpdate()

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

- a) getOutputStream
- b) getBinaryStream
- c) getWriter
- d) getStream

c - Which of the following files is the correct name and location of deployment descriptor of a web application. Assume that the web application is rooted at \doc-root. Select the one correct answer

- a) \doc-root\dd.xml
- b) \doc-root\WEB-INF\dd.xml
- c) \doc-root\WEB-INF\web.xml
- d) \doc-root\web.xml
- e) \doc-root\WEB_INF\dd.xml

c - Which of these is true about deployment descriptors.

Select the one correct answer

- a) The servlet-mapping element, if defined, must be included within the servlet element.
- b) The web-app element must include the servlet element
- c) The order of elements in deployment descriptor is important. The elements must follow a specific order
- d) The elements of deployment descriptor are case insensitive

d - The exception-type element specifies an exception type and is used to handle exceptions generated from a servlet. Which element of the deployment descriptor includes the exception-type as a sub-element. Do not include the element in enclosing parenthesis

- a) error
- b) exception

- c) exception-page
- d) error-page

a - _____ is a set of java API for executing SQL statements.

- a) JDBC
- b) JAVADB
- c) ODBC
- d) None of the other choices

b - JDBC supports _____ and _____ models.
choose one answer

- a) Three-tier and four-tier
- b) Two-tier and three-tier
- c) None of the other choices
- d) Single-tier and two-tier

b - URL referring to databases use the form:
(Choose one answer)

- a) protocol:subprotocol:datasoursename
- b) jdbc:odbc:datasoursename
- c) protocol:datasoursename
- d) jdbc:datasoursename

c - Study the statements:

1)When a JDBC connection is created, it is in auto-commit mode

2)Once auto-commit mode is disabled, no SQL statements will be committed until you call the method commit explicitly

(Choose one answer)

- a) Only statement 2 is true
- b) Both 1 and 2 are not true
- c) Both 1 and 2 are true
- d) Only statement 1 is true

c - The _____ class is the primary class that has the driver information.
Select the one correct answer.

- a) None of the other choices
- b) Driver
- c) DriverManager
- d) ODBCdriver

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

- A. HttpServletRequest
- B. HttpServletResponse
- C. ServletConfig
- D. ServletContext

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

- A. setType
- B. setContent
- C. setContentType

D. setResponseContentType

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

- A. The response from the dedicated server to a HEAD request consists of status line, content type and the document.
- B. The response from the server to a GET request does not contain a document.
- C. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- D. The HttpServletResponse defines constants like SC_NOT_FOUND that may be used as a parameter to setStatus method.

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

- A. SC_OK
- B. SC_MOVED_TEMPORARILY
- C. SC_NOT_FOUND
- D. SC_INTERNAL_SERVER_ERROR
- E. SC_BAD_REQUEST

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- a. True
- b. False

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

- A. The getRequestDispatcher method of ServletContext class takes the full path of the servlet, whereas the getRequestedDispatcher method of HttpServletRequest class takes the path of the servlet relative to the ServletContext.
- B. The include method defined in the RequestDispatcher class can be used to access one servlet from another. But it can be invoked only if no output has been sent to the server.
- C. The getRequestDispatcher(String URL) is defined in both ServletContext and HttpServletRequest method
- D. The getNamedDispatcher(String) defined in HttpServletRequest class takes the name of the servlet and returns an object of RequestDispatcher class.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. POST allows users to bookmark URLs with parameters.
- B. The POST method should not be used when large amount of data needs to be transferred.
- C. POST allows secure data transmission over the http method.
- D. POST method sends data in the body of the request.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. CONNECT method
- B. COMPARE method
- C. OPTIONS method
- D. TRACE method

b - Name the http method used to send resources to the server. Select the one correct answer.

- A. FTP methodd
- B. PUT method
- C. WRITE method
- D. COPY method

B - . Name the http method that sends the same response as the request. Select the one correct answer.

- A. DEBUG method
- B. TRACE method
- C. OPTIONS method
- D. HEAD method

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

- A. Codes starting from 200
- B. Codes starting from 300
- C. Codes starting from 400
- D. Codes starting from 500

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

- A. /META-INF/classes
- B. /classes
- C. /WEB-INF/classes
- D. /root/classes

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

- A. `<%int i = 1;%>`
`<%= i; %>`
- B. `<%int i = 1;`
`i; %>`
- C. `<%int i = 1%>`
`<%= i %>`
- D. `<%int i = 1;%>`
`<%= i %>`
- E. `<%int i = 1%>`
`<%= i; %>`

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

`<%x=1;%>`

- A. `<jsp:expression x=1;/>`
- B. `<jsp:expression>x=1;</jsp:expression>`
- C. `<jsp:statement>x=1;</jsp:statement>`
- D. `<jsp:declaration>x=1;</jsp:declaration>`
- E. `<jsp:scriptlet>x=1;</jsp:scriptlet>`

d - Which of the following are correct. Select the one correct answer.

- A. JSP scriptlets and declarations result in code that is inserted inside the `_jspService` method.
- B. The JSP statement `<%! int x; %>` is equivalent to the statement `<jsp:scriptlet>int x;</jsp:scriptlet%>`.
- C. The following are some of the predefined variables that maybe used in JSP expression - `httpSession`, `context`.
- D. To use the character `%>` inside a scriptlet, you may use `%\>` instead.

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

`<% int y = 0; %>`

`<% int z = 0; %>`

`<% for(int x=0;x<3;x++) { %>`

`<% z++;++y;%>`

`<% }%>`

`<% if(z<y) {%>`

`<%= z%>`

`<% } else {%>`

`<%= z - 1%>`

`<% }%>`

- A. 0
- B. 1
- C. 2
- D. 3
- E. The program generates compilation error.

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

- A. `out`
- B. `session`
- C. `request`
- D. `response`
- E. `httpSession`
- F. `page`

d - A bean with a property `color` is loaded using the following statement

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

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

- A. `<jsp:getColor bean="fruit"/>`
- B. `<jsp:getProperty id="fruit" property="color"/>`
- C. `<jsp:getProperty bean="fruit" property="color"/>`
- D. `<jsp:getProperty name="fruit" property="color"/>`
- E. `<jsp:getProperty class="Fruit" property="color"/>`

c - A bean with a property `color` is loaded using the following statement

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

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

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

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

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

- A. `<jsp:usebean id="fruit scope ="page"/>`
- B. `<jsp:usebean id="fruit type ="String"/>`
- C. `<jsp:usebean id="fruit type ="String" beanName="Fruit"/>`
- D. `<jsp:usebean id="fruit class="Fruit" beanName="Fruit"/>`

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

- A. The id attribute must be defined for `<jsp:usebean>`.
- B. The scope attribute must be defined for `<jsp:usebean>`.
- C. The class attribute must be defined for `<jsp:usebean>`.
- D. The `<jsp:usebean>` must include either type or class attribute or both.

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

- A. include
- B. scope
- C. errorPage
- D. session
- E. debug

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

- A. `<jsp:include file="a.jsp"/>`
- B. `<jsp:include page="a.jsp"/>`
- C. `<jsp:directive.include file="a.jsp"/>`
- D. There is no XML equivalent of include directive.

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

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

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

- A. `<% sum = sum + j %>`
- B. `<% sum = sum + j; %>`
- C. `<%= sum = sum + j %>`
- D. `<%= sum = sum + j; %>`

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

- A. `<% sum %>`
- B. `<% sum; %>`
- C. `<%= sum %>`
- D. `<%= sum; %>`

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

- A. HttpRequest
- B. ServletRequest
- C. Request
- D. HttpServletRequest

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

- A. session
- B. application
- C. httpSession
- D. httpsession

d - A Java bean with a property color is loaded using the following statement

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

What is the effect of the following statement.

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

Select the one correct answer.

- A. An error gets generated because the value attribute of setAttribute is not defined.
- B. The color attribute is assigned a value null.
- C. The color attribute is assigned a value "".
- D. If there is a non-null request parameter with name color, then its value gets assigned to color property of Java Bean fruit

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

- A. <% page info="test page" %>
- B. <%@ page info="test page" session="false"%>
- C. <%@ page session="true" %>
- D. <%@ page isErrorPage="errorPage.jsp" %>
- E. <%@ page isThreadSafe=true %>

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

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

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

- A. Yes. This is legal JSP syntax.
- B. No. This code will generate syntax errors

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

- A. contentType
- B. generateXML
- C. type
- D. outputXML

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

- A. extends
- B. import
- C. include
- D. package

E. classpath

ac - Which of these are true. Select the two correct answers.

- A. The default value of isThreadSafe attribute of page directive is true.
- B. If isThreadSafe attribute of page directive is set to true, then JSP container dispatches request for the page sequentially.
- C. When isThreadSafe attribute of page directive is set to true, a thread is created for each request for the page.
- D. Setting isThreadSafe attribute to true for JSP pages, can lead to poor performance.

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

- A. include
- B. exclude
- C. import
- D. taglibrary
- E. servlet
- F. page

d - Which of these is true about include directive. Select the one correct answer.

- A. The included file must have jspf extension.
- B. The XML syntax of include directive is `<jsp:include file="fileName"/>`.
- C. The content of file included using include directive, cannot refer to variables local to the original page.
- D. When using the include directive, the JSP container treats the file to be included as if it was part of the original file.

ad - Message-driven beans are classes that implement 2 interfaces :

Choose two answer

- [A]
javax.ejb.MessageDrivenBean
- [B]
javax.jms.Message
- [C]
javax.jms.MessageBean
- [D]
javax.jms.MessageListener

ab - Which are the types of messaging domains ? (choose 2)

- [A]
Publish/Subscribe
- [B]
Point-to-Point
- [C]
Peer-to-Peer
- [D]
Broadcast/Receiver

d - Select the correct JMS programming model

- [A]
Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message
- [B]
Locate the JMS Driver -> Create a JMS session -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message
- [C]
Locate the JMS Driver -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JM

S consumer -> Send or receive message

[D]

Locate the JMS Driver ->Create a JMS connection ->Create a JMS session ->Create a JMS producer or a JMS consumer -> Send or receive message

a - Select the word to replace ??? to make the diagram about messaging domain correct

[A]

Topic

[B]

Queue

[C]

PTP

[D]

Pub/Sub//

d - A ____ subscription to a topic means that a JMS subscriber receives all message even if the subscriber is inactive

[A]

temporary

[B]

nondurable

[C]

persistent

[D]

Durable

a - In ejb-jar.xml file, <persistence-type> element value is _____

[A]

Bean or Container

[B]

Container-Managed-Persistent

[C]

Bean-Managed-Persistent

[D]

BMP or CMP

a - Entity bean is _____

[A]

a persistent data component

[B]

a database object

[C]

an application logic component

[D]

an object-relational mapping

d - ejbCreate() method of entity bean class returns _____

[A]

remote object

[B]

null

[C]

home object

[D]
primary key

a - create() method of entity home interface returns _____

[A]
null
[B]
remote object
[C]
primary key
[D]
home object

ac - select CORRECT statement (choose 2)

[A]
Entity beans represent persistent state objects (things that don't go away when user goes away)
[B]
Session beans represent persistent state objects (things that don't go away when user goes away)
[C]
Session beans model a process or workflow (actions that are started by the user and that do away when user goes away)
[D]
Entity beans model a process or workflow (action that are started by the user and that go way when user goes away)

c - The _____ class makes every entity bean different

[A]
bean key
[B]
bean ID
[C]
primary key
[D]
key

acd - The top three values of EJB are (choose 3):

[A]
Portability is easier
[B]
Distributed application
[C]
Rapid Application Development
[D]
It is agreed upon by the industry
[E]
Easy to upgrade

a - Which is not the players in the EJB Ecosystem? (choose 1):

[A]
End User
[B]
EJB Deployer
[C]
System Administrator
[D]

Application Assembler

[E]

Bean provider

a - The _____ is the overall application architect .This party is responsible for understanding how various components fit together and writes the application that combine components.

[A]

Application Assembler

[B]

Application Builder

[C]

Deployer

[D]

Developer

c - which is not the role of EJB Deployer?

[A]

Securing the deployment with a firewall

[B]

Performance-tuning the system

[C]

Write the code that calls on components supplied by bean providers

[D]

Choosing hardware that provides the required level of performance

abe - Which are EJB containers ? (choose three)

[A]

JBoss

[B]

BEA's WebLogic

[C]

Microsoft Application Server

[D]

Apache Tomcat 5.5

[E]

IBM WebSphere

d - The _____ supplies business components,or enterprise beans

[A]

Tool vendor

[B]

Application assembler

[C]

Deployer

[D]

Bean provider

b - Given the following JSP and Tag handler code,what is the result of accessing the JSP ?

JSP Page Source

<html>

<body>

<%@taglib uri = "test_taglib" prefix = "myTag"%>

<% session.setAttribute("first", "first");%>

<myTag:TestTag/>

```
<br>
<%=session.getAttribute("second")%>
</body>
</html>
```

Tag Handler Code for <myTag:TestTag/>

```
package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
    private PageContext pageContext;

    public void setPage(PageContextpage){
        this.pageContext=page;
    }

    public int doStartTag() throws JspException {
        try{
            String first = pageContext.getSession().getAttribute("first").toString();
            pageContext.getOut().write(first);
            pageContext.setAttribute("second", "second", PageContext.PAGE_SCOPE);
        }
        catch(IOException)
        {
            throw new JspException(i.getMessage());
        }
        return SKIP_BODY;
    }

    public int doEndTag() throws JspException{
        return EVAL_PAGE;
    }
    public void release(){}

}
```

Assume *.tld and web.xml files are correct.

- [A]
second
first
- [B]
first
second
- [C]
first
null
- [D]
second
null

ae - Which of these are legal return types of the doEndTag method defined in a class that extends TagSupport class. SELECT the two correct answers.

- [A]
EVAL_PAGE
- [B]
EVAL_BODY
- [C]
EVAL_PAGE_INCLUDE
- [D]
EVAL_BODY_INCLUDE
- [E]
SKIP_PAGE
- [F]
SKIP_BODY

d - A JSP file that uses a tag library must declare the tag library first. The tag library is defined using the taglib directive `<%@taglib uri = "... " prefix="..."%>`

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

- [A]
The prefix defines the name of the tag that may be used for a tag library.
- [B]
The prefix attribute defines the location of the tag library descriptor file
- [C]
The prefix attribute should refer to the short name attribute of the tag library file that is defined by the uri attribute of taglib directive
- [D]
The prefix attribute is used in front of a tagname of a tag defined within the tag library

d - _____ sends a request to an object and includes the result in a JSP file.

- [A]
include directive
- [B]
import directive
- [C]
<jsp:forward>
- [D]
<jsp:include>

a - A programmer is designing a class to encapsulate the information about an inventory item. A JavaBeans component is need to do this. The InventoryItem has private instance variables to store the item information:

```
10.private int itemId;  
11.private String name;  
12.private String description;
```

Which method signature follows the JavaBeans naming standards for modifying the itemId instance variable? (choose one)

- [A]
setItemld(int itemld)
- [B]
updateItemID(int itemld)
- [C]
itemID(int itemld)
- [D]

update(int itemId)

[E]

mutateItemId(int itemId)

a - Name the class that includes the SetSession method that is used to get the HttpSession object

[A]

HttpServletRequest

[B]

HttpServletResponse

[C]

SessionContext

[D]

SessionConfig

bc - Which of the following are potential legal of JSP source ? (choose 2)

[A]

```
<jsp:useBean id = "beanName1" class="a.b.MyBean" type="a.b.Myinterface"/>
```

[B]

```
<% String myValue = "myValue"; %>
```

```
<jsp:setProperty name = "beanName1" property="soleProp" value = "<%=myValue%>" />
```

[C]

```
<%String className = "a.b.MyBean"; %>
```

```
<jsp:useBean id = "beanName2" class="<%=className%>" />
```

[D]

```
<%String propName = "soleProp"; %>
```

```
<jsp:getProperty name = "beanName1" property="<%=propName%>" />
```

[E]

```
<%String beanName = "beanName3"; %>
```

```
<jsp:useBean id = "<%=beanName3%>" class="a.b.MyBean" />
```

a - Given that a servlet has been mapped to /account/*.

Identity the HttpServletRequest methods that will return the /myapp segment for the URI: /myapp/account/*.

A. getPathInfo

B. getServletPath

C. getContextPath

d - Identify the method used to get an object available in a session. (Choose one)

A. get of Session

B. getValue of HttpSession

C. getAttribute of Session

D. getAttribute of HttpSession

e - Which jsp tag can be used to set bean property?

A. jsp:property

B. jsp:useBean.setProperty

C. jsp:useBean

D. jsp:useBean.property

E. jsp:setProperty

a - What is the consequence of attempting to access the following JSP page?

```
<html>
```

```
<body>
```

```
<%!
```

```
public void JspService(HttpServletRequest request HttpServletResponse response) { outwrite("A");
```

```

}
%>
<% outwritetf("B"): %>
</body>
</html>

```

- A. Duplicate method compilation error.
- B. "A" is output to the response before "B".
- C. "A" is output to the response.
- D. "B" is output to the response.

C - Which of the following statement is correct?

- A. Data Integrity means that the data cannot be viewed by anybody other than it's intended recipient
- B. Authentication means determining whether one has access to a particular resource or not
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver.

d - _____ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:forward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include>

d - Study the statements:

- 1) The special directory/WEB-INF/lib contains Java class files—servlets and supporting code.
 - 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.
- A. Only statement 1 is true
 - B. Only statement 2 is true
 - C. Both 1 and 2 are true
 - D. Both 1 and 2 are not true

b - Which statements are BEST describe class attribute of <jsp:useBean class=__ /> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- B. The fully qualified class name of the Java object
- C. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is ca
- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class.

c - Which are the correct lines of code to get information in the following<context-param> tag in the web.xml file Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. response.getParameter('machineName');
- B. request.getParameter(machineName');
- C. ServletContext sc = getServletContext();
String serverName = sc.getInitParameter("machineName");
- D. ServletConfigsc = getServletConfig();
String serverName = sc.getInitParameterfmachineName");

```

-----
<web-app>
<concexc-param>
<parair - narr.e >mach i neN ame < / p a r air - name >
<parair.-value>cms-server</parair.-value>

```

</context-param>
</web-app>

b - Consider the following java code:

```
//in file Book.java package com.bookstore; public class Book {  
private long isbn;  
public Book() { isbn = 0;}  
public long getIsbn() { return isbn;}  
public void setIsbn(long value) { this.isbn = value;}  
}
```

Code for browse.jsp:

```
<jsp:useBean class="com.bookstore.Book" id="newbook"/>
```

```
LINE 1: <jsp:setProperty name="newbook" property="isbn" value="1000"/>
```

Which of the following statements are correct?

- A. The isbn property of new book will be set to 1000 if 'value' attribute of 'setProperty' tag is given as: value=1000
- B. The isbn property of newbook will be set to 1000.
- C. It will not compile.

D - Identify the technique that can be used to implement 'sessions' if the client browser does not support cookies. (Choose one)

- A. It cannot be done without cookie support
- B. Using Http headers.
- C. URL Writing
- D. Hidden form fields.

C - You have to send a pdf file to the client as a response to a request Which of the following calls will you have to make? (Choose one)

- A. response.setContentType("application/pdf");
- B. response.setContentType("image/pdf");
- C. response.setContentType("application/pdf");
- D. response.setType("image/pdf");

c - A JSP _____ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the JspService method that is called by service to process the request).

- A. expression
- B. scriptlet
- c. declaration

d - Which is NOT a correct statement about entity beans?

- A. They are used to share data among clients
- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes

d - A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail

c - Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A. `getFormValue("email")` of `HttpServletRequest`
- B. `getField(email)` of `HttpServletRequest`
- C. `getParameter("email")` of `ServletRequest`
- D. `getParameters("email")` of `HttpServletRequest`

a - Which of the following methods can be used to add cookies to a servlet response?

- A. `HttpServletResponse.addCookie(Cookie cookie)`
- B. `ServletResponse.addCookie(Cookie cookie)`
- C. `ServletResponse.addCookie(String contents)`
- D. `HttpServletResponse.addCookie(String contents)`
- E. `ServletResponse.addHeader(String name, String value)`

d - Your web application named "FWorks" uses `SpecialMath.class`. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A. `FWorks/classes`
- B. `FWorks/WEB-INF/lib/classes`
- C. `FWorks/WEB-INF`
- D. `FWorks/WEB-INF/classes`

d - Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets
- E. directives

c - A parameter is defined in a `<context-param>` element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible only to the servlet it is defined for.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible to all the servlets of the webapp.

d - Identify the parent element of `<session-timeout>` element in `web.xml`

- A. `<session-configuration>`
- B. `<webapp>`
- C. `<session_config>`
- D. `<session-config>`

d - Which of the following are correct JSP expressions?

- A. `<%= outprintln("hello"); %>`
- B. `<% "Hello World"; %>`
- C. `<%= "Hello World"; %>`
- D. `<%= new Date() %>`

a - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. `\WEB-INF\lib`
- B. `\jars`
- C. `\WEB-INF`
- D. `\WEB-INF\classes`

b - Which security mechanism proves that data has not been tampered with during its transit through the network?

- A. Packet sniffing
- B. Data integrity

- C. Data validation
- D. Authentication
- E. Data privacy
- F. Authorization

d - A JSP page has the following page directives:

```
<%@page isErrorPage='false' %>
```

```
<%@page errorPage='/jsp/myerror.jsp' %>
```

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception

c - Which statements are BEST describe uri attribute of `<%@ taglib uri=_ %>` directive of JSP file?

- A. The scripting language used in the JSP. Currently, the only valid value for this attribute is java.
- B. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- C. Specifies the relative or absolute URI of the tag library descriptor.
- D. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names jsp, jsp, java, javax, servlet sun and sunw are reserved.

a - Which is NOT a standard technique for a session be definitely invalidated?

- A. If the session time out is set to 0 using `setMaxInactiveInterval()` method.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls `invalidate()` on a session object
- D. The container is shutdown and brought up again.

b - Which of the following task may happen in the translation phase of JSP page? (Choose one)

- A. Instantiation of the servlet class.
- B. Creation of the servlet class corresponding to the JSP file.
- C. None of the others
- D. Execution of `JspServiceQ` method.

b - How can you ensure the continuity of the session while using `HttpServletResponse.sendRedirect()` method when cookies are not supported by the client?

- A. By using `HttpServletRequest.encodeURL()` method.
- B. By encoding the redirect path with `HttpServletResponse.encodeRedirectURL()` method.
- C. By using hidden parameters.

c - Which of the following is a sensible way of sending an error page to the client in case of a business exception that extends from `java.lang.Exception`? (Choose one)

- A. Don't do anything, the servlet container will automatically send a default error page.
- B. Don't catch the exception and define the 'exception to error-page' mapping in `web.xml`
- C. Catch the exception, wrap it into `ServletException` and define the 'business exception to error-page' mapping in `web.xml`

c - What is the output of the following code snippet of a JSP page?

```
{empty} <br>
```

```
{empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true

b - Which option can be used to predefine Java Persistence queries for easy use?

- A. @NamedNativeQuery annotation
- B. @NamedQuery annotation
- C. using the named-native-query element in the XML descriptor

b - Which is NOT associated with the business tier in a JEE (J2EE) web-based application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans

d - Which of the following statements is correct? Select the one correct answer.

- A. The response from the server to a GET request does not contain a document
- B. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The HttpServletResponse defines constants like SC_NOT_FOUND that may be used as a parameter to setStatus method.

a - Which of the following classes define the methods setStatus(...) and sendError(...) used to send an HTTP error back to the browser? (Choose one)

- A. Both are defined in HttpServletResponse.
- B. Both are defined in ServletResponse
- C. HttpServletResponse and ServletResponse respectively.
- D. ServletResponse and HttpServletResponse respectively.

a - Identify the correct element is required for a valid <taglib> tag in web.xml (Choose one)

- A. <taglib-uri>
- B. <uri>
- C. <uri-name>
- D. <uri-location>
- E. <tag-uri>

d - (Choose 1 answer)

Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException {
    ServletException {
    res.getWriter().print("Hello");
    RequestDispatcher rd = getServletContext().getRequestDispatcher("/testjsp");
    rd.include(req, res);
    res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of the output
- D. "Hello" and "World" both will be a part of the output

c - Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JMS
- C. Servlets
- D. MOM (Message-Oriented Middleware Product)

C - 10. Which of the given jsp statement is equivalent to

<% = userbean.getAge() %>

Assume that `userbean.getAge()` returns an integer. (Choose one)

- A . `<jsp:getProperty name = "userbean" property = "Age" />`
- B. `<jsp:getProperty name = "userbean" method= "getAge" />`
- C. `<jsp:getProperty name = "userbean" property = "age" />`
- D . `<jsp:getProperty name = "userbean" property = "getAge" />`

C - 1. Which statements are BEST describe `errorPage` attribute of `<%@ page errorPage=. %>` directive?

- A. Specifies the MIME type of the data in the response to the client. The default type is `text/html`
- B. Specifies the class from which the translated JSP will be inherited . This attribute must be a fully qualified package and class name.
- C. Any exception in the current page that are not caught are sent to the error page for processing . The error page implicit object exception references the original exception.
- D. Specifies if the current page is an error page that will be inoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references th...

C - 2. What gets printed when the following code snippet is compiled? Select the one correct answer .

```
<% int y =0 ; %>
```

```
<% int z =0; %>
```

```
<%for(int x =0; x<3; x++) { %>
```

```
<% z++ ; ++y; %>
```

```
<% } %>
```

```
<% if(z<y) { %>
```

```
<%=z%>
```

```
<%} else { %>
```

```
<%= z-1 %>
```

```
<%} %>
```

- A. 0
- B. 1
- C. 2
- D. 3
- E. The program generates compilation error.

A - 3. Which of these is a correct fragment within the `web-app` element of deployment descriptor

- A. `<error-page> <error-code>404 </error-code> <location></error-page>`
- B. `<error-page> <exception-type> mypackage.MyException</exception-type> <error-code>404 </error-code> <location>/error.jsp</location></error-page>`
- C. `<error-page> <exception-type> mypackage.MyException</exception-type> <error-code>404 </error-code> <location></error-page>`

B - 5. The `HttpServletRequest` has methods by which you can find out about incoming information such as:

- A. the client's hostname
- B. All of the others
- C. cookies
- D. HTTP request headers
- E. form data

D - 6. Which of the following classes define the methods `setStatus(____)` and `sendError(____)` used to send an HTTP error back to the browser?

- A . Both are defined in `ServletRequest`
- B . Both are defined in `ServletResponse`
- C . Both are defined in `HttpServletRequest`

D. Both are defined in `HttpServletResponse`

A - 7. Host names are translated into IP addresses by web servers.

A. False

B. True

B - 8. Which of the following defines the type of the content that a tag can accept?

A. content-type

B. body-content

C. content

D. tag-content-type

C - 12.

Identify the parent element of `<session-timeout>` element in `web.xml`

A. `<session-configuration>`

B. `<session config>`

C. `<session-config>`

D. `<webapp>`

E - 14. In which of the following case will the method `doStartTag()` of a tag handler be invoked?

A. If `doEndTag()` returns `EVAL TAG AGAIN`

B. This method is invoked if `doTag()` method returns `true`.

C. It will be invoked only if the use of that tag is not enclosed in another custom tag.

D. This method is invoked if `doTag()` method returns `DO START`

E. This method is always invoked whenever the tag's use is encountered in the jsp page.

B - 16. Which statements are BEST describe name attribute of `<jsp:setProperty name:___/>` action?

A. The name of the property to set. Specifying `"*"` for this attribute causes the JSP to match the request parameters to the properties of the bean.

B. The ID of the JavaBean for which a property (or properties) will be set.

C. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property

D. The value to assign to a bean property The value typically is the result of a JSP expression

C - 17. How can you ensure the continuity of the session while using `HttpServletResponse.sendRedirect()` method when cookies are not supported by the client?

A. By using hidden parameters.

B. By using `HttpServletRequest.encodeURL()` method.

C. By encoding the redirect path with `HttpServletResponse.encodeRedirectURL()` method

D. `HttpServletResponse.encodeRedirectURL()` method

A - 18. Which of the following implicit variables should be used by a jsp page to access a resource and to forward a request to another jsp page?(Choose one)

A. `pageContext` and `config`

B. `config` and `pageContext`

C. application for both

D. `config` for both.

B - 19. Which of the following is a properly formatted taglib element occurring in `web.xml`?

A. `<taglib>`

`<uri>/graph</taglib-uri>`

`<location>/WEB-INF/Charts.tld</location>`

</tablib>

B. <taglib>

<taglib-uri>/graph</taglib-uri>

<tablib-location>/WEB-INF/Charts.tld</tablib-location>

</tablib>

C. <taglib>

<taglib-name>/graph</taglib-name>

<taglib-location>/WEB-INF/Charts.tld</taglib-location>

</taglib>

B - 21. Your web application logs a user in when she supplies username/password_ At that time a session is created for the user. You want to let the user to be logged in only for 20 r

A getLastAccessTime()

B getLastAccessedTime()

C getMaxInactiveInterval()

D getCreationTime()

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

<jsp:useBean id="fruit"

Which statement may be used to set the color property of the bean.

A <jsp:setColor id="fruit" property="color" value="white"/>

B <jsp:setColor name="fruit" property="color" value="white"/>

C <jsp:setValue name="fruit" property="color" value="white"/>

D <jsp:setProperty name="fruit" property="color" value="white">

E <jsp:setProperty name="fruit" property="color" value="white"/>

F <jsp:setProperty id="fruit" property="color" value="white">

C - 23. Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

A getFormValue("email") of HttpServletRequest

B getParameters("email") of HttpServlet

C getParameter("email") of ServletRequest

D getField("email") of HttpServletRequest

A - 26. Identify the method used to get an object available in a session. (Choose one)

A getAttribute of HttpSession

B getValue of HttpSession

C get of Session

D getAttribute of Session

E - 27. _____ includes a static file in a JSP file, parsing the file's JSP elements

A <jsp:forward>

B. <jsp:useBean>

C import directive

D <jsp:include>

E . include directive

C - 28. Which of these is legal attribute of page directive?

A include

B scope

C errorPage

D debug

A - 30. Complete the statement:

<taglib> element in the Web application deployment descriptor is used to _____

A specify the mapping of the name and the TLD file for a tag library

B specify the parameters needed by a tag library

C specify a URI identifying a tag library

A - 29. Which of the following XML fragments correctly specify the class name for a servlet in a deployment descriptor of a webapp?

A <servlet-class> com.abcinc.OrderServlet</servlet-class>

B <servlet> com.abcinc.OrderServlet</servlet>

C <class> com.abcinc.OrderServlet</class>

D <servlet-class> com.abcinc.OrderServlet.class</servlet-class>

B - 31. When implementing a tag, if the tag does not include the body, then the tag handler class must extend the BodyTagSupport class.

Is this statement true or false?

A True

B False

A - 33. Browsers typically cache the server's response to a POST request.

A False

B True

B - 34. You can set a page to be an error page either through web.xml or by adding a page directive

A <%@page errorPage="errorPage.jsp" %>

B <%@page isErrorPage="true" %>

B <%@page isErrorPage="false" %>

B - 36. (Choose 1 answer)

Study the statements:

1) The context path contains a special directory called WEB-INF which contains the deployment descriptor file, web.xml

2) A client application may directly access resources in WEB-INF or its subdirectories through HTTP_

A Both 1 and 2 are true

B Only statement 1 is true

C Only statement 2 is true

D Both 1 and 2 are not true

A - 37. (Choose 1 answer)

The web.xml file for a webapp contains the following XML fragment for configuring session timeout.

<session-config>

<session-timeout>300</session-timeout>

</session-config>

What would be the session timeout interval for the sessions created in this web application?

A. 300 minutes

B. 300 hours

C. 300 milliseconds

D. 300 seconds

B - 39. JSP _____ let you insert arbitrary code into servlet's _jspService method (which is called by service)

A declarations

B scriptlets

C expressions

E - 47. Which is NOT a scope of implicit objects of JSP file?

- A. application
- B session
- C page
- D request
- E response

B - 48. A JavaBeans component has the following field.

private boolean enabled

Which pairs of method declarations follow the JavaBeans standard for accessing this field?

- A. public boolean setEnabled(boolean enabled)
public boolean getEnabled()
- B. public void setEnabled(boolean enabled)
public boolean getEnabled()
- C. public Boolean setEnabled(boolean enabled)
public boolean isEnabled()
- D. public void setEnabled(boolean enabled)
public void isEnabled()

B - 49. statement true or false?

The deployment descriptor of a web application must have the name web_xml_ In the same way the tag library descriptor file must be called taglib_xml

- A. True
- B. False

C - 40. Which are the correct lines of code to get information in the following <context-param> tag,

Assume that response and request refer to HttpServletResponse and HttpServletRequest

```
<web-app>  
<context-param>  
<param-name>machineName</param-name>  
<param-value>cms-server</param-value>  
</context-param>  
</web-app>
```

- A. request.getParameter("machineName");
- B. ServletConfig sc = getServletConfig();
String serverName = sc.getInitParameter("machineName");
- C. ServletConfig sc = getServletContext();
String serverName = sc.getInitParameter("machineName");
- D. response.getParameter("machineName");

A - 41. <html>

```
<body>  
<form action="loginPage.jsp">  
Login ID:<input type "text" name="loginID"><br>  
Password:<input type "password" name="password"><br>  
<input type "submit" value="Login">  
<input type "reset" value="Reset">  
</form>  
</body>
```

<html>

Study the above html code. Assume that user clicks button Reset.

What is the correct statement?

A. All inputs are cleared.

B. Nothing changes.

D - 43. You need to modify the deployment descriptor for a web application installed in MyWebApp directory. Which file would you look for?

A. MyWebApp.xml MyWebApp

B. web.xml in MyWebApp

C. MyWebApp.xml in MyWebApp/WEB-INF

D. web.xml in MyWebApp/WEB-INF

A - 45. Your web application named "FWorks" uses SpecialMath_class. This is an unbundled class and is not contained in any jar file.

Where Will you keep this class file?

A. FWorks/WEB-INF/classes

B. FWorks/classes

C. FWorks/WEB-INF

D. FWorks/WEB-INF/lib/classes

C - 46.

Which of the following are correct JSP expressions?

A. <%=out.println("hello");%>

B. <%= "Hello World";%>

C. <%= new Date()%>

D. <%"Hello World";%>

C - Which jsp tag can be used to set bean property?

A. jsp:useBean.setProperty

B. jsp:useBean.property

C. jsp:setProperty

D. jsp:property

E. jsp:useBean

B - Which are the correct lines of code to get information in the following <context-param> tag in the web.xml file?

<web-app>

<context-param>

<param-name>machineName</param-name>

<param-value>cms-server</param-value>

</context-param>

</web-app>

```
A. request.getParameter("machineName");
B. ServletContext sc = getServletContext();
String serverName = sc.getInitParameter("machineName");
C. ServletConfig sc = getServletConfig().
String serverName = sc.getInitParameter("machineName");
D. response.getParameter("machineName");
```

A - Servlets usually are used on the client side of a networking application.

A. False
B. True

C - Study the statements:

1) Every web application within a web container has a unique context path
2) The context path and any directories you choose to create within it contain resources that are accessible through HTTP

A. Only statement 1 is true
B. Only statement 2 is true
C. Both 1 and 2 are true
D. Both 1 and 2 are false

C - What should be the value of <body-content> subelement of element <tag> in a TLD file if the tag should not have any contents as its body?

A. null
B. false
C. empty
D. blank

B - Session death is more likely to come about through a time-out mechanism. If there is no activity on a session for a predefined length of time, the web container invalidates the session.

A. False
B. True

A - What is the output of the following code snippet of a JSP page?

```
${empty ""}<br>
${empty "sometext"}
```

A. true
false
B. false
true
C. false
D. true

A - The <servlet-mapping> element provides a means of defining URLs to use the servlet resources.

A. True
B. False

B - Which of the following is a properly formatted taglib element occurring in web.xml?

A. <taglib>

<taglib-name>/graph</taglib-name>

<taglib-location>/WEB-INF/Charts.tld</taglib-location>

</taglib>

B. <taglib>

<taglib-uri>/graph</taglib-uri>

<taglib-location>/WEB-INF/Charts.tld</taglib-location>

</taglib>

C. <taglib>

<lib-uri>/graph</lib-uri>

<lib-location>/WEB-INF/Charts.tld</lib-location>

</taglib>

D. <taglib>

<uri>/graph</uri>

<location>/WEB-INF/Charts.tld</location>

</taglib>

D - What gets printed when the following JSP code is invoked in a browser?

<%= if(Math.random() < 0.5) %>

hello

<%= } else { %>

hi

<%= } %>

A. The browser will print either hello or hi based upon the return value of random.

B. The string hello will always get printed.

C. The string hi will always get printed.

D. The JSP file will not compile.

B - A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the which element of the taglib element in the tag library descriptor file?

A. tagname

B. name

C. tag

D. prefix

D - Identify the method used to get an object available in a session.

A. getValue of Session

B. getValue of HttpSession

C. getAttribute of Session

D. getAttribute of HttpSession

D - Which of these is true about include directive?

A. The included file must have jsp extension.

B. The XML syntax of include directive in <jsp:include file="fileName"/>

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

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

C - A bean present in the page and identified as 'mybean' has a property named 'name'. Which of the following is a correct way to print the value of this property?

- A. `<%=jsp:getProperty name="mybean" property="name"%>`
- B. `<%out.println(mybean.getName())%>`
- C. `<jsp:getProperty name="mybean" property="name"/>`
- D. `<%=out.println(mybean.getName())%>`

A - Your jsp page uses `java.util.TreeMap`. Adding which of the following statement will ensure that this class is available to the page?

- A. `<%@ page import="java.util.TreeMap"%>`
- B. `<%! import="java.util.TreeMap"%>`
- C. `<%@ import="java.util.TreeMap"%>`
- D. `<%! page import="java.util.TreeMap"%>`

A - Which directory is legal location for the deployment descriptor file? Note that all paths are shown as from the root of the web application directory

- A. `\WEB-INF`
- B. `\WEB-INF\xml`
- C. `\WEB-INF\classes`

A - Given the following JSP and tag handler code, what is the result of accessing the JSP?

```
<html>
<body>
START
<br>
<%@taglib uri="test_taglib" prefix="myTag"%>
<myTag:TestTag/>
<br>
END
</body>
</html>
```

Tag Handler Code for `<myTag:TestTag />`

```
package examples;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;
public class TestTag extends TagSupport {
    @Override
    public int doStartTag() throws JspException {
        return EVAL_PAGE;
    }
}
```

```
@Override
public int doEndTag() throws JspException {
    return SKIP_PAGE;
}
}
```

Assume *.tld and web.xml files are correct

- A. START
- B. START

END
C. END
START
D. END

C - Which of the following file is the correct name and location of deployment descriptor of a web application? Assume that the web application is rooted at \doc-root.

- A. \doc-root\dd.xml
- B. \doc-root\web.xml
- C. \doc-root\WEB-INF\web.xml
- D. \doc-root\WEB_INF\dd.xml
- E. \doc-root\WEB-INF\dd.xml
- F. \doc-root\WEB_INF\web.xml

D - A Java bean with a property color is loaded using the following statement

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

What is the effect of the following statement.

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

Select one correct answer.

- A. An error gets generated because the value attribute of setAttribute is not defined
- B. The color attribute is assigned a value null
- C. The color attribute is assigned a value ""
- D. If there is a non-null request parameter with name color, then its value gets assigned to color property of Java Bean fruit

A - Which of the following classes define the methods setStatus(...) and sendError(...) used to send an HTTP error back to the browser?

- A. Both are defined in HttpServletResponse
- B. Both are defined in ServletRequest
- C. Both are defined in ServletResponse
- D. Both are defined in HttpServletRequest

B - The path in a URL typically specifies a resource's exact location on the server

- A. False
- B. True

D - In which of the following cases will the method doEndTag() of a tag handler be invoked?

- A. It will be invoked only if doStartTag() or doAfterBody() return Tag.DO_END_TAG
- B. It will be invoked only if doStartTag() and doAfterBody() complete successfully
- C. This method is invoked if doStartTag() method returns true
- D. It will be invoked in all case even if doStartTag() or doAfterBody() throw an exception

C - Which statements are BEST describe errorPage attribute of <%@ page errorPage=...%> directive?

- A. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- B. Specifies the class from which the translated SP will be inherited. This attribute must be a fully qualified package and class name.
- C. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.

D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.

C - Which of the following statement is correct?

- A. Authentication means determining whether one has access to a particular resource or not
- B. Confidentiality and Authorization are one and the same thing
- C. Authentication means proving whether one is what one claims to be

D - Which of the following statements are correct about HTTP Basic authentication mechanism?

- A. HTML FORM is used to capture username and password
- B. Password is transmitted either in encrypted text or in plain text depending on the browser
- C. Password is transmitted in an encrypted form
- D. Password is transmitted as text

B - Select the correct directive statement insert into the first line of following lines of code:

1 Insert code here

```
<html>
<head>
<title>Test Page</title>
</head>
<body>
Today's Date is <%=new Date()%>
</body>
</html>
```

- A. `<%@ package import='java.util.*' %>`
- B. `<%@ page import='java.util.*' %>`
- C. `<%! page import='java.util.*' %>`
- D. `<%@ import package='java.util.*' %>`

C - Which statements are BEST describe page attribute of `<jsp:include page =...>` Action?

- A. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed
- B. Forwards request processing to another JSP, servlet or static page. This action terminates the current JSP's execution
- C. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application
- D. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean

B - Your web application logs a user in when she supplies username/password. At that time a session is created for the user. You want to let the user to be logged in only for 20 minutes. The application should redirect the user to the login page upon any request after 20 minutes of activity. Which of the following HttpSession methods would be helpful to you for implementing this functionality?

- A. `getCreationTime()`
- B. `getLastAccessedTime()`
- C. `getMaxInactiveInterval()`
- D. `getLastAccessTime()`

D - Identify correct statement about a WAR file:

- A. It is used by web application developer to deliver the web application in a single unit
- B. It cannot be unpackaged by the container
- C. It is an XML document
- D. It contains web components such as servlets as well as EJBs
- E. It cannot contain third party jar and class files.

A - The two most common HTTP requests are get and put.

- A. False
- B. True

D - Which security mechanism limits access to the availability of resources to permitted groups of users or programs ?

- A. MD5 encryption
- B. Authentication
- C. Data integrity
- D. Authorization
- E. Confidentiality
- F. Checksum validation

B - Browsers typically cache the server's response to a POST request.

- A. True
- B. False

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

- A. `extends`
- B. `import`
- C. `include`
- D. `package`
- E. `classpath`

C - Which statements are BEST describe include directive of JSP file?

- A. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- B. The scripting language used in the JSP. Currently, the only valid for this attribute is java.
- C. Causes the JSP container to perform a translation-time insertion of another resource's content. As the JSP is translated into a servlet and compiled, the referenced file replaces the include directive and is translated as if it were original part of the JSP.
- D. Defines page setting for the JSP container to process.

C - Which is NOT a standard technique for a session be definitely invalidated?

- A. The container is shutdown and brought up again.
- B. No request comes from the client for more than "session timeout" period.
- C. If the session time out is set to 0 using `setMaxInactiveInterval()` method.
- D. A servlet explicitly calls `invalidate()` on a session object.

C - You need to make sure that the response stream of your web application is secure. Which factor will you look at ?

- A. authorization
- B. authentication
- C. data integrity

A - Which of the following is NOT a valid attribute for a useBean tag?

- A. className
- B. beanName
- C. scope

D - Which of the given jsp statement is equivalent to: `<%=userbean.getAge()%>`. Assume that `userbean.getAge()` returns an integer.

- A. `<jsp:getProperty name="userbean" method="getAge"/>`
- B. `<jsp:getProperty name="userbean" property="Age"/>`
- C. `<jsp:getProperty name="userbean" property="getAge"/>`
- D. `<jsp:getProperty name="userbean" property="age"/>`

A - Which interface and method should be used to retrieve a servlet initialization parameter value?

- A. ServletConfig: `getInitParameter(String name)`
- B. ServletConfig: `getParameter(String name)`
- C. ServletConfig: `getInitParameterNames(String name)`
- D. SevletContext: `getInitParameter(String name)`

A - Which of the following elements defines the properties of an attribute that a tag needs?

- A. attribute
- B. tag-attribute-type
- C. attribute-type
- D. tag-attribute

A - ... is the well-known host name that refers to your own computer.

- A. localhost
- B. ip
- C. DNS
- D. computer name

D - Which statements are BEST describe `<jsp:include>` Action?

- A. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- B. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean.
- C. Forwards request processing to another JSP servlet or static page. This action terminates the current JSP's execution.
- D. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.

B - Which method of LoginServlet will be called when the user clicks on "Submit" button for the following form.

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

```
<form action="/myapp/LoginServlet" method="POST">
<input type="text" name="name">
<input type="password" name="password">
<input type="submit" value="POST">
</form>
</body>
</html>
```

- A. servicePost(HttpServletRequest, HttpServletResponse);
- B. doPost(HttpSevletRequest, HttpServletResponse);
- C. doPost(HttpServletRequest, HttpServletResponse);
- D. post(HttpServletRequest, HttpServletResponse);
- E. doPUT(HttpServletRequest, HttpServletResponse);

C - Which of the following statement is correct?

- A. Authentication means determining whether one has access to a particular resource or not.
- B. Data Integrity means that the data cannot be viewed by anybody other than it's intended receipient.
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver.

E - The HttpServletRequest has methods by which you can find out about incoming information such as:

- A. form data
- B. the client's hostname
- C. cookies
- D. HTTP request headers
- E. All of the others

A - Consider the following taglibrary descriptor element:

```
<tag>
<name>Hello</name>
<tag-class>com.abc.HelloTag</tag-class>
<body-content>...</body content>
</tag>
```

Which of the following is NOT a valid value for <body-content> element?

- A. generic
- B. empty
- C. JSP

D - The following line of code exists in the doGet method of Servlet:

```
String sid = request.getParameter("jsessionid");
```

Which of the option is NOT a standard technique for retrieving the HttpSession associated with the request?

- A. HttpSession session = request.getSession(true);
- B. HttpSession session = request.getSession(false);
- C. HttpSession session = request.getSession();
- D. HttpSession session = request.getSession(sid);

C - The web.xml file for a webapp contains the following XML fragment for configuring session timeout.

```
<session-config>
<session-timeout>300</session-timeout>
</session-config>
```

What would be the session timeout interval for the sessions created in this web application?

- A. 300 seconds
- B. 300 hours
- C. 300 minutes
- D. 300 milliseconds

B - Name the default value of the scope attribute of <jsp:useBean>

- A. request
- B. page
- C. application
- D. session

C F - What will be the result of pressing the submit button in the following HTML form? (Choose two.)

```
<form action="/servlet/Register">
  <input type="text" name="fullName" value="Type name here" />
  <input type="submit" name="sbmButton" value="OK" />
</form>
```

- A. A request is sent with the HTTP method HEAD.
- B. A request is sent with the HTTP method POST.
- C. A request is sent with the HTTP method GET.
- D. The parameter fullName is the only parameter passed to the web server in the request URL.
- E. The parameter fullName is the only parameter passed to the web server as part of the request body.
- F. The parameters fullName and sbmButton are passed to the web server in the request URL.
- G. The parameters fullName and sbmButton are passed to the web server as part of the request body.
- H. No parameters are passed to the web server.

JSP _____ let you insert arbitrary code into the servlet's _JspService method (which is called by service).
Scriptlets.

- A. scriptlets
- B. expressions
- C. declarations

Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A. getField("email") of HttpServletRequest
- B. getFormValue("email") of HttpServletRequest
- C. getParameter("email") of ServletRequest
- D. getParameters("email") of HttpServletRequest

Which of the following elements are used for error handling and are child elements of <web-app> of a deployment descriptor?

- A. <error-location>
- B. <error>
- C. <error-page>
- D. <error_page>

Consider the following taglibrary descriptor element

```
<tag>
  <name>Hello</name>
  <tag-class>com.abc.HelloTag</tag-class>
  <body-content> ----- </body-content>
</tag>
```

Which of the following is NOT a valid value for <body-content> element?

- A. empty
- B. tagdependent

- C. JSP
- D. generic D

Which statements are BEST describe isErrorPage attribute of `<%@ page isErrorPage=...%>` directive?

- a. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- b. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.
- c. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- d. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name. B

Which is the CORRECT statement about JMS?

- A. JMS enhances access to email services
- B. JMS uses JNDI to find destination
- C. JMS uses JMX to create a connection Factory B

Identify the parent element of `<session-timeout>` element in web.xml

- A. `<session-configuration>`
- B. `<webapp>`
- C. `<session_config>`
- D. `<session-config>` D

EJB 3.0 specifications are first implemented in _____

- A. Java EE 5
- B. Java EE 4
- C. Java EE 3
- D. Java EE 6 A

You want to use a bean that is stored in com/enthu/GUI.ser file. Which of following statements correctly defines the tag that accesses the bean?

- a `<jsp:useBean id="pref" name="com/enthu/GUI.ser" />`
- b `<jsp:useBean id="pref" name="com.enthu.GUI" />`
- c `<jsp:useBean id="pref" type="com/enthu/GUI.ser" />`
- d `<jsp:useBean id="pref" beanName="com.enthu.GUI" type="com.enthu.GUI"/>`
- e `<jsp:useBean id="pref" class="com.enthu.GUI.ser" />` D

Consider the following tag declaration in a TLD file.

```
<tag>
<name>simpleinterest</name>
<tag-class>SimpleInterestTag</tag-class>
//1
</tag>
```

SimpleinterestTag calculates simple interest for any amount and requires two attributes 'amount and 'rate'. Which of the following sub elements would you need to add inside the `<tag>` element in the TLD in place of //1 as shown above? Two separate `<attribute>` elements.

- A. One `<attribute>` element with sub-elements
- B. One `<attribute-list>` element with sub-elements
- C. One `<amount>` element and one `<rate>` element A

An object with page scope exists in every JSP of a particular Web application.

- A True
- B. false B

To be a servlet, a class should extend HttpServlet and override doGet or doPost, depending on whether the data is being sent by GET or by POST.

- A True
- B. false A

In which of the following cases will the method doEndTag() of a tag handler be invoked?

- A. It will be invoked only if doStartTag() and doAfterBody() complete successfully.
- B. This method is invoked if doStartTag () method returns true.
- C. It will be invoked only if doStartTag() or doAfterBody() return Tag.DO_END_TAG.
- D. It will be invoked in all case even if doStartTag() or doAfterBody() throw an exception. C

What is the result of attempting to access the following JSP page?

```
<html>
<body>
<%l public String methodA() {
return methodB();
}
%>
<%l public String methodB() {
return "JAD Final Test";
}
%>
<h2><%= methodA()%></h2>
</body>
</html>
```

- A. A runtime error occurs.
- B. A translation error occurs.
- C. The web page is blank.
- D. "JAD Final Test" is output to the resulting web page. D

Which of the following statement correctly store an object associated with a name at a place where all the servlets/js ps of the same webapp participating in a session can access it? Assume that request, response, name, value etc. are r eferences to objects of appropriate types.(Choose one)

- A request.setAttribute(name, value);
- B.request.getSession().setAttribute(name, value).;
- C. response.setAttribute(name, value);
- D. request.setParameter(name, value) B

Your web application named "FWorks" uses SpecialMath...class. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A FWorks/WEB-INF
- B. FWorks/classes
- C. FWorks/WEB-INF/classes
- D. FWorks/WEB-INF/lib/classes C

Which of these is a correct fragment within the web-app element of deployment descriptor? Select the one correct an swer

- a. <exception> <exception-type> mypackage.MyException </exception-type> <location> /error.jsp</location> </ex ception>
- b. <error-page> <exception-type> mypackage.MyException </exception-type> <location> /error.jsp</location> </er ror-page>
- c. <error-page> <exception> mypackage.MyException </exception-type> <location> /error.jsp </location> </error- page>
- d. <error-page> <exception-type> mypackage.MyException </exception-type> </error-page>
- e. <error-page> <servlet-name> myservlet</servlet-name> <exception-type> mypackage.MyException</exception-t ype> </error-page>

- f. <exception> <servlet-name> myservlet</servlet-name> <exception-type> mypackage.MyException</exception-t ype> </exception> B

The form attribute _____ specifies the server-side form handler, i.e., the program that handles the request

- A. name
- B. action
- C. localhost
- D. id B

Which statements are BEST describe prefix attribute of `<%@ taglib prefix=...%>` directive of JSP file?

- a. Specifies the relative or absolute URI of the tag library descriptor.
- b. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names `jsp`, `jspx`, `java`, `java:xml`, `servlet`, `sun` and `sunw` are reserved.
- c. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- d. The scripting language used in the JSP. Currently, the only valid value for this attribute is `java`. A

Which of the following statements is true? (Choose one)

- A. Session data is shared across multiple webapps in the same Webserver/servlet container.
- B. Any serializable object can be put into a session.
- C. To use session, the client browser must support cookies.
- D. A session can only be invalidated after "session-timeout" minutes of inactivity. A

What is output to the web page on the second access to the same instance of the following JSP? `<html>`

```
<body>
<% int x = 0; %>
<%= x++%>
</body->
</html>
```

- A 3
- B. 0
- C. 1
- D. 2 B

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

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

What is the output?

- a. The page display "Welcome John"
- b. The program gives a syntax error because of the statement `<% String myName=request.getParameter("name");%>`
- c. The program gives a syntax error because of the statement `<% String test= "Welcome " + myName; %>`
- d. The program gives a syntax error because of the statement `<%=test%>` A

Your servlet may receive a request, which the servlet cannot handle. In such cases, you want to redirect the request to another resource which may or may not be a part of the same web application. Which of the following options can be used to achieve this objective?

- A. `RequestDispatcher rd = request.getRequestDispatcher("some url");`
`rd.forward(request, response);`
- B. `response.sendRedirect("some url");`
- C. `request.sendRedirect("some url");`
- D. `RequestDispatcher rd = this.getServletContext().getRequestDispatcher("some url");`
`rd.forward(request, response);` B

Servlet methods are executed automatically.

- A. True
- B. False

Which technique is likely to return an initialization parameter for a JSP page?

- A. `<%= request.getParameter("myParm") %>`
- B. `<% String s = getAttribute("myParm"); %>`
- C. `<%= getParameter("myParm") %>`
- D. `<% String s = getInitParameter("myParm"); %>`

E. `<% = application.getInitParameter("myParm") %>`

Which HTTP method is used in FORM based Authentication?

- A. GET
- B. HEAD
- C. FORM
- D. POST

What is the implication of using the HTTP GET method for a form submission?(Choose one)

- A. The parameters will be appended to the URL as a query string.
- B. You can only reply with the HEADER information in the response.
- C. None of the others
- D. You cannot send multiple values for one parameter to the server

Which of the following correctly represents the following JSP statement? Select one correct answer. `<%=x%>`

- A. `<jsp:expression=x/>`
- B. `<jsp:expression>x</jsp:expression>`
- C. `<jsp:statement>x</jsp:statement>`
- D. `<jsp: declaration>x</jsp:declaration>`
- E. `<jsp:scriptlet>x</jsp:scriptlet>`

Consider the Servlet definition in a web.xml file below.

(see picture)

What will the following line of code return if present in the init() method of TestServlet?

`getInitParameter(1);`

- A. It Will return "eastern".
- B. Runtime error.
- C. Compilation error.
- D. It Will return null.
- E. It Will return "US".

You need to make sure that the response stream of your web application is secure. Which factor will you look at? (Choose one)

- A. authorization
- B. authentication
- C. data integrity

Consider the following HTML page code. Which method will be called on UploaderServlet when a user

- A. doPut
- B. doPost
- C. doHead
- D. doGet

Which statement is true about the EJB 3.0 stateful session beans?

- A. Its conversational state is retained across method invocations but NOT across transaction boundaries
- B. Its conversational state is retained across method invocations and transactions
- C. Its conversational state is lost after passivation unless the bean class saves it to a database

Your web application logs a user in when she supplies username/password. At that time a session is created for the user.

ser. You want to let the user to be logged in only for 20 minutes. The application should red.....

- A. getMaxInactiveInterval()
- B. getCreationTime()
- C. getLastAccessTime()
- D. getLastAccessedTime() C

The following statement is true or false? "if the isThreadSafe attribute of the page directive is true, then the generated servlet implements the Single ThreadModel interface".

- A. True
- B. False B

Study the statements about web.xml file.

- 1) The deployment descriptor file is called web.xml, and it must be located in the WEB-INF directory.
- 2) web.xml is in XML (extended markup language) format its root element is <Web>.

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true
- D. Both 1 and 2 are not true A

Where the bean is declared using the following useBean tag accessible? <jsp:useBean id="jbean" class="com.jclass.JBean" />

- A. within other servlets and JSP pages of the same web applications.
- B. throughout all future invocations of the JSP as long as the servlet engine is running.
- C. Throughout the remainder of the page.
- D. throughout all future invocations of the JSP as long as the session is not expired C

You have declared a useBean tag as: <jsp:useBean id="man" class="animal.Human" scope="application"/> in which type of object will this bean be kept?

- A. HttpSession
- B. Application Context
- C. ServletContext
- D. Servlet
- E. ServletConfig B

Study the statements:

- 1) URL rewriting may be used when a browser is disabled cookies.
- 2) In URL encoding the session id is included as part of the URL.

Which is the correct option?

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true
- D. Both 1 and 2 are not true C

If you want to send an entity object as the pass by value through a remote interface, which of the following statements are valid? (Choose one)

A. public class Employees implements Serializable{
...
}

B. @Entity
public class Employees implements Serializable{
...
}

C. @entity

```
public class Employees implements Serializable{  
...  
}
```

D. @Entity

```
public class Employees implements SessionSynchronization{  
...  
} B
```

_____ is the well-known host name that refers to your own computer.

A localhost

B. DNS

C. ip

D. computer name A

Which is NOT a scope of implicit objects of JSP file?

A page

B. response

C. session

D. application

E. request D

Study the statements.

1)The context path contains a special directory called WEB-INF, which contains the deployment descriptor file, web.xml.

2) A client application may directly access resources in WEB-INF or its subdirectories through HTTP.

A. Both 1 and 2 are not true

B. Only statement 1 is true

C. Only statement 2 is true

D. Both 1 and 2 are true B

A <servlet> element can include zero to many <init-param> elements: These aid in passing initialization parameter information from the deployment descriptor to all the servlets.

A False

B. True A

Action <jsp: setProperty>has the ability to match request parameters to properties of the same name in a bean by specifying "*" for attribute property.

A. False

B. True B

Which security mechanism proves that data has not been tampered with during its transit through the network?

a. Data validation

b. Data integrity

c. Authentication

d. Packet sniffing

e. Data privacy

f. Authorization B

Given that a servlet has been mapped to /account/. Identity the HttpServletRequest methods that will return /account segment for the URL: /myapp/account/.

A. getServletPath

B. getPathInfo

C. getContextPath A

Identify the method used to get an object available in a session

A. get of Session

B. getValues of HttpSession

C. getAttribute of Session

D. getAttribute of HttpSession D

Which is Not a standard technique for a session be definitely invalidate?

A. If the session time out is set to 0 using `setMaxInactiveInterval()` method.

B. No request comes from the client for more than "session timeout" period

C. A servlet explicitly calls `invalidate()` on a session object

D. The container is shutdown and brought up again

Objects with application scope are path of a particular Web application.

A. True

B. False

Which of the following task may happen in the translation phase of JSP page?

A. Instantiation of the servlet class

B. Creation of the servlet class corresponding to the JSP file

C. None of the others

D. Execution of `_jspService()` method

Which jsp tag can be used to set bean property?

A. `jsp:property`

B. `jsp:useBean.setProperty`

C. `jsp:useBean`

D. `jsp:useBean.Property`

E. `jsp:setProperty`

What is the consequence of attempting to access the following JSP page?

```
<html>
```

```
<body>
```

```
<%!
```

```
public void JspService(HttpServletRequest request HttpServletResponse response) { outwrite("A");
```

```
}
```

```
%>
```

```
<% outwritef("B"): %>
```

```
</body>
```

```
</html>
```

A. Duplicate method compilation error.

B. "A" is output to the response before "B".

C. "A" is output to the response.

D. "B" is output to the response.

When implementing a tag, if the tag does not include the body, then the tag handler class must extend the `BodyTagSupport` class.

A. True

B. False

Which of the following statement is correct?

A. Data Integrity means that the data cannot be viewed by anybody other than its intended recipient.

B. Authentication means determining whether one has access to a particular resource or not

C. Data Integrity means that the data is not modified in transit between the sender and the receiver
_____ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:foward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include> D

Study the statement:

- 1) The special directory /WEB-INF/lib contains Java class files—servlets and supporting code
- 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true.
- D. Both 1 and 2 are not true. D

A JSP page has the following page directives:

```
<%@page isErrorPage='False' %>
<%@page errorPage='jsp/myerror.jsp' %>
```

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception D

Which statement are BEST describe class attribute of <jsp:useBean class= ... /> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans. load a JavaBean into memory
- B. The fully qualified class name of the Java object
- C. The name used to manipulate the Java object with actions <jsp:getProperty>. A variable or this name is also declared for use in JSP scripting elements. The name specified here ca...
- D. The type of the Java.Bean This can be the same type as the class attribute, a superclass that type or an interface implemented by that type .The default value is the same as for attribute class A ClassCas...
- E. The scope in which the Java object is accessible—page, request, session or application. The default scope is page.

B

Which are the correct line of code to get information in the following <context-param> tag in the web.xml file..... Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively:

```
<web-app>
<context-param>
<param-name>machineName</param-name>
<param-value>cms-server</param-value>
</context-param>
</web-app>
```

A. `response.getParameter("machineName");`

B. `request.getParameter("machineName");`

C. `ServletContextsc = getServletContext();`
`String serverName = sc getlnitParameter("machmeName")`

D. `ServletConfigse = getServletConfig();`
`String serverName = sc getlnitParameter("machmeName")` C
Which statements are BEST describe uri attribute `<%@ taglib uri=_%>`

A. The scripting language used in the JSP. Currently, the only valid value for this attribute is Java

B. Allows programmers to include their own new tags in the libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.

C. Specifies the relative or absolute URI of the tag library descriptor

D. Specifies the required pefixthat distinguishes custom tags from built-in tags. The prefix name `jsp`, `jspx`, `java`, `java x`, `servlet sun` and `sunw` are reserved C

Consider the following java code:

```
//in file Book.java
package com.bookstore;
public class Book
{
private long isbn;
public Book() {isbn = 0;}
public long getIsbn() {return isbn;}
public void setIsbn(long value) {this isbn = value;}
}
```

Code for browser.jsp:

```
<jsp:useBean class = "com.bookstore.Book" id = "newbook"/>
LINE1: <jsp:setProperty name = "newbook" property = "isbn" value = "1000"/>
```

Which of the following statements are correct?

A. The isbn property of newbook will be set to 1000 ifnbsp;nbsp;'value' attribute of 'setProperty' tag is given as: value = 1000

B. The isbn property of newbook will be set to 1000

C. It will not compile B

Identify the technique that can be used to implement 'session' if the client browser does not support cookies

A. It can not be done without cookie support

B. Using Http headers.

C. URL Writing

D. Hidden form fields D

Name the default value of the scope attribute of `<jsp:useBean>`

- A. request
- B. application
- C. session
- D. page D

A custom tag can be nested inside another custom tag

- A. True
- B. False A

How can you ensure the continuity of the session while using `HttpServletResponse.sendRedirect()` method when cookies are not supported by the client?

- A. By using `HttpSevletRequest.encodeRedirectURL()` method.
- B. By encoding the direct path with `HttpSevletRequest.encodeRedirectURL()` method.
- C. By using hidden parameters B

You have to send a PDF file to the client as response to a request. Which of the following calls will you have to make

- A. `response.setType("applicantion/pdf");`
- B. `response.setContentType("image/pdf");`
- C. `response.setContentType("applicantion/pdf");`
- D. `response.setType("image/pdf");` C

Which of the following is a sensible way of the sending an error page to the client in the case of a business exception that extends from `java.lang.Exception`?

- A. Don't do anything, the servlet container will automatically send a default error page
- B. Don't catch the exception and define the exception to error-page' mapping in `web.xml`
- C. Catch the exception, wrap it into `ServletException` and define the 'business exception to error-page' mapping in `web.xml` C

What is the output of the following code snippet of a JSP page?

```
${empty""} <br>
${empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true C

Which option can be used to predefine Java Persistence queries for easy use?

- A. `@NamedNativeQuery` annotation
- B. `@NamedQuery` annotation
- C. using the named-native element in the XML descriptor B

A JSP _____ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the `_jspService` method that is called by service to process the request)

- A. expression
- B. scriptlet
- C. declaration C

Which is NOT associated with the business tier in a JEE (J2EE) web-base application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans B

Which is NOT a correct statement about entity beans?

- A. They are used to share data among client
- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes D

If you want the same Servlet to handle both GET and POST and to take the same action for each. you can simply have doGet call doPost or vice versa

- A. False
- B. True B

A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail D

Which of the following statements is correct? Select the one correct answer.

- A. The response from the server to a GET request does not contain a document
- B. The setStatus method defined in the HttpServletResponse class takes an int as an argument and sets the status of Http response
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The HttpServletResponse defines constants like SC_NOT_FOUND that may be used as a parameter to setStatus method. D

Which of the following methods can be used to add cookies to a servlet response?

- A. HttpServletResponse.addCookie(Cookie cookie)
- B. ServletResponse.addCookie(Cookie cookie)
- C. ServletResponse.addCookie(String contents)
- D. HttpServletResponse.addCookie(String contents) A

Which of the following classes define the methods setStatus(...) and sendError(...) used to send an HTTP error back to the browser?

- A. Both are defined in HttpServletResponse
- B. Both are defined in ServletResponse
- C. HttpServletResponse and ServletResponse respectively
- D. ServletResponse and HttpServletResponse respectively A

Identify the correct element that is required for a valid <taglib> tag in web.xml

- A. <taglib-uri>

- B. <uri>
- C. <uri-name>
- D. <uri-location>
- E. <tag-uri> A

Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException
{
    res.getWriter().print("Hello");
    RequestDispatcher rd = getServletContext().getRequestDispatcher("/test.jsp");
    rd.include(req, res);
    res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of output
- D. "Hello" and "World" both will be a part of the output D

Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets
- E. directives D

Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JSM
- C. Servlet
- D. MOM (Message-Oriented Middleware Product) C

A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of following statements is correct?

- A. It is accessible only to the servlet it is defined for
- B. It is accessible to all the servlet of all the webapps of the container
- C. It is accessible to all the servlet of the webapp. A

The deployment descriptor of a web application must have the name web.xml. In the same way the tag library descriptor file must be called taglib.xml

- A. True
- B. False B

Which of the following are correct JSP expressions?

- A. <%= out.println("hello"); %>
- B. <% "Hello World"; %>
- C. <%= "Hello World"; %>
- D. <%= new Date() %> D

What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. \WEB-INF\lib
- B. \jars
- C. \WEB-INF
- D. \WEB-INF\classes A

A stateful session bean must commit a transaction before a business method

- a. True
- b. False B

For what reason does the following JSP fail to translate and compile?

```
<html>
<body>
<%! int x; %>
<%
public String getDescription(){
return "JAD Final Test";
}
%>
</body>
</html>
```

- A. Data member x not initialized before use.
- B. Method declared in scriptlet
- C. Expression embedded in declaration.
- D. The page actually compiles and translates without any problem.
- E. Local variable x not initialized before use. C

Which statements are BEST describe errorPage attribute of <%@ page errorPage=....%> directive?

- a. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- b. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.
- c. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- d. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name. A

What gets printed when the following code snippet is compiled? Select the one correct answer.

```
<% int y = 0; %>
<% int z = 0; %>

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

<% if(z<y) { %>
<% = z %>
<% } else { %>
<% = z - 1 %>
<% } %>
```

- a. 0

- b. 1
- c. 2
- d. 3
- e. The program generates compilation error. C

Which of these is a correct fragment within the web-app element of deployment descriptor? Select the two correct answers.

- A. `<error-page><error-code>404</error-code><location>?error.jsp</location></error-page>`
- B. `<error-page><exception-type>mypacket.myexception</exception-type><error-code>404</error-code><location>?error.jsp</location></error-page>`
- C. `<error-page><exception-type>mypacket.myexception</exception-type><error-code>404</error-code></error-page>` A

a tag library defines a set of elements that can be inserted into the jsp file.

- A. True
- B. False A

The HttpServletRequest has methods by which you can find out about incoming information such as:

- A. All of the others
- B. the client's hostname
- C. Cookies
- D. HTTP request headers
- E. form data A

Host names are translated into IP addresses by web servers.

- A. True
- B. False B

Which of the given jsp statement is equivalent to `<%= userbean.getAge() %>` ? Assume that `userbean.getAge()` returns an integer. (Choose one)

- A. `<jsp:getProperty name="userbean" property="Age"/>`
- B. `<jsp:getProperty name="userbean" method="getAge"/>`
- C. `<jsp:getProperty name="userbean" property="age"/>`
- D. `<jsp:getProperty name="userbean" property="getAge"/>` B

The well-known port number for web request is 55

- A. True
- B. False B

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

- A. `getStream`
- B. `getOutputStream`
- C. `getBinaryStream`
- D. `getWriter` B

Which statements are BEST describe name attribute of `<jsp:setProperty name=.... />` action?

- a. The ID of the JavaBean for which a property (or properties) will be set.
- b. The name of the property to set. Specifying "*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- c. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- d. The value to assign to a bean property. The value typically is the result of a JSP expression. A

Which of the following implicit variables should be used by a jsp page to access a resource and to forward a request to another jsp page?

- A. `config` for both.
- B. `application` and `config`

C. application for both

D.config and pageContext

E.pageContext and config C

Which of the following is a properly formatted taglib element occurring in web.xml

A. <taglib> <uri>/graph</uri> <location>/web-inf/charts.tld</location> </taglib>

B. <taglib> <taglib-uri>/graph</taglib-uri> <taglib-location>/web-inf/charts.tld</taglib-location> </taglib>

C. <taglib> <taglib-name>/graph</taglib-name> <taglib-location>/web-inf/charts.tld</taglib-location> </taglib> B

Which statements are BEST describe type attribute of <jsp:useBean type=../> action?

A. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is call..

B. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.

C. The fully qualified class name of the Java object

D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. AClassCai

E. The scope in which the Java object is accessible-page, request session or application. The default scope is page. C

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

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

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

A. <jsp:setColor id="fruit" property="color" value="white"/>

B. <jsp:setColor name="fruit" property="color" value="white"/>

C. <jsp:setValue name="fruit" property="color" value="white"/>

D. <jsp:setProperty name="fruit" property="color" value="white">

E. <jsp:setProperty name="fruit" property="color" value="white"/>

F. <jsp:setProperty id="fruit" property="color" value="white"> E

Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

A. SSL Sessions

B. HTTP is already a stateful protocol.

C. Cookies

D. URL rewriting B

Following is the code for doGet() and doPost() method of TestServlet.

Which of the statement is correct?

a. This will only work for HTTP GET requests

b. This will only work for HTTP POST requests

c. This will work for HTTP GET as well as POST requests.

d. It'll throw an exception at runtime, as you cannot call doGet() from doPost().

e. It'll throw an exception at runtime only if a POST request is sent to it. C

Which of these is legal attribute of page directive?.

a. include

b. scope

c. errorPage

d. debug C

Which of the following XML fragments correctly specify the class name for a servlet in a deployment descriptor of a webapp?

- A. <servlet-class>com.abcinc.OrderServlet.class</servlet-class>
- B. <class>com.abcinc.OrderServlet</class>
- C.<servlet-class>com.abcinc.OrderServlet</servlet-class>
- D. <servlet>com.abcinc.OrderServlet</servlet> C

Complete the statement:

<taglib> element in the Web application deployment descriptor is used to...

- A. specify a URI identifying a tag library.
- B. specify the mapping of the name and the TLD file for a tag library.
- C. specify the parameters needed by a tag library.
- D. specify the TLD file location.
- E. specify the mapping of TLD file and the library. B

HTTP is a "stateless" protocol: each time a client retrieves a Web page, it opens a separate connection to the Web server, and the server does not automatically maintain contextual information about a client.

- a. True
- b. False A

Browsers typically cache the server's response to a POST request.

- A. True
- B. False B

You can set a page to be an error page either through web.xml or by adding a page directive_____

- A. <%@page errorPage="errorPage.jsp" %>
- B. <%@page isErrorPage="true" %>
- C. <%@page isErrorPage="false" %> B

The two most common HTTP requests are get and put.

- A. True
- B. False B

The web.xml file for a webapp contains the following XML fragment for configuring session timeout.<session-config><session-timeout>300</session-timeout></session-config>What would be the session timeout interval for the sessions created in this web application?

- A. 300 minutes
- B. 300 seconds
- C. 300 hours A

HttpSession objects live on the server

- A. True
- B. False A

<html><body><form action="loginpage.jsp">login id:<input type="text" name="loginid">
password:<input type="password" name="password">
<input type="submit" value="login"><input type="reset" value="reset"></form></body></html> study the above html code. assume that user clicks button reset. what is the correct statement

- A. all inputs are cleared
- B. All inputs are submitted to server.
- C. Nothing changes. A

Which of the following is NOT a valid attribute for a useBean tag?

- A. className
- B. beanName

- C. scope A

You need to modify deployment descriptor for a web application installed in MyWebApp directory. Which file would you look for?

- A. web.xml in MyWebApp/WEB-INF

- B. web.xml in MyWebApp
- C. MyWebApp.xml in MyWebApp
- D. MyWebApp.xml in MyWebApp/WEB-INF A

For JSP scopes of request and page, what are the classes of objects that are used to store the attributes?

- (a) HttpServletRequest and ServletContext respectively.
- (b) ServletRequest and ServletConfig respectively.
- (c) ServletRequest and PageContext respectively.
- (d) HttpServletRequest and PageContext respectively.
- (e) ServletConfig for both. C

A JavaBeans component has the following field:

private boolean enabled;

Which pairs of method declarations follow the JavaBeans standard for accessing this field? (Choose two.)

A. public boolean setEnabled(boolean enabled)
public boolean getEnabled()

B. public void setEnabled(boolean enabled)
public boolean getEnabled()

C. public boolean setEnabled(boolean enabled)
public boolean isEnabled()

D. public boolean setEnabled(boolean enabled)
public void isEnabled() B

Which of the following defines the type of the content that a tag can accept?

- A. content-type
- B. body-content
- C. content
- D. tag-content-type A

In which of the following case will the method doStartTag() of a tag handler be invoked?

- A. If doEndTag() returns EVAL_TAG_AGAIN
- B. This method is invoked if doTag() method returns true
- C. It will be invoked only If the use of that tag is not enclosed in another custom tag
- D. This method is invoked if doTag() method returns DO_START
- E. This method is always invoked whenever the tag's use is encountered in the jsp page. E

Which of the following statement is true for <jsp:useBean> ?

A. The class attribute must be defined for <jsp:useBean>.

B. The id attribute must be defined for <jsp:useBean>.

C. The scope attribute must be defined for <jsp:useBean>. B

Given that a servlet has been mapped to /account/. Identify the HttpServletRequest methods that will be return the /myapp segment for the URL: /myapp/account/*.

- A. getPathInfo
- B. getServletPath
- C. getContextPath A

What will happen when a servlet makes the following call within its doGet() method? getServletContext().setAttribute("userid", userid);

- A. The userid attribute is placed in application scope.
- B. A SessionContextListener will be invoked.
- C. The code in complied error A

What will be the outcome of executing the following code?

public void doGet(HttpServletRequest request HttpServletResponse response) throws ServletException, IOException

- ```
n { response.setContentType("text/plain"); response.setContentLength(6);
PrintWriter out = response. getWriter(); out. write ("What's your name?"); out.write(" " + response.isCommitted());
```
- A. An `IllegalStateException` is thrown.
  - B. "What's your name?" is returned to the client.
  - C. A blank page is returned to the client
  - D. Won't execute because of a compilation error.
  - E. "What's" is returned to the client
  - F. An `IllegalArgumentException` is thrown. E

Computers that run \_\_\_\_ software make resources available, such as web pages, images, PDF documents and even objects that perform complex task.

- A. JDK
- B. Eclipse
- C. Web server
- D. NetBean C

Which of the following is a valid standard action that can be used by a jsp page to import content generated by another jsp file named another.jsp?

- A. `<jsp:include file='another.jsp'/>`
- B. `<jsp:import file='another.jsp'/>`
- C. `<jsp:include page='another.jsp'/>`
- D. `<jsp:import page='another.jsp'/>` C

Your jsp page uses `java.util.TreeMap`. Adding which of the following statement will ensure that this class is available to the page? (Choose one)

- A. `<%! page import="java.util.TreeMap"%>`
- B. `<%@ import="java.util.TreeMap"%>`
- C. `<%! import="java.util.TreeMap"%>`
- D. `<%@ page import="java.util.TreeMap"%>` D

Session death can come about through an explicit call (in servlet code) to `HttpSession.invalidate()`;

- A. True
- B. False A

Which of these is legal return types of the `doAfterBody` method defined in a class that extends `TagSupport` class?.

- A. `EVAL.PAGE`
- B. `EVAL.BODY`
- C. `EVAL_PAGE_AGAIN`
- D. `SKIP_BODY`
- E. `SKIP_PAGE` D

What are the different scope values for the `<jsp:useBean>`? (Choose one correct answer)

- A. session, page, application, global
- B. session, page, application, context
- C. session, page, response, request
- D. session, page, application, request D

The page directive is used to convey information about the page to JSP container. Which statement is legal page directive. Select one correct statement

- A. `<%@ page info="test page" %>`
- B. `<%@ page info="test page" session="false"%>`
- C. `<%@ page isErrorPage="errorPage.jsp"%>`
- D. `<%@ page isThreadSafe=true %>` B

Which of the following is a correct JSP declaration for a variable of class `java.util.Date`?

- A. `<%! Date d = new Date() %>`
- B. `<%@ Date d = new Date() %>`
- C. `<% Date d = new Date() %>`
- D. `<%! Date d = new Date(); %>` D

You have to send a gif image to the client as a response to a request Which of the following calls will you have to make? (Choose one)

- A. response.setContentType("image/gif);
- B. response.setType("application/gif);
- C. response.setContentType("application/bin");
- D. response.setType("image/gif); A

Consider the following doGet method code of a servlet

```
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
String command = req.getParameter("command"); if("remove".equals(command))
{
HttpSession session = req.getSession();
//insert code here
}
}
```

If the command equals remove, you want to unbind an attribute named "user" from the session. Which of the following option will you use? (Choose one)

- A. session.deleteAttribute("user");
- B. session.unbindfuser");
- C. session.removeAttribute("user");
- D. session.remove("user"); C

What will be the result of pressing the submit button in the following HTML form? (Choose two.)

```
<form action="/servlet/Register">
```

```
<input type="text" name="fullName" value="Type name here" /> <input type="submit" name="sbmButton" value="OK" /> </form>
```

- A. A request is sent with the HTTP method HEAD.
- B. A request is sent with the HTTP method POST.
- C. A request is sent with the HTTP method GET.
- D. The parameter fullName is the only parameter passed to the web server in the request URL.
- E. The parameter fullName is the only parameter passed to the web server as part of the request body. C

Action <jsp:include> is evaluated once at page translation time.

- A. False
- B. True A

Which of the following method calls can be used to retrieve an object from the session that was stored using the name "userid"?

- A. getValue("userid");
- B. get("userid");



C. `getAttribute("userid");`

D. `getParameter("userid");`

E. `getObject("userid");` C

A \_\_\_\_\_ has a name, a single value, and optional attributes such as a comment, path and domain qualifiers, a maximum age, and a version number.

A. Session

B. Request

C. Cookie

D. Response C

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

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

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

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

A. This is incorrect syntax of `<jsp:setProperty/>` and will generate a compilation error. Either value or param must be defined.

B. All the properties of the fruit bean are initialized to a value of null.

C. All the properties of the fruit bean are assigned the values of input parameters of the JSP page that have the same name.

D. All the properties of the fruit bean are initialized to a value of \*. C

Which of the following defines the class name of a tag in a TLD?

A. class

B. class-name

C. tag-class

D. tag-class-name C

Which of the following defines the name of a tag in a taglibrary descriptor?

A. tagaction

B. tag-name

C. name

D. tag-action B

c - Study the statements:

1) URL rewriting may be used when a browser is disabled cookies.

2) In URL encoding the session id is included as part of the URL

Which is the correct option ?

A. Only statement 1 is true

B. Only statement 2 is true

C. Both 1 and 2 are true

D. Both 1 and 2 are not true

d - A JSP page will not have access to session implicit variable if.

A. the user has closed all his/her browser windows.

B. the request is the first request from the user.

C. the user's browser does not support URL rewriting.

D. the session attribute of page directive is set to false.

c - Which statements are BEST describe type attribute of `<jsp:useBean type=_. />` action?

A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is call..

B. The name of a bean that can be used with method `instantiate` of class `java.beans.Beans` to load a `JavaBean` into memory.

C. The fully qualified class name of the Java object

- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. `AClassCai`
- E. The scope in which the Java object is accessible-page, request session or application. The default scope is page.

d - (Choose 1 answer)

`HttpServletRequest.getSession()` method returns a \_\_\_\_\_ object.

- A. `HttpSession`.
- B. `HttpSession`.
- C. `HttpSession`.
- D. `HttpSession`.

a - (Choose 1 answer)

You need to make sure that the response stream of your web application is secure. Which factor will you look at? (Choose one)

- A. data integrity
- B. authentication
- C. authorization

b - Class `HttpServlet` defines the methods \_\_\_\_\_ and \_\_\_\_\_ to response to get and post request from a client.

- A. `doGet`, `doPost`
- B. `doGet`, `doPost`
- C. `doGET`, `doPOST`
- D. `Get`, `Post`

c - (Choose 1 answer)

Which of the elements defined within the `taglib` element of `taglib` descriptor file are required? Select one correct answer.

- A. `taguri`
- B. `info`
- C. `taglib-location`
- D. `display-name`

c - (Choose 1 answer)

Which of the following method calls can be used to retrieve an object from the session that was stored using the name "userid"?

- A. `getValue("userid");`
- B. `get("userid");`
- C. `getAttribute("userid");`
- D. `getParameter("userid");`
- E. `getObject("userid");`

c - (Choose 1 answer)

Consider the following `doGet` method code of a servlet

```
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
 String command = req.getParameter("command"); if("remove".equals(command))
 {
 HttpSession session = req.getSession();
 //insert code here
 }
}
```

If the command equals `remove`, you want to unbind an attribute named `"user"` from the session. Which of the following option will you use? (Choose one)

- A. `session.deleteAttribute("user");`
- B. `session.unbindfuser");`
- C. `session.removeAttribute("user");`
- D. `session.remove("user");`

c - (Choose 1 answer)

Which Java technology provides a standard API for publish-subscribe messaging model?

- A. JNDI
- B. UDDI
- C. JMS
- D. JSP

c - (Choose 1 answer)

Which of the following statements are correct about HTTP Basic authentication mechanism?

- A. HTML FORM is used to capture username and password.
- B. Password is transmitted in an encrypted form.
- C. Password is transmitted as text
- D. Password is transmitted either in encrypted text or in plain text depending on the browser.

a - (Choose 1 answer)

Which is NOT true about stateless session beans?

- A. They are used to represent data stored in a RDBMS
- B. They are used to implement business logic
- C. They are an Enterprises Beans
- D. They are CANNOT hold client state

a - (Choose 1 answer)

JSP\_let you insert arbitrary code into the servlet's JspService method (which is called by service).

- A. scriptlets
- B. expressions
- C. declarations

c - (Choose 1 answer)

Which component can use a container-managed entity manager with an extended persistent context?

- A. Session beans and web components
- B. Only stateless session beans
- C. Only stateful session beans
- D. Any EJB component

a - (Choose 1 answer)

Which statements are BEST describe <jsp:include> Action?

- A. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.
- B. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.

C. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean.

D. Forwards request processing to another JSP, servlet or static page. This action terminates the current JSP's execution.

a - (Choose 1 answer)

Which of these is legal return types of the doEndTag method defined in a class that extends TagSupport class? Select one correct answer.

A. EVAL\_PAGE

B. EVAL\_BODY

C. EVAL\_PAGE\_INCLUDE

D. EVAL\_BODY\_INCLUDE

E. SKIP\_BODY

c - (Choose 1 answer)

A developer must implement a 'shopping cart' object for a web-based application. The shopping cart must be able to maintain the state of the cart but the state is not stored persistently. Which JEE (J2EE) tech

A. JMS

B. Stateless session beans

C. Stateful session beans

D. Entity beans

b - (Choose 1 answer)

Which is the correct sequence?

A. jsp page is compiled-->Jsp page is translated ~>jspInit is called ->JspService is called ->jspDestroy is called

B. Jsp page is translated -->jsp page is compiled-->jspInit is called ->JspService is called -->jspDestroy is called

C. Jsp page is translated -->jsp page is compiled-->jspService is called ->jspInit is called ->JspDestroy is called

D. jsp page is compiled-->Jsp page is translated --> JspService is called -->jspInit is called -->jspDestroy is called

c - (Choose 1 answer)

Which statement is true about the EJB 3.0 stateful session beans?

A. Its conversational state is lost after passivation unless the bean class saves it to a database

B. Its conversational state is retained across method invocations but NOT across transaction boundaries

C. Its conversational state is retained across method invocations and transactions

a - (Choose 1 answer)

GET requests and POST requests can both be used to send form data to a web server.

A. True

B. False

a - (Choose 1 answer)

Consider the following tag declaration in a TLD file:

```
<tag>

<name>simpleInterest</name>

<tag-class>SimpleInterestTag</tag-class>

//1

</tag>
```

SimpleInteresTag calculates simple interest for any amount and requires two attributes 'amount' and 'rate'.

Which of the following sub elements would you need to add inside the <tag> element in the TLD in place of//1 as shown above? Two separate <attribute> elements.

A. One <attribute> elementwith sub-elements

B. One <attribute-list> elementwith sub-elements

C. One <amount> element and one <rate> element

c - (Choose 1 answer)

Which statement about an entity instance lifecycle is correct?

A. A removed entity instance is NOT associated with a persistence context

B. A new entity instance is an instance with a fully populated state.

C. A managed entity instance is the instance associated with a persistence context

D. A detached entity instance is an instance with no persistent identity.

a - (Choose 1 answer)

Which of the following are potentially legal lines of JSP source?

A. <jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />

B. <% String propName = "soleProp": %>

```
<jsp:getProperty name="beanName1" property="<%=propName%>" />

/>
```

C. <% String beanName = "beanName3"; %>

```
<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />
```

D. <% String className = "a.b.MyBean"; %>

```
<jsp:useBean id="beanName2" class="<0/o=className%>" />
```

e - (Choose 1 answer)

You want to use a bean that is stored in com/enthu/GUI.ser file. Which of following statements correctly defines the tag that accesses the bean?

A. <jsp:useBean id="pref" type="com/enthu/GUI.ser"/>

B. <jsp:useBean id="pref" name="com/enthu/GUI.ser"/>

C. <jsp:useBean id="pref" class="com.enthu.GUI.ser,7>

D. <jsp:useBean id="pref" name="com.enthu.GUr7>

E. <jsp:useBean id="pref" beanName^com.enthu.GUI" type="com.enthu.GUI7>

b - (Choose 1 answer)

Each page has its own instances of the page-scope implicit objects.

A. False

B. True

b - (Choose 1 answer)

Which is NOT Enterprise Beans?

A. Message-Driven Beans

B. Business Beans

C. Entity Beans

D. Session Beans

a - (Choose 1 answer)

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

- A. <%@page contentType='text/xml'>
- B. <%@page contentType='xml'>
- C. <%@page contentType='text/html'\*>
- D. <%@page contentType='html/xml'\*>

c - (Choose 1 answer)

Review the following scenario: then identify which security mechanisms would be important to fulfill the requirement (Choose one.)

An online magazine company wishes to protect part of its website content to make that part available only to users who pay a monthly subscription. The company wants to keep client network, and server processing overheads down: Theft of content is unlikely to be an issue, as is abuse of user IDs and passwords through network snooping.

- A. Client certification
- B. Confidentiality
- C. Authorization and Authentication
- D. Indication
- E. Data integrity

e - (Choose 1 answer)

Which Java technology provides a unified interface to multiple naming and directory services?

- A. JNI
- B. JDBC
- C. EJB
- D. JavaMail
- E. JNDI

c - (Choose 1 answer)

What sub element of <attribute> tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. <attribute-name>
- B. <attributename>
- C. <name>
- D. <param-name>



c - (Choose 1 answer)

Which statement is NOT true about JMS?

- A. JSM support an event oriented approach to message reception.
- B. JMS support both synchronous and asynchronous message passing
- C. JMS does NOT depend on MOM (Messaging-Oriented Middleware) products
- D. JMS provides common way for Java programs to access an enterprise messaging system's message

b - (Choose 1 answer)

Your servlet may receive a request, which the servlet cannot handle. In such cases, you want to redirect the request to another resource which may or may not be a part of the same web application. Which of the following options can be used to achieve this objective?

- A. `RequestDispatcher rd = request.getRequestDispatcher("some url");  
rd.forward(request, response);`
- B. `response.sendRedirect("some url");`
- C. `request.sendRedirect("some url");`
- D. `RequestDispatcher rd = this.getServletContext().getRequestDispatcher("some url");  
rd.forward(request, response);`

a - (Choose 1 answer)

Which of the following elements are used for error handling and are child elements of <web-app> of a deployment descriptor?

- A. <error\_page>
- B. <error-page>
- C. <error-location>
- D. <error>

b - (Choose 1 answer)

A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the which element of the taglib element in the tag library descriptor file ?

- A. tagname
- B. name
- C. tag
- D. prefix

b - Consider the Servlet definition in a web.xml file below.

(see picture)

What will the following line of code return if present in the init() method of TestServlet?

getInitParameter(1);

A. It will return "US".

B. Compilation error.

C. It will return null.

D. It will return "eastern".

E. Runtime error.

b - (Choose 1 answer)

Which of the following statement is true for <jsp:useBean> ?

A. The class attribute must be defined for <jsp:useBean>.

B. The id attribute must be defined for <jsp:useBean>.

C. The scope attribute must be defined for <jsp:useBean>.

a - (Choose 1 answer)

See the extract from webxml of web application 'mywebapp\*' on server named myserver. runs on port 8080:

<servlet-mapping>

<servlet-name>ServletA</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

<servlet-mapping>

<servlet-name>ServletB</servlet-name>

<url-pattern>/bservlethtml</url-pattern>

</servlet-mapping>

<servlet-mapping>

<servlet-name>ServletC</servlet-name>

<url-pattern>\*.servletC</url-pattern>

</servlet-mapping>

<servlet-mapping>

<servlet-name>ServletD</servlet-name>

<url-pattern>/dservlet/\*</url-pattern>

</servlet-mapping>

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.) http://myserver:8080/mywebapp

Next

A. ServletA

B. ServletB

C. ServletD

D. ServletC

a - (Choose 1 answer)

A <servlet> element can include zero to many <init-param> elements: These aid in passing initialization parameter information from the deployment descriptor to all the servlets.

A. False

B. True

a - (Choose 1 answer)

You have to send a gif image to the client as a response to a request Which of the following calls will you have to make? (Choose one)

A. response.setContentType("image/gif");

B. response.setType("application/gif");

C. response.setContentType("application/bin");

D. response.setType("image/gif");

c - (Choose 1 answer)

Which statement is correct about the Java Persistence API support for the SQL queries?

A. SQL queries are expected to be portable across database

B. SQL queries are NOT allowed to use parameters.

C. The result of a SQL query is not limited to entities

D. Only SELECT SQL queries are required to be supported

b - (Choose 1 answer)

Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

- A. SSL Sessions
- B. HTTP is already a stateful protocol.
- C. Cookies
- D. URL rewriting

b - (Choose 1 answer)

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

```
<%! String myName=request.getParameterO;%>
```

```
<% String test= "welcome" + myName; %>
```

```
<%= test%>
```

What is the output?

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement `<%! String myName=request.getParameterO;%>`
- C. The program gives a syntax error because of the statement `<% String test= "welcome" + myName: %>`
- D. The program gives a syntax error because of the statement `<%= test%>`

b - (Choose 1 answer)

Which statements are BEST describe param attribute of `<jsp:setProperty param=_ ./>` Action?

- A. The value to assign to a bean property. The value typically is the result of a JSP expression.
- B. The ID of the JavaBean for which a property (or properties) will be set
- C. The name of the property to set Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.
- D. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.

a - (Choose 1 answer)

A(n)\_enables a web application to obtain a Connection to a database.

- A. DataSource
- B. Netbean
- C. Eclipse

D. Web server

b - (Choose 1 answer)

Which is a valid PostConstruct method in a message-driven bean class?

A. @PostConstruct  
public boolean init() {return true;}

B. @PostConstruct  
private void init() {};

C. @PostConstruct  
private static void init() {}

D. @PostConstruct  
public static void init() {}

b - (Choose 1 answer)

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

A. SC\_NOT\_FOUND

B. SC\_MOVED\_TEMPORARILY

C. SC\_INTERNAL\_SERVER\_ERROR

D. SC\_BAD\_REQUEST

E. SC\_OK

a - (Choose 1 answer)

Which is NOT provided by the EJB tier in a multitier JEE (J2EE) application?

A. XML Parsing

B. Concurrency control

C. Transaction management

D. Security

e - (Choose 1 answer)

Which type of JEE (or J2EE) component is used to store business data persistently?

A. Stateful session beans

B. Java Server Pages

C. Stateless session beans

D. Java Beans

E. Entity Bean

a - (Choose 1 answer)

What is the purpose of JNDI?

A. To access various directory services using a single interface

B. To register Java Web Start applications with a web server

C. To parse XML documents

D. To access native code from Java application

a - Which of the following is true about Data Integrity?

A. The information/data is not tampered with, in transit from host to client.

B. The information/data is not read by parties other than its intended recipients.

C. The information/data is never modified.

D. The information/data is accessible only to users who are authenticated.

c - (Choose 1 answer)

Which of the following statements is correct? (choose one)

A. Authentication means determining whether one has access to a particular resource or not.

B. Confidentiality and Authorization are one and the same thing.

C. Authorization means determining whether one has access to a particular resource or not

d - (Choose 1 answer)

Which is true about JDBC?

A. The JDBC API is an extension of the ODBC API

B. All JDBC drivers are pure Java.

C. JDBC is used to connect to MOM (Message-Oriented Middleware Product)

D. The JDBC API is included in J2SE

d - (Choose 1 answer)

In which of the following cases will the method doEndTag() of a tag handler be invoked?

- A. It will be invoked in all case even if doStartTagO or doAfterBodyO throw an exception.
- B. This method is invoked if doStartTagO method returns true.
- C. It will be invoked only if doStartTagO and doAfterBodyO complete successfully.
- D. It will be invoked only if doStartTagO or doAfterBodyO return Tag.DO\_END\_TAG.

d - (Choose 1 answer)

Data Integrity is the biggest issue for your web application. What will you do? (Choose one)

- A. Use HTTPS instead of HTTP.
- B. Use LDAP to store user credentials.
- C. Use HTTP digest authentication.
- D. Use form-based authentication.

c - (Choose 1 answer)

Which jsp tag is needed to ensure that implicit variable 'exception' is available in the page that is meant to be an error page? (Choose one)

- A. `<%@isErrorPage="true"%>`
- B. `<%@ page errorPage="this"%>`
- C. `<%@ page isErrorPage="true"%>`
- D. `<%@errorPage="true"%>`

b - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is used by web application developer to deliver the web application in a single unit
- B. It contains web components such as servlets as well as EJBs.
- C. It cannot contain third party jar and class files.
- D. It cannot be unpackaged by the container.
- E. It is an XML document

c - (Choose 1 answer)

Where the bean is declared using the following useBean tag accessible? `<jsp:useBean id="jbean" class="com.jclass.JBean" />`

- A. within other servlets and JSP pages of the same web applications.

B. throughout all future invocations of the JSP as long as the servlet engine is running.

C. Throughout the remainder of the page.

D. throughout all future invocations of the JSP as long as the session is not expired

d - (Choose 1 answer)

Which of the following statement correctly set a cookie from a servlet code? (Choose one)

Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

A. request.setCookie("mycookie". "value");

B. response.addCookie(mycookie". "value");

C. response.setCookie("mycookie". "value");

D. response.addCookie(new Cookie("mycookie". "value"));

a - (Choose 1 answer)

Which statements are BEST describe contentType attribute of `<%@ page contentType=_.%>` directive?

A. Specifies the MIME type of the data in the response to the client The default type is text/html.

B. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.

C. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.

D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception

a - (Choose 1 answer)

The following line of code exists in the doGet method of Servlet String sid = request.getParameter("jsessionId");

Which of the option is NOT a standard technique for retrieving the HttpSession associated with the request? (Assume that the session has already been created.)

A. HttpSession session = request.getSession(sid);

B. HttpSession session = request.getSession();

C. HttpSession session = request.getSession(false);

D. HttpSession session = request.getSession(true);

d - (Choose 1 answer)

Which is NOT the main type of JSP constructs that you embed in a page?



- A. directives
- B. scripting elements
- C. HTML code
- D. actions

a - (Choose 1 answer)

A web application named webmail has a file named folderview.jsp which the user should be able access directly. Which of the following directory may contain this file? (Choose one)

- A. /webmail/jsp
- B. /webmail/web-inf/jsp
- C. /webmail/WEB-INF/lib/jsp
- D. /webmail/WEB-INF/jsp

c - (Choose 1 answer)

Servlet Container calls the init method on a servlet instance\_

- A. For each request to the servlet
- B. For each request to the servlet that causes a new thread to be created.
- C. Only once in the life time of the servlet instance.
- D. If the request is from the user whose session has expired.

d - (Choose 1 answer)

What should be the value of <body-content> subelement of element <tag> in a TLD file if the tag should not have any contents as its body?

- A. false
- B. null
- C. blank
- D. empty

d - Choose 1 answer)

Which of the following XML fragments correctly defines a role named "manager" in webxml?

- A. <security-role>manager</security-role>
- B. <security-role rolename=manager></security-role>

C. <security>

<role-name>manager</role-name>

</security>

D. <security-role>

<role-name>manager</role-name>

</security-role>

c - (Choose 1 answer)

Which of the following lines of code are correct?

A. @EntityBean

```
public class Employees{
 ...
}
```

B. class Employees{

@Entity

```
private class Address{
 ...
}
...
}
```

C. @Entity

```
public class Employees{
}
```

d - The requirement for an online shopping application are:

It must support millions of customers. The invocations must be transactional. The shopping cart must be persistent  
Which technology is required to support these requirements?

A. JMX

B. JNI

C. JMS

D. EJB

d - (Choose 1 answer)

Which technique is likely to return an initialization parameter for a JSP page?

- A. <%= request.getParameter("myParm") %>
- B. <% String s = getAttributefmyParm"); %>
- C. <%= getParameter("myParm") %>
- D. <% String s = getlnitParameterfmyParm"); %>
- E. <% = application.getlnitParameter("myParm") %>

c - (Choose 1 answer)

Which method would you use to put the session id into the URL to support sessions using URL rewriting?

- A. encodeURL() of HttpServlet
- B. rewriteURL() of HttpServletResponse
- C. encodeURL() of HttpServletResponse
- D. encodeURL() of HttpServletRequest

d - (Choose 1 answer)

Which of the following is indicated by URL. which is used on the Internet?

- A. IP addresses of servers connected to the Internet
- B. E-mail addresses for use in the Internet
- C. Owners of PCs connected to the Internet
- D. Information resources(sources) on the Internet

b - (Choose 1 answer)

Which syntax is correct for JSP Declarations?

- A. <%=code%>
- B. <%! code %>
- C. <%code%>

a - (Choose 1 answer)

Which of the following is NOT a valid attribute for a useBean tag?

- A. className
- B. beanName
- C. scope

b - (Choose 1 answer)

What is the implementation specification of EJB 3 session bean classes?

- A. a session bean class must be final or abstract
- B. a session bean class must be marked with `@Stateless` or `@Stateful`
- C. a session bean class can't extend other classes

c - (Choose 1 answer)

Given a stateless session bean with container-managed transaction demarcation, from which method can a developer access another enterprise bean?

- A. bean constructor
- B. `PreDestroy` lifecycle callback method
- C. business method from the business interface

c - (Choose 1 answer)

Which statements are BEST describe name attribute of `<jsp:setProperty name=_. />` action?

- A. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- B. The value to assign to a bean property. The value typically is the result of a JSP expression.
- C. The ID of the `JavaBean` for which a property (or properties) will be set.
- D. The name of the property to set. Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.

d - (Choose 1 answer)

Which is NOT responsibility of the business tier in a multitier web-based application with web, business, and EIS tiers?

- A. To participate in transactions
- B. To integrate with the legacy applications
- C. To provide business logic
- D. To generate dynamic content

c - (Choose 1 answer)

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

- A. `request`

- B. response
- C. pageContext
- D. out
- E. page

b - (Choose 1 answer)

Which statements are BEST describe scope attribute of `<jsp:useBean scope=.. />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is `ca`
- B. The scope in which the Java object is accessible-page, request session or application. The default scope is page.
- C. The name of a bean that can be used with method `instantiate` of class `java.beans.Beans` to load a `JavaBean` into memory.
- D. The type of the `JavaBean`. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute `class`. `AClassCai`
- E. The fully qualified class name of the Java object

c - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is an XML document
- B. It cannot be unpackaged by the container.
- C. It contains web components such as servlets as well as EJBs.
- D. It may contain third party jar and class files.

b - (Choose 1 answer)

Which statement(s) about Servlet Life Cycle is(are) correct? (Choose one)

- A. When the servlet is first created, its `init` method is invoked, so that is where you put one-time setup code.
- B. All the others
- C. Servlet can implement a special interface that stipulates that only a single thread is permitted to run at any one time.
- D. When the server decides to unload a servlet it first calls the servlet's `destroy` method.
- E. Each user request results in a thread that calls the service method of the previously created instance.
- F. Multiple concurrent requests normally result in multiple threads calling service simultaneously.

c - (Choose 1 answer)

Which is true about RMI?

- A. RMI is used to create thin web client
- B. RMI is the Java API used for executing queries on a database
- C. RMI allows objects to be send from one computer to another
- D. RMI is the transport protocol used by web servers and browsers

a - (Choose 1 answer)

Which statement is true about management of an EJB's resources?

- A. The reference to home object is obtained through JNDI to improve maintainability and flexibility.
- B. The reference to the remote object is obtained through JNDI to improve maintainability and flexibility.

b - (Choose 1 answer)

A web application is located in "helloapp" directory. Which directory should its deployment descriptor be in?

- A. helloapp
- B. helloapp/WEB-INF
- C. helloapp/WEBJNF
- D. helloapp/WEBINF

c - (Choose 1 answer)

A developer is working on a project that includes both EJB 2.1 and EJB 3.0 session beans. A lot of business logic has been implemented and tested in these EJB 2.1 session beans. Some EJB 3.0 session beans need to access this business logic.

Which design approach can achieve this requirement?

- A. Add adapted home interfaces to EJB 3.0 session beans to make EJB 3.0 and EJB 2.1 session beans interoperable.
- B. Add EJB 3.0 business interfaces to existing EJB 2.1 session beans and inject references to these business interfaces into EJB 3.0 session beans.
- C. No need to modify existing EJB 2.1 session beans. Use the @EJB annotation to inject a reference to the EJB 2.1 home interface into the EJB 3.0 bean class.

c - (Choose 1 answer)

Which statement is true about EJB 3.0 containers?

- A. The Java 2D API is guaranteed to be available for session beans

B. Java Telephony API is guaranteed to be available for session and message beans

C. `javax.naming.initialContext` is guaranteed to provide a JNDI name space

b - (Choose 1 answer)

Which method of `ReportGeneratorServlet` will be called when the user clicks on the URL shown by the following HTML.

Assume that `ReportGeneratorServlet` does not override the `service(HttpServletRequest HttpServletResponse)` method of the `HttpServlet` class. (Choose one)

A. `doPost(HttpServletRequest HttpServletResponse);`

B. `doGet(HttpServletRequest HttpServletResponse);`

C. `doOption(HttpServletRequest HttpServletResponse);`

D. `doHead(HttpServletRequest HttpServletResponse);`

a - (Choose 1 answer)

The same servlet class can be declared using different logical names in the deployment descriptor.

A. True

B. False

a - (Choose 1 answer)

The Java Persistent API defines the `Query` interface. Which statement is true about the `Query.executeUpdate` method?

A. It must always be executed within a transaction

B. All managed entity objects corresponding to database rows affected by the update will have their state changed to correspond with the update

C. It throws a `PersistenceException` if no entities were updated.

c - (Choose 1 answer)

If you want to send an entity object as the pass by value through a remote interface, which of the following statements are valid? (Choose one)

A. `public class Employees implements Serializable{`  
...  
}

B. `@Entity`  
`public class Employees implements Serializable{`  
...  
}

C. @entity  
public class Employees implements Serializable{  
...  
}

D. @Entity  
public class Employees implements SessionSynchronization{  
...  
}

a - (Choose 1 answer)

When you obtain a session (using getSession() of HttpServletRequest object), the web container manufactures a unique ID string for the session. This is passed as a token between the client and server.

A. True

B. False

c - (Choose 1 answer)

Which of the following lines of code, in the doPost() method of a servlet, uses the RL rewriting approach to maintaining sessions? (Choose one)

A. request.useURLRewriting();

B. out.println(response.rewrite("<a href='/servlet/XServlet'>Click here</a>"));

C. out.println("<a href='"+response.encodeURL("/servlet/XServlet")+"'>Click here</a>"));

D. out.println("<a href='"+request.rewrite("/servlet/XServlet")+"'>Click here</a>"));

a - (Choose 1 answer)

Which syntax is correct for JSP Scriptlets?

A. <% code%>

B. <%= code%>

C. <%! code %>

B - Which security mechanism proves that data has not been tampered with during its transit through the network?

A. Packet Sniffing

B. Data integrity

C. Data validation

D. Authentication

E. Data privacy

F. Authorization

A - Given that a servlet has been mapped to /account/. Identify the HttpServletRequest methods that will be return the /myapp segment for the URL: /myapp/account/\*.

A. getPathInfo



- B. `getServletPath`
- C. `getContextPath`

D - Identify the method used to get an object available in a session

- A. `get` of `Session`
- B. `getValues` of `HttpSession`
- C. `getAttribute` of `Session`
- D. `getAttribute` of `HttpSession`

A - Which is Not a standard technique for a session to be definitely invalidated?

- A. If the session timeout is set to 0 using `setMaxInactiveInterval()` method.
- B. No request comes from the client for more than "session timeout" period
- C. A servlet explicitly calls `invalidate()` on a session object
- D. The container is shutdown and brought up again

B - Objects with application scope are path of a particular Web application.

- A. True
- B. False

B - Which of the following tasks may happen in the translation phase of JSP page?

- A. Instantiation of the servlet class
- B. Creation of the servlet class corresponding to the JSP file
- C. None of the others
- D. Execution of `_jspService()` method

E - Which JSP tag can be used to set bean property?

- A. `jsp:property`
- B. `jsp:useBean.setProperty`
- C. `jsp:useBean`
- D. `jsp:useBean.Property`
- E. `jsp:setProperty`

A - What is the correct consequence of attempting to access the following JSP page?

```
<html>
<body>
<%!
public void _jspService(HttpServletRequest request, HttpServletResponse response){
out.write("A");
}
%>
<% out.write("B"); %>
</body>
</html>
```

- A. Duplicate method compilation error.
- B. "A" is output to the response before "B".

- C. "A" is output to the response
- D. "B" is output to the response

B - When implementing a tag, if the tag does not include the body, then the tag handler class must extend the BodyTagSupport class.

- A. True
- B. False

B - Which of the following statement is correct?

- A. Data Integrity means that the data cannot be viewed by anybody other than its intended recipient.
- B. Authentication means determining whether one has access to a particular resource or not
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver

D - \_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:forward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include>

D - Study the statement:

- 1) The special directory /WEB-INF/lib contains Java class files—servlets and supporting code
- 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true.
- D. Both 1 and 2 are not true.

D - A JSP page has the following page directives:

```
<%@page isErrorPage='False' %>
<%@page errorPage='jsp/myerror.jsp' %>
```

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception

B - Which statement BEST describes class attribute of <jsp:useBean class= ... /> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans. load a JavaBean into memory
- B. The fully qualified class name of the Java object

C. The name used to manipulate the Java object with actions `<jsp:getProperty>`. A variable or this name is also declared for use in JSP scripting elements. The name specified here ca...

D. The type of the Java.Bean This can be the same type as the class attribute, a superclass that type or an interface implemented by that type .The default value is the same as for attribute class A ClassCas...

E. The scope in which the Java object is accessible—page, request, session or application. The default scope is page.

B - Action `<jsp:setProperty>` has the ability to match request parameters to properties of the same name in a bean by specifying "\*" for attribute property

A. False

B. True

C - Which are the correct line of code to get information in the following `<context-param>` tag in the web.xml fi.....  
... Assume that response and request refer to `HttpServletResponse` and `HttpServletRequest` respectively:

```
<web-app>
<context-param>
<param-name>machineName</param-name>
<param-value>cms-server</param-value>
</context-param>
</web-app>
```

A. `response.getParameter("machineName");`

B. `request.getParameter("machineName");`

C. `ServletContextsc = getServletContext();`  
`String serverName = sc getInitParameter("machmeName")`

D. `ServletConfigse = getServletConfig();`  
`String serverName = sc getInitParameter("machmeName")`

C - Which statements are BEST describe uri attribute `<%@ taglib uri=_%>`

A. The scripting language used in the JSP. Currently, the only valid value for this attribute is Java

B. Allows programmers to include their own new tags in the libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.

C. Specifies the relative or absolute URI of the tag library descriptor

D. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix name `jsp`, `jspx`, `java`, `java x`, `servlet sun` and `sunw` are reserved

B - Consider the following java code:

```
//in file Book.java
package com.bookstore;
public class Book
{
```

```
private long isbn;
public Book() {isbn = 0;}
public long getIsbn() {return isbn;}
public void setIsbn(long value) {this isbn = value;}
}
```

Code for browser.jsp:

```
<jsp:useBean class = "com.bookstore.Book" id = "newbook"/>
```

```
LINE1: <jsp:setProperty name ="newbook" property = "isbn" value = "1000"/>
```

Which of the following statements are correct?

A. The isbn property of newbook will be set to 1000 if  
'value' attribute of 'setProperty' tag is given as: value = 1000

B. The isbn property of newbook will be set to 1000

C. It will not compile

D - Identify the technique that can be used to implement 'session' if the client browser does not support cookies

A. It can not be done without cookie support

B. Using Http headers.

C. URL Writing

D. Hidden form fields

D - Name the default value of the scope attribute of <jsp:useBean>

A. request

B. application

C. session

D. page

A - A custom tag can be nested inside another custom tag

A. True

B. False

B - How can you ensure the continuity of the session while using HttpServletResponse.sendRedirect() method when cookies are not supported by the client?

A. By using HttpServletRequest.encodeRedirectURL() method.

B. By encoding the direct path with HttpServletRequest.encodeRedirectURL() method.

C. By using hidden parameters

C - You have to send a PDF file to the client as response to a request. Which of the following calls will you have to make

- A. response.setType("application/pdf");
- B. response.setContentType("image/pdf");
- C. response.setContentType("application/pdf");
- D. response.setType("image/pdf");

C - Which of the following is a sensible way of the sending an error page to the client in the case of a business exception that extends from java.lang.Exception?

- A. Don't do anything, the servlet container will automatically send a default error page
- B. Don't catch the exception and define the exception to error-page' mapping in web.xml
- C. Catch the exception, wrap it into ServletException and define the 'business exception to error-page' mapping in web.xml

C - What is the output of the following code snippet of a JSP page?

```
${empty""}

${empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true

B - Which option can be used to predefine Java Persistence queries for easy use?

- A. @NamedNativeQuery annotation
- B. @NamedQuery annotation
- C. using the named-native element in the XML descriptor

B - Servlet methods are executed automatically

- A. False
- B. True

C - A JSP \_\_\_\_\_ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the \_jspService method that is called by service to process the request)

- A. expression
- B. scriptlet
- C. declaration

B - Which is NOT associated with the business tier in a JEE (J2EE) web-base application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans

D - Which is NOT a correct statement about entity beans?

- A. They are used to share data among client

- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes

B - If you want the same Servlet to handle both GET and POST and to take the same action for each, you can simply have doGet call doPost or vice versa

- A. False
- B. True

A - Given that a servlet has been mapped to /account/. Identify the HttpServletRequest methods that will return the account segment for the URL: /myapp/account/.

- A. getServletPath
- B. getPathInfo
- C. getContextPath

B - Which statement is true about the use of a persist operation in a transaction of an Entity Beans

- A. If an user persists a managed entity an exception may be thrown by the persist operation
- B. If an user persist a new entity with an existing primary key the transaction will fail
- C. The persist operation on an entity always cascades to its related entities
- D. If an user persist a detached object it always become managed

D - A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail

C - Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser?

- A. getFormValue("email") of HttpServletRequest
- B. getField("email") of HttpServletRequest
- C. getParameter("email") of HttpServletRequest
- D. getFormValue("email") of HttpServlet

D - Which of the following statements is correct?

- A. The response from the server to a GET request does not contain a document
- B. The setStatus method defined in the HttpServletRequest class takes an int as argument and sets the status of Http response
- C. The response from the server to a HEAD request consist of status line, content type and the document
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus

method

A - Which of the following methods can be used to add cookies to a servlet response?

- A. `HttpServletResponse.addCookie(Cookie cookie)`
- B. `ServletResponse.addCookie(Cookie cookie)`
- C. `ServletResponse.addCookie(String contents)`
- D. `HttpServletResponse.addCookie(String contents)`

A - Which the following classes define the methods `setStatus(...)` and `sendError(...)` used to send an HTTP error back to the browser?

- A. Both are defined in `HttpServletResponse`
- B. Both are defined in `ServletResponse`
- C. `HttpServletResponse` and `ServletResponse` respectively
- D. `ServletResponse` and `HttpServletResponse` respectively

D - Your web application named "FWorks" uses `SpecialMath.class`. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A. `FWorks/classes`
- B. `FWorks/WEB-INF/lib/classes`
- C. `FWorks/WEB-INF`
- D. `FWorks/WEB-INF/classes`

A - Identify the correct element is required for a valid `<taglib>` tag in `web.xml`

- A. `<taglib-uri>`
- B. `<uri>`
- C. `<uri-name>`
- D. `<uri-location>`
- E. `<tag-uri>`

D - Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException
{
 res.getWriter().print("Hello");
 RequestDispatcher rd = getServletContext().getRequestDispatcher("/test.jsp");
 rd.include(req, res);
 res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of output

D. "Hello" and "World" both will be a part of the output

D - Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets
- E. directives

C - Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JSM
- C. Servlet
- D. MOM (Message-Oriented Middleware Product)

A - A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible only to the servlet it is defined for
- B. It is accessible to all the servlets of all the webapps of the container
- C. It is accessible to all the servlets of the webapp.

D - Identify the parent element of <session-timeout> element in web.xml

- A. <session-configuration>
- B. <webapp>
- C. <session\_config>
- D. <session-config>

B - The deployment descriptor of a web application must have the name web.xml. In the same way the tag library descriptor file must be called taglib.xml

- A. True
- B. False

D - Which of the following are correct JSP expressions?

- A. <%= out.println("hello"); %>
- B. <% "Hello World"; %>
- C. <%= "Hello World"; %>
- D. <%= new Date() %>

A - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. \WEB-INF\lib
- B. \jars
- C. \WEB-INF
- D. \WEB-INF\classes



A - A state session bean must commit a transaction before a business method

- A. True
- B. False

C - For what reason does the following JSP fail to translate and compile?

```
<html>
<body>
<%! int x;%>
<%
public String getDescription(){
return "JAD Final Test";
}
%>
</body>
</html>
```

- A. Data member x not initialized before use.
- B. Method declared in scriptlet
- C. Expression embedded in declaration.
- D. The page actually compiles and translates without any problem.
- E. Local variable x not initialized before use.

a - Given that a servlet has been mapped to /account/\*\* . Identify the HttpServletRequest methods that will return the segment for the URI: /myapp/account/\*\* .

- A. getPathInfo
- B. getServletPath
- C. getContextPath

d - Identify the method used to get an object available in a session. (Choose one)

- A. get of Session
- B. getValue of HttpSession
- C. getAttribute of Session
- D. getAttribute of HttpSession

e - Which jsp tag can be used to set bean property?

- A. jsp:property
- B. jsp:useBean.setProperty
- C. jsp:useBean
- D. jsp:useBean.property
- E. jsp:setProperty

a - What is the consequence of attempting to access the following JSP page?

```
<html>
<body>
<%!
public void JspService(HttpServletRequest request HttpServletResponse response) { outwrite("A");
}
```

```
%>
<% outwritef("B"): %>
</body>
</html>
```

- A. Duplicate method compilation error.
- B. "A" is output to the response before "B".
- C. "A" is output to the response.
- D. "B" is output to the response.

b - Which of the following statement is correct?

- A. Data Integrity means that the data cannot be viewed by anybody other than it's intended receipient
- B. Authentication means determining whether one has access to a particular resource or not
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver.

d - \_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:forward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include>

d - Study the statements:

- 1) The special directory/WEB-INF/lib contains Java class files—servlets and supporting code.
- 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.
- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true
- D. Both 1 and 2 are not true

b - Which statements are BEST describe class attribute of <jsp:useBean class=\_\_ ./> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- B. The fully qualified class name of the Java object
- C. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is ca
- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class.

b - Action <jsp:setProperty> has the ability to match request parameters to properties of the same name in a bean by specifying "\*" for attribute property.

- A. False
- B. True

c - Which are the correct lines of code to get information in the following<context-param> tag in the web.xml fi Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. response.getParameter('machineName');
- B. request.getParameter( machineName');
- C. ServletContextsc = getServletContextO;
- String serverName = sc.getlnitParameter("machineName");
- D. ServletConfigsc = getServletConfigO;
- String serverName = sc.getlnitParameterfmachineName");

-----

```

<web-app>
<concexc-param>
<parair - narr.e >mach i neN ame < / p a r air - name >
<parair.-value>cms-server</parair.-value>
</context-parair.>
</web-app>|

```

b - Consider the following java code:

```

//in file Book.java package com.bookstore; public class Book {
private long isbn;
public BookO{ isbn = 0;}
public long getlsbn(){ return isbn;}
public void setlsbn(long value){ this.isbn = value;}
}

```

Code for browse.jsp:

```

<jsp:useBean class="com.bookstore.Book" id="newbook"/>

```

```

LINE 1: <jsp:setProperty name="newbook" property="isbn" value="1000"/>

```

Which of the following statements are correct?

- A. The isbn property of new book will be set to 1000 if nbsp;nbsp;'value' attribute of 'setProperty' tag is given as: value=1000
- B. The isbn property of newbookwill be set to 1000.
- C. It will not compile.

d - Identify the technique that can be used to implement 'sessions' if the client browser does not support cookies.(Choose one)

- A. It cannot be done without cookie support
- B. Using Http headers.
- C. URL Writing
- D. Hidden form fields.

d - Name the default value of the scope attribute of <jsp:useBean>

- A. request
- B. application
- C. session
- D. page

c - You have to send a pdf file to the client as a response to a request Which of the following calls will you have to make? (Choose one)

- A. response.setType("application/pdf");
- B. response.setContentType("image/pdf");
- C. response.setContentType("application/pdf");
- D. response.setType("image/pdf");

c - A JSP\_\_\_\_\_lets you define methods or fields that get inserted into the main body of the servlet class (outside of the JspService method that is called by service to process the request).

- A. expression
- B. scriptlet
- c. declaration

d - Which is NOT a correct statement about entity beans?

- A. They are used to share data among clients
- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes

a - If you want the same Servlet to handle both GET and POST and to take the same action for each, you can simply have doGet call doPost or vice versa.

- A. False
- B. True

d - A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail

c - Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A. getFormValue("email") of HttpServletRequest
- B. getField(email") of HttpServletRequest
- C. getParameter("email") of ServletRequest
- D. getParameters("email") of HttpServlet

a - Which of the following methods can be used to add cookies to a servlet response?

- A. HttpServletResponse.addCookie(Cookie cookie)
- B. ServletResponse.addCookie(Cookie cookie)
- C. ServletResponse.addCookie(String contents)
- D. HttpServletResponse.addCookie(String contents)
- E. ServletResponse.addHeader(String name, String value)

d - Your web application named "FWorks" uses SpecialMath.class. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A. FWorks/classes
- B. FWorks/WEB-INF/lib/classes
- C. FWorks/WEB-INF
- D. FWorks/WEB-INF/classes

d - Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets
- E. directives

a - A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible only to the servlet it is defined for.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible to all the servlets of the webapp.

d - Identify the parent element of <session-timeout> element in web.xml

- A. <session-configuration>
- B. <webapp>
- C. <session\_config>
- D. <session-config>

b - Is this statement true or false? The deployment descriptor of a web application must have the name web.xml. In t

the same way the tag library descriptor file must be called taglib.xml.

- A. True
- B. False

d - Which of the following are correct JSP expressions?

- A. `<%= out.println("hello"); %>`
- B. `<% "Hello World"; %>`
- C. `<%= "Hello World"; %>`
- D. `<%= new Date() %>`

a - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. `\WEB-INF\lib`
- B. `\jars`
- C. `\WEB-INF`
- D. `\WEB-INF\classes`

b - Which security mechanism proves that data has not been tampered with during its transit through the network?

- A. Packet sniffing
- B. Data integrity
- C. Data validation
- D. Authentication
- E. Data privacy
- F. Authorization

d - A JSP page has the following page directives:

```
<%@page isErrorPage='false' %>
<%@page errorPage='/jsp/myerror.jsp' %>
```

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception

c - Which statements are BEST describe uri attribute of `<%@ taglib uri=_%>` directive of JSP file?

- A. The scripting language used in the JSP. Currently, the only valid value for this attribute is java.
- B. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- C. Specifies the relative or absolute URI of the tag library descriptor.
- D. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names jsp, jsp.x, java, javax, servlet, sun and sunw are reserved.

a - A custom tag can be nested inside another custom tag.

- A. true
- B. false

a - Which is NOT a standard technique for a session be definitely invalidated?

- A. If the session time out is set to 0 using `setMaxInactiveInterval()` method.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls `invalidate()` on a session object
- D. The container is shutdown and brought up again.

b - Objects with application scope are part of a particular Web application.

- A. False

B. True

b - Which of the following task may happen in the translation phase of JSP page? (Choose one)

- A. Instantiation of the servlet class.
- B. Creation of the servlet class corresponding to the JSP file.
- C. None of the others
- D. Execution of JspServiceQ method.

b - When implementing a tag, if the tag does not include the body, then the tag handler class must extend the BodyTagSupport class. Is this statement true or false?

- A. True
- B. False

b - How can you ensure the continuity of the session while using HttpServletResponse.sendRedirect() method when cookies are not supported by the client?

- A. By using HttpServletResponse.encodeURL() method.
- B. By encoding the redirect path with HttpServletResponse.encodeRedirectURL() method.
- C. By using hidden parameters.

c - Which of the following is a sensible way of sending an error page to the client in case of a business exception that extends from java.lang.Exception? (Choose one)

- A. Don't do anything, the servlet container will automatically send a default error page.
- B. Don't catch the exception and define the 'exception to error-page' mapping in web.xml
- C. Catch the exception, wrap it into ServletException and define the 'business exception to error-page' mapping in web.xml

b - What is the output of the following code snippet of a JSP page?

```
${empty""}

${empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true

b - Which option can be used to predefine Java Persistence queries for easy use?

- A. @NamedNativeQuery annotation
- B. @NamedQuery annotation
- C. using the named-native-query element in the XML descriptor

b - Servlet methods are executed automatically.

- A. False
- B. True

b - Which is NOT associated with the business tier in a JEE (J2EE) web-based application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans

d - Which of the following statements is correct? Select the one correct answer.

- A. The response from the server to a GET request does not contain a document
- B. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of the response
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus

method.

a - Which of the following classes define the methods setStatus(...) and sendError(...) used to send an HTTP error back to the browser? (Choose one)

- A. Both are defined in HttpServletResponse.
- B. Both are defined in ServletResponse
- C. HttpServletResponse and ServletResponse respectively.
- D. ServletResponse and HttpServletResponse respectively.

a - Identify the correct element is required for a valid <taglib> tag in web.xml (Choose one)

- A. <taglib-uri>
- B. <uri>
- C. <uri-name>
- D. <uri-location>
- E. <tag-uri>

d - (Choose 1 answer)

Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException {
 res.getWriter().print("Hello");
 RequestDispatcher rd = getServletContext().getRequestDispatcher("/testjsp");
 rd.include(req, res);
 res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of the output
- D. "Hello" and "World" both will be a part of the output

c - Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JMS
- C. Servlets
- D. MOM (Message-Oriented Middleware Product)

a - A stateful session bean must commit a transaction before a business method

- A. False
- B. True

b - If you want the same Servlet to handle both GET and POST and to take the same action for each , you can simply have doGet call doPost , or vice versa

- A. False
- B. True

d - Which is correct JDBC-ODBC driver name?

Chọn một câu trả lời

- a) jdbc.odbc.sun.JdbcOdbcDriver
- b) sun.driver.jdbc.odbc
- c) jdbc.odbc.sun.driver
- d) sun.jdbc.odbc.JdbcOdbcDriver

ade - Choose three correct statements in JDBC

Chọn ít nhất một câu trả lời

- a) getObject

- b) getLine
- c) getText
- d) getInt
- e) getString

c - Which is correct sequence for a JDBC execution?

Chọn một câu trả lời

- a) Connection -> Load Driver -> Statement -> ResultSet
- b) Load Driver -> Statement -> ResultSet -> Connection
- c) Load Driver -> Connection -> Statement -> ResultSet
- d) Statement -> Connection -> ResultSet -> Load Driver

ad - Which are the correct statements of Connection object? (Choose two)

- a) createStatement(int, int);
- b) createStatement(int, String);
- c) createStatement(String, int);
- d) createStatement();

acd - Which are the correct statements of ResultSet object? (Choose three)

- a) executeQuery()
- b) executeBatch()
- c) execute()
- d) executeUpdate()

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

- a) getOutputStream
- b) getBinaryStream
- c) getWriter
- d) getStream

c - Which of the following files is the correct name and location of deployment descriptor of a web application. Assume that the web application is rooted at \doc-root. Select the one correct answer

- a) \doc-root\dd.xml
- b) \doc-root\WEB-INF\dd.xml
- c) \doc-root\WEB-INF\web.xml
- d) \doc-root\web.xml
- e) \doc-root\WEB\_INF\dd.xml

c - Which of these is true about deployment descriptors. Select the one correct answer

Chọn một câu trả lời

- a) The servlet-mapping element, if defined, must be included within the servlet element.
- b) The web-app element must include the servlet element
- c) The order of elements in deployment descriptor is important. The elements must follow a specific order
- d) The elements of deployment descriptor are case insensitive

d - The exception-type element specifies an exception type and is used to handle exceptions generated from a servlet. Which element of the deployment descriptor includes the exception-type as a sub-element. Do not include the element in enclosing parenthesis

- a) error
- b) exception
- c) exception-page



d) error-page

a - \_\_\_\_\_ is a set of java API for executing SQL statements.

- a) JDBC
- b) JAVADB
- c) ODBC
- d) None of the other choices

b - JDBC supports \_\_\_\_\_ and \_\_\_\_\_ models.

Chọn một câu trả lời

- a) Three-tier and four-tier
- b) Two-tier and three-tier
- c) None of the other choices
- d) Single-tier and two-tier

b - URL referring to databases use the form:

Chọn một câu trả lời

- a) protocol:subprotocol:datasoursename
- b) jdbc:odbc:datasoursename
- c) protocol:datasoursename
- d) jdbc:datasoursename

c - Study the statements:

1)When a JDBC connection is created, it is in auto-commit mode

2)Once auto-commit mode is disabled, no SQL statements will be committed until you call the method commit explicitly

Chọn một câu trả lời

- a) Only statement 2 is true
- b) Both 1 and 2 are not true
- c) Both 1 and 2 are true
- d) Only statement 1 is true

c - The \_\_\_\_\_ class is the primary class that has the driver information.

Chọn một câu trả lời

- a) None of the other choices
- b) Driver
- c) DriverManager
- d) ODBCDriver

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

- A. HttpServletRequest
- B. HttpServletResponse
- C. ServletConfig
- D. ServletContext

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

- A. setType
- B. setContent
- C. setContentType
- D. setResponseContentType

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

- A. The response from the dedicated server to a HEAD request consists of status line, content type and the document.
- B. The response from the server to a GET request does not contain a document.
- C. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus method.

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY
- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY
- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

a - . Which of the following statements are correct about the status of the Http response. Select the one correct answer.

- A. A status of 200 to 299 signifies that the request was successful.
- B. A status of 300 to 399 are informational messages.
- C. A status of 400 to 499 indicates an error in the server.
- D. A status of 500 to 599 indicates an error in the client.

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- a. True
- b. False

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

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

- B. The include method defined in the RequestDispatcher class can be used to access one servlet from another. But it can be invoked only if no output has been sent to the server.
- C. The getRequestDispatcher(String URL) is defined in both ServletContext and HttpServletRequest method
- D. The getNamedDispatcher(String) defined in HttpServletRequest class takes the name of the servlet and returns an object of RequestDispatcher class.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. POST allows users to bookmark URLs with parameters.
- B. The POST method should not be used when large amount of data needs to be transferred.
- C. POST allows secure data transmission over the http method.
- D. POST method sends data in the body of the request.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. CONNECT method
- B. COMPARE method
- C. OPTIONS method
- D. TRACE method

b - Name the http method used to send resources to the server. Select the one correct answer.

- A. FTP method
- B. PUT method
- C. WRITE method
- D. COPY method

b - . Name the http method that sends the same response as the request. Select the one correct answer.

- A. DEBUG method
- B. TRACE method
- C. OPTIONS method
- D. HEAD method

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

- A. Codes starting from 200
- B. Codes starting from 300
- C. Codes starting from 400
- D. Codes starting from 500

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

- A. /META-INF/classes
- B. /classes
- C. /WEB-INF/classes
- D. /root/classes

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

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

`<%= i; %>`

B. `<%int i = 1;`

`i; %>`

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

`<%= i %>`

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

`<%= i %>`

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

`<%= i; %>`

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

```
<%! String myName=request.getParameter();%>
```

```
<% String test= "welcome" + myName; %>
```

```
<%= test%>
```

A. The program prints "Welcome John"

B. The program gives a syntax error because of the statement

```
<%! String myName=request.getParameter();%>
```

C. The program gives a syntax error because of the statement

```
<% String test= "welcome" + myName; %>
```

D. The program gives a syntax error because of the statement

```
<%= test%>
```

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

```
<%=x%>
```

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

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

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

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

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

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

```
<%x=1;%>
```

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

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

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

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

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

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

```
<%= if(Math.random() < 0.5) %>
```

```
hello
```

```
<%= } else { %>
```

```
hi
```

```
<%= } %>
```

A. The browser will print either hello or hi based upon the return value of random.

B. The string hello will always get printed.

C. The string hi will always get printed.

D. The JSP file will not compile.

d - Which of the following are correct. Select the one correct answer.

- A. JSP scriptlets and declarations result in code that is inserted inside the `_jspService` method.
- B. The JSP statement `<%! int x; %>` is equivalent to the statement `<jsp:scriptlet>int x;</jsp:scriptlet%>`.
- C. The following are some of the predefined variables that maybe used in JSP expression - `httpSession`, `context`.
- D. To use the character `%>` inside a scriptlet, you may use `%\>` instead.

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

```
<% int y = 0; %>
```

```
<% int z = 0; %>
```

```
<% for(int x=0;x<3;x++) { %>
```

```
<% z++;++y;%>
```

```
<% } %>
```

```
<% if(z<y) { %>
```

```
<%= z %>
```

```
<% } else { %>
```

```
<%= z - 1 %>
```

```
<% } %>
```

A. 0

B. 1

C. 2

D. 3

E. The program generates compilation error.

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

A. `out`

B. `session`

C. `request`

D. `response`

E. `httpsession`

F. `page`

d - A bean with a property `color` is loaded using the following statement

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

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

A. `<jsp:getColor bean="fruit"/>`

B. `<jsp:getProperty id="fruit" property="color"/>`

C. `<jsp:getProperty bean="fruit" property="color"/>`

D. `<jsp:getProperty name="fruit" property="color"/>`

E. `<jsp:getProperty class="Fruit" property="color"/>`

c - A bean with a property `color` is loaded using the following statement

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

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

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

A. This is incorrect syntax of `<jsp:setProperty/>` and will generate a compilation error. Either `value` or `param` must be defined.

B. All the properties of the fruit bean are initialized to a value of `null`.

C. All the properties of the fruit bean are assigned the values of input parameters of the JSP page that have the same name.

D. All the properties of the fruit bean are initialized to a value of `*`.

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

- A. <jsp:usebean id="fruit scope ="page"/>
- B. <jsp:usebean id="fruit type ="String"/>
- C. <jsp:usebean id="fruit type ="String" beanName="Fruit"/>
- D. <jsp:usebean id="fruit class="Fruit" beanName="Fruit"/>

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

- A. page
- B. application
- C. session
- D. request

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

- A. The id attribute must be defined for <jsp:usebean>.
- B. The scope attribute must be defined for <jsp:usebean>.
- C. The class attribute must be defined for <jsp:usebean>.
- D. The <jsp:usebean> must include either type or class attribute or both.

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

- A. include
- B. scope
- C. errorPage
- D. session
- E. debug

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

- A. <jsp:include file="a.jsp"/>
- B. <jsp:include page="a.jsp"/>
- C. <jsp:directive.include file="a.jsp"/>
- D. There is no XML equivalent of include directive.

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

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

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

- A. <% sum = sum + j %>
- B. <% sum = sum + j; %>
- C. <%= sum = sum + j %>
- D. <%= sum = sum + j; %>

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

- A. <% sum %>
- B. <% sum; %>
- C. <%= sum %>
- D. <%= sum; %>

d - JSP pages have access to implicit objects that are exposed automatically. One such object that is available is requ

est. The request object is an instance of which class?

- A. HttpRequest
- B. ServletRequest
- C. Request
- D. HttpServletRequest

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

- A. session
- B. application
- C. httpSession
- D. httpsession

d - A Java bean with a property color is loaded using the following statement

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

What is the effect of the following statement.

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

Select the one correct answer.

- A. An error gets generated because the value attribute of setAttribute is not defined.
- B. The color attribute is assigned a value null.
- C. The color attribute is assigned a value "".
- D. If there is a non-null request parameter with name color, then its value gets assigned to color property of Java Bean fruit

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

- A. <% page info="test page" %>
- B. <%@ page info="test page" session="false"%>
- C. <%@ page session="true" %>
- D. <%@ page isErrorPage="errorPage.jsp" %>
- E. <%@ page isThreadSafe=true %>

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

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

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

- A. Yes. This is legal JSP syntax.
- B. No. This code will generate syntax errors

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

- A. contentType
- B. generateXML
- C. type
- D. outputXML

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

- A. extends
- B. import
- C. include
- D. package
- E. classpath

ac - Which of these are true. Select the two correct answers.

- A. The default value of isThreadSafe attribute of page directive is true.
- B. If isThreadSafe attribute of page directive is set to true, then JSP container dispatches request for the page sequentially.
- C. When isThreadSafe attribute of page directive is set to true, a thread is created for each request for the page.
- D. Setting isThreadSafe attribute to true for JSP pages, can lead to poor performance.

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

- A. include
- B. exclude
- C. import
- D. taglibrary
- E. servlet
- F. page

d - Which of these is true about include directive. Select the one correct answer.

- A. The included file must have jspf extension.
- B. The XML syntax of include directive is `<jsp:include file="fileName"/>`.
- C. The content of file included using include directive, cannot refer to variables local to the original page.
- D. When using the include directive, the JSP container treats the file to be included as if it was part of the original file.

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

- A. page
- B. pageContext
- C. context
- D. object
- E. jspPage

ad - Message-driven beans are classes that implement 2 interfaces :

- [A]  
javax.ejb.MessageDrivenBean
- [B]  
javax.jms.Message
- [C]  
javax.jms.MessageBean
- [D]  
javax.jms.MessageListener

ab - Which are the types of messaging domains ? (choose 2)

- [A]  
Publish/Subscribe
- [B]  
Point-to-Point
- [C]  
Peer-to-Peer
- [D]  
Broadcast/Receiver

d - Select the correct JMS programming model

- [A]  
Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message
- [B]



Locate the JMS Driver ->Create a JMS session ->Create a JMS connection ->Locate the JMS destination ->Create a JMS producer or a JMS consumer -> Send or receive message

[C]

Locate the JMS Driver ->Create a JMS connection -> Locate the JMS destination ->Create a JMS producer or a JMS consumer -> Send or receive message

[D]

Locate the JMS Driver ->Create a JMS connection ->Create a JMS session ->Create a JMS producer or a JMS consumer -> Send or receive message

b - Message-driven beans do not have any return value

[A]

True

[B]

False

a - Select the word to replace ??? to make the diagram about messaging domain correct

[A]

Topic

[B]

Queue

[C]

PTP

[D]

Pub/Sub//

d - A \_\_\_\_ subscription to a topic means that a JMS subscriber receives all message even if the subscriber is inactive

[A]

temporary

[B]

nondurable

[C]

persistent

[D]

Durable

a - In ejb-jar.xml file, <persistence-type> element value is \_\_\_\_\_

[A]

Bean or Container

[B]

Container-Managed-Persistent

[C]

Bean-Managed-Persistent

[D]

BMP or CMP

a - Entity bean is \_\_\_\_\_

[A]

a persistent data component

[B]

a database object

[C]

an application logic component

[D]  
an object-relational mapping

d - ejbCreate() method of entity bean class returns \_\_\_\_\_

- [A]  
remote object
- [B]  
null
- [C]  
home object
- [D]  
primary key

a - create() method of entity home interface returns \_\_\_\_\_

- [A]  
null
- [B]  
remote object
- [C]  
primary key
- [D]  
home object

ac - select CORRECT statement (choose 2)

- [A]  
Entity beans represent persistent state objects (things that don't go away when user goes away)
- [B]  
Session beans represent persistent state objects (things that don't go away when user goes away)
- [C]  
Session beans model a process or workflow (actions that are started by the user and that do away when user goes away)
- [D]  
Entity beans model a process or workflow (action that are started by the user and that go way when user goes away)

c - The \_\_\_\_\_ class makes every entity bean different

- [A]  
bean key
- [B]  
bean ID
- [C]  
primary key
- [D]  
key

acd - The top three values of EJB are (choose 3):

- [A]  
Portability is easier
- [B]  
Distributed application
- [C]  
Rapid Application Development
- [D]  
It is agreed upon by the industry
- [E]

Easy to upgrade

a - Which is not the players in the EJB Ecosystem? (choose 1):

[A]

End User

[B]

EJB Deployer

[C]

System Administrator

[D]

Application Assembler

[E]

Bean provider

a - The \_\_\_\_\_ is the overall application architect .This party is responsible for understanding how various components fit together and writes the application that combine components.

[A]

Application Assembler

[B]

Application Builder

[C]

Deployer

[D]

Developer

c - which is not the role of EJB Deployer?

[A]

Securing the deployment with a firewall

[B]

Performance-tuning the system

[C]

Write the code that calls on components supplied by bean providers

[D]

Choosing hardware that provides the required level of performance

abe - Which are EJB containers ? (choose three)

[A]

JBoss

[B]

BEA's WebLogic

[C]

Microsoft Application Server

[D]

Apache Tomcat 5.5

[E]

IBM WebSphere

d - The \_\_\_\_\_ supplies business components,or enterprise beans

[A]

Tool vendor

[B]

Application assembler

[C]

Deployer  
[D]  
Bean provider

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

[A]  
True  
[B]  
False

b - Given the following JSP and Tag handler code, what is the result of accessing the JSP ?

JSP Page Source

```
<html>
<body>
<%@taglib uri = "test_taglib" prefix = "myTag"%>
<% session.setAttribute("first", "first");%>
<myTag:TestTag/>

<%=session.getAttribute("second")%>
</body>
</html>
```

Tag Handler Code for <myTag:TestTag/>

```
package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
 private PageContext pageContext;

 public void setPage(PageContext page){
 this.pageContext=page;
 }

 public int doStartTag() throws JspException {
 try{
 String first = pageContext.getSession().getAttribute("first").toString();
 pageContext.getOut().write(first);
 pageContext.setAttribute("second", "second", PageContext.PAGE_SCOPE);
 }
 catch(IOException)
 {
 throw new JspException(i.getMessage());
 }
 return SKIP_BODY;
 }

 public int doEndTag() throws JspException{
 return EVAL_PAGE;
 }
}
```

```
public void release(){}

}
```

Assume \*.tld and web.xml files are correct.

- [A]  
second  
first
- [B]  
first  
second
- [C]  
first  
null
- [D]  
second  
null

b - When implementing a tag, if the tag does not include the body ,then the tag handler lass must extend the BodyTagSupport class.

Is this statement true or false.

- [A]  
True
- [B]  
False

ae - Which of these are legal return types of the doEndTag method defined in a class that extends TagSupport class.  
SELECT the two correct answers.

- [A]  
EVAL\_PAGE
- [B]  
EVAL\_BODY
- [C]  
EVAL\_PAGE\_INCLUDE
- [D]  
EVAL\_BODY\_INCLUDE
- [E]  
SKIP\_PAGE
- [F]  
SKIP\_BODY

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

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

- [A]  
The prefix defines the name of the tag that may be used for a tag library.
- [B]  
The prefix attribute defines the location of the tag library descriptor file
- [C]  
The prefix attribute should refer to the short name attribute of the tag library file that is defined by the uri attribute of taglib directive
- [D]  
The prefix attribute is used in front of a tag defined within the tag library

d - \_\_\_\_\_ sends a request to an object and includes the result in a JSP file.

[A]

include directive

[B]

import directive

[C]

<jsp:forward>

[D]

<jsp:include>

a - A programmer is designing a class to encapsulate the information about an inventory item. A JavaBeans component is needed to do this. The InventoryItem has private instance variables to store the item information:

10. private int itemId;

11. private String name;

12. private String description;

Which method signature follows the JavaBeans naming standards for modifying the itemId instance variable? (choose one)

[A]

setItemId(int itemId)

[B]

updateItemID(int itemId)

[C]

itemID(int itemId)

[D]

update(int itemId)

[E]

mutateItemId(int itemId)

a - Name the class that includes the getSession method that is used to get the HttpSession object

[A]

HttpServletRequest

[B]

HttpServletResponse

[C]

ServletContext

[D]

SessionConfig

bc - Which of the following are potential legal JSP source ? (choose 2)

[A]

<jsp:useBean id = "beanName1" class="a.b.MyBean" type="a.b.Myinterface"/>

[B]

<% String myValue = "myValue"; %>

<jsp:setProperty name = "beanName1" property="soleProp" value = "<%=myValue%>"/>

[C]

<%String className = "a.b.MyBean"; %>

<jsp:useBean id = "beanName2" class="<%=className%>"/>

[D]

<%String propName = "soleProp"; %>

<jsp:getProperty name = "beanName1" property="<%=propName%>" />

[E]

```
<%String beanName = "beanName3"; %>
<jsp:useBean id = "<%=beanName3%>" class="a.b.MyBean" />
```

d - (Choose 1 answer)

Which is NOT the main type of JSP constructs that you embed in a page?

- A. directives
- B. scripting elements
- C. HTML code
- D. actions

d - (Choose 1 answer)

Which statements are BEST describe <jsp:setProperty> Action?

- A. Sets a property in the specified JavaBean instance. A special feature of this action is automatic matching of request parameters to bean properties of the same name.
- B. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.
- C. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- D. Gets a property in the specified JavaBean instance and converts the result to a string for output in the response.

b - (Choose 1 answer)

Which of the following is INCORRECT statement about implicit objects and scope?

- A. page is of type java.lang.Object
- B. application can't be used to access other web application resources
- C. PageContext.findAttribute() can't be used to return a session scope attribute if an attribute of the same name exists in page scope.

a - (Choose 1 answer)

Which statement is true?

- A. When isThreadSafe attribute of page directive is set to true, a thread is created for each request for the page
- B. If isThreadSafe attribute of page directive is set to true, then JSP container dispatches request for the page sequentially
- C. Setting ThreadSafe attribute to true for JSP pages, can lead to poor performance.

b - (Choose 1 answer)

Which of these is legal return type of the doStartTag method defined in a class that extends TagSupport class?

- A EVAL\_PAGE
- B EVAL\_BODY
- C EVAL\_PAGE\_INCLUDE
- D EVAL\_BODY\_INCLUDE
- E SKIP\_PAGE

b - (Choose 1 answer)

Consider the code shown in the exhibit for the init() method of a HTTP servlet. Which of the following LOC "may" correctly retrieve the DBURL parameter at //1? (Assume that servletContext is a reference to ServletContext for this servlet. Choose one)

```
public void init()
{
 Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
 //1 Get DBURL here
 theConnection = DriverManager.getConnection(dbUrl, "admin", "admin");
}
```

A this `getParameterCDBURL()`.  
B this `getInitParameter("DBURL1")`.  
C this `getContextParameter("DBURL")`;

e - (Choose 1 answer)

What will be the outcome of executing the following code?

```
public void doGet(HttpServletRequest request HttpServletResponse response) throws ServletException, IOException {
 response.setContentType("text/plain");
 response.setContentLength(6);
```

```
 PrintWriter out = response.getWriter();
 out.write("What's your name?");
 out.write(" " + response.isCommitted());
```

- A. An `IllegalStateException` is thrown.
- B. "What's your name?" is returned to the client.
- C. A blank page is returned to the client
- D. Won't execute because of a compilation error.
- E. "What's" is returned to the client
- F. An `IllegalArgumentException` is thrown.

d - (Choose 1 answer)

A \_\_\_\_\_ manages the threading for the servlets and JSPs and provides the necessary interface with the Web server.

- A. Applets
- B. EJB Container
- C. Servlets
- D. Web Container

c - (Choose 1 answer)

Which of the following statement is true for `<jsp:useBean>` ?

- A. The class attribute must be defined for `<jsp:useBean>`.
- B. The scope attribute must be defined for `<jsp:useBean>`.
- C. The id attribute must be defined for `<jsp:useBean>`.

b - (Choose 1 answer)

Which of the following statement correctly set a cookie from a servlet code? (Choose one)

Assume that response and request refer to `HttpServletResponse` and `HttpServletRequest` respectively.

- A. `response.addCookie("mycookie". "value");`
- B. `response.addCookie(new Cookie("mycookie". "value"));`
- C. `response.setCookie("mycookie". "value");`
- D. `request.setCookie("mycookie". "value");`

a - (Choose 1 answer)

Which of the following statements is correct? (Choose one)

- A. To support sessions using URL rewriting, `<url-rewriting>true</url-rewriting>` must be specified in the deployment descriptor.
- B. If a web application uses HTTPS, the HTTPS response stream may be used to identify the client
- C. Access to attributes stored in a session is guaranteed to be thread safe.

b - (Choose 1 answer)

Which syntax is correct for JSP Scriptlets?

- A. `<%=code%>`
- B. `<%code%>`
- C. `<%! code %>`

a - (Choose 1 answer)

Which statement is true about EJB 3.0 stateful session beans and stateless session beans? (Choose one)

- A. Both can have multiple remote and local business interfaces



- B. Both can be passivated by the EJB container to preserve resource
- C. Only the stateful session bean class is required to implement java.io.Serializable interface
- D. Only the stateless session bean class is required to implement java.io.Serializable interface

b - (Choose 1 answer)

Which of the following statements are correct about HTTP Basic authentication mechanism?

- A. HTML FORM is used to capture username and password.
- B. Password is transmitted either in encrypted text or in plain text depending on the browser.
- C. Password is transmitted in an encrypted form.
- D. Password is transmitted as text.

d - (Choose 1 answer)

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

- A. SC\_INTERNAL\_SERVER\_ERROR
- B. SC\_NOT\_FOUND
- C. SC\_OK
- D. SC\_MOVED\_TEMPORARILY
- E. SC\_BAD\_REQUEST

a - (Choose 1 answer)

Which of the following statements is correct? Select the one correct answer.

- A. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- B. The response from the server to a GET request does not contain a document
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus method.

c - (Choose 1 answer)

\_\_\_\_\_ is the well-known host name that refers to your own computer.

- A. computer name
- B. ip
- C. localhost
- D. DNS

a - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It contains web components such as servlets as well as EJBs.
- B. It is an XML document
- C. It cannot be unpackaged by the container.
- D. It is used by web application developer to deliver the web application in a single unit

b - (Choose 1 answer)

Which of the following elements are used for error handling and are child elements of <web-app> of a deployment descriptor?

- A. <error-location>
- B. <error\_page>
- C. <error-page>
- D. <error>

a - (Choose 1 answer)

Which of the following statement is correct? (choose one)

- A. Authorization means determining whether one has access to a particular resource or not

- B. Authentication means determining whether one has access to a particular resource or not.
- C. Confidentiality and Authorization are one and the same thing.

c - (Choose 1 answer)

Which of these is legal attribute of page directive?.

- A. include
- B. scope
- C. errorPage
- D. debug

a - (Choose 1 answer)

Given that a servlet has been mapped to /account/\*. Identity the HttpServletRequest methods that will return the /\* s  
egementfor the URI: /myapp/account/\*.

- A. getPathInfo
- B. getServletPath
- C. getContextPath

d - (Choose 1 answer)

provides a way to identify a user across more than one page request or visit to a Web site and to store information ab  
out that user.

- A. Hidden Field
- B. URL Rewrite
- C. Cookie
- D. Session management

e - (Choose 1 answer)

A Java programmer wants to develop a browser-based multitier application for a large bank. Which Java edition (or  
editions) should be used to develop this system?

- A. Only J2ME
- B. Only J2EE
- C. J2SE and J2ME
- D. Only J2SE
- E. J2SE and J2EE

b - (Choose 1 answer)

Which statements are BEST describe page attribute of <jsp:include page =\_> Action?

- A. Forwards request processing to another JSP. servlet or static page. This action terminates the current JSP's execut  
ion.
- B. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and pro  
cessed.
- C. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- D. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID th  
at scripting components can use to manipulate the bean.

d - (Choose 1 answer)

Which of these is legal return types of the doAfterBody method defined in a class that extends TagSupport class?.

- A. EVAL.PAGE
- B. EVAL.BODY
- C. EVAL\_PAGE\_AGAIN
- D. SKIP\_BODY
- E. SKIP\_PAGE

e - (Choose 1 answer)

Which statements are BEST describe class attribute of `<jsp:useBean class=_. />` Action?

- A. The scope in which the Java object is accessible-page, request session or application. The default scope is page.
- B. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. A ClassCai
- C. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- D. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is cs
- E. The fully qualified class name of the Java object

a - (Choose 1 answer)

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

- A. `<%@page contentType="text/xml":>`
- B. `<%@page contentType="xml">`
- C. `<%@page contentType="text/html">`
- D. `<%@page contentType="html/xml">`

a - (Choose 1 answer)

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

- A. `HttpServletResponse`
- B. `ServletContext`
- C. `ServletConfig`
- D. `HttpServletRequest`

d - (Choose 1 answer)

A Java bean with a property `color` is loaded using the following statement `<jsp:useBean id="fruit" class="Fruit"/>`

What is the effect of the following statement `<jsp:setProperty name="fruit" property="color7">`

Select one correct answer.

- A. An error gets generated because the value attribute of `setAttribute` is not defined
- B. The `color` attribute is assigned a value `null`
- C. The `color` attribute is assigned a value `""`
- D. If there is a non-null request parameter with name `color`, then its value gets assigned to `color` property of Java Bean `fruit`

a - (Choose 1 answer)

Which statements are BEST describe request implicit object of jsp file?

- A. This object represents the client request. The object normally is an instance of a class that implements `HttpServletRequest` (package `javax.servlet.http`). If a protocol other than HTTP is used, this object is a
- B. This `javax.servlet.jsp.PageContext` object hides the implementation details of the underlying servlet and JSP container and provides JSP programmers with access to the implicit objects discussed in this ta
- C. This `javax.servlet.jsp.JspWriter` object writes text as part of the response to a request This object is used implicitly with JSP expressions and actions that insert string content in a response.
- D. This `java.lang.Object` object represents the this reference for the current JSP instance.
- E. This object represents the response to the client The object normally is an instance of a class that implements `HttpServletResponse` (package `javax.servlet.http`). If a protocol other than HTTP is used, this object is an instance of a class that implements `javax.servlet.ServletResponse`

b - (Choose 1 answer)

Consider the following `doGet` method code of a servlet:

```
public void doGet(HttpServletRequest req, HttpServletResponse res) {
 String command = req.getParameter("command"); if("remove".equals(command))
 {
```

```
HttpSession session = req.getSession();
```

```
//insert code here
```

```
}
}
```

If the command equals remove, you want to remove all the attributes from the session. Which of the following option will you use? (Choose one)

A. Enumerate the attribute names and remove them one by one from the session using removeAttribute(name) method.

B. session.invalidate();

C. session.unbind();

D. session.removeAttribute();

c - (Choose 1 answer)

Which of the following represents a correct syntax for using a Javabeen?

A. <jsp:useBean id="fruit" scope="page"/>

B. <jsp:useBean id="fruit" scope="page" type="String"/>

C. <jsp:useBean id="fruit" class="Fruit" beanName="Fruit"/> ®

D. None of these

c - (Choose 1 answer)

A bean with a property color is loaded using the following statement <jsp:useBean id="fruit" class="Fruit"/>

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

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

A. This is incorrect syntax of <jsp:setProperty/> and will generate a compilation error. Either value or param must be defined.

B. All the properties of the fruit bean are initialized to a value of null.

C. All the properties of the fruit bean are assigned the values of input parameters of the JSP page that have the same name.

D. All the properties of the fruit bean are initialized to a value of\*.

a - (Choose 1 answer)

Which of the following elements defines the properties of an attribute that a tag needs?

A. attribute

B. attribute-type

C. tag-attribute-type

D. tag-attribute

b - (Choose 1 answer)

A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the which element of the taglib element in the tag library descriptor file ?.

A. tagname

B. name

C. tag

D. prefix

c - (Choose 1 answer)

Which statements are BEST describe prefix attribute of <%@ taglib prefix=\_%>directive of JSP file?

A. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.

B. Specifies the relative or absolute URI of the tag library descriptor.

C. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names jsp, jsp, java, javax, servlet sun and sunw are reserved. ^

D. The scripting language used in the JSP. Currently, the only valid value for this attribute is java.

a - (Choose 1 answer)

The web.xml file for a webapp contains the following XML fragment for configuring session timeout <session-config>

```
<session-timeout>300</session-timeout>
</session-config>
```

What would be the session timeout interval for the sessions created in this web application?

- A. 300 minutes
- B. 300 milli seconds
- C. 300 hours
- D. 300 seconds

a - (Choose 1 answer)

The Java Persistent API defines the Query interface. Which statement is true about the Query.executeUpdate method ?

- A. It must always be executed within a transaction
- B. All managed entity objects corresponding to database rows affected by the update will have their state changed to correspond with the update
- C. It throws a PersistenceException if no entities were updated.

b - (Choose 1 answer)

Which statements are BEST describe <jsp:getProperty> Action?

- A. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- B. Sets a property in the specified JavaBean instance. A special feature of this action is automatic matching of request parameters to bean properties of the same name.
- C. Gets a property in the specified JavaBean instance and converts the result to a string for output in the response.
- D. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.

a - (Choose 1 answer)

What will be the result of pressing the submit button in the following HTML form?

```
<form action="/servlet/Register">
<input type="text" name="fullName" value="Type name here" />
<input type="submit" name="sbmButton" value="OK" />
</form>
```

- A. A request is sent with the HTTP method GET.
- B. A request is sent with the HTTP method POST.
- C. The parameter fullName is the only parameter passed to the web server in the request URL.
- D. A request is sent with the HTTP method HEAD.
- E. The parameter fullName is the only parameter passed to the web server as part of the request body.

a - (Choose 1 answer)

Which of the following is a sensible way of sending an error page to the client in case of a business exception that extends from java.lang.Exception? (Choose one)

- A. Catch the exception, wrap it into ServletException and define the 'business exception to error-page' mapping in web.xml
- B. Don't do anything, the servlet container will automatically send a default error page.
- C. Don't catch the exception and define the 'exception to error-page' mapping in web.xml

a - (Choose 1 answer)

You have declared a useBean tag as:

```
<jsp:useBean id="man" class="animal.Human" scope="application"/>
```

In which type of object will this bean be kept

?

- A. ApplicationContext
- B. Servlet
- C. ServletContext
- D. HttpSession
- E. ServletConfig

c - Which of the HTTP methods below is not considered to be "idempotent"? (Choose one.)

- A. GET
- B. TRACE
- C. POST
- D. HEAD
- E. OPTIONS
- F. SERVICE

a d e - Which of the HTTP methods below are likely to change state on the web server? (Choose three.)

- A. DELETE
- B. TRACE
- C. OPTIONS
- D. POST
- E. PUT
- F. CONNECT
- G. HEAD
- H. SERVICE

a b d e - Which of the following are valid servlet methods that match up with HTTP methods? (Choose four.)

- A. doGet()
- B. doPost()
- C. doConnect()
- D. doOptions()
- E. doHead()
- F. doRequest()
- G. doService()

c - What is the likely effect of calling a servlet with the POST HTTP method if that servlet does not have a doPost() method? (Choose one.)

A. If the servlet has a doGet() method, it executes that instead.

B. 404 response code: SC\_NOT\_FOUND.

C. 405 response code: SC\_METHOD\_NOT\_ALLOWED.

D. 500 response code: SC\_INTERNAL\_SERVER\_ERROR.

E. 501 response code: SC\_NOT\_IMPLEMENTED.

a - What is the likely effect of calling a servlet with the HEAD HTTP method if that servlet does not have a doHead() method? (Choose one.)

A. 200 response code: SC\_OK

B. 404 response code: SC\_NOT\_FOUND

C. 405 response code: SC\_METHOD\_NOT\_ALLOWED

D. 500 response code: SC\_INTERNAL\_SERVER\_ERROR

E. 501 response code: SC\_NOT\_IMPLEMENTED

c f - What will be the result of pressing the submit button in the following HTML form? (Choose two.)

```
<form action="/servlet/Register">
```

```
<input type="text" name="fullName" value="Type name here" /> <input type="submit" name="sbmButton" value="OK" /> </form>
```

A. A request is sent with the HTTP method HEAD.

B. A request is sent with the HTTP method POST.

C. A request is sent with the HTTP method GET.

D. The parameter fullName is the only parameter passed to the web server in the request URL.

E. The parameter fullName is the only parameter passed to the web server as part of the request body.

F. The parameters fullName and sbmButton are passed to the web server in the request URL.

G. The parameters fullName and sbmButton are passed to the web server as part of the request body.

H. No parameters are passed to the web server.

e - Consider the following form and servlet code. Assuming the user changes none of the default settings and presses submit, what will the servlet output in the response? (Choose one.)

```
<form action="PrintParams?param1=First" method="post"> <input type="hidden" name="param1" value="First" />
<input type="text" name="param1" value="Second" /> <input type="radio" name="param1" value="Third" /> <inp
```

```
ut type="submit" />
</form>
```

```
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 response.setContentType("text/html");
 PrintWriter out = response.getWriter();
 out.write("<html>\n<head>\n<title>Print
```

```
Parameters</title>\n</head>\n<body>");
```

```
String[] param1 = request.getParameterValues("param1");
for (int i = 0; i < param1.length; i++) {
 out.write(param1[i] + " ");
}
out.write("\n</body>\n</html>");
out.close();
}
```

A. First:Second:Third

B. First:Second:Second

C. First:Third:Third

D. Second:Third:First

E. First:First:Second

F. No response — servlet will not compile.

G. No response — ServletException occurs.

h - What is the maximum number of parameter values that can be forwarded to the servlet from the following HTML form? (Choose one.)

```
<html>
<body>
<h1>Chapter 1 Question 9</h1>
<form action="ParamsServlet" method="get">
 <select name="Languages" size="3" multiple>
 <option value="JAVA" selected>Java</option>
 <option value="CSHARP">C#</option>
 <option value="C" selected>C</option>
 <option value="CPLUSPLUS">C++</option>
 <option value="PASCAL">Pascal</option>
 <option value="ADA">Ada</option>
 </select>
 <input type="submit" name="button" />
</form>
</body>
</html>
```

A. 0

B. 1

C. 2

D. 3

E. 4



F. 5

G. 6

H. 7

b - What request header must be set for parameter data to be decoded from a form? (Choose one.)

- A. EncType: application /x-www-urlencoded
- B. Content-Type: application /x-www-form-urlencoded
- C. Content-Type: multipart /form-data
- D. Encoding-Type: multipart /form-data
- E. Accept-Encoding: application/www-form-encoded
- F. Encoding-Type: multipart/www-form-data

a c d - Which of the following are likely to found as request header fields? (Choose three.)

- A. Accept
- B. WWW-Authenticate
- C. Accept-Language
- D. From
- E. Client-Agent
- F. Retry-After

d - What is the most likely outcome of running the following servlet code? (Choose one.)

```
long date = request.getDateHeader("Host");
response.setContentType("text/plain"); response.getWriter().write("" + date);
```

- A. A formatted date is written to the response.
- B. 1 is written to the response.
- C. Won't run because won't compile.
- D. IllegalArgumentException
- E. NumberFormatException
- F. DateFormatException

d - What is the likely outcome of attempting to run the following servlet code?

```
String[] values = request.getHeaders("BogusHeader");
```

```
response.setContentType("text/plain"); response.getWriter().write(values[0]);
```

- A. IllegalArgumentException
- B. NumberFormatException
- C. Won't run: 1 compilation error.
- D. Won't run: 2 compilation errors.
- E. Nothing written to the response.
- F. null written to the response

d - What is the likely outcome of attempting to compile and run the following servlet code, assuming there is one cookie attached to the incoming request?

```
11 Cookie[] cookies = request.getCookies();
12 Cookie cookie1 = cookies[0];
13 response.setContentType("text/plain");
14 String attributes = cookie1.getName();
15 attributes += cookie1.getValue();
16 attributes += cookie1.getDomain();
17 attributes += cookie1.getPath();
18 response.getWriter().write(attributes);
```

- A. Compilation error at line 11
- B. Compilation error at line 16
- C. Output to the response including at least the name and domain
- D. Output to the response including at least the name and value
- E. Output to the response including at least the name, value, and domain
- F. Output to the response including all of name, value, domain, and path 15.

c - Under what circumstances can the `HttpServletRequest.getHeaders(String name)` method return null? (Choose one.)

- A. If there are no request headers present in the request for the given header name.
- B. If there are multiple headers for the given header name.
- C. If the container disallows access to the header information.
- D. If there are multiple values for the given header name.
- E. If there is only a single value for the given header name.
- F. There is no such method on `HttpServletRequest`.

a e - Which of the following methods can be used to add cookies to a servlet response? (Choose two.)

- A. HttpServletResponse.addCookie(Cookie cookie)
- B. ServletResponse.addCookie(Cookie cookie)
- C. HttpServletResponse.addCookie(String contents)
- D. ServletResponse.addCookie(String contents)
- E. HttpServletResponse.addHeader(String name, String value)
- F. ServletResponse.addHeader(String name, String value)

b d - What is the outcome of running the following servlet code? (Choose two.)

```
public void doGet(
 HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 response.setContentType("text/plain;charset=UTF-8"); PrintWriter out = response.getWriter();
 out.flush();
 out.close();
 System.out.println(response.isCommitted());
 response.setContentType("illegal/value");
}
```

- A. An IllegalArgumentException is thrown.
- B. A blank page is returned to the client.
- C. A 500 error is reported to the client.
- D. "true" is output on the server's console.
- E. "false" is output on the server's console.

e - What will be the outcome of executing the following code? (Choose one.)

```
public void doGet(HttpServletRequest request, HttpServletResponse response)
 throws ServletException, IOException { response.setContentType("text/plain"); response.setContentLength(4); Prin
tWriter out = response.getWriter(); out.write("What will be the response? "); out.write("'" + response.isCommitted())
;
}
```

- A. Won't execute because of a compilation error.
- B. An IllegalArgumentException is thrown.
- C. An IllegalStateException is thrown.
- D. A blank page is returned to the client.
- E. "What" is returned to the client.
- F. "What will be the response?" is returned to the client.

G. "What will be the response? true" is returned to the client.

H. "What will be the response? false" is returned to the client.

a f - Which of the approaches below will correctly cause a client to redirect to an alternative URL?  
(In the code fragments below, consider that "response" is an instance of HttpServletResponse.)  
(Choose two.)

A. response.sendRedirect("index.jsp");

B. response.setLocation("index.jsp");

C. RequestDispatcher rd = response.getRequestDispatcher("index.jsp"); rd.sendRedirect();

D. response.redirect("index.jsp");

E. response.setHeader("Location", "index.jsp");

F. response.setStatus(HttpServletResponse.SC\_TEMPORARY\_REDIRECT); response.setHeader("Location", "index.jsp");

c d - Identify statements that are always true about threads running through the service() method of a servlet with the following class declaration. (Choose two.)

```
public class MyServlet extends HttpServlet { // servlet code }
```

A. The destroy() method never cuts short threads running through the service() method.

B. Threads running through the service() method must run one at a time.

C. There could be anything from zero to many threads running through the service() method during the time the servlet is loaded.

D. If the init() method for the servlet hasn't run, no threads have yet been able to run through the service() method.

E. At least one thread will run through the service() method if init() has been executed.

a c f g - Under which of the following circumstances are servlets most likely to be instantiated?  
(Choose four.)

A. During web application startup

B. If there are insufficient instances of the servlet to service incoming requests

C. On a client first requesting the servlet

D. At the same time as a different servlet is instantiated, when that different servlet makes use of the servlet in question

E. After the servlet's destroy() method is called, dependent on the server's keep-alive setting

F. At some arbitrary point in the web application or application server lifetime

G. After the time specified on an UnavailableException has expired

a e - Which of the following are true statements about servlet availability? (Choose two.)

- A. If a servlet is removed from service, then any requests to the servlet should result in an HTTP 404 (SC\_NOT\_FOUND) error.
- B. The init() method must not throw an UnavailableException.
- C. If permanent unavailability is indicated via an UnavailableException, a servlet's destroy() method must be called.
- D. Servlet containers must distinguish between periods of temporary and permanent unavailability.
- E. If a servlet is deemed temporarily unavailable; a container may return an HTTP 503 (SC\_SERVICE\_UNAVAILABLE) message on receiving requests to the servlet during its time of unavailability.

b d - Under what circumstances will a servlet instance's destroy() method never be called? (Choose two.)

- A. As a result of a web application closedown request
- B. When init() has not run to completion successfully
- C. If no thread has ever executed the service() method
- D. After destroy() has already been called
- E. During servlet replacement

d f - Given the following servlet code, identify the outputs that could not or should not occur during the lifetime of the web application housing the servlet.

- A. init:destroy:
- B. init:destroy:init:destroy:
- C. init:init:init:
- D. destroy:service:
- E. init:service:service:service:service:service:
- F. init:service:init:service:

a c - Which of the following directories are legal locations for the deployment descriptor file? Note that all paths are shown as from the root of the machine or drive. (Choose two.)

- A. / WEB-INF
- B. /appserverInstallDirectory/webapps/webappName/ WEB-INF/xml
- C. /appserverInstallDirectory/webapps/webappName/ WEB-INF
- D. /appserverInstallDirectory/webapps/webappName/ WEB-INF/classes

f - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the l

ist below, all directories begin from the context root. (Choose one.)

- A. / WEB-INF
- B. / WEB-INF/classes
- C. /jars
- D. /web-inf/jars
- E. /CLASSES
- F. / WEB-INF/lib
- G. /lib
- H. None of the above.

d - What's the likely outcome of a user entering the following URL in her browser? You can assume that index.html does exist in /WEB-INF/html, where /WEB-INF/html is a directory off the context root, and that the server, port, and context details are specified correctly. (Choose one.)

`http://localhost:8080/mywebapp/WEB-INF/html/index.html`

- A. Because the file is an HTML file, the web application serves it back to the browser.
- B. An HTTP response code in the 500 range is returned (server error).
- C. An HTTP response code of 403 is returned to indicate that the server is not allowed to serve files from this location.
- D. An HTTP response code of 404 returned to indicate that the requested resource has not been found.
- E. None of the above.

b c d - Identify which of the following are true statements about web applications. (Choose three.)

- A. The only way to access resources under the / WEB-INF directory is through appropriate servlet mapping directives in the deployment descriptor.
- B. Server-side code has access to all resources in the web application.
- C. Clients of web applications can't directly access resources in / WEB-INF/tld.
- D. A good place to keep a .tld (tag library file) is directly in the / WEB-INF directory.

a - See the extract from web.xml below:

```
<servlet-mapping> <servlet-name>ServletA</servlet-name> <url-pattern>/</url-pattern> </servlet-mapping>
<servlet-mapping> <servlet-name>ServletB</servlet-name> <url-pattern>/bservlet.html</url-pattern> </servlet-mapping>
<servlet-mapping> <servlet-name>ServletC</servlet-name> <url-pattern>*.servletC</url-pattern> </servlet-mapping>
```

`<servlet-mapping> <servlet-name>ServletD</servlet-name> <url-pattern>/dservlet/*</url-pattern> </servlet-mapping>`

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.)

`http://myserver:8080/mywebapp/Bservlet.html`

- A. ServletA
- B. ServletB
- C. ServletC
- D. ServletD
- E. The answer is dependent on the web container you use.
- F. None of the above: A 404 "page not found error" will result.

b - What is the parent tag for `<welcome-file-list>`? (Choose one.)

- A. `<welcome-file>`
- B. `<web-app>`
- C. None — the tag doesn't exist.
- D. `<welcome-files>`
- E. `<servlet>`

b e - Which of the following are true statements about the deployment descriptor for a web application? (Choose two.)

- A. At least one `<servlet>` element must be present.
- B. `<welcome-file>` is a child element of `<welcome-file-list>`.
- C. `<web-application>` is the root element.
- D. `<servlet>` elements must all be declared before `<servlet-mapping>` elements.
- E. At least one element must be present.

c - What of the following represents a correct declaration of a servlet in the deployment descriptor? (Choose one.)

- A. `<servlet>`  
`<servlet-class>MyServlet</servlet-class> <servlet-name>MyServlet</servlet-name> </servlet>`
- B. `<servlet>`  
`<servlet-name>MyServlet</servlet-name> <servlet-class>MyServlet.class</servlet-class>`  
`</servlet>`

C. `<servlet>`  
`<description>MyServlet</description>` `<servlet-name>MyServlet</servlet-name>` `<servlet-class>MyServlet</servlet-class>`  
`</servlet>`

D. `<servlet>`  
`<servlet-class>MyServlet</servlet-class>` `<jsp-file>index.jsp</jsp-file>`  
`</servlet>`

b - Given five servlets with `<load-on-startup>` value set as follows, and declared in the following order in the deployment descriptor,

| ServletA: 1  
| ServletB: 0  
| ServletC: 1  
| ServletD: 1  
| ServletE: no value set for `<load-on-startup>`

Identify true statements from the list below. (Choose one.)

- A. ServletA will load before ServletB.
- B. ServletB will load before ServletC.
- C. ServletC will load before ServletD.
- D. ServletD will load before ServletE.
- E. ServletA will load before ServletE.

b - What will be the outcome of compiling and deploying the servlet code below? (You can assume that correct import statements are provided and that the servlet lives in the default package. Line numbers are for ease of reference and are not part of the code.)

```
11 public class NameServlet extends HttpServlet {
12 protected void doGet(HttpServletRequest request,
13 HttpServletResponse response) {
14 out.write(getServletName());
15 }
16 }
```

- A. Will not compile because the `doGet()` method doesn't throw the correct exceptions
- B. Will not compile for some other reason
- C. When run, terminates with a `ServletNotFoundException` at line 14
- D. Outputs "NameServlet"
- E. Outputs the contents of the corresponding `<servlet>` element
- F. Outputs the contents of the corresponding `<servlet-name>` element

g - Assume that there is a file called `secure.txt`, located at `/WEB-INF/securefiles`, whose contents are "Password="



WebCert." What statements are false about the result of compiling and running the following code?

```
11 public class CodeTestServlet extends HttpServlet {
12 protected void doGet(HttpServletRequest request,
13 HttpServletResponse response) throws IOException {
14 ServletContext sc = getServletContext();
15 InputStream is = sc.getResourceAsStream("/WEB-" +
16 "INF/securefiles/secure.txt");
17 BufferedReader br = new BufferedReader(new InputStreamReader(is));
18 System.out.println(br.readLine());
19 }
20 }
```

- A. The code will not compile.
- B. A RuntimeException will occur at lines 15/16.
- C. An IOException will occur at line 18.
- D. The string "Password=WebCert" will be returned to the requester.
- E. A, B, and C above.
- F. B, C, and D above.
- G. A, B, C, and D above.

d - Given the following deployment descriptor:

```
<web-app>
<servlet> <servlet-name>InitParams</servlet-name>
<servlet-class>com.osborne.c02.InitParamsServlet</servlet-class> <init-param>
<param-name>initParm</param-name> <param-value>question14</param-value> </init-param>
</servlet> </web-app>
```

What is the outcome of running the following servlet? (Choose one.)

```
public class InitParamsServlet extends HttpServlet {
 protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExce
 ption { ServletContext sc = this.getServletContext();
 PrintWriter out = response.getWriter(); out.write("Initialization Parameter is: " + sc.getInitParameter("initParm"));
 }
}
```

- A. A runtime error
- B. "Initialization Parameter is: null" written to the console
- C. "Initialization Parameter is: question14" returned to the requester
- D. "Initialization Parameter is: null" returned to the requester
- E. "Initialization Parameter is: question14" written to the console

a b e - Which of the following methods derive from the ServletConfig interface? (Choose three.)

- A. ServletContext getServletContext()
- B. String getInitParameter(String name)
- C. MapEntry getInitParameterEntry()
- D. Iterator getInitParameterNames()
- E. String getServletName()

d - Which of the following is a valid way to set up a mime mapping in the deployment descriptor? (Choose one.)

- A. <mime-mapping-list> <mime-type>text/plain</mime-type> <extension>txt</extension> <mime-mapping-list>
- B. <mime-mapping-list> <extension>.txt</extension> <mime-type>text/plain</mime-type> <mime-mapping-list>
- C. <mime-mapping> <mime-type>txt</mime-type> <extension>text/plain</extension> <mime-mapping>
- D. <mime-mapping> <extension>txt</extension> <mime-type>text/plain</mime-type> <mime-mapping>

b - Which of the following servlet methods can return null? (Choose one.)

- A. getInitParameterNames()
- B. getInitParameter(String name)
- C. getServletName()
- D. getServletContext()

a c e - Identify correct statements about the META-INF directory from the list below. (Choose three.)

- A. META-INF is a suitable location for storing digital certificates.
- B. META-INF is used as a repository for common code.
- C. The MANIFEST.MF file is found in the META-INF directory.
- D. The deployment descriptor file is found in the META-INF directory.
- E. META-INF is not directly accessible to clients.

a b d - Identify correct statements about WAR files from the list below. (Choose three.)

- A. A META-INF directory will be present in the WAR file.
- B. A WEB-INF directory will be present in the WAR file.
- C. A web container can't work directly from a WAR file; it must be extracted (unzipped) into the file system.
- D. A WAR file is in ZIP file format.

e - Consider the following list of files in a web application, where myApp is the context path:

/devDir/myapp/index.jsp

/devDir/myapp/WEB-INF/web.xml /devDir/myapp/WEB-INF/classes/webcert/ch02/SomeServlet.class

Which of the following sets of instructions will build a correctly formed web archive file? (Choose one.)

A. None of the sets of instructions will build a valid WAR file until /webcert/ch02/SomeServlet.class is moved to the WEB-INF/lib directory.

B. Change directory to /devDir; execute `jar tvf myapp.war *.*`

C. Change directory to /devDir/myApp; execute `jar cvf myapp.jar *.*`

D. Change directory to /devDir/myApp/WEB-INF; execute `jar xvf myapp.war *.*`

E. Change directory to /devDir/myApp; execute `jar cvf someapp.war *.*`

d f - What is the result of loading the web-app with the following deployment descriptor and attempting to execute the following servlet? (Choose two.)

```
<web-app> <context-param>
```

```
<paramname>author</paramname> <paramvalue>Elmore Leonard</paramvalue> </context-param>
```

```
</web-app>
```

```
public class ContextInitParms extends HttpServlet { protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException { response.setContentType("text/html");
```

```
PrintWriter out = response.getWriter();
```

```
out.write("<HTML><HEAD></HEAD><BODY>"); ServletContext sc = getServletContext(); out.write(sc.getInitParameter("author"));
```

```
out.close();
```

```
}
```

```
}
```

A. ParameterNotFoundException is thrown.

B. Some other exception is thrown.

C. "Elmore Leonard" is output on the web page.

D. An application failure occurs.

E. null is output on the web page.

F. A 404 error occurs in the browser.

G. Some other error (status code in the 500s) occurs in the browser.

b e - What results from a call to the `getInitParameterNames()` method on `ServletContext` when there are no context parameters set up in the deployment descriptor? (Choose two.)

A. A `NoParametersExistException` is thrown.

B. An empty Enumeration object is returned.

- C. null is returned.
- D. An ArrayList object of size zero is returned.
- E. No exceptions are thrown.
- F. An empty Iterator object is returned.

e - Identify true statements about context parameters from the list below. (Choose one.)

- A. The deployment descriptor elements used to describe context parameter names and values are unique to the context parameter element.
- B. Context parameters must be declared in the deployment descriptor before servlets.
- C. Context parameters are available to all web applications loaded by an application server.
- D. In distributable applications, context parameters are duplicated between JVMs.
- E. None of the above.

a - Given a servlet containing the following code, what is the outcome of attempting to compile and run the servlet? (Choose one.)

```
ServletContext context = getServletContext();
String s = context.getAttribute("javax.servlet.context.tempdir");
```

- A. The servlet won't compile.
- B. The servlet won't run.
- C. String s has a null value.
- D. String s has a valid directory as its value. Attributes, Scope, and Multithreading

b - What is the likely result from attempting to compile and execute the following servlet code? (Choose one.)

```
HttpSession session = getSession();
String s = session.getAttribute("javax.servlet.session.tempdir");
```

- A. Won't compile for one reason.
- B. Won't compile for more than one reason.
- C. Runtime exception when attempting to get access to the attribute.
- D. s contains null.
- E. s contains a valid String, denoting a temporary directory.

b c - Identify true statements from the list below. (Choose two.)

- A. Attribute methods don't throw exceptions.

- B. You cannot remove request parameters.
- C. Attributes can be set by the web container or by application code.
- D. Attribute values are String objects.
- E. "malhereusement" is an illegal name for an attribute.

e - What is result of attempting to run the following code? (Choose one.)

```
public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 request.setAttribute("a", "request");
 System.out.print(request.getAttribute("a"));
 request.setAttribute("a", "2nd request");
 System.out.print(", "); System.out.print(request.getAttribute("a"));
 request.removeAttribute("a");
 request.removeAttribute("a");
 System.out.print(", ");
 Object o = request.getAttribute("a");
 System.out.print(o);
}
```

- A. "request, request, 2nd request, null" written to standard output
- B. NullPointerException at line 22
- C. AttributeAlreadyRemovedException at line 22
- D. NullPointerException at line 24
- E. "request, 2nd request, null" written to standard output
- F. "request, 2nd request" written to standard output
- G. "request, request, 2nd request" written to standard output

c - From the following list, what is a probable outcome from a call to the ServletContext.getAttributeNames() method? (Choose one.)

- A. A null reference is returned.
- B. An empty Enumeration is returned.
- C. A nonempty Enumeration is returned.
- D. An empty ArrayList is returned.
- E. A nonempty ArrayList is returned.
- F. A NoAttributesFoundException is thrown.
- G. Some other exception is thrown.

b c - Identify true statements about scope from the following list. (Choose two.)

A. Context scope can span JVMs.

B. Session scope can span JVMs.

C. Requests can span web apps.

D. Sessions can span web apps.

E. Requests can span JVMs.

b - What is the outcome of executing ServletA? You can assume that (1) ServletB has a mapping of "/ServletB" and a name of "ServletB," and (2) imports have been omitted from the code for breity; the code will compile successfully. (Choose one.)

```
public class ServletA extends HttpServlet {
 public void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
 RequestDispatcher rd = getServletContext().getNamedDispatcher("ServletB");
 rd.forward(req, resp);
 }
}
```

```
public class ServletB {
 public void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
 String attr = (String) req.getAttribute("javax.servlet.forward.servlet_path");
 PrintWriter out = resp.getWriter();
 out.write("Attribute value: " + attr);
 }
}
```

A. NullPointerException thrown

B. "Attribute value: null" output to the web page

C. A blank web page

D. ServletException thrown

E. "Attribute value: /ServletB" output to the web page

F. "Attribute value: ServletB" output to the web page

G. ClassCastException thrown

c e - Identify which of the following are names of special attributes associated with the dispatching mechanism. (Choose two.)

A. java.servlet.include.servlet\_name

B. javax.http.servlet.include.query\_name

C. javax.servlet.include.servlet\_path

D. javax.servlet.forward.request\_url

E. javax.servlet.include.path\_info

F. java.servlet.forward.context\_path

a d - What are possible outcomes from executing the doGet method in ServletC below? (Choose two.)

```
public class ServletC extends HttpServlet {
 public void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
 RequestDispatcher rd = getServletContext().getRequestDispatcher("ServletB");
 rd.forward(req, resp);
 }
}
```

A. HTTP 500 error (error in 500s).

B. NullPointerException.

C. HTTP 404 error.

D. Some other exception.

E. ServletNotFoundException.

F. ServletB runs.

G. A file called ServletB is served from the context directory.

b - What is the web page output from executing ServletD with the URL below? (Choose one.)

http://localhost:8080/myapp/ServletD?fruit=orange

```
public class ServletD extends HttpServlet {
 public void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
 RequestDispatcher rd = getServletContext().getRequestDispatcher("/ServletE?fruit=pear");
 rd.forward(req, resp);
 }
}
```

```
public class ServletE extends HttpServlet {
 public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 response.setContentType("text/plain"); PrintWriter out = response.getWriter();
 String[] valueArray = request.getParameterValues("fruit"); for (int i = 0; i < valueArray.length; i++) {
 if (i > 0) { out.write(", ");
 }
 out.write(valueArray[i]);
 }
 String queryString = (String) request.getAttribute("javax.servlet.forward.query_string"); int pos = queryString.indexOf("=") + 1;
 String values = queryString.substring(pos); out.write(", " + values);
 }
}
```

- A. pear, pear
- B. pear, orange, orange
- C. orange, pear, orange
- D. orange, pear, pear
- E. orange, pear
- F. pear, orange, null
- G. orange, pear, null
- H. pear, orange, pear, orange

a - ServletA forwards to ServletB, which includes Servlet C, which forwards to ServletD, which includes ServletE. When ServletA is requested, which servlets might contribute to the final response? (Choose one.)

- A. ServletD and ServletE
- B. ServletB, ServletC, ServletD, and ServletE
- C. ServletD only
- D. ServletB only
- E. All of them

a - Identify true statements about filters. (Choose one.)

- A. You cannot work directly with the request object that is passed as a parameter to the filter.
- B. The order of filter processing is arbitrarily determined by the web container.
- C. Only URL patterns can be used by filters to target specific web resources.
- D. You must implement the doChain(request, response) method to pass control from filter to filter, or filter to servlet.

a - Which of the following is a legal filter mapping declaration in the deployment descriptor? (Choose one.)

- A. `<filter-mapping>  
<filter-name>MicroPaymentFilter</filter-name> <servlet-name>MicroPaymentServlet</servlet-name> <dispatcher>REQUEST</dispatcher> </filter-mapping>`
- B. `<filter> <filter-name>MicroPaymentFilter</filter-name>  
<filter-class>webcert.ch03.MicroPaymentFilter</filter-class> <filter-mapping> <url-pattern>/MicroPaymentServlet</url-pattern> </filter-mapping>  
</filter>`
- C. `<filter-mapping> <filter-name>MicroPaymentFilter</filter-name> <url-pattern>MicroPayment/*</url-pattern>  
</filter-mapping>`



```
D. <filter> <filter-name>MicroPaymentFilter</filter-name>
<filter-class>webcert.ch03.MicroPaymentFilter</filter-class> <filter-mapping> <servlet-name>MicroPaymentServl
et</servlet-name> </filter-mapping>
</filter>
```

c - From the available options, what is the likely outcome from running the code below? (Choose one.)

```
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExce
ption { RequestDispatcher dispatcher = getServletContext().getNamedDispatcher("/ServletB"); dispatcher.forward(r
equest, response);
}
```

- A. DispatcherNotFoundException.
- B. Runtime error because of incorrectly formed parameter to getNamedDispatcher() method.
- C. NullPointerException.
- D. ServletB can obtain request attribute javax.servlet.forward.request\_uri.

e - Given the following deployment descriptor, identify the sequence of fi lters that execute on a direct client request for ServletA. (Choose one.)

```
<filter-mapping> <filter-name>LogFilter</filter-name> <servlet-name>ServletA</servlet-name> </filter-mapping>

<filter-mapping> <filter-name>AuditFilter</filter-name> <url-pattern>/ServletA</url-pattern> <dispatcher>FORW
ARD</dispatcher> </filter-mapping>

<filter-mapping> <filter-name>EncryptionFilter</filter-name> <url-pattern>/*</url-pattern> </filter-mapping>

<servlet-mapping> <servlet-name>ServletA</servlet-name> <url-pattern>/ServletA</url-pattern> </servlet-mappin
g>
```

- A. LogFilter, AuditFilter, EncryptionFilter
- B. LogFilter, EncryptionFilter
- C. LogFilter
- D. EncryptionFilter, AuditFilter, LogFilter
- E. EncryptionFilter, LogFilter
- F. AuditFilter, EncryptionFilter, LogFilter

a - What is the outcome of attempting to compile, deploy, and run the following servlet code? Line numbers are for reference only and should not be considered part of the code. (Choose one.)

```
10 import java.io.*;
11 import javax.servlet.*;
12 import javax.servlet.http.*;
13 public class Question2 extends HttpServlet {
14 protected void doGet(ServletRequest request,
15 ServletResponse response) throws ServletException, IOException {
16 HttpSession session = request.getSession(false);
```

```
17 session.invalidate();
18 session.setAttribute("illegal", "exception thrown");
19 }
20 }
```

- A. Won't compile
- B. NullPointerException at line 16 on client's first call to servlet
- C. IllegalStateException at line 18
- D. Some other runtime exception
- E. None of the above

a f - Identify the two equivalent method calls in the list below. (Choose two.)

- A. HttpServletRequest.getSession()
- B. ServletRequest.getSession()
- C. ServletRequest.getSession(true)
- D. HttpServletRequest.getSession(false)
- E. ServletRequest.getSession(false)
- F. HttpServletRequest.getSession(true)
- G. HttpServletRequest.getSession("true")
- H. ServletRequest.getSession("false")

b d - Identify true statements about sessions from the list below. (Choose two.)

- A. Sessions can span web applications.
- B. Sessions can be cloned across JVMs.
- C. Sessions are destroyed only after a predefined period of inactivity.
- D. Sessions can be set to never time out.
- E. You can use the deployment descriptor to cause sessions to expire after a set number of requests.

a c - Which of the following mechanisms will guarantee that every session in a web application will expire after 1 minute? You can assume that for each answer below, this is the only session time-out mechanism in force for the web application. (Choose two.)

- A. In the deployment descriptor: `<session-config>  
<session-timeout>1</session-timeout> </session-config>`
- B. In the deployment descriptor: `<session-config> <session-timeout>60</session-timeout> </session-config>`

C. In the doFilter() method of a filter that has the following <url-pattern> mapping in the deployment descriptor: "/. " request is an instance of HttpServletRequest, cast from the ServletRequest parameter passed to the method.

```
HttpSession session = request.getSession();
session.setMaxInactiveInterval(60);
```

D. In the doGet() method of a servlet. request is an instance of HttpServletRequest, passed as a parameter to the method.

```
HttpSession session = request.getSession();
session.setMaxInactiveInterval(1);
```

E. In the init() method of a servlet that loads on start up of the web application. request is an instance of HttpServletRequest, passed as a parameter to the method.

```
HttpSession session = request.getSession();
session.setMaxInactiveInterval(60);
```

Session Management

c - Identify the default mechanism for session management from the list below. (Choose one.)

A. URL rewriting

B. Hidden Form Fields

C. Cookies

D. SSL

E. jsessionId request parameter

b e - Identify correct statements about session management from the list below. (Choose two.)

A. Session management is usually dependent on a hidden form field called JSessionId.

B. The unique identifier for a session may be passed back and forward through a name/value pair in the URL. The name is jsessionid.

C. If a cookie used for default session management, there is some flexibility with the name used for the cookie.

D. The cookie used for default session management must be added to the response using the HttpServletResponse.addCookie(Cookie theCookie) method.

E. The rules for rewriting URLs for links may be different from those for rewriting URLs for redirection.

c - Given the following servlet code called with this URL —http://127.0.0.1:8080/example0402/Q9—and also given that URL rewriting is the session mechanism in force, identify the likely output from the servlet from the choices below. (Choose one.)

```
PrintWriter out = response.getWriter();
response.setContentType("text/html");
out.write("<HTML><HEAD>"); out.write("<TITLE>Encoding URLs</TITLE>"); out.write("</HEAD><BODY>");
HttpSession session = request.getSession(); out.write("\n<P>Session id is "
+ session.getId() + ".</P>");
String URL1 = response.encodeURL("Q9"); String URL2 = response.encodeURL ("http://127.0.0.1:8080/example0402/Q1");
out.write("\n<P>URL1: " + URL1 + "</P>"); out.write("\n<P>URL2: " + URL2 + "</P>"); out.write("");
```

ODY></HTML>");

A. Output:

Session ID is 4EDF861942E3539B1F3C101B71636C1A.

URL1: Q9;JSESSIONID=4EDF861942E3539B1F3C101B71636C1A

URL2: http://127.0.0.1:8080/examp0401/Q1

B. Output:

Session ID is 4EDF861942E3539B1F3C101B71636C1A.

URL1: Q9

URL2: http://127.0.0.1:8080/examp0401/Q1? jsessionid=4EDF861942E3539B1F3C101B71636C1A

C. Output:

Session ID is 4EDF861942E3539B1F3C101B71636C1A.

URL1: Q9;jsessionid=4EDF861942E3539B1F3C101B71636C1A

URL2: http://127.0.0.1:8080/examp0401/Q1

D. Output:

Session ID is 4EDF861942E3539B1F3C101B71636C1A.

URL1: Q9;jsessionid=4EDF861942E3539B1F3C101B71636C1A

URL2: http://127.0.0.1:8080/examp0401/Q1;jsessionid=4EDF861942E3539B1F3C101B71636C1A

E. Output:

Session ID is 4EDF861942E3539B1F3C101B71636C1A.

URL1: Q9?JSESSIONID=4EDF861942E3539B1F3C101B71636C1A

URL2: http://127.0.0.1:8080/examp0401/Q1

d e - Which of the following statements contain accurate advice for web developers? (Choose two.)

A. Because the server determines the session mechanism, there is no need to rewrite URLs when cookies are switched on.

B. Rewrite every URL embedded in your servlets and JSP code with the HttpServletResponse.encodeURL() method.

C. Cookies are not necessarily supported by J2EE-compliant web containers, so always use URL rewriting as an additional precaution.

D. Because the client determines whether cookies are permitted or not, it's a good idea always to encode URLs as a fallback session mechanism.

E. Static pages in your web application can disrupt session management. Request and Context Listeners

b d - Identify actions that won't fix a potential problem in the following ServletRequestListener code.(Choose two.)

```
01 public void requestDestroyed(ServletRequestEvent reqEvent) {
02 HttpServletRequest request = (HttpServletRequest)
03 reqEvent.getServletRequest();
04 HttpSession session = request.getSession();
05 session.setAttribute("name", "value");
06 }
```

A. Ensure that an HttpSession is created in the requestInitialized() method of the same ServletRequestListener.

B. Ensure that any servlet in your web application obtains a session.

C. Substitute the code below for lines 04 and 05:

```
HttpSession session = request.getSession(false);
if (session != null) session.setAttribute("name", "value");
```

D. Take no action, for the code will work in all circumstances.

E. Place lines 04 and 05 inside a try/catch block.

e - What is the outcome of attempting to compile and run the servlet code below? (Choose one.)

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Question12 extends HttpServlet { protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException { ServletContext context = getServletContext(); context.addAttribute("mutable", "firstvalue"); context.replaceAttribute("mutable", "secondvalue"); context.removeAttribute("mutable"); context.
removeAttribute("mutable");
}
}
```

A. There will be three method calls to any ServletContextAttributeListener classes registered to the web application.

B. An exception will be thrown on trying to remove the same attribute for a second time.

C. There will be four method calls to any ServletContextAttributeListener classes registered to the web application.

D. An exception will be thrown if the context cannot be obtained.

E. None of the above.

a c f - Identify true statements about listener interfaces and related classes from the list below. (Choose three.)

A. It is possible to add context attributes in the contextDestroyed() method.

B. During controlled shutdown of a web application, the last listener whose methods are potentially called is the ServletContextListener.

C. You can access the current session from methods in classes implementing the Servlet RequestListener interface.

D. You can access the current session from methods in classes implementing the Servlet ContextAttributeListener interface.

E. The ServletContextAttributeEvent class extends java.util.EventObject.

F. It is unwise to change request attributes in the attributeReplaced() method of a class implementing the ServletRequestAttributeListener interface.

d - Identify the number and nature of the errors in the code below, which is taken from a class implementing the Ser

vletRequestAttributeListener interface. (Choose one.)

```
1 public void attributeAdded(ServletRequestAttributeEvent event) {
2 HttpServletRequest request = event.getServletRequest();
3 Object o = event.getSource();
4 System.out.println("Source of event is: "
5 + o.getClass().getName());
6 String name = event.getName();
7 String value = event.getValue();
8 System.out.println("In ServletRequestAttributeListener."
9 + "attributeAdded() with name: "
10 + name + ", value: " + value);
11 }
```

A. No compilation errors, no runtime errors

B. No compilation errors, one runtime error

C. One compilation error

D. Two compilation errors

E. Three compilation errors

b e - If a request attribute has been replaced, which of the following techniques will not obtain the current (new) value of the attribute? (Choose two.)

A. Use the `ServletRequest.getAttribute()` method anywhere in servlet code following the replacement.

B. Use the `ServletRequestAttributeEvent.getValue()` method anywhere in the `attributeReplaced()` method of a class implementing `ServletRequestAttributeListener`.

C. Use the `ServletRequest.getAttribute()` method anywhere in filter code following the replacement.

D. Use the following code in a class implementing `ServletRequestAttributeListener`:

```
01 public void attributeReplaced(ServletRequestAttributeEvent event) {
02 String name = event.getName();
03 Object newValue = event.getServletRequest().getAttribute(name);
04 }
```

E. Use the `ServletRequestAttributeEvent.getValue()` method anywhere in the `attributeUpdated()` method of a class implementing `ServletRequestAttributeListener`.

d - The code below is from a class implementing the `HttpSessionListener` interface (you can assume that the whole class compiles successfully). What will happen when the class is deployed in a web application and servlet code requests a session? (Choose one.)

```
public void sessionInitialized(HttpSessionEvent event) {
 System.out.println("Session Initialized...");
 HttpSession session = event.getSession();
 Boolean loginOK = (Boolean)
session.getAttribute("login"); if (loginOK == null || !loginOK.booleanValue()) { session.invalidate();
}
```

}

- A. A runtime exception.
- B. Session will be invalidated dependent on the "login" attribute.
- C. Session will always be invalidated.
- D. Can't determine what will happen.

adefh - The code below shows code for the class MySessionAttribute (Listing A). An instance of this class is attached to an HttpSession (Listing B). From the list below, pick out the things that will happen when this session is migrated from a source JVM to a target JVM. (Choose four.)

#### LISTING A

```
import java.io.*;
import javax.servlet.http.*;
public class MySessionAttribute implements HttpSessionActivationListener, Serializable {
 private static String data;
 public String getData() { return data; }
 public void setData(String newData) { data = newData;
 }
 public void sessionWillPassivate(HttpSessionEvent arg0) { System.out.println(data);
 }
 public void sessionDidActivate(HttpSessionEvent arg0) { System.out.println(data);
 }
}
```

#### LISTING B

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class TestMySessionAttribute extends HttpServlet { protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 HttpSession session = request.getSession();
 MySessionAttribute msa = new MySessionAttribute(); msa.setData("My Data");
 }
}
```

- A. sessionWillPassivate() method called in the source JVM
- B. sessionWillPassivate() method called in the target JVM
- C. sessionDidActivate() method called in the source JVM
- D. sessionDidActivate() method called in the target JVM
- E. "My data" written to the source JVM's web server console
- F. "My data" not written to the source JVM's web server console
- G. "My data" written to the target JVM's web server console

H. "My data" not written to the source JVM's web server console

b f - Pick out true statements from the list below. (Choose two.)

A. Classes implementing HttpSessionBindingListener must be declared in the deployment descriptor.

B. More than one session listener interface may take effect from the same deployment descriptor declaration.

C. HttpSessionAttributeEvent is a parameter for methods on more than one of the session listener interfaces.

D. A single class cannot implement both the interfaces ServletRequestAttributeListener and HttpSessionAttributeListener.

E. sessionDidPassivate() is one of the methods of the HttpSessionActivationListener interface.

F. An HttpSessionListener's sessionDestroyed() method will be called as a result of a client refusing to join a session.

c - A web application houses an HttpSessionAttributeListener and an object (SessionAttrObject) that implements HttpSessionBindingListener. Pick out the correct sequence of listener method calls that follows from executing the servlet code below inside this web application. (Choose one.)

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Question20 extends HttpServlet {
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
HttpSession session = request.getSession();
session.invalidate();
HttpSession newSession = request.getSession(); SessionAttrObject boundObject = new SessionAttrObject("value");
newSession.setAttribute("name", boundObject); newSession.setAttribute("name", "value"); newSession.setAttribute("name", null);
} }
```

A. attributeAdded(), valueBound(), attributeRemoved(), valueUnbound(), attributeReplaced(), attributeRemoved()

B. valueBound(), attributeAdded(), valueUnbound(), attributeRemoved(), attributeReplaced(), attributeRemoved()

C. valueBound(), attributeAdded(), valueUnbound(), attributeReplaced(), attributeRemoved()

D. attributeAdded(), valueBound(), attributeReplaced(), valueUnbound(), attributeReplaced()

E. valueBound(), attributeAdded(), valueUnbound(), attributeRemoved(), valueBound(), attributeAdded(), valueUnbound(), attributeRemoved()

F. None of the above.

b - Which security mechanism proves that data has not been tampered with during its transit through the network (Choose one.)

A. Data validation

B. Data integrity



C. Authentication

D. Packet sniffing

E. Data privacy

F. Authorization

b - Which security mechanism limits access to the availability of resources to permitted groups of users or programs ? (Choose one.)

A. Authentication

B. Authorization

C. Data integrity

D. Confidentiality

E. Checksum validation

F. MD5 encryption

a d e - Which of the following deployment descriptor elements play some part in the authentication process? (Choose three.)

A. <login-config>

B. <transport-guarantee>

C. <role-name>

D. <auth-method>

E. <form-error-page>

F. <security-role-ref>

f - In a custom security environment, for which security mechanisms would a fi lter be incapable of playing any usef ul part? (Choose one.)

A. Authentication

B. Authorization

C. Data integrity

D. Confidentiality

E. All of the above

F. None of the above

a b - Review the following scenario; then identify which security mechanisms would be important to fulfill the requirement. (Choose two.)

An online magazine company wishes to protect part of its web site content, to make that part available only to users who pay a monthly subscription. The company wants to keep client, network, and server processing overheads down : Theft of content is unlikely to be an issue, as is abuse of user IDs and passwords through network snooping.

- A. Authorization
- B. Authentication
- C. Indication
- D. Client certification
- E. Data integrity
- F. Confidentiality

c e - Identify which choices in the list below show immediate subelements for <securityconstraint> in the correct order. (Choose two.)

- A. <security-role-ref>,<auth-method>,<transport-guarantee>
- B. <web-resource-name>,<auth-constraint>
- C. <web-resource-collection>,<auth-constraint>,<user-data-constraint>
- D. <auth-method>,<web-resource-name>
- E. <web-resource-collection>,<auth-constraint>
- F. <auth-constraint>,<web-resource-name>
- G. <web-resource-collection>,<transport-guarantee>,<auth-method>

a e g h - Identify valid configurations for the <transport-guarantee> element in the deployment descriptor. (Choose four.)

- A. <transport-guarantee>CONFIDENTIAL</transport-guarantee>
- B. <transport-guarantee>ENCRPYTED</transport-guarantee>
- C. <transport-guarantee>FAILSAFE</transport-guarantee>
- D. <transport-guarantee>ENCIPHERED</transport-guarantee>
- E. Absent altogether from the deployment descriptor
- F. <transport-guarantee />
- G. <transport-guarantee>NONE</transport-guarantee>
- H. <transport-guarantee>INTEGRAL</transport-guarantee>

a d e - Given the following incomplete extract from a deployment descriptor, what are possible ways of accessing the protected resource named TheCheckedServlet? (Choose three.)

```
<security-constraint>
<web-resource-collection> <web-resource-name>TheCheckedServlet</web-resource-name> <url-pattern>/CheckedServlet</url-pattern> </web-resource-collection>
<auth-constraint />
</security-constraint>
<security-constraint> <web resource-collection>
<web-resource-name>TheCheckedServlet</web-resource-name>
<url-pattern>/CheckedServlet</url-pattern> <http-method>GET</http-method>
</web-resource-collection>
<auth-constraint> <role-name>bigwig</role-name>
</auth-constraint> </security-constraint>
```

- A. Via another URL pattern (if one is set up elsewhere within the deployment descriptor).
- B. Any authenticated user can access the resource.
- C. Any user (authenticated or not) can access the resource.
- D. Via `RequestDispatcher.include()`.
- E. Via `RequestDispatcher.forward()`.
- F. Via the URL pattern `/CheckedServlet`, provided the user is authenticated and has `bigwig` as a valid role.

b c d e - Which of the following might a web server consider important in ensuring a transport guarantee of CONFIDENTIAL? (Choose four.)

- A. Base64 encoding
- B. Server-side digital certificates
- C. Symmetric keys
- D. Asymmetric (public/private keys)
- E. SSL
- F. Client-side digital certificates

e - The following web page is defined as the custom form login page for authentication. Assuming that you have attempted to access a protected resource and been redirected to this web page, what is the result of filling in the username and password fields and pressing submit? (Choose one.)

```
<html>
<head><title>Login Form</title></head>
<body>
<form action="/jsecuritycheck" method="POST">

Name: <input type="text" name="jusername" />

Password: <input type="password" name="jpassword" />
<input type="submit" value="Log In" />
```

```
</form>
</body>
</html>
```

- A. You will not be redirected to this page in the first place.
- B. HTTP 401 or 403 error (forbidden /not authorized).
- C. HTTP 404 error (page not found).
- D. HTTP 500 error (server error).
- E. The page is redisplayed.

a - What is the result of the following login configuration? (Choose one.)

```
<login-config>
<auth-method>FORM</auth-method> <form-login-config> <form-login-page>login.html</form-login-page>
<form-error-page>error.html</form-error-page>
</form-login-config>
</login-config>
```

- A. Application fails to start.
- B. Application starts with warning errors.
- C. Application runs, but access to a protected resource results in an HTTP 404 error.
- D. Application runs and presents login form on a user's first access to a protected resource.

f g - Which of the following subelements might you expect to find in the <login-config> for BASIC authorization? (Choose two.)

- A. <auth-constraint>
- B. <form-login-config>
- C. <role-name>
- D. <form-login-page>
- E. <realm>
- F. <auth-method>
- G. <realm-name>

a b c e - Which of the following subelements would you not expect to find in the <login-config> for CLIENT-CERT authorization? (Choose four.)

- A. <auth-constraint>
- B. <role-name>

C. <form-login-page>

D. <auth-method>

E. <realm-name>

e - What will be the most likely outcome of attempting to access the following JSP for the second time? (Choose one.)

```
<%@ page language="java" %> <%@ page import="java.util.*" %>
<html><head><title>Chapter 6 Question 1</title></head> <body>
<h1>Chapter 6 Question 1</h1>
<%!
public void jspInit() {
System.out.println("First half of jspInit()");
%>
<%> new Date() %>
<%!
System.out.println("Second half of jspInit()");
}
%>
</body></html>
```

A. Translation error (HTTP response code of 500)

B. Page not found error (HTTP response code of 404)

C. Web page returned showing a heading and the current date; two lines of output written to the server log

D. Web page returned showing "First half of jspInit()," "Second half of jspInit()," a heading, and the current date

E. Web page returned showing a heading and the current date

d - What is output to the web page on the second access to the same instance of the following JSP? (Choose one.)

```
<%@ page language="java" %> <html>
<head><title>Chapter 6 Question 2</title></head> <body>
<h1>Chapter 6 Question 2</h1> <%! int x = 0; %>
<%!
public void jspInit() { System.out.println(x++);
}
%>
<%= x++ %>
<% System.out.println(x); %> <% jspInit(); %> </body></html>
```

A. 0

B. 1

C. 2

D. 3

E. 4

F. Page does not translate.

G. Page translates, but there is another runtime error.

a - For what reason does the following JSP fail to translate and compile? (Choose one.)

```
<%@ page language="java" %>
<html>
<head><title>Chapter 6 Question 3</title></head> <body>
<h1>Chapter 6 Question 3</h1> <%! int x; %>
<%!
public void jspDestroy() { System.out.println("self-destructing");
}
%>
<%!
public void jspInit() { System.out.println(<%= x %>);
}
%>
</body></html>
```

A. Expression embedded in declaration.

B. Data member x not initialized before use.

C. Local variable x not initialized before use.

D. Placement of jspDestroy() method before jspInit() method.

E. The page actually compiles and translates without any problem.

F. None of the above.

a d - Which of the following are true statements about the JavaServer Page life cycle? (Choose two.)

A. The \_jspService() method is called from the generated servlet's service() method.

B. jspInit() is only ever called on the first request to a JSP instance.

C. jspDestroy() is only ever called on the last request to a JSP instance.

D. All servlet methods are accessible from the jspInit() method.

E. You cannot override or provide a no-parameter init() method in a JSP page.

a e - What is the consequence of attempting to access the following JSP page? (Choose two.)

```
<%@ page language="java" %> <html>
<head><title>Chapter 6 Question 5</title></head> <body>
<h1>Chapter 6 Question 5</h1>
```

```
<%!public void _jspService(HttpServletRequest request, HttpServletResponse response) {
out.write("A"); } %>
<% out.write("B"); %> </body>
</html>
```

A. Cannot resolve symbol compilation error.

B. "A" is output to the response.

C. "B" is output to the response.

D. "A" is output to the response before "B."

E. Duplicate method compilation error.

F. "B" is output to the response before "A."

b - What is the result of attempting to access the following JSP page? (Choose one.)

```
<html>
<head><title>Chapter 6 Question 6</title></head> <body>
<h1>Chapter 6 Question 6</h1> <%! public String methodA() { return methodB();
}
%>
<%! public String methodB() { return methodC();
}
%>
<% public String methodC() { return "Question 6 Text";
}
%>
<h2><%= methodA() %></h2> </body>
</html>
```

A. "Question 6 Text" is output to the resulting web page.

B. A translation error occurs.

C. A runtime error occurs.

D. The text between the <h1></h1> HTML tags appears, followed by a Java stack trace.

E. The web page is blank.

b h - What true statements can you make about the following JSP page source? The line numbers are for reference only and should not be considered part of the source. (Choose two.)

```
01 <%@ page import="java.io.*" %>
02 <html>
03 <head><title>Chapter 6 Question 8</title></head>
04 <body>
05 <%
06 PrintWriter out = response.getWriter();
```

```
07 out.write("P");
08 %>
09 <% out.write("Q"); %>
10 </body>
11 </html>
```

- A. In line 09, the scriptlet markers should not be on the same line as the Java source statement.
- B. In JSP technology, it's a bad idea to get hold of the `PrintWriter` directly from the response.
- C. "P" will be written to the response, followed by "Q."
- D. "Q" will be written to the response, followed by "P."
- E. Only "Q" will be written to the response.
- F. The page has a compilation error because of a directive syntax error.
- G. The page has a compilation error because the import in the directive syntax is for the wrong Java package.
- H. The page has a compilation error for other reasons.

a c d - Which of the following are false statements to make about JSP scripting elements? (Choose three.)

- A. It is legal to embed a `<%--` style comment inside another comment.
- B. It is legal to embed an expression inside a scriptlet.
- C. It is legal to embed an expression inside a declaration.
- D. It is legal to embed an expression inside a directive.
- E. It is legal to include a declaration at any point in the JSP page source, provided that it appears outside of other elements.
- F. It is legal to embed a scriptlet inside an expression inside a `<%--` style comment.

d - What is the result of attempting to access the following JSP page source? (Choose one.)

```
<% <%-- for (int i = 0; i < 10; i++) {
<%-- if(i==3) System.out.println("i is 3!");--%> System.out.println("i squared is " + i * i);
} %> --%>
```

- A. Doesn't translate because the page source is incomplete.
- B. Doesn't compile because nesting comments in this way is illegal.
- C. The JSP page would compile if the terminating curly brace were removed.
- D. The JSP page would compile if one of the percent (%) signs were removed.
- E. Runs as is and produces output (possibly not the output intended).



d e - Which of the following constitute valid ways of importing Java classes into JSP page source? (Choose two.)

- A. `<%! import java.util.*; %>`
- B. `<%@ import java.util.* %>`
- C. `<%@ page import="java.util.StringTokenizer" %>`
- D. `<%@ page import='java.util.*, java.io.PrintStream' import="java.text.*" %>`
- E. `<%@page import = " java.util.* "%>`

a - What is the outcome of accessing the first JSP page, includer12.jsp, shown below? (Choose one.)

```
<%-- file includer12.jsp begins here --%>
<% for (int i = 0; i < 10; i ++) { %>
<%@ include file="included12.jsp" %> <% } %>
<%-- End of file includer12.jsp --%>
<%-- Beginning of file included12.jsp --%> <html>
<head><title>Chapter 6 Question 12</title></head>
<body>
<h1>Chapter 6 Question 12</h1>
For the <%=i%>th time

</body>
</html>
<%-- End of file included12.jsp --%>
```

- A. An ill-formed HTML page will be the output.
- B. The call will fail because variable i is not declared in included.jsp.
- C. Translation will fail because elements denoting the beginning and end of an HTML document must be in the including JSP document, not the included.
- D. "For the 10th time" appears in the output.
- E. Translation fails for other reasons.

c f - What statements are true about the following two JSP page sources, given the intention of always requesting includer13.jsp? (Choose two.)

```
<%-- file includer13.jsp begins here --%>
<%@ page import="java.util.*" contentType="text/html" session="true"%> <html>
<head><title>Chapter 6 Question 13</title></head> <body>
<h1>Chapter 6 Question 13</h1> <%ArrayList al = new ArrayList(); al.add("Jack Russell"); al.add("Labrador");
al.add("Great Dane");%>
<%@ include file="included13.jsp" %> </body>
</html>
<%-- file includer13.jsp ends here --%> <%-- file included13.jsp begins here --%>
<%@ page import="java.util.*" contentType="text/html" %> <table>
<%for (int i = 0; i < al.size(); i++) {%> <tr><td><%= al.get(i) %></td></tr> <%}%>
</table>
```

<%-- file included13.jsp ends here --%>

- A. Translation will fail because the import attribute of the page directive is repeated across the page sources.
- B. Translation will fail because the contentType attribute of the page directive is repeated across the page sources.
- C. Removing the Session attribute from included13.jsp will make no difference to the generated servlet code.
- D. The local variable al in included13.jsp will not be recognized.
- E. The import, contentType, and session attributes should appear in separate page directives.
- F. The order of the import and contentType attributes in both JSP page sources is immaterial.

a b d - Which of the following are invalid directives? (Choose three.)

- A. <%@page isELIgnored = "false" %>
- B. <%@ page session=the"/' is okay true' %>
- C. <%@ page contentType="image/music/text" %>
- D. <%@include uri="header.jsp" %>
- E. <%@ taglib prefix="mytags" uri="http://www.osborne.com/taglibs/mytags" %>

b - Given the beginning of the JSP page source below, which set of lines should be used to complete the JSP page source in order to print out all the song lyrics? (Choose one.)

```
<%! static String[] suedeShoes = new String[4];
static { suedeShoes[0] = "One for the Money,";
suedeShoes[1] = "Two for the Show,";
suedeShoes[2] = "Three to Get Ready,";
suedeShoes[3] = "And Go, Cat, Go!"; } %>
<% pageContext.setAttribute("line1", suedeShoes[0]); request.setAttribute("line2", suedeShoes[1]); session.setAttribute("line3", suedeShoes[2]); config.getServletContext().setAttribute("line4", suedeShoes[3]); %>
```

- A. <%@ page contentType="text/plain" info="Blue Suede Shoes" session="false" %> <%for (int i = 0; i < suedeShoes.length; i++) {  
String songLine = (String) pageContext.findAttribute("line" + (i + 1));%> <%= songLine %>  
<%} %>
- B. <%@ page contentType="text/plain" info="Blue Suede Shoes" session="true" %> <%for (int i = 0; i < suedeShoes.length; i++) {  
String songLine = (String) pageContext.findAttribute("line" + (i + 1));%> <%= songLine %>  
<%} %>
- C. <%@ page contentType="text/plain" info="Blue Suede Shoes" session="true" %> <%for (int i = 1; i < suedeShoes.length; i++) {  
String songLine = (String) pageContext.findAttribute("line" + i);%> <%= songLine %>  
<%} %>

D. `<%@ page contentType="text/plain" info="Blue Suede Shoes" session="true" %> <%for (int i = 0; i < suedeShoes.length; i++) { String songLine = (String) pageContext.getAttribute("line" + (i + 1));%> <%= songLine %> <%}%>`

E. `<%@ page contentType="text/plain" info="Blue Suede Shoes" session="true" %> <%for (int i = 0; i < suedeShoes.length; i++) { String songLine = (String) pageContext.getAttribute("line" + (i + 1));%> <%= songLine; %> <%}%>`

b d - Which of the following techniques is likely to return an initialization parameter for a JSP page? (Choose two.)

A. `<%= request.getParameter("myParm") %>`

B. `<% String s = getInitParameter("myParm"); %>`

C. `<% = application.getInitParameter("myParm") %>`

D. `<%= config.getInitParameter("myParm"); %>`

E. `<%= getParameter("myParm") %>`

F. `<% Object o = confi g.getParameter("myParm"); %>`

G. `<% String s = confi g.getAttribute("myParm"); %>`

H. `<% String s = getAttribute("myParm"); %>`

c - What is the result of requesting errorProvoker.jsp for the first time? Assume that neither of the JSP pages below has yet been translated. (Choose one.)

```
<%--Beginning of errorProvoker.jsp page source --%> <%@ page errorPage="/errorDisplayer.jsp" %>
<% request.setAttribute("divisor", new Integer(0)); %> <html>
<head>
<% int i = ((Integer) request.getAttribute("divisor")).intValue(); %> <title>Page Which Terminates In Error</title>
</head><body> <%= 1.0 / i %> </body></html>
<%-- End of errorProvoker.jsp page source --%>
<%-- Beginning of errorDisplayer.jsp page source --%>
<%@ page isErrorPage="true" %>
<%@ page import="java.io.*" %>
<html><head><title>Divide by Zero Error</title></head> <body><h1>Don't divide by zero!</h1>
<pre><% exception.printStackTrace(new PrintWriter(out)); %></pre> </body></html>
<%-- End of errorDisplayer.jsp page source --%>
```

A. errorProvoker.jsp will not translate and compile because of faults in the page source.

B. errorDisplayer.jsp will not translate and compile because of faults in the page source.

C. errorDisplayer.jsp will not be translated.

D. A stack trace will be displayed in the requesting browser.

E. The browser's title bar will display "Divide by Zero Error."

F. errorProvoker.jsp displays output.

a b e f - Which of the following are false statements about implicit objects and scope? (Choose four.)

- A. out is of type java.io.PrintWriter.
- B. config can be used to return context initialization parameters.
- C. PageContext.findAttribute() can't be used to return a session scope attribute if an attribute of the same name exists in page scope.
- D. page is of type java.lang.Object.
- E. application can't be used to access other web application resources.
- F. It is illegal to have attributes of the same name existing in more than one scope.

d - What is the result of attempting to access attributeFinder.jsp below, typing text into the input field, and pressing the submit button? (Choose one.)

```
<%-- Beginning of attributeFinder.jsp page source --%>
<%@ include file="fieldSetter.jsp" %>
<html><head><title>Echo Input</title></head>
<body><h5>Type in the field below and press the button to echo input...</h5>
<form>
<input type="text" name="<%= session.getAttribute("echoFieldName")%>" /> <input type="submit" /> </form>
<h3>Echoed Text: <%= request.getAttribute("echoInput") %></h3> </body></html>
<%-- End of attributeFinder.jsp page source --%>
<%-- Beginning of fieldSetter.jsp page source --%>
<% session.setAttribute("echoFieldName", "echoInput"); %> <%-- End of fieldSetter.jsp page source --%>
```

- A. Can't be accessed: translation error in attributeFinder.jsp.
- B. Can't be accessed: translation error in fieldSetter.jsp.
- C. Can't be accessed: translation errors in both attributeFinder.jsp and fieldSetter.jsp.
- D. null is displayed for the echoed text.
- E. Echoed text is displayed as intended.

a d - Which of the following are potentially legal lines of JSP source? (Choose two.)

- A. <jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />
- B. <% String className = "a.b.MyBean"; %>  
<jsp:useBean id="beanName2" class="<%=className%>" />
- C. <% String beanName = "beanName3"; %>  
<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />
- D. <% String myValue = "myValue"; %>  
<jsp:setProperty name="beanName1" property="soleProp" value="<%=myValue%>" />

E. `<% String propName = "soleProp"; %>`  
`<jsp:getProperty name="beanName1" property="<%=propName%>" />`

b d e - Which of the following are false statements about `<jsp:useBean>` standard action attributes? (Choose three.)

- A. If present, the class attribute must match the object type of your bean.
- B. If the type attribute is used, the class attribute must be present.
- C. The reference variable used for a bean doesn't always have the same type as the bean object it refers to.
- D. If both are used, class and type attributes must have different values.
- E. If both are used, class and type attributes must have the same value.
- F. If both are used, class and type attributes can have the same value.

a - Given a `NameBean` with a "name" property and an `AddressBean` with an "address" property, what happens when the following JSP is requested with the following URL? (Choose one.)

Calling URL: `http://localhost:8080/examp0701/Question4.jsp?name=David%20Bridgewater&address=Leeds%20UK`

JSP page source:

```
<jsp:useBean id="name" class="webcert.ch07.examp0701.NameBean" />
<jsp:useBean id="address" class="webcert.ch07.examp0701.AddressBean" />
<jsp:setProperty name="name" property="name" />
<jsp:setProperty name="address" param="*" />
<jsp:getProperty name="name" property="name" />
<jsp:getProperty name="address" property="address" />
```

- A. A translation time error occurs.
- B. A request time error occurs.
- C. "null null" is displayed.
- D. "David Bridgewater null" is displayed.
- E. "null Leeds UK" is displayed.
- F. "David Bridgewater Leeds UK" is displayed.

a b c d - Which of the following techniques would correctly put a bean into application scope? (You can assume that any necessary page directives are present and correct elsewhere in the JSP page.) (Choose four.)

- A. `<jsp:useBean id="app1" class="webcert.ch07.examp0701.AddressBean" scope="application" />`
- B. `<% AddressBean ab2 = new AddressBean(); application.setAttribute("app2", ab2); %>`
- C. `<% AddressBean ab3 = new AddressBean();`  
`pageContext.setAttribute("app3", ab3, PageContext.APPLICATION_SCOPE); %>`

D. `<% AddressBean ab4 = new AddressBean();  
ServletContext context = getServletContext();  
context.setAttribute("app4", ab4); %>`

E. `<% AddressBean ab5 = new AddressBean(); pageContext.setAttribute("app5", ab5); %>`

F. `<jsp:useBean name="app6" class="webcert.ch07.examp0701.AddressBean" scope="application" />`

d g - 6. Consider the source for the following two JSP pages, a.jsp and b.jsp. What is the outcome of requesting each in turn? You can assume that "c.jsp" is available in the same web application directory as a.jsp and b.jsp. (Choose two.)

Source for a.jsp:

```
<%@page buffer="none" autoFlush="true"%> <jsp:forward page="c.jsp"/>
<%@page buffer="none" autoFlush="true"%><jsp:forward page="c.jsp"/>
```

A. Neither JSP page translates.

B. a.jsp translates; b.jsp does not.

C. b.jsp translates; a.jsp does not.

D. Both JSP pages translate.

E. Neither JSP page runs successfully.

F. a.jsp runs successfully; b.jsp does not.

G. b.jsp runs successfully, a.jsp does not.

H. Both a.jsp and b.jsp run successfully.

e - What is the outcome of making the HTTP GET request shown to params.jsp (source follows)? (Choose one.)

The HTTP request is in this form: `http://localhost:8080/examp0702/params.jsp?X=1&Y=2&Z=3`

Source of params.jsp:

```
<jsp:include page="included.jsp"> <jsp:param name="X" value="4" />
<jsp:param name="X" value="5" /> <jsp:param name="Y" value="6" /> </jsp:include>
${param.X} <%=request.getParameter("Y")%> Source of included.jsp: ${param.X}
${param.Y}
<% String[] x = request.getParameterValues("X"); for (int i = 0; i < x.length; i++) {
out.write(x[i]);
}
%>
```

A. 1 2 45 4 6

B. 1 2 145 4 6

C. 4 6 451 4 6

D. 1 2 145 1 2

E. 4 6 451 1 2

F. 4 6 45 1 2

G. None of the above

b c d - Which of the following are helpful statements about the include standard action and the include directive? (Choose three.)

A. The include directive is useful for the inclusion of pages that change frequently.

B. The include standard action is useful when soft-coding the page to include.

C. Given the same page to include, the include directive may be more efficient than the include standard action at request time.

D. The body of the include standard action can influence existing request parameters.

E. Given the same page to include, the include directive may be more efficient than the include standard action at translation time.

F. An include directive can be processed or not according to JSTL, EL, or scriptlet page logic.

f - What will be the result of requesting the JSP page represented by the following source? Assume that "forwardedTo.jsp" is an empty file. (Choose one.)

```
<%@ page import="java.util.*,java.text.*" %>
<%! private String returnTimeStamp(PageContext pageContext) { DateFormat df = DateFormat.getDateTimeInstance();
String s = df.format(new Date()); pageContext.setAttribute("timestamp", s); return s;
} %>
<jsp:forward page="forwardedTo.jsp" /> <%=returnTimeStamp(pageContext)%> <%System.out.println(pageContext.getAttribute("timestamp"));%>
```

A. Translation error.

B. Run-time error.

C. A formatted date appears in the page output.

D. A formatted date appears in the server console.

E. A formatted date appears both in the page output and in the server console.

F. None of the above.

f - What is the outcome of making the HTTP GET request shown to params.jsp (source follows)? (Choose one.)

The HTTP request is in this form: `http://localhost:8080/examp0702/params.jsp?X=1&Y=2&Z=3` Source of params.jsp:

```
<jsp:forward page="included.jsp"> <jsp:param name="X" value="4" /> <jsp:param name="X" value="5" /> <jsp:pa
```

```

ram name="Y" value="6" /> <jsp:forward/>
${param.X} <%=request.getParameter("Y")%> Source of included.jsp: ${param.X}
${param.Y}
<% String[] x = request.getParameterValues("X"); for (int i = 0; i < x.length; i++) {
out.write(x[i]);
}
%>

```

- A. 1 2 145
- B. 4 6 451
- C. 1 2 145 1 2
- D. 4 6 451 1 2
- E. 4 6 451 4 6
- F. None of the above

e - What is the outcome of accessing the following page, defined as a JSP document in a web application? The line numbers are for reference only and should not be considered part of the JSP page source. (Choose one.)

```

01 <html xmlns:jsp="http://java.sun.com/JSP/Page">
02 <jsp:directive.page contentType="text/html" />
03 <jsp:declaration>
04 public int squared(int value) {
05 return value * value;
06 }
07 </jsp:declaration>
08 <jsp:scriptlet>
09 int value = Integer.parseInt
10 (request.getParameter("number"));
11 int squared = squared(value);
12 out.write(value + " squared is " + squared);
13 if (squared < 100) {
14 out.write("; try a bigger number.");
15 }
16 </jsp:scriptlet>
17 </html>

```

- A. Translation error at line 1
- B. Translation error at line 2
- C. Translation error at line 4
- D. Translation error at line 12
- E. Translation error at line 13
- F. Run-time error



G. No errors, with page displaying successfully

c e - Which of the following JSP documents will produce output? You can assume that `a.b.StringBean` exists and has a valid property called "string." (Choose two.)

A. `<jsp:useBean id="string" class="a.b.StringBean">  
<jsp:setProperty name="string" property="string" value="Question12" /> <jsp:getProperty name="string" property="string" />  
</jsp:useBean>`

B. `<jsp:useBean xmlns:jsp="http://java.sun.com/JSP/Page" id="string" class="a.b.StringBean">  
<jsp:setProperty name="string" property="string" value="Question12" /> <jsp:getProperty name="string" property="string" />  
</jsp:useBean>`

C. `<jsp:useBean xmlns:jsp="http://java.sun.com/JSP/Page" id="string" class="a.b.StringBean">  
<jsp:setProperty name="string" property="string" value="Question12" /> <data><jsp:getProperty name="string" property="string" /></data>  
</jsp:useBean>`

D. `<jsp:useBean xmlns:jsp="http://java.sun.com/JSP/Page" id="string" class="a.b.StringBean">  
<jsp:setProperty name="string" property="string" value="Question12" /> </jsp:useBean>  
<data><jsp:getProperty name="string" property="string" /></data>`

E. `<jsp:root xmlns:jsp="http://java.sun.com/JSP/Page" version="2.0"> <jsp:useBean id="string" class="a.b.StringBean">  
<jsp:setProperty name="string" property="string" value="Question12" /> </jsp:useBean>  
<data><jsp:getProperty name="string" property="string" /></data> </jsp:root>`

b d - Which of the following techniques will cause JSP page source to be treated as a JSP document by the JSP container? (Choose two.)

A. Setting the `<is-xml>` subelement of `<jsp-config>` to a value of true

B. Using a `.jspx` extension with a version 2.4 deployment descriptor

C. Using a `.xml` extension with a version 2.4 deployment descriptor

D. Using `<jsp:root>` as the root element of your source

E. Using a deployment descriptor at level 2.4

F. Writing your page source in XML syntax

d - Of the five JSP page source extracts below, there are two pairs. Each member of the pair gives rise to identical output. Which is the odd one out? (Choose one.)

A. `<% int i, j, k;  
i = 1; j = 2; k = 3; %> <%= i + j / k %>`

B. `<jsp:scriptlet>int i, j, k;  
i = 1; j = 2; k = 3;</jsp:scriptlet> <jsp:expression>(i + j) / k</jsp:expression>`

C. `<% int i, j, k;  
i = 1; j = 2; k = 3; %>  
<%= (i + j) / k + ".0" %>`

D. `<% pageContext.setAttribute("i", new Integer(1)); pageContext.setAttribute("j", new Integer(2)); pageContext.setAttribute("k", new Integer(3)); %>${pageScope.i + pageScope.j / pageScope.k}`

E. `<% pageContext.setAttribute("i", new Integer(1)); pageContext.setAttribute("j", new Integer(2)); pageContext.setAttribute("k", new Integer(3)); %>${(pageScope.i + pageScope.j) / pageScope.k}`

e - Which of the following tags will successfully complete the following JSP page extract, at the points marked `<jsp:???` and `</jsp:???` ? (Choose one.)

```
<html xmlns:jsp="http://java.sun.com/JSP/Page" > <jsp:directive.page contentType="text/html" /> <head><title>Question 15</title></head> <jsp:???><![CDATA[<jsp:???><![CDATA[" />]]></jsp:???>
</html>
```

A. `<jsp:param>` and `</jsp:param>`

B. `<jsp:element>` and `</jsp:element>`

C. `<jsp:img>` and `</jsp:img>`

D. `<jsp:output>` and `</jsp:output>`

E. `<jsp:text>` and `</jsp:text>`

f - What is the consequence of accessing the following JSP page with the URL shown? (Choose one.)

URL for accessing Question16.jsp: `http://localhost:8080/examp0704/Question16.jsp?A=1&A=2`

JSP page source:

```
<!-- Source for Question16.jsp --> <p>Parameter A has values
<% for (int j = 0; j < request.getParameterValues("A").length; j++) { %> ${paramValues.A[j]},
<% } %> </p>
```

A. Translation error

B. Run-time error

C. Output of: "Parameter A has values 1,2,"

D. Output of: "Parameter A has values 1, ,"

E. Output of: "Parameter A has values 0,0,"

F. Output of: "Parameter A has values , ,"

b c - Which of the following are implicit variables in EL? (Choose two.)

A. session

- B. param
- C. paramValues
- D. initParams
- E. request
- F. page
- G. contextScope

c - Which of the following EL expressions will return a `<servlet-name>` associated with the JSP executing the expression? (Choose one.)

- A. `${pageContext.config.getServletName}`
- B. `${pageContext.config.servletName}`
- C. `${pageContext.servletConfig.servletName}`
- D. `${pageContext.servletConfig.getServletName}`
- E. `${pageContext.getServletConfig().getServletName()}`

b c - What expression is required at the point marked ??? in the following JSP page to output the number 46? (Choose two.)

```
<html xmlns:jsp="http://java.sun.com/JSP/Page" >
<head><title>Question 19</title></head>
<jsp:output omit-xml-declaration="true" /> <jsp:directive.page contentType="text/html" />
<body>
<jsp:scriptlet>
request.setAttribute("a", new Integer(2));
session.setAttribute("b", new Integer(3));
application.setAttribute("c", new Integer(4));
request.setAttribute("d", new Integer(5));
</jsp:scriptlet>
???
</body></html>
```

- A. `${pageContext.c * pageContext.d * pageContext.a + pageContext.a * pageContext.b}`
- B. `${applicationScope.c * requestScope.d * requestScope.a + requestScope.a * sessionScope.b}`
- C. `${(applicationScope.c * requestScope.d * requestScope.a) + (requestScope.a * sessionScope.b)}`
- D. `${(pageContext.c * pageContext.d * pageContext.a) + (pageContext.a * pageContext.b)}`
- E. `${(application.c * request.d * request.a) + (request.a * session.b)}`
- F. `${application.c * request.d * request.a + request.a * session.b}`

d - Which is correct JDBC-ODBC driver name?

Chọn một câu trả lời

- a) jdbc.odbc.sun.JdbcOdbcDriver
- b) sun.driver.jdbc.odbc
- c) jdbc.odbc.sun.driver
- d) sun.jdbc.odbc.JdbcOdbcDriver

ade - Choose three correct statements in JDBC

Chọn ít nhất một câu trả lời

- a) getObject
- b) getLine
- c) getText
- d) getInt
- e) getString

c - Which is correct sequence for a JDBC execution?

Chọn một câu trả lời

- a) Connection -> Load Driver -> Statement -> ResultSet
- b) Load Driver -> Statement -> ResultSet -> Connection
- c) Load Driver -> Connection -> Statement -> ResultSet
- d) Statement -> Connection -> ResultSet -> Load Driver

ad - Which are the correct statements of Connection object? (Choose two)

- a) createStatement(int, int);
- b) createStatement(int, String);
- c) createStatement(String, int);
- d) createStatement();

bcd - Which are the correct statements of ResultSet object? (Choose three)

- a) executeQueries()
- b) executeBatch()
- c) execute()
- d) executeUpdate()

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

- a) getOutputStream
- b) getBinaryStream
- c) getWriter
- d) getStream

c - Which of the following files is the correct name and location of deployment descriptor of a web application. Assume that the web application is rooted at \doc-root. Select the one correct answer

- a) \doc-root\dd.xml
- b) \doc-root\WEB-INF\dd.xml
- c) \doc-root\WEB-INF\web.xml
- d) \doc-root\web.xml
- e) \doc-root\WEB\_INF\dd.xml

c - Which of these is true about deployment descriptors. Select the one correct answer

Chọn một câu trả lời

- a) The servlet-mapping element, if defined, must be included within the servlet element.

- b) The web-app element must include the servlet element
- c) The order of elements in deployment descriptor is important. The elements must follow a specific order
- d) The elements of deployment descriptor are case insensitive

d - The exception-type element specifies an exception type and is used to handle exceptions generated from a servlet. Which element of the deployment descriptor includes the exception-type as a sub-element. Do not include the element in enclosing parenthesis

- a) error
- b) exception
- c) exception-page
- d) error-page

a - \_\_\_\_\_ is a set of java API for executing SQL statements.

- a) JDBC
- b) JAVADB
- c) ODBC
- d) None of the other choices

b - JDBC supports \_\_\_\_\_ and \_\_\_\_\_ models.

Chọn một câu trả lời

- a) Three-tier and four-tier
- b) Two-tier and three-tier
- c) None of the other choices
- d) Single-tier and two-tier

b - URL referring to databases use the form:

Chọn một câu trả lời

- a) protocol:subprotocol:datasourcename
- b) jdbc:odbc:datasourcename
- c) protocol:datasourcename
- d) jdbc:datasourcename

c - Study the statements:

1)When a JDBC connection is created, it is in auto-commit mode

2)Once auto-commit mode is disabled, no SQL statements will be committed until you call the method commit explicitly

Chọn một câu trả lời

- a) Only statement 2 is true
- b) Both 1 and 2 are not true
- c) Both 1 and 2 are true
- d) Only statement 1 is true

c - The \_\_\_\_\_ class is the primary class that has the driver information.

Chọn một câu trả lời

- a) None of the other choices
- b) Driver
- c) DriverManager
- d) ODBCDriver

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

A. HttpServletRequest

- B. HttpServletResponse
- C. ServletConfig
- D. ServletContext

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

- A. setType
- B. setContent
- C. setContentType
- D. setResponseContentType

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

- A. The response from the dedicated server to a HEAD request consists of status line, content type and the document.
- B. The response from the server to a GET request does not contain a document.
- C. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus method.

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY
- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY
- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

a - . Which of the following statements are correct about the status of the Http response. Select the one correct answer.

- A. A status of 200 to 299 signifies that the request was successful.
- B. A status of 300 to 399 are informational messages.
- C. A status of 400 to 499 indicates an error in the server.
- D. A status of 500 to 599 indicates an error in the client.

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- A. getStream
- B. getOutputStream

- C. getBinaryStream
- D. getWriter

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

- a. True
- b. False

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

- A. The getRequestDispatcher method of ServletContext class takes the full path of the servlet, whereas the getRequestDispatcher method of HttpServletRequest class takes the path of the servlet relative to the ServletContext.
- B. The include method defined in the RequestDispatcher class can be used to access one servlet from another. But it can be invoked only if no output has been sent to the server.
- C. The getRequestDispatcher(String URL) is defined in both ServletContext and HttpServletRequest method
- D. The getNamedDispatcher(String) defined in HttpServletRequest class takes the name of the servlet and returns an object of RequestDispatcher class.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. POST allows users to bookmark URLs with parameters.
- B. The POST method should not be used when large amount of data needs to be transferred.
- C. POST allows secure data transmission over the http method.
- D. POST method sends data in the body of the request.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. CONNECT method
- B. COMPARE method
- C. OPTIONS method
- D. TRACE method

b - Name the http method used to send resources to the server. Select the one correct answer.

- A. FTP method
- B. PUT method
- C. WRITE method
- D. COPY method

c - . Name the http method that sends the same response as the request. Select the one correct answer.

- A. DEBUG method
- B. TRACE method
- C. OPTIONS method
- D. HEAD method

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

- A. Codes starting from 200
- B. Codes starting from 300
- C. Codes starting from 400
- D. Codes starting from 500

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

- A. /META-INF/classes
- B. /classes
- C. /WEB-INF/classes
- D. /root/classes

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

- A. `<%int i = 1;%>`  
`<%= i; %>`
- B. `<%int i = 1;`  
`i; %>`
- C. `<%int i = 1%>`  
`<%= i %>`
- D. `<%int i = 1;%>`  
`<%= i %>`
- E. `<%int i = 1%>`  
`<%= i; %>`

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

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

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement  
`<%! String myName=request.getParameter();%>`
- C. The program gives a syntax error because of the statement  
`<% String test= "welcome" + myName; %>`
- D. The program gives a syntax error because of the statement  
`<%= test%>`

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

- ```
<%=x%>
```
- A. `<jsp:expression=x/>`
 - B. `<jsp:expression>x</jsp:expression>`
 - C. `<jsp:statement>x</jsp:statement>`
 - D. `<jsp:declaration>x</jsp:declaration>`
 - E. `<jsp:scriptlet>x</jsp:scriptlet>`

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

- ```
<%x=1;%>
```
- A. `<jsp:expression x=1;/>`
  - B. `<jsp:expression>x=1;</jsp:expression>`
  - C. `<jsp:statement>x=1;</jsp:statement>`
  - D. `<jsp:declaration>x=1;</jsp:declaration>`
  - E. `<jsp:scriptlet>x=1;</jsp:scriptlet>`



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

```
<%= if(Math.random() < 0.5) %>
```

```
hello
```

```
<%= } else { %>
```

```
hi
```

```
<%= } %>
```

A. The browser will print either hello or hi based upon the return value of random.

B. The string hello will always get printed.

C. The string hi will always get printed.

D. The JSP file will not compile.

d - Which of the following are correct. Select the one correct answer.

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

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

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

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

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

```
<% int y = 0; %>
```

```
<% int z = 0; %>
```

```
<% for(int x=0;x<3;x++) { %>
```

```
<% z++;++y;%>
```

```
<% }%>
```

```
<% if(z<y) {%>
```

```
<%= z%>
```

```
<% } else {%>
```

```
<%= z - 1%>
```

```
<% }%>
```

A. 0

B. 1

C. 2

D. 3

E. The program generates compilation error.

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

A. out

B. session

C. request

D. response

E. `httpSession`

F. page

d - A bean with a property color is loaded using the following statement

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

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

A. `<jsp:getColor bean="fruit"/>`

B. `<jsp:getProperty id="fruit" property="color"/>`

C. `<jsp:getProperty bean="fruit" property="color"/>`

D. `<jsp:getProperty name="fruit" property="color"/>`

E. `<jsp:getProperty class="Fruit" property="color"/>`

c - A bean with a property color is loaded using the following statement

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

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

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

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

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

- A. `<jsp:usebean id="fruit" scope="page"/>`
- B. `<jsp:usebean id="fruit" type="String"/>`
- C. `<jsp:usebean id="fruit" type="String" beanName="Fruit"/>`
- D. `<jsp:usebean id="fruit" class="Fruit" beanName="Fruit"/>`

a - Name the default value of the scope attribute of `<jsp:usebean>`.

- A. page
- B. application
- C. session
- D. request

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

- A. The id attribute must be defined for `<jsp:usebean>`.
- B. The scope attribute must be defined for `<jsp:usebean>`.
- C. The class attribute must be defined for `<jsp:usebean>`.
- D. The `<jsp:usebean>` must include either type or class attribute or both.

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

- A. include
- B. scope
- C. errorPage
- D. session
- E. debug

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

- A. `<jsp:include file="a.jsp"/>`
- B. `<jsp:include page="a.jsp"/>`
- C. `<jsp:directive.include file="a.jsp"/>`
- D. There is no XML equivalent of include directive.

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

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

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

- A. `<% sum = sum + j %>`
- B. `<% sum = sum + j; %>`

- C. `<%= sum = sum + j %>`
- D. `<%= sum = sum + j; %>`

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

- A. `<% sum %>`
- B. `<% sum; %>`
- C. `<%= sum %>`
- D. `<%= sum; %>`

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

- A. `HttpRequest`
- B. `ServletRequest`
- C. `Request`
- D. `HttpServletRequest`

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

- A. `session`
- B. `application`
- C. `httpSession`
- D. `httpsession`

d - A Java bean with a property `color` is loaded using the following statement

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

What is the effect of the following statement.

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

Select the one correct answer.

- A. An error gets generated because the value attribute of `setAttribute` is not defined.
- B. The `color` attribute is assigned a value `null`.
- C. The `color` attribute is assigned a value `""`.
- D. If there is a non-null request parameter with name `color`, then its value gets assigned to `color` property of Java Bean `fruit`

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

- A. `<% page info="test page" %>`
- B. `<%@ page info="test page" session="false"%>`
- C. `<%@ page session="true" %>`
- D. `<%@ page isErrorPage="errorPage.jsp" %>`
- E. `<%@ page isThreadSafe=true %>`

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

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

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

- A. Yes. This is legal JSP syntax.
- B. No. This code will generate syntax errors

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

- A. `contentType`
- B. `generateXML`
- C. `type`

D. outputXML

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

- A. extends
- B. import
- C. include
- D. package
- E. classpath

ac - Which of these are true. Select the two correct answers.

- A. The default value of `isThreadSafe` attribute of page directive is true.
- B. If `isThreadSafe` attribute of page directive is set to true, then JSP container dispatches request for the page sequentially.
- C. When `isThreadSafe` attribute of page directive is set to true, a thread is created for each request for the page.
- D. Setting `isThreadSafe` attribute to true for JSP pages, can lead to poor performance.

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

- A. include
- B. exclude
- C. import
- D. taglibrary
- E. servlet
- F. page

d - Which of these is true about include directive. Select the one correct answer.

- A. The included file must have `jspf` extension.
- B. The XML syntax of include directive in `<jsp:include file="fileName"/>`.
- C. The content of file included using include directive, cannot refer to variables local to the original page.
- D. When using the include directive, the JSP container treats the file to be included as if it was part of the original file.

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

- A. page
- B. pageContext
- C. context
- D. object
- E. jspPage

ad - Message-driven beans are classes that implement 2 interfaces :

- [A]  
`javax.ejb.MessageDrivenBean`
- [B]  
`javax.jms.Message`
- [C]  
`javax.jms.MessageBean`
- [D]  
`javax.jms.MessageListener`

ab - Which are the types of messaging domains ? (choose 2)

- [A]  
Publish/Subscribe
- [B]

Point-to-Point

[C]

Peer-to-Peer

[D]

Broadcast/Receiver

d - Select the correct JMS programming model

[A]

Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[B]

Locate the JMS Driver -> Create a JMS session -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[C]

Locate the JMS Driver -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[D]

Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Create a JMS producer or a JMS consumer -> Send or receive message

b - Message-driven beans do not have any return value

[A]

True

[B]

False

a - Select the word to replace ??? to make the diagram about messaging domain correct

[A]

Topic

[B]

Queue

[C]

PTP

[D]

Pub/Sub//

d - A \_\_\_\_ subscription to a topic means that a JMS subscriber receives all message even if the subscriber is inactive

[A]

temporary

[B]

nondurable

[C]

persistent

[D]

Durable

a - In ejb-jar.xml file, <persistence-type> element value is \_\_\_\_\_

[A]

Bean or Container

[B]

Container-Managed-Persistent

[C]

Bean-Managed-Persistent

[D]

BMP or CMP

a - Entity bean is \_\_\_\_\_

[A]

a persistent data component

[B]

a database object

[C]

an application logic component

[D]

an object-relational mapping

d - ejbCreate() method of entity bean class returns \_\_\_\_\_

[A]

remote object

[B]

null

[C]

home object

[D]

primary key

a - create() method of entity home interface returns \_\_\_\_\_

[A]

null

[B]

remote object

[C]

primary key

[D]

home object

ac - select CORRECT statement (choose 2)

[A]

Entity beans represent persistent state objects (things that don't go away when user goes away)

[B]

Session beans represent persistent state objects (things that don't go away when user goes away)

[C]

Session beans model a process or workflow (actions that are started by the user and that do away when user goes away)

[D]

Entity beans model a process or workflow (action that are started by the user and that go way when user goes away)

c - The \_\_\_\_\_ class makes every entity bean different

[A]

bean key

[B]

bean ID

[C]

primary key

[D]

key

acd - The top three values of EJB are (choose 3):

[A]

Portability is easier

[B]

Distributed application

[C]

Rapid Application Development

[D]

It is agreed upon by the industry

[E]

Easy to upgrade

a - Which is not the players in the EJB Ecosystem? (choose 1):

[A]

End User

[B]

EJB Deployer

[C]

System Administrator

[D]

Application Assembler

[E]

Bean provider

a - The \_\_\_\_\_ is the overall application architect .This party is responsible for understanding how various components fit together and writes the application that combine components.

[A]

Application Assembler

[B]

Application Builder

[C]

Deployer

[D]

Developer

c - which is not the role of EJB Deployer?

[A]

Securing the deployment with a firewall

[B]

Performance-tuning the system

[C]

Write the code that calls on components supplied by bean providers

[D]

Choosing hardware that provides the required level of performance

abe - Which are EJB containers ? (choose three)

[A]

JBoss

[B]

BEA's WebLogic

[C]

Microsoft Application Server

[D]  
Apache Tomcat 5.5  
[E]  
IBM WebSphere

d - The \_\_\_\_\_ supplies business components,or enterprise beans

[A]  
Tool vendor  
[B]  
Application assembler  
[C]  
Deployer  
[D]  
Bean provider

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

[A]  
True  
[B]  
False

b - Given the following JSP and Tag handler code,what is the result of accessing the JSP ?

JSP Page Source

```
<html>
<body>
<%@taglib uri = "test_taglib" prefix = "myTag"%>
<% session.setAttribute("first", "first");%>
<myTag:TestTag/>

<%=session.getAttribute("second")%>
</body>
</html>
```

Tag Handler Code for <myTag:TestTag/>

```
package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
 private PageContext pageContext;

 public void setPage(PageContextpage){
 this.pageContext=page;
 }

 public int doStartTag() throws JspException {
 try{
 String first = pageContext.getSession().getAttribute("first").toString();
 pageContext.getOut().write(first);
 pageContext.setAttribute("second", "second", PageContext.PAGE_SCOPE);
 }
 }
}
```



```

 }
 catch(IOException)
 {
 throw new JspException(i.getMessage());
 }
 return SKIP_BODY;
}

public int doEndTag() throws JspException{
 return EVAL_PAGE;
}

public void release(){}

}

```

Assume \*.tld and web.xml files are correct.

- [A]  
second  
first
- [B]  
first  
second
- [C]  
first  
null
- [D]  
second  
null

b - When implementing a tag, if the tag does not include the body ,then the tag handler lass must extend the BodyTagSupport class.

Is this statement true or false.

- [A]  
True
- [B]  
False

ae - Which of these are legal return types of the doEndTag method defined in a class that extends TagSupport class.  
SELECT the two correct answers.

- [A]  
EVAL\_PAGE
- [B]  
EVAL\_BODY
- [C]  
EVAL\_PAGE\_INCLUDE
- [D]  
EVAL\_BODY\_INCLUDE
- [E]  
SKIP\_PAGE
- [F]  
SKIP\_BODY

d - A JSP file that uses a tag library must declare the tag library first. The tag library is defined using the taglib direct

ive <%@taglib uri = "... " prefix="..."%>

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

[A]

The prefix defines the name of the tag that may be used for a tag library.

[B]

The prefix attribute defines the location of the tag library descriptor file

[C]

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

[D]

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

d - \_\_\_\_\_ sends a request to an object and includes the result in a JSP file.

[A]

include directive

[B]

import directive

[C]

<jsp:forward>

[D]

<jsp:include>

a - A programmer is designing a class to encapsulate the information about an inventory item. A JavaBeans component is need to do this. The InventoryItem has private instance variables to store the item information:

10.private int itemId;

11.private String name;

12.private String description;

Which method signature follows the JavaBeans naming standards for modifying the itemId instance variable? (choose one)

[A]

setItemId(int itemId)

[B]

updateItemID(int itemId)

[C]

itemID(int itemId)

[D]

update(int itemId)

[E]

mutateItemId(int itemId)

a - Name the class that includes the SetSession method that is used to get the HttpSession object

[A]

HttpServletRequest

[B]

HttpServletResponse

[C]

SessionContext

[D]

SessionConfig

bc - Which of the following are potential legal of JSP source ? (choose 2)

[A]

```

<jsp:useBean id = "beanName1" class="a.b.MyBean" type="a.b.Myinterface"/>
[B]
<% String myValue = "myValue"; %>
<jsp:setProperty name = "beanName1" property="soleProp" value = "<%=myValue%>" />
[C]
<%String className = "a.b.MyBean"; %>
<jsp:useBean id = "beanName2" class="<%=className%>" />
[D]
<%String propName = "soleProp"; %>
<jsp:getProperty name = "beanName1" property="<%=propName%>" />
[E]
<%String beanName = "beanName3"; %>
<jsp:useBean id = "<%=beanName3%>" class="a.b.MyBean" />

```

b - Given that a servlet has been mapped to /account/. Identify the HttpServletRequest methods that will return the/m  
yapp segmentforthe URI: /myapp/account/.

- A. getPathInfo
- B. getServletPath
- C. getContextPath

d - Identify the method used to get an object available in a session. (Choose one)

- A. get of Session
- B. getValue of HttpSession
- C. getAttribute of Session
- D. getAttribute of HttpSession

e - Which jsp tag can be used to set bean property?

- A. jsp:property
- B. jsp:useBean.setProperty
- C. jsp:useBean
- D. jsp:useBean.property
- E. jsp:setProperty

a - What is the consequence of attempting to access the following JSP page?

```

<html>
<body>
<%!
public void JspService(HttpServletRequest request HttpServletResponse response) { outwrite("A");
}
%>
<% outwritef("B"): %>
</body>
</html>

```

- A. Duplicate method compilation error.
- B. "A" is output to the response before "B".
- C. "A" is output to the response.
- D. "B" is output to the response.

b - Which of the following statement is correct?

- A. Data Integrity means that the data cannot be viewed by anybody other than it's intended receipient
- B. Authentication means determining whether one has access to a particular resource or not
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver.

d - \_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:forward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include>

d - Study the statements:

- 1) The special directory/WEB-INF/lib contains Java class files—servlets and supporting code.
  - 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.
- A. Only statement 1 is true
  - B. Only statement 2 is true
  - C. Both 1 and 2 are true
  - D. Both 1 and 2 are not true

b - Which statements are BEST describe class attribute of <jsp:useBean class=... /> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- B. The fully qualified class name of the Java object
- C. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is ca
- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class.

b - Action <jsp:setProperty> has the ability to match request parameters to properties of the same name in a bean by specifying "\*" for attribute property.

- A. False
- B. True

c - Which are the correct lines of code to get information in the following<context-param> tag in the web.xml file Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. response.getParameter('machineName');
- B. request.getParameter( machineName');
- C. ServletContextsc = getServletContextO;  
String serverName = sc.getInitParameter("machineName");
- D. ServletConfigsc = getServletConfigO;  
String serverName = sc.getInitParameter("machineName");

```

<web-app>
<context-param>
<param-name>machineName</param-name>
<param-value>cms-server</param-value>
</context-param>
</web-app>
```

b - Consider the following java code:

```
//in file Book.java package com.bookstore; public class Book {
private long isbn;
public BookO{ isbn = 0;}
public long getIsbn(){ return isbn;}
public void setIsbn(long value){ this.isbn = value;}
}
```

Code for browse.jsp:

<jsp:useBean class="com.bookstore.Book" id="newbook"/>

LINE 1: <jsp:setProperty name="newbook" property="isbn" value="1000"/>

Which of the following statements are correct?

- A. The isbn property of new book will be set to 1000 if `value` attribute of `setProperty` tag is given as: `value=1000`
- B. The isbn property of newbook will be set to 1000.
- C. It will not compile.

d - Identify the technique that can be used to implement 'sessions' if the client browser does not support cookies. (Choose one)

- A. It cannot be done without cookie support
- B. Using Http headers.
- C. URL Writing
- D. Hidden form fields.

d - Name the default value of the scope attribute of <jsp:useBean>

- A. request
- B. application
- C. session
- D. page

c - You have to send a pdf file to the client as a response to a request Which of the following calls will you have to make? (Choose one)

- A. `response.setContentType("application/pdf");`
- B. `response.setContentType("image/pdf");`
- C. `response.setContentType("application/pdf");`
- D. `response.setType("image/pdf");`

c - A JSP \_\_\_\_\_ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the `JspService` method that is called by service to process the request).

- A. expression
- B. scriptlet
- C. declaration

d - Which is NOT a correct statement about entity beans?

- A. They are used to share data among clients
- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes

b - If you want the same Servlet to handle both GET and POST and to take the same action for each, you can simply have `doGet` call `doPost` or vice versa.

- A. False
- B. True

d - A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail

c - Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A. `getFormValue("email")` of `HttpServletRequest`
- B. `getField(email)` of `HttpServletRequest`
- C. `getParameter("email")` of `ServletRequest`
- D. `getParameters("email")` of `HttpServlet`

a - Which of the following methods can be used to add cookies to a servlet response?

- A. `HttpServletResponse.addCookie(Cookie cookie)`
- B. `ServletResponse.addCookie(Cookie cookie)`
- C. `ServletResponse.addCookie(String contents)`
- D. `HttpServletResponse.addCookie(String contents)`
- E. `ServletResponse.addHeader(String name, String value)`

d - Your web application named "FWorks" uses `SpecialMath.class`. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A. `FWorks/classes`
- B. `FWorks/WEB-INF/lib/classes`
- C. `FWorks/WEB-INF`
- D. `FWorks/WEB-INF/classes`

d - Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets
- E. directives

a - A parameter is defined in a `<context-param>` element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible only to the servlet it is defined for.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible to all the servlets of the webapp.

d - Identify the parent element of `<session-timeout>` element in `web.xml`

- A. `<session-configuration>`
- B. `<webapp>`
- C. `<session_config>`
- D. `<session-config>`

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

- A. True
- B. False

d - Which of the following are correct JSP expressions?

- A. `<%= out.println("hello"); %>`
- B. `<% "Hello World"; %>`
- C. `<%= "Hello World"; %>`
- D. `<%= new Date() %>`

a - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. `\WEB-INF\lib`
- B. `\jars`
- C. `\WEB-INF`

D. \WEB-INF\classes

b - Which security mechanism proves that data has not been tampered with during its transit through the network?

- A. Packet sniffing
- B. Data integrity
- C. Data validation
- D. Authentication
- E. Data privacy
- F. Authorization

d - A JSP page has the following page directives:

```
<%@page isErrorPage='false' %>
```

```
<%@page errorPage='/jsp/myerror.jsp' %>
```

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception

c - Which statements are BEST describe uri attribute of `<%@ taglib uri=_%>` directive of JSP file?

- A. The scripting language used in the JSP. Currently, the only valid value for this attribute is java.
- B. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- C. Specifies the relative or absolute URI of the tag library descriptor.
- D. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names jsp, jsp, java, javax, servlet sun and sunw are reserved.

a - A custom tag can be nested inside another custom tag.

- A. true
- B. false

a - Which is NOT a standard technique for a session be definitely invalidated?

- A. If the session time out is set to 0 using `setMaxInactiveInterval()` method.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls `invalidate()` on a session object
- D. The container is shutdown and brought up again.

b - Objects with application scope are part of a particular Web application.

- A. False
- B. True

b - Which of the following task may happen in the translation phase of JSP page? (Choose one)

- A. Instantiation of the servlet class.
- B. Creation of the servlet class corresponding to the JSP file.
- C. None of the others
- D. Execution of `JspServiceQ` method.

b - When implementing a tag, if the tag does not include the body, then the tag handler class must extend the `BodyTagSupport` class. Is this statement true or false?

- A. True
- B. False

b - How can you ensure the continuity of the session while using `HttpServletResponse.sendRedirect()` method when cookies are not supported by the client?

- A. By using `HttpServletRequest.encodeURLO` method.
- B. By encoding the redirect path with `HttpServletResponse.encodeRedirectURLO` method.
- C. By using hidden parameters.

c - Which of the following is a sensible way of sending an error page to the client in case of a business exception that extends from `java.lang.Exception`? (Choose one)

- A. Don't do anything, the servlet container will automatically send a default error page.
- B. Don't catch the exception and define the 'exception to error-page' mapping in `web.xml`
- C. Catch the exception, wrap it into `ServletException` and define the 'business exception to error-page' mapping in `web.xml`

c - What is the output of the following code snippet of a JSP page?

```
${empty""}

${empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true

b - Which option can be used to predefine Java Persistence queries for easy use?

- A. `@NamedNativeQuery` annotation
- B. `@NamedQuery` annotation
- C. using the `named-native-query` element in the XML descriptor

b - Servlet methods are executed automatically.

- A. False
- B. True

b - Which is NOT associated with the business tier in a JEE (J2EE) web-based application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans

b - Which of the following statements is correct? Select the one correct answer.

- A. The response from the server to a GET request does not contain a document
- B. The `setStatus` method defined in the `HttpServletRequest` class takes an `int` as an argument and sets the status of HTTP response
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The `HttpServletResponse` defines constants like `SC_NOT_FOUND` that may be used as a parameter to `setStatus` method.

a - Which of the following classes define the methods `setStatus(...)` and `sendError(...)` used to send an HTTP error back to the browser? (Choose one)

- A. Both are defined in `HttpServletResponse`.
- B. Both are defined in `ServletResponse`
- C. `HttpServletResponse` and `ServletResponse` respectively.
- D. `ServletResponse` and `HttpServletResponse` respectively.

a - Identify the correct element is required for a valid `<taglib>` tag in `web.xml` (Choose one)

- A. `<taglib-uri>`
- B. `<uri>`
- C. `<uri-name>`
- D. `<uri-location>`
- E. `<tag-uri>`



d - (Choose 1 answer)

Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException {
 res.getWriter().print("Hello");
 RequestDispatcher rd = getServletContext().getRequestDispatcher("/testjsp");
 rd.include(req, res);
 res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of the output
- D. "Hello" and "World" both will be a part of the output

c - Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JMS
- C. Servlets
- D. MOM (Message-Oriented Middleware Product)

a - A stateful session bean must commit a transaction before a business method

- A. False
- B. True

b - If you want the same Servlet to handle both GET and POST and to take the same action for each, you can simply have doGet call doPost, or vice versa

- A. False
- B. True

c - Which statement is true about the use of a persist operation in a transaction of an Entity Beans

- a. If a user persists a detached object it always becomes managed
- b. The persist operation on an entity always cascades to its related entities
- c. If a user persists a new entity with an existing primary key the transaction will fail
- d. If a user persists a managed entity an exception may be thrown by the persist operation

c - Study the statements:

- 1) URL rewriting may be used when a browser is disabled cookies.
- 2) In URL encoding the session id is included as part of the URL

Which is the correct option ?

- A. Only statement 1 is true
- B. Only statement 2 is true
- C. Both 1 and 2 are true
- D. Both 1 and 2 are not true

d - A JSP page will not have access to session implicit variable if.

- A. the user has closed all his/her browser windows.
- B. the request is the first request from the user.
- C. the user's browser does not support URL rewriting.
- D. the session attribute of page directive is set to false.

c - Which statements are BEST describe type attribute of <jsp:useBean type=... /> action?

- A. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of

this name is also declared for use in JSP scripting elements. The name specified here is call..

B. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.

C. The fully qualified class name of the Java object

D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. AClassCai

E. The scope in which the Java object is accessible-page, request session or application. The default scope is page.

d - (Choose 1 answer)

HttpServletRequest.getSession() method returns a \_\_\_\_\_ object.

A. HttpSessionSession.

B. HttpServletResponseSession.

C. HttpRequestSession.

D. HttpSession.

a - (Choose 1 answer)

You need to make sure that the response stream of your web application is secure. Which factor will you look at? (Choose one)

A. data integrity

B. authentication

C. authorization

b - Class HttpServlet defines the methods \_\_\_\_\_ and \_\_\_\_\_ to response to get and post request from a client.

A. doGet, doPost

B. doGet, doPost

C. doGET, doPOST

D. Get, Post

c - (Choose 1 answer)

Which of the elements defined within the taglib element of taglib descriptor file are required? Select one correct answer.

A. taguri

B. info

C. taglib-location

D. display-name

c - (Choose 1 answer)

Which of the following method calls can be used to retrieve an object from the session that was stored using the name "userid"?

- A. `getValue("userid");`
- B. `get("userid");`
- C. `getAttribute("userid");`
- D. `getParameter("userid");`
- E. `getObject("userid");`

c - (Choose 1 answer)

Consider the following `doGet` method code of a servlet

```
public void doGet(HttpServletRequest req, HttpServletResponse res)
{
 String command = req.getParameter("command"); if("remove".equals(command))
 {
 HttpSession session = req.getSession();

 //insert code here
 }
}
```

If the command equals `remove`, you want to unbind an attribute named `"user"` from the session. Which of the following option will you use? (Choose one)

- A. `session.deleteAttribute("user");`
- B. `session.unbind("user");`
- C. `session.removeAttribute("user");`
- D. `session.remove("user");`

c - (Choose 1 answer)

Which Java technology provides a standard API for publish-subscribe messaging model?

- A. JNDI
- B. UDDI

C. JMS

D. JSP

c - (Choose 1 answer)

Which of the following statements are correct about HTTP Basic authentication mechanism?

A. HTML FORM is used to capture username and password.

B. Password is transmitted in an encrypted form.

C. Password is transmitted as text

D. Password is transmitted either in encrypted text or in plain text depending on the browser.

a - (Choose 1 answer)

Which is NOT true about stateless session beans?

A. They are used to represent data stored in a RDBMS

B. They are used to implement business logic

C. They are an Enterprises Beans

D. They are CANNOT hold client state

a - (Choose 1 answer)

JSP\_let you insert arbitrary code into the servlet's JspService method (which is called by service).

A. scriptlets

B. expressions

C. declarations

c - (Choose 1 answer)

Which component can use a container-managed entity manager with an extended persistent context?

A. Session beans and web components

B. Only stateless session beans

C. Only stateful session beans

D. Any EJB component

a - (Choose 1 answer)

Which statements are BEST describe <jsp:include> Action?

- A. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.
- B. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- C. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean.
- D. Forwards request processing to another JSP, servlet or static page. This action terminates the current JSP's execution.

a - (Choose 1 answer)

Which of these is legal return types of the doEndTag method defined in a class that extends TagSupport class? Select one correct answer.

- A. EVAL\_PAGE
- B. EVAL\_BODY
- C. EVAL\_PAGE\_INCLUDE
- D. EVAL\_BODY\_INCLUDE
- E. SKIP\_BODY

c - (Choose 1 answer)

A developer must implement a 'shopping cart' object for a web-based application. The shopping cart must be able to maintain the state of the cart but the state is not stored persistently. Which JEE (J2EE) tech

- A. JMS
- B. Stateless session beans
- C. Stateful session beans
- D. Entity beans

b - (Choose 1 answer)

Which is the correct sequence?

- A. jsp page is compiled-->Jsp page is translated ~>jspInit is called ->JspService is called ->jspDestroy is called
- B. Jsp page is translated -->jsp page is compiled-->jspInit is called ->JspService is called -->jspDestroy is called
- C. Jsp page is translated -->jsp page is compiled-->jspService is called ->jspInit is called ->JspDestroy is called
- D. jsp page is compiled-->Jsp page is translated --> JspService is called -->jspInit is called -->jspDestroy is called

c - (Choose 1 answer)

Which statement is true about the EJB 3.0 stateful session beans?

- A. Its conversational state is lost after passivation unless the bean class saves it to a database
- B. Its conversational state is retained across method invocations but NOT across transaction boundaries
- C. Its conversational state is retained across method invocations and transactions

a - (Choose 1 answer)

GET requests and POST requests can both be used to send form data to a web server.

- A. True
- B. False

a - (Choose 1 answer)

Consider the following tag declaration in a TLD file:

```
<tag>

<name>simpleInterest</name>

<tag-class>SimpleInterestTag</tag-class>

//1

</tag>
```

SimpleInterestTag calculates simple interest for any amount and requires two attributes 'amount' and 'rate'.

Which of the following sub elements would you need to add inside the <tag> element in the TLD in place of //1 as shown above? Two separate <attribute> elements.

- A. One <attribute> element with sub-elements
- B. One <attribute-list> element with sub-elements
- C. One <amount> element and one <rate> element

c - (Choose 1 answer)

Which statement about an entity instance lifecycle is correct?

- A. A removed entity instance is NOT associated with a persistence context
- B. A new entity instance is an instance with a fully populated state.
- C. A managed entity instance is the instance associated with a persistence context
- D. A detached entity instance is an instance with no persistent identity.

a - (Choose 1 answer)

Which of the following are potentially legal lines of JSP source?

A. `<jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />`

B. `<% String propName = "soleProp": %>`

`<jsp:getProperty name="beanName1" property="<%=propName%>" />`

`/>`

C. `<% String beanName = "beanName3"; %>`

`<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />`

D. `<% String className = "a.b.MyBean"; %>`

`<jsp:useBean id="beanName2" class="<0/o=className%>" />`

e - (Choose 1 answer)

You want to use a bean that is stored in com/enthu/GUI.ser file. Which of following statements correctly defines the tag that accesses the bean?

A. `<jsp:useBean id="pref" type="com/enthu/GUI.ser"/>`

B. `<jsp:useBean id="pref" name="com/enthu/GUI.ser"/>`

C. `<jsp:useBean id="pref" class="com.enthu.GUI.ser,7>`

D. `<jsp:useBean id="pref" name="com.enthu.GUr7>`

E. `<jsp:useBean id="pref" beanName^com.enthu.GUI" type="com.enthu.GUI7>`

b - (Choose 1 answer)

Each page has its own instances of the page-scope implicit objects.

A. False

B. True

b - (Choose 1 answer)

Which is NOT Enterprise Beans?

A. Message-Driven Beans

B. Business Beans

C. Entity Beans

D. Session Beans

a - (Choose 1 answer)

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

- A. `<%@page contentType='text/xml'>`
- B. `<%@page contentType='xml'>`
- C. `<%@page contentType='text/html*>`
- D. `<%@page contentType='html/xml*>`

c - (Choose 1 answer)

Review the following scenario: then identify which security mechanisms would be important to fulfill the requirement (Choose one.)

An online magazine company wishes to protect part of its website content to make that part available only to users who pay a monthly subscription. The company wants to keep client network, and server processing overheads down. Theft of content is unlikely to be an issue, as is abuse of user IDs and passwords through network snooping.

- A. Client certification
- B. Confidentiality
- C. Authorization and Authentication
- D. Indication
- E. Data integrity

e - (Choose 1 answer)

Which Java technology provides a unified interface to multiple naming and directory services?

- A. JNI
- B. JDBC
- C. EJB
- D. JavaMail
- E. JNDI

c - (Choose 1 answer)

What sub element of `<attribute>` tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. `<attribute-name>`
- B. `<attributename>`



C. <name>

D. <param-name>

c - (Choose 1 answer)

Which statement is NOT true about JMS?

A. JMS support an event oriented approach to message reception.

B. JMS support both synchronous and asynchronous message passing

C. JMS does NOT depend on MOM (Messaging-Oriented Middleware) products

D. JMS provides common way for Java programs to access an enterprise messaging system's message

b - (Choose 1 answer)

Your servlet may receive a request, which the servlet cannot handle. In such cases, you want to redirect the request to another resource which may or may not be a part of the same web application. Which of the following options can be used to achieve this objective?

A. `RequestDispatcher rd = request.getRequestDispatcher("some url");  
rd.forward(request, response);`

B. `response.sendRedirect("some url");`

C. `request.sendRedirect("some url");`

D. `RequestDispatcher rd = this.getServletContext().getRequestDispatcher("some url");  
rd.forward(request, response);`

a - (Choose 1 answer)

Which of the following elements are used for error handling and are child elements of <web-app> of a deployment descriptor?

A. <error\_page>

B. <error-page>

C. <error-location>

D. <error>

b - (Choose 1 answer)

A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the which element of the taglib element in the tag library descriptor file ?

A. tagname

B. name

C. tag

D. prefix

b - Consider the Servlet definition in a web.xml file below.

(see picture)

What will the following line of code return if present in the init() method of TestServlet?

getInitParameter(1);

A. It will return "US".

B. Compilation error.

C. It will return null.

D. It will return "eastern".

E. Runtime error.

b - (Choose 1 answer)

Which of the following statement is true for <jsp:useBean> ?

A. The class attribute must be defined for <jsp:useBean>.

B. The id attribute must be defined for <jsp:useBean>.

C. The scope attribute must be defined for <jsp:useBean>.

a - (Choose 1 answer)

See the extract from webxml of web application 'mywebapp\*' on server named myserver. runs on port 8080:

```
<servlet-mapping>
```

```
<servlet-name>ServletA</servlet-name>
```

```
<url-pattern>/</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet-mapping>
```

```
<servlet-name>ServletB</servlet-name>
```

```
<url-pattern>/bservehtml</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet-mapping>
```

```
<servlet-name>ServletC</servlet-name>
```

```
<url-pattern>*.servletC</url-pattern>
```

</servlet-mapping>

<servlet-mapping>

<servlet-name>ServletD</servlet-name>

<url-pattern>/dservlet/\*</url-pattern>

</servlet-mapping>

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.) http://myserver:8080/mywebapp

Next

A. ServletA

B. ServletB

C. ServletD

D. ServletC

a - (Choose 1 answer)

A <servlet> element can include zero to many <init-param> elements: These aid in passing initialization parameter information from the deployment descriptor to all the servlets.

A. False

B. True

a - (Choose 1 answer)

You have to send a gif image to the client as a response to a request Which of the following calls will you have to make? (Choose one)

A. response.setContentType("image/gif");

B. response.setType("application/gif");

C. response.setContentType("application/bin");

D. response.setType("image/gif");

c - (Choose 1 answer)

Which statement is correct about the Java Persistence API support for the SQL queries?

A. SQL queries are expected to be portable across database

B. SQL queries are NOT allowed to use parameters.

C. The result of a SQL query is not limited to entities

D. Only SELECT SQL queries are required to be supported

b - (Choose 1 answer)

Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

A. SSL Sessions

B. HTTP is already a stateful protocol.

C. Cookies

D. URL rewriting

b - (Choose 1 answer)

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

```
<%! String myName=request.getParameterO;%>
```

```
<% String test= "welcome" + myName; %>
```

```
<%= test%>
```

What is the output?

A. The program prints "Welcome John"

B. The program gives a syntax error because of the statement `<%! String myName=request.getParameterO;%>`

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

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

b - (Choose 1 answer)

Which statements are BEST describe param attribute of `<jsp:setProperty param=_ ./>` Action?

A. The value to assign to a bean property. The value typically is the result of a JSP expression.

B. The ID of the JavaBean for which a property (or properties) will be set

C. The name of the property to set Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.

D. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.

a - (Choose 1 answer)

A(n)\_enables a web application to obtain a Connection to a database.

A. DataSource

B. Netbean

C. Eclipse

D. Web server

b - (Choose 1 answer)

Which is a valid PostConstruct method in a message-driven bean class?

A. @PostConstruct

public boolean init() {return true;}

B. @PostConstruct

private void init() {};

C. @PostConstruct

private static void init() {}

D. @PostConstruct

public static void init() {}

b - (Choose 1 answer)

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

A. SC\_NOT\_FOUND

B. SC\_MOVED\_TEMPORARILY

C. SC\_INTERNAL\_SERVER\_ERROR

D. SC\_BAD\_REQUEST

E. SC\_OK

a - (Choose 1 answer)

Which is NOT provided by the EJB tier in a multitier JEE (J2EE) application?

A. XML Parsing

B. Concurrency control

C. Transaction management

D. Security

e - (Choose 1 answer)

Which type of JEE (or J2EE) component is used to store business data persistently?

- A. Stateful session beans
- B. Java Server Pages
- C. Stateless session beans
- D. Java Beans
- E. Entity Bean

a - (Choose 1 answer)

What is the purpose of JNDI?

- A. To access various directory services using a single interface
- B. To register Java Web Start applications with a web server
- C. To parse XML documents
- D. To access native code from Java application

a - Which of the following is true about Data Integrity?

- A. The information/data is not tampered with, in transit from host to client.
- B. The information/data is not read by parties other than its intended recipients.
- C. The information/data is never modified.
- D. The information/data is accessible only to users who are authenticated.

c - (Choose 1 answer)

Which of the following statement is correct? (choose one)

- A. Authentication means determining whether one has access to a particular resource or not.
- B. Confidentiality and Authorization are one and the same thing.
- C. Authorization means determining whether one has access to a particular resource or not

d - (Choose 1 answer)

Which is true about JDBC?

- A. The JDBC API is an extension of the ODBC API
- B. All JDBC drivers are pure Java.
- C. JDBC is used to connect to MOM (Message-Oriented Middleware Product)
- D. The JDBC API is included in J2SE

d - (Choose 1 answer)

In which of the following cases will the method doEndTagO of a tag handler be invoked?

- A. It will be invoked in all case even if doStartTagO or doAfterBodyO throw an exception.
- B. This method is invoked if doStartTagO method returns true.
- C. It will be invoked only if doStartTagO and doAfterBodyO complete successfully.
- D. It will be invoked only if doStartTagO or doAfterBodyO return Tag.DO\_END\_TAG.

d - (Choose 1 answer)

Data Integrity is the biggest issue for your web application. What will you do? (Choose one)

- A. Use HTTPS instead of HTTP.
- B. Use LDAP to store user credentials.
- C. Use HTTP digest authentication.
- D. Use form-based authentication.

c - (Choose 1 answer)

Which jsp tag is needed to ensure that implicit variable 'exception' is available in the page that is meant to be an error page? (Choose one)

- A. `<%@isErrorPage="true"%>`
- B. `<%@ page errorPage="this"%>`
- C. `<%@ page isErrorPage="true"%>`
- D. `<%@errorPage="true"%>`

b - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is used by web application developer to deliver the web application in a single unit
- B. It contains web components such as servlets as well as EJBs.
- C. It cannot contain third party jar and class files.
- D. It cannot be unpackaged by the container.
- E. It is an XML document

c - (Choose 1 answer)

Where the bean is declared using the following useBean tag accessible? `<jsp:useBean id="jbean" class="com.jclass.`

JBean" />

- A. within other servlets and JSP pages of the same web applications.
- B. throughout all future invocations of the JSP as long as the servlet engine is running.
- C. Throughout the remainder of the page.
- D. throughout all future invocations of the JSP as long as the session is not expired

d - (Choose 1 answer)

Which of the following statement correctly set a cookie from a servlet code? (Choose one)

Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. request.setCookie("mycookie". "value");
- B. response.addCookie("mycookie". "value");
- C. response.setCookie("mycookie". "value");
- D. response.addCookie(new Cookie("mycookie". "value"));

a - (Choose 1 answer)

Which statements are BEST describe contentType attribute of <%@ page contentType=\_.%> directive?

- A. Specifies the MIME type of the data in the response to the client The default type is text/html.
- B. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- C. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.
- D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception

a - (Choose 1 answer)

The following line of code exists in the doGet method of Servlet String sid = request.getParameter("jsessionId");

Which of the option is NOT a standard technique for retrieving the HttpSession associated with the request? (Assume that the session has already been created.)

- A. HttpSession session = request.getSession(sid);
- B. HttpSession session = request.getSession();
- C. HttpSession session = request.getSession(false);
- D. HttpSession session = request.getSession(true);



d - (Choose 1 answer)

Which is NOT the main type of JSP constructs that you embed in a page?

- A. directives
- B. scripting elements
- C. HTML code
- D. actions

a - (Choose 1 answer)

A web application named webmail has a file named folderview.jsp which the user should be able access directly. Which of the following directory may contain this file? (Choose one)

- A. /webmail/jsp
- B. /webmail/web-inf/jsp
- C. /webmail/WEB-INF/lib/jsp
- D. /webmail/WEB-INF/jsp

c - (Choose 1 answer)

Servlet Container calls the init method on a servlet instance\_\_

- A. For each request to the servlet
- B. For each request to the servlet that causes a new thread to be created.
- C. Only once in the life time of the servlet instance.
- D. If the request is from the user whose session has expired.

d - (Choose 1 answer)

What should be the value of <body-content> subelement of element <tag> in a TLD file if the tag should not have any contents as its body?

- A. false
- B. null
- C. blank
- D. empty

d - Choose 1 answer)

Which of the following XML fragments correctly defines a role named "manager" in webxml?

A. `<security-role>manager</security-role>`

B. `<security-role rolename=manager></security-role>`

C. `<security>`

`<role-name>manager</role-name>`

`</security>`

D. `<security-role>`

`<role-name>manager</role-name>`

`</security-role>`

c - (Choose 1 answer)

Which of the following lines of code are correct?

A. `@EntityBean`

```
public class Employees {
 ...
}
```

B. `class Employees {`

`@Entity`

```
private class Address {
 ...
}
...
}
```

C. `@Entity`

```
public class Employees {
}
```

d - The requirements for an online shopping application are:

It must support millions of customers. The invocations must be transactional. The shopping cart must be persistent  
Which technology is required to support these requirements?

A. JMX

B. JNI

C. JMS

D. EJB

d - (Choose 1 answer)

Which technique is likely to return an initialization parameter for a JSP page?

- A. `<%= request.getParameter("myParm") %>`
- B. `<% String s = getAttributefmyParm"); %>`
- C. `<%= getParameter("myParm") %>`
- D. `<% String s = getlnitParameterfmyParm"); %>`
- E. `<% = application.getlnitParameter("myParm") %>`

c - (Choose 1 answer)

Which method would you use to put the session id into the URL to support sessions using URL rewriting?

- A. `encodeURL()` of `HttpServlet`
- B. `rewriteURL()` of `HttpServletResponse`
- C. `encodeURL()` of `HttpServletResponse`
- D. `encodeURL()` of `HttpServletRequest`

d - (Choose 1 answer)

Which of the following is indicated by URL. which is used on the Internet?

- A. IP addresses of servers connected to the Internet
- B. E-mail addresses for use in the Internet
- C. Owners of PCs connected to the Internet
- D. Information resources(sources) on the Internet

b - (Choose 1 answer)

Which syntax is correct for JSP Declarations?

- A. `<%=code%>`
- B. `<%! code %>`
- C. `<%code%>`

a - (Choose 1 answer)

Which of the following is NOT a valid attribute for a `useBean` tag?

- A. `className`

B. beanName

C. scope

b - (Choose 1 answer)

What is the implementation specification of EJB 3 session bean classes?

A. a session bean class must be final or abstract

B. a session bean class must be marked with `@Stateless` or `@Stateful`

C. a session bean class can't extend other classes

c - (Choose 1 answer)

Given a stateless session bean with container-managed transaction demarcation, from which method can a developer access another enterprise bean?

A. bean constructor

B. `PreDestroy` lifecycle callback method

C. business method from the business interface

c - (Choose 1 answer)

Which statements are BEST describe name attribute of `<jsp:setProperty name=_. />` action?

A. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.

B. The value to assign to a bean property. The value typically is the result of a JSP expression.

C. The ID of the `JavaBean` for which a property (or properties) will be set.

D. The name of the property to set. Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.

d - (Choose 1 answer)

Which is NOT responsibility of the business tier in a multitier web-based application with web, business, and EIS tiers?

A. To participate in transactions

B. To integrate with the legacy applications

C. To provide business logic

D. To generate dynamic content

c - (Choose 1 answer)

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

- A. request
- B. response
- C. pageContext
- D. out
- E. page

b - (Choose 1 answer)

Which statements are BEST describe scope attribute of `<jsp:useBean scope=.. />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is ca
- B. The scope in which the Java object is accessible-page, request session or application. The default scope is page.
- C. The name of a bean that can be used with method `instantiate` of class `java.beans.Beans` to load a `JavaBean` into memory.
- D. The type of the `JavaBean`. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. `AClassCai`
- E. The fully qualified class name of the Java object

c - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is an XML document
- B. It cannot be unpackaged by the container.
- C. It contains web components such as servlets as well as EJBs.
- D. It may contain third party jar and class files.

b - (Choose 1 answer)

Which statement(s) about Servlet Life Cycle is(are) correct? (Choose one)

- A. When the servlet is first created, its `init` method is invoked, so that is where you put one-time setup code.
- B. All the others
- C. Servlet can implement a special interface that stipulates that only a single thread is permitted to run at any one time.
- D. When the server decides to unload a servlet it first calls the servlet's `destroy` method.

- E. Each user request results in a thread that calls the service method of the previously created instance.
- F. Multiple concurrent requests normally result in multiple threads calling service simultaneously.

c - (Choose 1 answer)

Which is true about RMI?

- A. RMI is used to create thin web client
- B. RMI is the Java API used for executing queries on a database
- C. RMI allows objects to be send from one computer to another
- D. RMI is the transport protocol used by web servers and browsers

a - (Choose 1 answer)

Which statement is true about management of an EJB's resources?

- A. The reference to home object is obtained through JNDI to improve maintainability and flexibility.
- B. The reference to the remote object is obtained through JNDI to improve maintainability and flexibility.

b - (Choose 1 answer)

A web application is located in "helloapp" directory. Which directory should its deployment descriptor be in?

- A. helloapp
- B. helloapp/WEB-INF
- C. helloapp/WEBJNF
- D. helloapp/WEBINF

c - (Choose 1 answer)

A developer is working on a project that includes both EJB 2.1 and EJB 3.0 session beans. A lot of business logic has been implemented and tested in these EJB 2.1 session beans. Some EJB 3.0 session beans need to access this business logic.

Which design approach can achieve this requirement?

- A. Add adapted home interfaces to EJB 3.0 session beans to make EJB 3.0 and EJB 2.1 session beans interoperable.
- B. Add EJB 3.0 business interfaces to existing EJB 2.1 session beans and inject references to these business interfaces into EJB 3.0 session beans.
- C. No need to modify existing EJB 2.1 session beans. Use the @EJB annotation to inject a reference to the EJB 2.1 home interface into the EJB 3.0 bean class.

c - (Choose 1 answer)

Which statement is true about EJB 3.0 containers?

- A. The Java 2D API is guaranteed to be available for session beans
- B. Java Telephony API is guaranteed to be available for session and message beans
- C. `javax.naming.initialContext` is guaranteed to provide a JNDI name space

b - (Choose 1 answer)

Which method of `ReportGeneratorServlet` will be called when the user clicks on the URL shown by the following HTML.

Assume that `ReportGeneratorServlet` does not override the `service(HttpServletRequest HttpServletResponse)` method of the `HttpServlet` class. (Choose one)

- A. `doPost(HttpServletRequest HttpServletResponse);`
- B. `doGet(HttpServletRequest HttpServletResponse);`
- C. `doOption(HttpServletRequest HttpServletResponse);`
- D. `doHead(HttpServletRequest HttpServletResponse);`

a - (Choose 1 answer)

The same servlet class can be declared using different logical names in the deployment descriptor.

- A. True
- B. False

a - (Choose 1 answer)

The Java Persistent API defines the `Query` interface. Which statement is true about the `Query.executeUpdate` method?

- A. It must always be executed within a transaction
- B. All managed entity objects corresponding to database rows affected by the update will have their state changed to correspond with the update
- C. It throws a `PersistenceException` if no entities were updated.

c - (Choose 1 answer)

If you want to send an entity object as the pass by value through a remote interface, which of the following statements are valid? (Choose one)

- A. `public class Employees implements Serializable{`  
...  
}
- B. `@Entity`

```
public class Employees implements Serializable{
...
}
```

C. @entity

```
public class Employees implements Serializable{
...
}
```

D. @Entity

```
public class Employees implements SessionSynchronization{
...
}
```

a - (Choose 1 answer)

When you obtain a session (using getSession() of HttpServletRequest object), the web container manufactures a unique ID string for the session. This is passed as a token between the client and server.

A. True

B. False

c - (Choose 1 answer)

Which of the following lines of code, in the doPost() method of a servlet, uses the RL rewriting approach to maintaining sessions? (Choose one)

A. request.useURLRewriting();

B. out.println(response.rewrite("<a href='/servlet/XServlet'>Click here</a>"));

C. out.println("<a href='"+response.encodeURL("/servlet/XServlet")+"'>Click here</a>"));

D. out.println("'"<a href='"+request.rewrite("/servlet/XServlet")+"'>Click here</a>"));

a - (Choose 1 answer)

Which syntax is correct for JSP Scriptlets?

A. <% code%>

B. <%= code%>

C. <%! code %>

A - Which of the following statements are correct about the status of the Http response? Select the one correct answer

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

B. A status of 300 to 399 is informational messages.

C. A status of 400 to 499 indicates an error in the server

D. A status of 500 to 599 indicates an error in the client.



A - Classes HttpServlet and GenericServlet implement the \_\_\_\_\_ interface.

- A. Servlet
- B. Http
- C. HttpServletRequest
- D. HttpServletResponse

A - The HttpSession method getAttribute returns the object associated with a particular name.

- A. True
- B. False

A - HttpSession objects live on the server.

- A. True
- B. False

A - You have to send a gif image to the client as a response to a request. Which of the following calls will you have to make? (Choose one)

- A. response.setContentType("image/gif");
- B. response.setType("application/gif");
- C. response.setContentType("application/bin");
- D. response.setType("image/gif");

A - Sessions will automatically become inactive when the amount of time between client accesses exceeds the interval specified by getMaxInactiveInterval.

- A. True
- B. False

C - Consider the code of ReportServlet servlet of a web application. Assuming generateReport() is valid method and have no problems, which of the following statement about these servlet is true?

- A. ReportServlet will throw exception at runtime.
- B. ReportServlet.java won't compile.
- C. ReportServlet.java will compile and run without any problems.

A - Which method of ReportGeneratorServlet will be called when the user clicks on the URL shown by the following HTML.

Assume that ReportGeneratorServlet does not override the service(HttpServletRequest, HttpServletResponse) method of the HttpServlet class.

(Choose one)

- A. doGet(HttpServletRequest, HttpServletResponse);
- B. doPost(HttpServletRequest, HttpServletResponse);
- C. doHead(HttpServletRequest, HttpServletResponse);
- D. doOption(HttpServletRequest, HttpServletResponse);

A - HttpSession objects have a built-in data structure that lets you store any number of keys and associated values.

- A. True
- B. False

E - What will be the outcome of executing the following code?

```
public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
 response.setContentType("text/plain");
 response.setContentLength(6);
 PrintWriter out = response.getWriter();
 out.write("What's your name? ");
}
```

```
out.write("" + response.isCommitted());
}
```

- A. Won't execute because of a compilation error.
- B. An `IllegalArgumentException` is thrown.
- C. An `IllegalStateException` is thrown.
- D. A blank page is returned to the client.
- E. "What's" is returned to the client.
- F. "What's your name?" is returned to the client.

C - Following is the code for `doGet()` and `doPost()` methods of `TestServlet`. Which of the statement is correct?

- A. This will only work for HTTP GET requests
- B. This will only work for HTTP POST requests
- C. This will work for HTTP GET as well as POST requests.
- D. It'll throw an exception at runtime, as you cannot call `doGet()` from `doPost()`.
- E. It'll throw an exception at runtime only if a POST request is sent to it.

A - Which of the following is indicated by URL, which is used on the Internet?

- A. Information resources(sources) on the Internet
- B. E-mail addresses for use in the Internet
- C. IP addresses of servers connected to the Internet
- D. Owners of PCs connected to the Internet

B - Browsers typically cache the server's response to a POST request.

- A. True
- B. False

D - Identify correct statement about a WAR file.(Choose one)

- A. It is an XML document.
- B. It cannot be unpackaged by the container.
- C. It is used by web application developer to deliver the web application in a single unit.
- D. It contains web components such as servlets as well as EJBs.

B - Host names are translated into IP addresses by web servers.

- A. True
- B. False

A - See the extract from `web.xml` of web application "mywebapp" on server named myserver, runs on port 8080:

```
<servlet-mapping>
 <servlet-name>ServletA</servlet-name>
 <url-pattern>/</url-pattern>
</servlet-mapping>
<servlet-mapping>
 <servlet-name>ServletB</servlet-name>
 <url-pattern>/bservlet.html</url-pattern>
</servlet-mapping>
<servlet-mapping>
 <servlet-name>ServletC</servlet-name>
 <url-pattern>*.servletC</url-pattern>
</servlet-mapping>
<servlet-mapping>
 <servlet-name>ServletD</servlet-name>
 <url-pattern>/dservlet/*</url-pattern>
```

</servlet-mapping>

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.)

http://myserver:8080/mywebapp

- A. ServletA
- B. ServletB
- C. ServletC
- D. ServletD

A - A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible to all the servlets of the webapp.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible only to the servlet it is defined for.

A - A ..... manages the threading for the servlets and JSPs and provides the necessary interface with the Web server.

- A. Web Container
- B. EJB Container
- C. Servlets
- D. Applets

A - A \_\_\_\_\_ has a name, a single value, and optional attributes such as a comment, path and domain qualifiers, a maximum age, and a version number.

- A. Cookie
- B. Session
- C. Request
- D. Response

D - Which of the following method calls can be used to retrieve an object from the session that was stored using the name "roleName"?

- A. getObject("roleName");
- B. getValue("roleName");
- C. get("roleName");
- D. getAttribute("roleName");
- E. getParameter("roleName");

D - Which is NOT a standard technique for a session be definitely invalidated?

- A. The container is shutdown and brought up again.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls invalidate() on a session object.
- D. If the session time out is set to 0 using setMaxInactiveInterval() method.

A - Which method can be invoked on a session object so that it is never invalidated by the servlet container automatically?

- A. setMaxInactiveInterval(-1)
- B. setTimeout(Integer.MAX\_INT)
- C. setMaxInactiveInterval(Integer.MAX\_INT)
- D. setTimeout(-1)

A - Session death is more likely to come about through a time-out mechanism. If there is no activity on a session for a predefined length of time, the web container invalidates the session.

- A. True
- B. False

A - What are the different scope values for the `<jsp:useBean>`? (Choose one correct answer)

- A. session, page, application, request
- B. session, page, application, global
- C. session, page, application, context
- D. session, page, response, request

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

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

What is the output?

- A. The page display "Welcome John"
- B. The program gives a syntax error because of the statement `<% String myName=request.getParameter("name");%>`
- C. The program gives a syntax error because of the statement `<% String test= "Welcome " + myName; %>`
- D. The program gives a syntax error because of the statement `<%=test%>`

A - Name the default value of the scope attribute of `<jsp:useBean>`

- A. page
- B. session
- C. application
- D. request

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

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

What is the output?

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement `<%! String myName=request.getParameter();%>`
- C. The program gives a syntax error because of the statement `<% String test= "welcome" + myName; %>`
- D. The program gives a syntax error because of the statement `<%= test%>`

A - What is the output of the following code snippet of a JSP page?

```
${empty""}

${empty"sometext"}
```

- A. true
- B. false
- C. true
- D. false

A - Select the correct directive statement insert into the first line of following lines of code (1 insert code here):

- A. `<%@page import='java.util.*' %>`
- B. `<%@import package='java.util.*' %>`
- C. `<%@ package import ='java.util.*' %>`
- D. `<%! page import='java.util.*' %>`

A - For JSP scopes of request and page, what type of object is used to store the attributes?

- A. `HttpServletRequest` and `ServletContext` respectively.
- B. `ServletRequest` and `ServletConfig` respectively.
- C. `ServletRequest` and `PageContext` respectively.
- D. `HttpServletRequest` and `PageContext` respectively.
- E. `ServletConfig` for both.

B - Which of the following correctly represents the following JSP statement? Select one correct answer.

`<%=x%>`

- A. `<jsp:expression=x/>`
- B. `<jsp:expression>x</jsp:expression>`
- C. `<jsp:statement>x</jsp:statement>`
- D. `<jsp:declaration>x</jsp:declaration>`
- E. `<jsp:scriptlet>x</jsp:scriptlet>`

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

`<%= if(Math.random() < 0.5) %>`

hello

`<%= } else { %>`

hi

`<%= } %>`

- A. The browser will print either hello or hi based upon the return value of random.
- B. The string hello will always get printed.
- C. The string hi will always get printed.
- D. The JSP file will not compile.

B - Which technique is likely to return an initialization parameter for a JSP page?

- A. `<%= request.getParameter("myParm") %>`
- B. `<% String s = getInitParameter("myParm"); %>`
- C. `<% = application.getInitParameter("myParm") %>`
- D. `<%= getParameter("myParm") %>`
- E. `<% String s = getAttribute("myParm"); %>`

A - A JSP \_\_\_\_\_ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the `_jspService` method that is called by service to process the request).

- A. declaration
- B. scriptlet
- C. expression

E - Which jsp tag can be used to set bean property?

- A. `jsp:useBean`
- B. `jsp:useBean.property`
- C. `jsp:useBean.setProperty`
- D. `jsp:property`
- E. `jsp:setProperty`

B - Which statements are BEST describe param attribute of `<jsp:setProperty param=.... />` Action?

- A. The ID of the JavaBean for which a property (or properties) will be set.
- B. The name of the property to set. Specifying "\*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- C. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- D. The value to assign to a bean property. The value typically is the result of a JSP expression.

D - Which statements are BEST describe value attribute of `<jsp:setProperty value=... />` action?

- A. The ID of the JavaBean for which a property (or properties) will be set.
- B. The name of the property to set. Specifying "\*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- C. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- D. The value to assign to a bean property. The value typically is the result of a JSP expression.

C - Which statements are BEST describe contentType attribute of `<%@ page contentType=....%>` directive?

- A. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- B. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.
- C. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- D. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.

A - Which statements are BEST describe id attribute of `<jsp:useBean id=..... />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is case sensitive.
- B. The scope in which the Java object is accessible—page, request, session or application. The default scope is page.
- C. The fully qualified class name of the Java object.
- D. The name of a bean that can be used with method `newInstance` of class `java.beans.Beans` to load a JavaBean into memory.
- E. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute `class`. A `ClassCastException` occurs if the Java object is not of the type specified with attribute `type`.

A - Which statements are BEST describe errorPage attribute of `<%@ page errorPage=....%>` directive?

- A. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- B. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception that occurred.
- C. Specifies the MIME type of the data in the response to the client. The default type is text/html.
- D. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.

A - Action \_\_\_\_\_ has the ability to match request parameters to properties of the same name in a bean by specifying "\*" for attribute `property`.

- A. `<jsp:setProperty>`
- B. `<jsp:getProperty>`
- C. `<jsp:useBean>`
- D. `<jsp:include>`

B - Which of the following are potentially legal lines of JSP source?

- A. `<jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />`
- B. `<% String className = "a.b.MyBean"; %>`  
`<jsp:useBean id="beanName2" class="<%=className%>" />`
- C. `<% String beanName = "beanName3"; %>`  
`<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />`
- D. `<% String propName = "soleProp"; %>`  
`<jsp:getProperty name="beanName1" property="<%=propName%>" />`  
`/>`

B - What sub element of `<attribute>` tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. `<attribute-name>`
- B. `<name>`
- C. `<attributename>`
- D. `<param-name>`

B - What should be the value of `<body-content>` subelement of element `<tag>` in a TLD file if the tag should not have any contents as its body?

- A. blank
- B. empty
- C. null
- D. false

E - Identify the correct element is required for a valid `<taglib>` tag in web.xml (Choose one)

- A. `<uri>`
- B. `<tag-uri>`
- C. `<uri-name>`
- D. `<uri-location>`
- E. `<taglib-uri>`

C - Given the following JSP and tag handler code, what is the result of accessing the JSP?

JSP Page Source

```
<html>
<body>
 <%@taglib uri="test_taglib" prefix="myTag"%>
 <% session.setAttribute("first", "first"); %>
 <myTag:TestTag/>

 <%=session.getAttribute("second")%>
</body>
</html>
```

Tag Handler Code for `<myTag:TestTag />`

```
package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
 private PageContext pageContext;
```

```

public void setPageContext(PageContext page){
this.pageContext=page;
}

public int doStartTag() throws JspException {
try{
String first=pageContext.getSession().getAttribute("first").toString();
pageContext.getOut().write(first);
pageContext.setAttribute("second", "second",PageContext.PAGE_SCOPE);
}
catch(IOException i)
{
throw new JspException(i.getMessage());
}
return SKIP_BODY;
}

public int doEndTag() throws JspException{
return EVAL_PAGE;
}
public void release(){}

}

```

Assume \*.tld and web.xml files are correct.

- A. first  
null
- B. second  
null
- C. first  
second
- D. second  
first

D - Which of these is legal return types of the doAfterBody method defined in a class that extends TagSupport class ?.

- A. EVAL\_PAGE
- B. EVAL\_BODY
- C. EVAL\_PAGE\_AGAIN
- D. SKIP\_BODY
- E. SKIP\_PAGE

A - Which of the following elements defines the properties of an attribute that a tag needs?

- A. attribute
- B. tag-attribute
- C. tag-attribute-type
- D. attribute-type

A - Which element defined within the taglib element of taglib descriptor file is required? Select one correct answer.

- A. Tag
- B. Description
- C. Validator
- D. Name



D - Which of the following is a properly formatted taglib element occurring in web.xml?

A. <taglib>

<uri>/graph</uri>

<location>/WEB-INF/Charts.tld</location>

</taglib>

B. <taglib>

<lib-uri>/graph</lib-uri>

<lib-location>/WEB-INF/Charts.tld</lib-location>

</taglib>

C. <taglib>

<taglib-name>/graph</taglib-name>

<taglib-location>/WEB-INF/Charts.tld</taglib-location>

</taglib>

D. <taglib>

<taglib-uri>/graph</taglib-uri>

<taglib-location>/WEB-INF/Charts.tld</taglib-location>

</taglib>

c - Study the statements:

1) URL rewriting may be used when a browser is disabled cookies.

2) In URL encoding the session id is included as part of the URL

Which is the correct option ?

A. Only statement 1 is true

B. Only statement 2 is true

C. Both 1 and 2 are true

D. Both 1 and 2 are not true

d - A JSP page will not have access to session implicit variable if.

A. the user has closed all his/her browser windows.

B. the request is the first request from the user.

C. the user's browser does not support URL rewriting.

D. the session attribute of page directive is set to false.

d - Which statements are BEST describe type attribute of <jsp:useBean type=\_\_\_ /> action?

A. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is call..

B. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.

C. The fully qualified class name of the Java object

D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. AClassCai

E. The scope in which the Java object is accessible-page, request session or application. The default scope is page.

d - (Choose 1 answer)

HttpServletRequest.getSession() method returns a \_\_\_\_\_ object.

A. HttpSession.

B. HttpServletResponse.

C. HttpRequestSession.

D. HttpSession.

a - (Choose 1 answer)

You need to make sure that the response stream of your web application is secure. Which factor will you look at? (Choose one)

A. data integrity

B. authentication

C. authorization

b - Class HttpServlet defines the methods \_\_\_\_\_ and \_\_\_\_\_ to response to get and post request from a client.

A. doGet, doPost

B. doGet, doPost

C. doGet, doPost

D. Get, Post

c - (Choose 1 answer)

Which of the elements defined within the taglib element of taglib descriptor file are required? Select one correct answer.

A. taguri

B. info

C. taglib-location

D. display-name

c - (Choose 1 answer)

Which of the following method calls can be used to retrieve an object from the session that was stored using the name "userid"?

A. getValue("userid");

B. get("userid");

C. getAttribute("userid");

D. getParameter("userid");

E. getObject("userid");

c - (Choose 1 answer)

Consider the following doGet method code of a servlet

```
public void doGet(HttpServletRequest req, HttpServletResponse res)

{

String command = req.getParameter("command"); if("remove".equals(command))

{

HttpSession session = req.getSession();

//insert code here

}

}
```

If the command equals remove, you want to unbind an attribute named "user" from the session. Which of the following option will you use? (Choose one)

- A. session.deleteAttribute("user");
- B. session.unbindfuser");
- C. session.removeAttribute("user");
- D. session.remove("user");

c - (Choose 1 answer)

Which Java technology provides a standard API for publish-subscribe messaging model?

- A. JNDI
- B. UDDI
- C. JMS
- D. JSP

c - (Choose 1 answer)

Which of the following statements are correct about HTTP Basic authentication mechanism?

- A. HTML FORM is used to capture username and password.
- B. Password is transmitted in an encrypted form.
- C. Password is transmitted as text
- D. Password is transmitted either in encrypted text or in plain text depending on the browser.

a - (Choose 1 answer)

Which is NOT true about stateless session beans?

- A. They are used to represent data stored in a RDBMS
- B. They are used to implement business logic
- C. They are an Enterprises Beans
- D. They are CANNOT hold client state

a - (Choose 1 answer)

JSP\_let you insert arbitrary code into the servlet's JspService method (which is called by service).

- A. scriptlets
- B. expressions
- C. declarations

c - (Choose 1 answer)

Which component can use a container-managed entity manager with an extended persistent context?

- A. Session beans and web components
- B. Only stateless session beans
- C. Only stateful session beans
- D. Any EJB component

a - (Choose 1 answer)

Which statements are BEST describe <jsp:include> Action?

- A. Dynamically includes another resource in a JSP. As the JSP executes, the referenced resource is included and processed.
- B. Specifies the relative URI path of the resource to include. The resource must be part of the same Web application.
- C. Specifies that the JSP uses a JavaBean instance. This action specifies the scope of the bean and assigns it an ID that scripting components can use to manipulate the bean.
- D. Forwards request processing to another JSP, servlet or static page. This action terminates the current JSP's execution.

ae - (Choose 2 answer)

Which of these is legal return types of the doEndTag method defined in a class that extends TagSupport class? Select one correct answer.

- A. EVAL\_PAGE
- B. EVAL\_BODY
- C. EVAL\_PAGE\_INCLUDE
- D. EVAL\_BODY\_INCLUDE
- E. SKIP\_BODY

c - (Choose 1 answer)

A developer must implement a 'shopping cart' object for a web-based application. The shopping cart must be able to maintain the state of the cart but the state is not stored persistently. Which JEE (J2EE) tech

- A. JMS
- B. Stateless session beans
- C. Stateful session beans
- D. Entity beans

b - (Choose 1 answer)

Which is the correct sequence?

- A. jsp page is compiled-->Jsp page is translated ~->jspInit is called ->JspService is called ->jspDestroy is called
- B. Jsp page is translated -->jsp page is compiled-->jspInit is called ->JspService is called -->jspDestroy is called
- C. Jsp page is translated -->jsp page is compiled-->jspService is called ->jspInit is called ->JspDestroy is called
- D. jsp page is compiled-->Jsp page is translated --> JspService is called -->jspInit is called -->jspDestroy is called

c - (Choose 1 answer)

Which statement is true about the EJB 3.0 stateful session beans?

- A. Its conversational state is lost after passivation unless the bean class saves it to a database
- B. Its conversational state is retained across method invocations but NOT across transaction boundaries
- C. Its conversational state is retained across method invocations and transactions

a - (Choose 1 answer)

GET requests and POST requests can both be used to send form data to a web server.

- A. True
- B. False

a - (Choose 1 answer)

Consider the following tag declaration in a TLD file:

```
<tag>

<name>simpleInterest</name>

<tag-class>SimpleInterestTag</tag-class>

//1
```

```
</tag>
```

SimpleInterestTag calculates simple interest for any amount and requires two attributes 'amount' and 'rate'.

Which of the following sub elements would you need to add inside the <tag> element in the TLD in place of //1 as shown above? Two separate <attribute> elements.

- A. One <attribute> element with sub-elements
- B. One <attribute-list> element with sub-elements
- C. One <amount> element and one <rate> element

c - (Choose 1 answer)

Which statement about an entity instance lifecycle is correct?

- A. A removed entity instance is NOT associated with a persistence context
- B. A new entity instance is an instance with a fully populated state.
- C. A managed entity instance is the instance associated with a persistence context
- D. A detached entity instance is an instance with no persistent identity.

d - (Choose 1 answer)

Which of the following are potentially legal lines of JSP source?

- A. <jsp:useBean id="beanName1" class="a.b.MyBean" type="a.b.MyInterface" />
- B. <% String propName = "soleProp"; %>

```
<jsp:getProperty name="beanName1" property="<%=propName%>" />
```

```
/>
```

- C. <% String beanName = "beanName3"; %>

```
<jsp:useBean id="<%=beanName3%>" class="a.b.MyBean" />
```

- D. <% String className = "a.b.MyBean"; %>

```
<jsp:useBean id="beanName2" class="</o=className%>" />
```

e - (Choose 1 answer)

You want to use a bean that is stored in com/enthu/GUI.ser file. Which of following statements correctly defines the tag that accesses the bean?

- A. `<jsp:useBean id="pref" type="com/enthu/GUI.ser"/>`
- B. `<jsp:useBean id="pref" name="com/enthu/GUI.ser"/>`
- C. `<jsp:useBean id="pref" class="com.enthu.GUI.ser,7>`
- D. `<jsp:useBean id="pref" name="com.enthu.GUr7>`
- E. `<jsp:useBean id="pref" beanName="com.enthu.GUI" type="com.enthu.GUI7>`

b - (Choose 1 answer)

Each page has its own instances of the page-scope implicit objects.

- A. False
- B. True

b - (Choose 1 answer)

Which is NOT Enterprise Beans?

- A. Message-Driven Beans
- B. Business Beans
- C. Entity Beans
- D. Session Beans

a - (Choose 1 answer)

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

- A. `<%@page contentType='text/xml'>`
- B. `<%@page contentType='xml'>`
- C. `<%@page contentType='text/html*>`
- D. `<%@page contentType='html/xml*>`

c - (Choose 1 answer)

Review the following scenario: then identify which security mechanisms would be important to fulfill the requirement (Choose one.)

An online magazine company wishes to protect part of its website content to make that part available only to users who pay a monthly subscription. The company wants to keep client network, and server processing overheads down: Theft of content is unlikely to be an issue, as is abuse of user IDs and passwords through network snooping.

- A. Client certification
- B. Confidentiality
- C. Authorization and Authentication
- D. Indication
- E. Data integrity

e - (Choose 1 answer)

Which Java technology provides a unified interface to multiple naming and directory services?

- A. JNI
- B. JDBC
- C. EJB
- D. JavaMail
- E. JNDI

c - (Choose 1 answer)

What sub element of <attribute> tag defines the name of the attribute that might be passed to the tag handler? (Choose one)

- A. <attribute-name>
- B. <attributename>
- C. <name>
- D. <param-name>

c - (Choose 1 answer)

Which statement is NOT true about JMS?

- A. JSM support an event oriented approach to message reception.
- B. JMS support both synchronous and asynchronous message passing
- C. JMS does NOT depend on MOM (Messaging-Oriented Middleware) products
- D. JMS provides common way for Java programs to access an enterprise messaging system's message

b - (Choose 1 answer)



Your servlet may receive a request, which the servlet cannot handle. In such cases, you want to redirect the request to another resource which may or may not be a part of the same web application. Which of the following options can be used to achieve this objective?

- A. `RequestDispatcher rd = request.getRequestDispatcher("some url");  
rd.forward(request, response);`
- B. `response.sendRedirect("some url");`
- C. `request.sendRedirect("some url");`
- D. `RequestDispatcher rd = this.getServletContext().getRequestDispatcher("some url");  
rd.forward(request, response);`

b - (Choose 1 answer)

Which of the following elements are used for error handling and are child elements of `<web-app>` of a deployment descriptor?

- A. `<error_page>`
- B. `<error-page>`
- C. `<error-location>`
- D. `<error>`

b - (Choose 1 answer)

A JSP file uses a tag as `<myTaglib:myTag>`. The `myTag` element here should be defined in the which element of the `taglib` element in the tag library descriptor file ?

- A. `tagname`
- B. `name`
- C. `tag`
- D. `prefix`

b - Consider the Servlet definition in a `web.xml` file below.  
(see picture)

What will the following line of code return if present in the `init()` method of `TestServlet`?  
`getInitParameter(1);`

- A. It will return "US".
- B. Compilation error.
- C. It will return null.
- D. It will return "eastern".

E. Runtime error.

b - (Choose 1 answer)

Which of the following statement is true for <jsp:useBean> ?

A. The class attribute must be defined for <jsp:useBean>.

B. The id attribute must be defined for <jsp:useBean>.

C. The scope attribute must be defined for <jsp:useBean>.

a - (Choose 1 answer)

See the extract from webxml of web application 'mywebapp\*' on server named myserver. runs on port 8080:

```
<servlet-mapping>
```

```
<servlet-name>ServletA</servlet-name>
```

```
<url-pattern>/</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet-mapping>
```

```
<servlet-name>ServletB</servlet-name>
```

```
<url-pattern>/bservlethtml</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet-mapping>
```

```
<servlet-name>ServletC</servlet-name>
```

```
<url-pattern>*.servletC</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet-mapping>
```

```
<servlet-name>ServletD</servlet-name>
```

```
<url-pattern>/dservlet/*</url-pattern>
```

```
</servlet-mapping>
```

Given that a user enters the following into her browser, which (if any) of the mapped servlets will execute? (Choose one.) http ://my s e rve r:8080/mywe b a p p

Next

A. ServletA

B. ServletB

C. ServletD

D. ServletC

a - (Choose 1 answer)

A <servlet> element can include zero to many <init-param> elements: These aid in passing initialization parameter information from the deployment descriptor to all the servlets.

A. False

B. True

a - (Choose 1 answer)

You have to send a gif image to the client as a response to a request Which of the following calls will you have to make? (Choose one)

A. response.setContentType("image/gif");

B. response.setType("application/gif");

C. response.setContentType("application/bin");

D. response.setType("image/gif");

c - (Choose 1 answer)

Which statement is correct about the Java Persistence API support for the SQL queries?

A. SQL queries are expected to be portable across database

B. SQL queries are NOT allowed to use parameters.

C. The result of a SQL query is not limited to entities

D. Only SELECT SQL queries are required to be supported

b - (Choose 1 answer)

Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

A. SSL Sessions

B. HTTP is already a stateful protocol.

C. Cookies

D. URL rewriting

b - (Choose 1 answer)

A JSP page called testjsp is passed a parameter name in the URL using http://localhost/testjsp?name="John". The tes

tjsp contains the following code.

```
<%! String myName=request.getParameterO;%>
```

```
<% String test= "welcome" + myName; %>
```

```
<%= test%>
```

What is the output?

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement `<%! String myName=request.getParameterO;%>`
- C. The program gives a syntax error because of the statement `<% String test= "welcome" + myName: %>`
- D. The program gives a syntax error because of the statement `<%= test%>`

b - (Choose 1 answer)

Which statements are BEST describe param attribute of `<jsp:setProperty param=_ . />` Action?

- A. The value to assign to a bean property. The value typically is the result of a JSP expression.
- B. The ID of the JavaBean for which a property (or properties) will be set
- C. The name of the property to set Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.
- D. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.

a - (Choose 1 answer)

A(n)\_enables a web application to obtain a Connection to a database.

- A. DataSource
- B. Netbean
- C. Eclipse
- D. Web server

b - (Choose 1 answer)

Which is a valid PostConstruct method in a message-driven bean class?

- A. `@PostConstruct`  
`public boolean init() {return true;}`
- B. `@PostConstruct`  
`private void init() {};`

C. @PostConstruct  
private static void init() {}

D. @PostConstruct  
public static void init() {}

b - (Choose 1 answer)

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

A. SC\_NOT\_FOUND

B. SC\_MOVED\_TEMPORARILY

C. SC\_INTERNAL\_SERVER\_ERROR

D. SC\_BAD\_REQUEST

E. SC\_OK

a - (Choose 1 answer)

Which is NOT provided by the EJB tier in a multitier JEE (J2EE) application?

A. XML Parsing

B. Concurrency control

C. Transaction management

D. Security

e - (Choose 1 answer)

Which type of JEE (or J2EE) component is used to store business data persistently?

A. Stateful session beans

B. Java Server Pages

C. Stateless session beans

D. Java Beans

E. Entity Bean

a - (Choose 1 answer)

What is the purpose of JNDI?

A. To access various directory services using a single interface

B. To register Java Web Start applications with a web server

C. To parse XML documents

D. To access native code from Java application

a - Which of the following is true about Data Integrity?

A. The information/data is not tampered with, in transit from host to client.

B. The information/data is not read by parties other than it's intended recipients.

C. The information/data is never modified.

D. The information/data is accessible only to users who are authenticated.

a - (Choose 1 answer)

Which of the following statement is correct? (choose one)

A. Authentication means determining whether one has access to a particular resource or not.

B. Confidentiality and Authorization are one and the same thing.

C. Authorization means determining whether one has access to a particular resource or not

d - (Choose 1 answer)

Which is true about JDBC?

A. The JDBC API is an extension of the ODBC API

B. All JDBC drivers are pure Java.

C. JDBC is used to connect to MOM (Message-Oriented Middleware Product)

D. The JDBC API is included in J2SE

d - (Choose 1 answer)

In which of the following cases will the method doEndTagO of a tag handler be invoked?

A. It will be invoked in all case even if doStartTagO or doAfterBodyO throw an exception.

B. This method is invoked if doStartTagO method returns true.

C. It will be invoked only if doStartTagO and doAfterBodyO complete successfully.

D. It will be invoked only if doStartTagO or doAfterBodyO return Tag.DO\_END\_TAG.

d - (Choose 1 answer)

Data Integrity is the biggest issue for your web application. What will you do? (Choose one)

A. Use HTTPS instead of HTTP.

- B. Use LDAP to store user credentials.
- C. Use HTTP digest authentication.
- D. Use form-based authentication.

c - (Choose 1 answer)

Which jsp tag is needed to ensure that implicit variable 'exception' is available in the page that is meant to be an error page? (Choose one)

- A. `<%@isErrorPage="true"%>`
- B. `<%@ page errorPage="this"%>`
- C. `<%@ page isErrorPage="true"%>`
- D. `<%@errorPage="true"%>`

b - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is used by web application developer to deliver the web application in a single unit
- B. It contains web components such as servlets as well as EJBs.
- C. It cannot contain third party jar and class files.
- D. It cannot be unpackaged by the container.
- E. It is an XML document

c - (Choose 1 answer)

Where the bean is declared using the following useBean tag accessible? `<jsp:useBean id="jbean" class="com.jclass.JBean" />`

- A. within other servlets and JSP pages of the same web applications.
- B. throughout all future invocations of the JSP as long as the servlet engine is running.
- C. Throughout the remainder of the page.
- D. throughout all future invocations of the JSP as long as the session is not expired

d - (Choose 1 answer)

Which of the following statement correctly set a cookie from a servlet code? (Choose one)

Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. `request.setCookie("mycookie", "value");`

- B. `response.addCookie(mycookie". "value");`
- C. `response.setCookie("mycookie". "value");`
- D. `response.addCookie(newCookie("mycookie". "value"));`

a - (Choose 1 answer)

Which statements are BEST describe contentType attribute of `<%@ page contentType=_.%>` directive?

- A. Specifies the MIME type of the data in the response to the client The default type is text/html.
- B. Any exceptions in the current page that are not caught are sent to the error page for processing. The error page implicit object exception references the original exception.
- C. Specifies the class from which the translated JSP will be inherited. This attribute must be a fully qualified package and class name.
- D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references the original exception

a - (Choose 1 answer)

The following line of code exists in the doGet method of Servlet String sid = request.getParameter("jsessionid");

Which of the option is NOT a standard technique for retrieving the HttpSession associated with the request? (Assume that the session has already been created.)

- A. `HttpSession session = requestgetSession(sid);`
- B. `HttpSession session = requestgetSession();`
- C. `HttpSession session = requestgetSession(false);`
- D. `HttpSession session = request.getSession(true);`

c

(there are three main types of JSP constructs that you embed in a page: scripting elements, directives, and actions) - (Choose 1 answer)

Which is NOT the main type of JSP constructs that you embed in a page?

- A. directives
- B. scripting elements
- C. HTML code
- D. actions

a - (Choose 1 answer)

A web application named webmail has a file named folderview.jsp which the user should be able access directly. W



Which of the following directory may contain this file? (Choose one)

- A. /webmail/jsp
- B. /webmail/web-inf/jsp
- C. /webmail/WEB-INF/lib/jsp
- D. /webmail/WEB-INF/jsp

c - (Choose 1 answer)

Servlet Container calls the init method on a servlet instance\_

- A. For each request to the servlet
- B. For each request to the servlet that causes a new thread to be created.
- C. Only once in the life time of the servlet instance.
- D. If the request is from the user whose session has expired.

d - (Choose 1 answer)

What should be the value of <body-content> subelement of element <tag> in a TLD file if the tag should not have any contents as its body?

- A. false
- B. null
- C. blank
- D. empty

d - Choose 1 answer)

Which of the following XML fragments correctly defines a role named "manager" in webxml?

- A. <security-role>manager</security-role>
- B. <security-role rolename=manager></security-role>

C. <security>

<role-name>manager</role-name>

</security>

D. <security-role>

<role-name>manager</role-name>

</security-role>

c - (Choose 1 answer)

Which of the following lines of code are correct?

A. `@EntityBean`

```
public class Employees{
...
}
```

B. `class Employees{`

`@Entity`

```
private class Address{
...
}
...
}
```

C. `@Entity`

```
public class Employees{
}
```

d - The requirements for an online shopping application are:

It must support millions of customers. The invocations must be transactional. The shopping cart must be persistent  
Which technology is required to support these requirements?

A. JMX

B. JNI

C. JMS

D. EJB

d - (Choose 1 answer)

Which technique is likely to return an initialization parameter for a JSP page?

A. `<%= request.getParameter("myParm") %>`

B. `<% String s = getAttributefmyParm"); %>`

C. `<%= getParameter("myParm") %>`

D. `<% String s = getlnitParameterfmyParm"); %>`

E. `<% = application.getlnitParameter("myParm") %>`

c - (Choose 1 answer)

Which method would you use to put the session id into the URL to support sessions using URL rewriting?

- A. `encodeURL()` of `HttpServlet`
- B. `rewriteURL()` of `HttpServletResponse`
- C. `encodeURL()` of `HttpServletResponse`
- D. `encodeURL()` of `HttpServletRequest`

d - (Choose 1 answer)

Which of the following is indicated by URL. which is used on the Internet?

- A. IP addresses of servers connected to the Internet
- B. E-mail addresses for use in the Internet
- C. Owners of PCs connected to the Internet
- D. Information resources(sources) on the Internet

b - (Choose 1 answer)

Which syntax is correct for JSP Declarations?

- A. `<%=code%>`
- B. `<%! code %>`
- C. `<%code%>`

a - (Choose 1 answer)

Which of the following is NOT a valid attribute for a `useBean` tag?

- A. `className`
- B. `beanName`
- C. `scope`

b - (Choose 1 answer)

What is the implementation specification of EJB 3 session bean classes?

- A. a session bean class must be final or abstract
- B. a session bean class must be marked with `@Stateless` or `@Stateful`
- C. a session bean class can't extend other classes

c - (Choose 1 answer)

Given a stateless session bean with container-managed transaction demarcation, from which method can a developer access another enterprise bean?

- A. bean constructor
- B. PreDestroy lifecycle callback method
- C. business method from the business interface

c - (Choose 1 answer)

Which statements are BEST describe name attribute of `<jsp:setProperty name=_. />` action?

- A. If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property.
- B. The value to assign to a bean property. The value typically is the result of a JSP expression.
- C. The ID of the JavaBean for which a property (or properties) will be set.
- D. The name of the property to set. Specifying for this attribute causes the JSP to match the request parameters to the properties of the bean.

d - (Choose 1 answer)

Which is NOT responsibility of the business tier in a multitier web-based application with web, business, and EIS tiers?

- A. To participate in transactions
- B. To integrate with the legacy applications
- C. To provided business logic
- D. To generate dynamic content

c - (Choose 1 answer)

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

- A. request
- B. response
- C. pageContext
- D. out
- E. page

b - (Choose 1 answer)

Which statements are BEST describe scope attribute of `<jsp:useBean scope=_. />` Action?

- A. The name used to manipulate the Java object with actions `<jsp:setProperty>` and `<jsp:getProperty>`. A variable of this name is also declared for use in JSP scripting elements. The name specified here is `ca`
- B. The scope in which the Java object is accessible-page, request session or application. The default scope is page.
- C. The name of a bean that can be used with method `newInstance` of class `java.beans.Beans` to load a `JavaBean` into memory.
- D. The type of the `JavaBean`. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class. `AClassCai`
- E. The fully qualified class name of the Java object

c - (Choose 1 answer)

Identify correct statement about a WAR file.(Choose one)

- A. It is an XML document
- B. It cannot be unpackaged by the container.
- C. It contains web components such as servlets as well as EJBs.
- D. It may contain third party jar and class files.

b - (Choose 1 answer)

Which statement(s) about Servlet Life Cycle is(are) correct? (Choose one)

- A. When the servlet is first created, its `init` method is invoked, so that is where you put one-time setup code.
- B. All the others
- C. Servlet can implement a special interface that stipulates that only a single thread is permitted to run at any one time.
- D. When the server decides to unload a servlet it first calls the servlet's `destroy` method.
- E. Each user request results in a thread that calls the service method of the previously created instance.
- F. Multiple concurrent requests normally result in multiple threads calling service simultaneously.

c - (Choose 1 answer)

Which is true about RMI?

- A. RMI is used to create thin web client
- B. RMI is the Java API used for executing queries on a database
- C. RMI allows objects to be send from one computer to another
- D. RMI is the transport protocol used by web servers and browsers

a - (Choose 1 answer)

Which statement is true about management of an EJB's resources?

- A. The reference to home object is obtained through JNDI to improve maintainability and flexibility.
- B. The reference to the remote object is obtained through JNDI to improve maintainability and flexibility.

b - (Choose 1 answer)

A web application is located in "helloapp" directory. Which directory should its deployment descriptor be in?

- A. helloapp
- B. helloapp/WEB-INF
- C. helloapp/WEBJNF
- D. helloapp/WEBINF

c - (Choose 1 answer)

A developer is working on a project that includes both EJB 2.1 and EJB 3.0 session beans. A lot of business logic has been implemented and tested in these EJB 2.1 session beans. Some EJB 3.0 session beans need to access this business logic.

Which design approach can achieve this requirement?

- A. Add adapted home interfaces to EJB 3.0 session beans to make EJB 3.0 and EJB 2.1 session beans interoperable.
- B. Add EJB 3.0 business interfaces to existing EJB 2.1 session beans and inject references to these business interfaces into EJB 3.0 session beans.
- C. No need to modify existing EJB 2.1 session beans. Use the @EJB annotation to inject a reference to the EJB 2.1 home interface into the EJB 3.0 bean class.

c - (Choose 1 answer)

Which statement is true about EJB 3.0 containers?

- A. The Java 2D API is guaranteed to be available for session beans
- B. Java Telephony API is guaranteed to be available for session and message beans
- C. javax.naming.initialContext is guaranteed to provide a JNDI name space

b - (Choose 1 answer)

Which method of ReportGeneratorServlet will be called when the user clicks on the URL shown by the following HTML.

Assume that ReportGeneratorServlet does not override the service(HttpServletRequest HttpServletResponse) method of the HttpServlet class. (Choose one)

- A. doPost(HttpServletRequest Request. HttpServletResponse);
- B. doGet(HttpServletRequest Request HttpServletResponse):
- C. doOption(HttpServletRequest Request. HttpServletResponse);
- D. doHead(HttpServletRequest Request. HttpServletResponse);

a - (Choose 1 answer)

The same servlet class can be declared using different logical names in the deployment descriptor.

A. True

B. False

a - (Choose 1 answer)

The Java Persistent API defines the Query interface. Which statement is true about the Query.executeUpdate method ?

- A. It must always be executed within a transaction
- B. All managed entity objects corresponding to database rows affected by the update will have their state changed to correspond with the update
- C. It throws a PersistenceException if no entities were updated.

b - (Choose 1 answer)

If you want to send an entity object as the pass by value through a remote interface, which of the following statements are valid? (Choose one)

- A. public class Employees implements Serializable{  
...  
}
- B. @Entity  
public class Employees implements Serializable{  
...  
}
- C. @entity  
public class Employees implements Serializable{  
...  
}
- D. @Entity  
public class Employees implements SessionSynchronization{  
...  
}

a - (Choose 1 answer)

When you obtain a session (using getSession() of HttpServletRequest object), the web container manufactures a unique ID string for the session. This is passed as a token between the client and server.

A. True

B. False

c - (Choose 1 answer)

Which of the following lines of code, in the doPost() method of a servlet, uses the RL rewriting approach to maintaining sessions? (Choose one)

A. request.useURLRewriting();

B. out.println(response.rewrite("<a href='/servlet/XServlet'>Click here</a>"));

C. out.println("<a href='"+response.encodeURL("/servlet/XServlet")+"'>Click here</a>"));

D. out.println("<a href='"+request.rewrite("/servlet/XServlet")+"'>Click here</a>"));

a - (Choose 1 answer)

Which syntax is correct for JSP Scriptlets?

A. <% code%>

B. <%= code%>

C. <%! code %>

d - Which is correct JDBC-ODBC driver name?

Chọn một câu trả lời

a) jdbc.odbc.sun.JdbcOdbcDriver

b) sun.driver.jdbc.odbc

c) jdbc.odbc.sun.driver

d) sun.jdbc.odbc.JdbcOdbcDriver

ade - Choose three correct statements in JDBC

Chọn ít nhất một câu trả lời

a) getObject

b) getLine

c) getText

d) getInt

e) getString

c - Which is correct sequence for a JDBC execution?

Chọn một câu trả lời

a) Connection -> Load Driver -> Statement -> ResultSet

b) Load Driver -> Statement -> ResultSet -> Connection

c) Load Driver -> Connection -> Statement -> ResultSet

d) Statement -> Connection -> ResultSet -> Load Driver

ad - Which are the correct statements of Connection object? (Choose two)



- a) createStatement(int, int);
- b) createStatement(int, String);
- c) createStatement(String, int);
- d) createStatement();

acd - Which are the correct statements of ResultSet object? (Choose three)

- a) executeQueries()
- b) executeBatch()
- c) execute()
- d) executeUpdate()

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

- a) getOutputStream
- b) getBinaryStream
- c) getWriter
- d) getStream

c - Which of the following files is the correct name and location of deployment descriptor of a web application. Assume that the web application is rooted at \doc-root. Select the one correct answer

- a) \doc-root\dd.xml
- b) \doc-root\WEB-INF\dd.xml
- c) \doc-root\WEB-INF\web.xml
- d) \doc-root\web.xml
- e) \doc-root\WEB\_INF\dd.xml

c - Which of these is true about deployment descriptors. Select the one correct answer

Chọn một câu trả lời

- a) The servlet-mapping element, if defined, must be included within the servlet element.
- b) The web-app element must include the servlet element
- c) The order of elements in deployment descriptor is important. The elements must follow a specific order
- d) The elements of deployment descriptor are case insensitive

d - The exception-type element specifies an exception type and is used to handle exceptions generated from a servlet. Which element of the deployment descriptor includes the exception-type as a sub-element. Do not include the element in enclosing parenthesis

- a) error
- b) exception
- c) exception-page
- d) error-page

a - \_\_\_\_\_ is a set of java API for executing SQL statements.

- a) JDBC
- b) JAVADB
- c) ODBC
- d) None of the other choices

b - JDBC supports \_\_\_\_\_ and \_\_\_\_\_ models.

Chọn một câu trả lời

- a) Three-tier and four-tier
- b) Two-tier and three-tier

- c) None of the other choices
- d) Single-tier and two-tier

b - URL referring to databases use the form:

Chọn một câu trả lời

- a) protocol:subprotocol:datasoursename
- b) jdbc:odbc:datasoursename
- c) protocol:datasoursename
- d) jdbc:datasoursename

c - Study the statements:

1)When a JDBC connection is created, it is in auto-commit mode

2)Once auto-commit mode is disabled, no SQL statements will be committed until you call the method commit explicitly

Chọn một câu trả lời

- a) Only statement 2 is true
- b) Both 1 and 2 are not true
- c) Both 1 and 2 are true
- d) Only statement 1 is true

c - The \_\_\_\_\_ class is the primary class that has the driver information.

Chọn một câu trả lời

- a) None of the other choices
- b) Driver
- c) DriverManager
- d) ODBCDriver

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

- A. HttpServletRequest
- B. HttpServletResponse
- C. ServletConfig
- D. ServletContext

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

- A. setType
- B. setContent
- C. setContentType
- D. setResponseContentType

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

- A. The response from the dedicated server to a HEAD request consists of status line, content type and the document.
- B. The response from the server to a GET request does not contain a document.
- C. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus method.

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY

- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

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

- A. SC\_OK
- B. SC\_MOVED\_TEMPORARILY
- C. SC\_NOT\_FOUND
- D. SC\_INTERNAL\_SERVER\_ERROR
- E. ESC\_BAD\_REQUEST

a - . Which of the following statements are correct about the status of the Http response. Select the one correct answer.

- A. A status of 200 to 299 signifies that the request was successful.
- B. A status of 300 to 399 are informational messages.
- C. A status of 400 to 499 indicates an error in the server.
- D. A status of 500 to 599 indicates an error in the client.

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- A. getStream
- B. getOutputStream
- C. getBinaryStream
- D. getWriter

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

- a. True
- b. False

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

- A. The getRequestDispatcher method of ServletContext class takes the full path of the servlet, whereas the getRequestedDispatcher method of HttpServletRequest class takes the path of the servlet relative to the ServletContext.
- B. The include method defined in the RequestDispatcher class can be used to access one servlet from another. But it can be invoked only if no output has been sent to the server.
- C. The getRequestDispatcher(String URL) is defined in both ServletContext and HttpServletRequest method
- D. The getNamedDispatcher(String) defined in HttpServletRequest class takes the name of the servlet and returns an object of RequestDispatcher class.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. POST allows users to bookmark URLs with parameters.
- B. The POST method should not be used when large amount of data needs to be transferred.
- C. POST allows secure data transmission over the http method.
- D. POST method sends data in the body of the request.

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

- A. GET method
- B. POST method
- C. HEAD method
- D. PUT method

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

- A. CONNECT method
- B. COMPARE method
- C. OPTIONS method
- D. TRACE method

b - Name the http method used to send resources to the server. Select the one correct answer.

- A. FTP methodd
- B. PUT method
- C. WRITE method
- D. COPY method

B - . Name the http method that sends the same response as the request. Select the one correct answer.

- A. DEBUG method
- B. TRACE method
- C. OPTIONS method
- D. HEAD method

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

- A. Codes starting from 200
- B. Codes starting from 300
- C. Codes starting from 400
- D. Codes starting from 500

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

- A. /META-INF/classes
- B. /classes
- C. /WEB-INF/classes
- D. /root/classes

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

- A. `<%int i = 1;%>`  
`<%= i; %>`
- B. `<%int i = 1;`  
`i; %>`
- C. `<%int i = 1%>`  
`<%= i %>`
- D. `<%int i = 1;%>`  
`<%= i %>`
- E. `<%int i = 1%>`  
`<%= i; %>`

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

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

- A. The program prints "Welcome John"
- B. The program gives a syntax error because of the statement  
<%! String myName=request.getParameter();%>
- C. The program gives a syntax error because of the statement  
<% String test= "welcome" + myName; %>
- D. The program gives a syntax error because of the statement  
<%= test%>

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

```
<%=x%>
```

- A. <jsp:expression=x/>
- B. <jsp:expression>x</jsp:expression>
- C. <jsp:statement>x</jsp:statement>
- D. <jsp:declaration>x</jsp:declaration>
- E. <jsp:scriptlet>x</jsp:scriptlet>

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

```
<%x=1;%>
```

- A. <jsp:expression x=1;/>
- B. <jsp:expression>x=1;</jsp:expression>
- C. <jsp:statement>x=1;</jsp:statement>
- D. <jsp:declaration>x=1;</jsp:declaration>
- E. <jsp:scriptlet>x=1;</jsp:scriptlet>

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

```
<%= if(Math.random() < 0.5) %>
```

```
hello
```

```
<%= } else { %>
```

```
hi
```

```
<%= } %>
```

- A. The browser will print either hello or hi based upon the return value of random.
- B. The string hello will always get printed.
- C. The string hi will always get printed.
- D. The JSP file will not compile.

d - Which of the following are correct. Select the one correct answer.

- A. JSP scriptlets and declarations result in code that is inserted inside the \_jspService method.
- B. The JSP statement <%! int x; %> is equivalent to the statement <jsp:scriptlet>int x;</jsp:scriptlet%>.
- C. The following are some of the predefined variables that maybe used in JSP expression - HttpSession, context.
- D. To use the character %> inside a scriptlet, you may use %\> instead.

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

```
<% int y = 0; %>
```

```
<% int z = 0; %>
```

```
<% for(int x=0;x<3;x++) { %>
```

```
<% z++;++y;%>
```

```
<% }%>
```

```

<% if(z<y) {%>
<%= z%>
<% } else {%>
<%= z - 1%>
<% }%>

```

- A. 0
- B. 1
- C. 2
- D. 3
- E. The program generates compilation error.

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

- A. out
- B. session
- C. request
- D. response
- E. httpsession
- F. page

d - A bean with a property color is loaded using the following statement

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

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

- A. <jsp:getColor bean="fruit"/>
- B. <jsp:getProperty id="fruit" property="color"/>
- C. <jsp:getProperty bean="fruit" property="color"/>
- D. <jsp:getProperty name="fruit" property="color"/>
- E. <jsp:getProperty class="Fruit" property="color"/>

c - A bean with a property color is loaded using the following statement

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

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

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

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

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

- A. <jsp:usebean id="fruit" scope="page"/>
- B. <jsp:usebean id="fruit" type="String"/>
- C. <jsp:usebean id="fruit" type="String" beanName="Fruit"/>
- D. <jsp:usebean id="fruit" class="Fruit" beanName="Fruit"/>

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

- A. page
- B. application
- C. session
- D. request

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

- A. The id attribute must be defined for <jsp:usebean>.
- B. The scope attribute must be defined for <jsp:usebean>.
- C. The class attribute must be defined for <jsp:usebean>.
- D. The <jsp:usebean> must include either type or class attribute or both.

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

- A. include
- B. scope
- C. errorPage
- D. session
- E. debug

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

- A. <jsp:include file="a.jsp"/>
- B. <jsp:include page="a.jsp"/>
- C. <jsp:directive.include file="a.jsp"/>
- D. There is no XML equivalent of include directive.

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

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

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

- A. <% sum = sum + j %>
- B. <% sum = sum + j; %>
- C. <%= sum = sum + j %>
- D. <%= sum = sum + j; %>

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

- A. <% sum %>
- B. <% sum; %>
- C. <%= sum %>
- D. <%= sum; %>

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

- A. HttpRequest
- B. ServletRequest
- C. Request
- D. HttpServletRequest

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

- A. session
- B. application
- C. httpSession
- D. httpsession

d - A Java bean with a property color is loaded using the following statement

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

What is the effect of the following statement.

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

Select the one correct answer.

- A. An error gets generated because the value attribute of setAttribute is not defined.
- B. The color attribute is assigned a value null.
- C. The color attribute is assigned a value "".
- D. If there is a non-null request parameter with name color, then its value gets assigned to color property of Java Bean fruit

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

- A. <% page info="test page" %>
- B. <%@ page info="test page" session="false"%>
- C. <%@ page session="true" %>
- D. <%@ page isErrorPage="errorPage.jsp" %>
- E. <%@ page isThreadSafe=true %>

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

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

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

- A. Yes. This is legal JSP syntax.
- B. No. This code will generate syntax errors

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

- A. contentType
- B. generateXML
- C. type
- D. outputXML

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

- A. extends
- B. import
- C. include
- D. package
- E. classpath

ac - Which of these are true. Select the two correct answers.

- A. The default value of isThreadSafe attribute of page directive is true.
- B. If isThreadSafe attribute of page directive is set to true, then JSP container dispatches request for the page sequentially.
- C. When isThreadSafe attribute of page directive is set to true, a thread is created for each request for the page.
- D. Setting isThreadSafe attribute to true for JSP pages, can lead to poor performance.

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

- A. include
- B. exclude
- C. import
- D. taglibrary
- E. servlet



F. page

d - Which of these is true about include directive. Select the one correct answer.

A. The included file must have jspf extension.

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

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

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

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

A. page

B. pageContext

C. context

D. object

E. jspPage

ad - Message-driven beans are classes that implement 2 interfaces :

[A]

`javax.ejb.MessageDrivenBean`

[B]

`javax.jms.Message`

[C]

`javax.jms.MessageBean`

[D]

`javax.jms.MessageListener`

ab - Which are the types of messaging domains ? (choose 2)

[A]

Publish/Subscribe

[B]

Point-to-Point

[C]

Peer-to-Peer

[D]

Broadcast/Receiver

d - Select the correct JMS programming model

[A]

Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[B]

Locate the JMS Driver -> Create a JMS session -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[C]

Locate the JMS Driver -> Create a JMS connection -> Locate the JMS destination -> Create a JMS producer or a JMS consumer -> Send or receive message

[D]

Locate the JMS Driver -> Create a JMS connection -> Create a JMS session -> Create a JMS producer or a JMS consumer -> Send or receive message

b - Message-driven beans do not have any return value

[A]

True

[B]

False

a - Select the word to replace ??? to make the diagram about messaging domain correct

[A]

Topic

[B]

Queue

[C]

PTP

[D]

Pub/Sub//

d - A \_\_\_\_ subscription to a topic means that a JMS subscriber receives all message even if the subscriber is inactive

[A]

temporary

[B]

nondurable

[C]

persistent

[D]

Durable

a - In ejb-jar.xml file, <persistence-type> element value is \_\_\_\_\_

[A]

Bean or Container

[B]

Container-Managed-Persistent

[C]

Bean-Managed-Persistent

[D]

BMP or CMP

a - Entity bean is \_\_\_\_\_

[A]

a persistent data component

[B]

a database object

[C]

an application logic component

[D]

an object-relational mapping

d - ejbCreate() method of entity bean class returns \_\_\_\_\_

[A]

remote object

[B]

null

[C]

home object

[D]

primary key

a - create() method of entity home interface returns \_\_\_\_\_

[A]

null

[B]

remote object

[C]

primary key

[D]

home object

ac - select CORRECT statement (choose 2)

[A]

Entity beans represent persistent state objects (things that don't go away when user goes away)

[B]

Session beans represent persistent state objects (things that don't go away when user goes away)

[C]

Session beans model a process or workflow (actions that are started by the user and that do away when user goes away)

[D]

Entity beans model a process or workflow (action that are started by the user and that go way when user goes away)

c - The \_\_\_\_\_ class makes every entity bean different

[A]

bean key

[B]

bean ID

[C]

primary key

[D]

key

acd - The top three values of EJB are (choose 3):

[A]

Portability is easier

[B]

Distributed application

[C]

Rapid Application Development

[D]

It is agreed upon by the industry

[E]

Easy to upgrade

a - Which is not the players in the EJB Ecosystem? (choose 1):

[A]

End User

[B]

EJB Deployer

[C]

System Administrator

[D]

Application Assembler

[E]

Bean provider

a - The \_\_\_\_\_ is the overall application architect .This party is responsible for understanding how various components fit together and writes the application that combine components.

[A]

Application Assembler

[B]

Application Builder

[C]

Deployer

[D]

Developer

c - which is not the role of EJB Deployer?

[A]

Securing the deployment with a firewall

[B]

Performance-tuning the system

[C]

Write the code that calls on components supplied by bean providers

[D]

Choosing hardware that provides the required level of performance

abe - Which are EJB containers ? (choose three)

[A]

JBoss

[B]

BEA's WebLogic

[C]

Microsoft Application Server

[D]

Apache Tomcat 5.5

[E]

IBM WebSphere

d - The \_\_\_\_\_ supplies business components,or enterprise beans

[A]

Tool vendor

[B]

Application assembler

[C]

Deployer

[D]

Bean provider

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

[A]

True

[B]

False

b - Given the following JSP and Tag handler code,what is the result of accessing the JSP ?

JSP Page Source

```
<html>
<body>
<%@taglib uri = "test_taglib" prefix = "myTag"%>
<% session.setAttribute("first", "first");%>
<myTag:TestTag/>

<%=session.getAttribute("second")%>
</body>
</html>
```

Tag Handler Code for <myTag:TestTag/>

```
package examples;
import java.io.*;
import javax.servlet.jsp.*;
import javax.servlet.jsp.tagext.*;

public class TestTag extends TagSupport
{
 private PageContext pageContext;

 public void setPage(PageContext page){
 this.pageContext=page;
 }

 public int doStartTag() throws JspException {
 try{
 String first = pageContext.getSession().getAttribute("first").toString();
 pageContext.getOut().write(first);
 pageContext.setAttribute("second", "second", PageContext.PAGE_SCOPE);
 }
 catch(IOException)
 {
 throw new JspException(i.getMessage());
 }
 return SKIP_BODY;
 }

 public int doEndTag() throws JspException{
 return EVAL_PAGE;
 }
 public void release(){}

}
```

Assume \*.tld and web.xml files are correct.

- [A]  
second  
first
- [B]  
first  
second
- [C]

first  
null  
[D]  
second  
null

b - When implementing a tag, if the tag does not include the body ,then the tag handler lass must extend the BodyTagSupport class.

Is this statement true or false.

[A]  
True  
[B]  
False

ae - Which of these are legal return types of the doEndTag method defined in a class that extends TagSupport class. SELECT the two correct answers.

[A]  
EVAL\_PAGE  
[B]  
EVAL\_BODY  
[C]  
EVAL\_PAGE\_INCLUDE  
[D]  
EVAL\_BODY\_INCLUDE  
[E]  
SKIP\_PAGE  
[F]  
SKIP\_BODY

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

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

[A]  
The prefix defines the name of the tag that may be used for a tag library.  
[B]  
The prefix attribute defines the location of the tag library descriptor file  
[C]  
The prefix attribute should refer to the short name attribute of the tag library file that is defined by the uri attribute of taglib directive  
[D]  
The prefix attribute is used in front of a tagname of a tag defined within the tag library

d - \_\_\_\_\_ sends a request to an object and includes the result in a JSP file.

[A]  
include directive  
[B]  
import directive  
[C]  
<jsp:forward>  
[D]  
<jsp:include>

a - A programmer is designing a class to encapsulate the information about an inventory item. A JavaBeans component is need to do this. The InventoryItem has private instance variables to store the item information:

10.private int itemId;  
11.private String name;  
12.private String description;

Which method signature follows the JavaBeans naming standards for modifying the itemId instance variable? (choose one)

- [A]  
setItemId(int itemId)
- [B]  
updateItemID(int itemId)
- [C]  
itemID(int itemId)
- [D]  
update(int itemId)
- [E]  
mutateItemId(int itemId)

a - Name the class that includes the SetSession method that is used to get the HttpSession object

- [A]  
HttpServletRequest
- [B]  
HttpServletResponse
- [C]  
SessionContext
- [D]  
SessionConfig

bc - Which of the following are potential legal of JSP source ? (choose 2)

- [A]  
<jsp:useBean id = "beanName1" class="a.b.MyBean" type="a.b.Myinterface"/>
- [B]  
<% String myValue = "myValue"; %>  
<jsp:setProperty name = "beanName1" property="soleProp" value = "<%=myValue%>"/>
- [C]  
<%String className = "a.b.MyBean"; %>  
<jsp:useBean id = "beanName2" class="<%=className%>"/>
- [D]  
<%String propName = "soleProp"; %>  
<jsp:getProperty name = "beanName1" property="<%=propName%>" />
- [E]  
<%String beanName = "beanName3"; %>  
<jsp:useBean id = "<%=beanName3%>" class="a.b.MyBean" />

a - Given that a servlet has been mapped to /account/\*.

Identify the HttpServletRequest methods that will return the/myapp segment for the URI: /myapp/account/\*.

- A. getPathInfo
- B. getServletPath
- C. getContextPath

d - Identify the method used to get an object available in a session. (Choose one)

- A. get of Session
- B. getValue of HttpSession
- C. getAttribute of Session

#### D. getAttribute of HttpSession

e - Which jsp tag can be used to set bean property?

- A. jsp:property
- B. jsp:useBean.setProperty
- C. jsp:useBean
- D. jsp:useBean.property
- E. jsp:setProperty

a - What is the consequence of attempting to access the following JSP page?

```
<html>
<body>
<%!
public void JspService(HttpServletRequest request HttpServletResponse response) { outwrite("A");
}
%>
<% outwritef("B"): %>
</body>
</html>
```

- A. Duplicate method compilation error.
- B. "A" is output to the response before "B".
- C. "A" is output to the response.
- D. "B" is output to the response.

b - Which of the following statement is correct?

- A. Data Integrity means that the data cannot be viewed by anybody other than it's intended receipient
- B. Authentication means determining whether one has access to a particular resource or not
- C. Data Integrity means that the data is not modified in transit between the sender and the receiver.

d - \_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

- A. <jsp:forward>
- B. <jsp:useBean>
- C. import directive
- D. include directive
- E. <jsp:include>

d - Study the statements:

- 1) The special directory/WEB-INF/lib contains Java class files—servlets and supporting code.
  - 2) The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.
- A. Only statement 1 is true
  - B. Only statement 2 is true
  - C. Both 1 and 2 are true
  - D. Both 1 and 2 are not true

b - Which statements are BEST describe class attribute of <jsp:useBean class=\_. /> Action?

- A. The name of a bean that can be used with method instantiate of class java.beans.Beans to load a JavaBean into memory.
- B. The fully qualified class name of the Java object
- C. The name used to manipulate the Java object with actions <jsp:setProperty> and <jsp:getProperty>. A variable of this name is also declared for use in JSP scripting elements. The name specified here is ca
- D. The type of the JavaBean. This can be the same type as the class attribute, a superclass of that type or an interface implemented by that type. The default value is the same as for attribute class.

b - Action <jsp:setProperty> has the ability to match request parameters to properties of the same name in a bean by



specifying "\*" for attribute property.

- A. False
- B. True

c - Which are the correct lines of code to get information in the following<context-param> tag in the web.xml file. Assume that response and request refer to HttpServletResponse and HttpServletRequest respectively.

- A. response.getParameter('machineName');
- B. request.getParameter( machineName');
- C. ServletContext sc = getServletContext();  
String serverName = sc.getInitParameter("machineName");
- D. ServletConfig sc = getServletConfig();  
String serverName = sc.getInitParameter("machineName");

```

<web-app>
<context-param>
<param name="machineName" value="cms-server"/>
</context-param>
</web-app>
```

b - Consider the following java code:

```
//in file Book.java package com.bookstore; public class Book {
private long isbn;
public Book(){ isbn = 0;}
public long getIsbn(){ return isbn;}
public void setIsbn(long value){ this.isbn = value;}
}
```

Code for browse.jsp:

```
<jsp:useBean class="com.bookstore.Book" id="newbook"/>
LINE 1: <jsp:setProperty name="newbook" property="isbn" value="1000"/>
```

Which of the following statements are correct?

- A. The isbn property of new book will be set to 1000 if the 'value' attribute of 'setProperty' tag is given as: value=1000
- B. The isbn property of newbook will be set to 1000.
- C. It will not compile.

D - Identify the technique that can be used to implement 'sessions' if the client browser does not support cookies. (Choose one)

- A. It cannot be done without cookie support
- B. Using Http headers.
- C. URL Writing
- D. Hidden form fields.

d - Name the default value of the scope attribute of <jsp:useBean>

- A. request
- B. application
- C. session
- D. page

b - You have to send a pdf file to the client as a response to a request. Which of the following calls will you have to make? (Choose one)

- A. response.setContentType("application/pdf");

- B. response.setContentType("image/pdf");
- C. response.setContentType("application/pdf");
- D. response.setType("image/pdf");

c - A JSP \_\_\_\_\_ lets you define methods or fields that get inserted into the main body of the servlet class (outside of the JspService method that is called by service to process the request).

- A. expression
- B. scriptlet
- c. declaration

d - Which is NOT a correct statement about entity beans?

- A. They are used to share data among clients
- B. They are used to store persistent data
- C. They are used to represent data stored in a RDBMS
- D. They are used to implement business processes

B - If you want the same Servlet to handle both GET and POST and to take the same action for each, you can simply have doGet call doPost or vice versa.

- A. False
- B. True

d - A Java developer needs to be able to send email, containing XML attachments, using SMTP. Which JEE (J2EE) technology provides this capability?

- A. Servlet
- B. JSP
- C. EJB
- D. JavaMail

c - Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A. getFormValue("email") of HttpServletRequest
- B. getField(email") of HttpServletRequest
- C. getParameter("email") of ServletRequest
- D. getParameters("email") of HttpServlet

a - Which of the following methods can be used to add cookies to a servlet response?

- A. HttpServletResponse.addCookie(Cookie cookie)
- B. ServletResponse.addCookie(Cookie cookie)
- C. ServletResponse.addCookie(String contents)
- D. HttpServletResponse.addCookie(String contents)
- E. ServletResponse.addHeader(String name, String value)

d - Your web application named "FWorks" uses SpecialMath.class. This is an unbundled class and is not contained in any jar file. Where will you keep this class file?

- A. FWorks/classes
- B. FWorks/WEB-INF/lib/classes
- C. FWorks/WEB-INF
- D. FWorks/WEB-INF/classes

d - Which is NOT a core component of JSP?

- A. actions
- B. name of a jsp file
- C. tag libraries
- D. scriptlets

E. directives

c - A parameter is defined in a <context-param> element of the deployment descriptor for a web application. Which of the following statements is correct?

- A. It is accessible only to the servlet it is defined for.
- B. It is accessible to all the servlets of all the webapps of the container.
- C. It is accessible to all the servlets of the webapp.

d - Identify the parent element of <session-timeout> element in web.xml

- A. <session-configuration>
- B. <webapp>
- C. <session\_config>
- D. <session-config>

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

- A. True
- B. False

d - Which of the following are correct JSP expressions?

- A. <%= out.println("hello"); %>
- B. <% "Hello World"; %>
- C. <%= "Hello World"; %>
- D. <%= new Date() %>

a - What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root

- A. \WEB-INF\lib
- B. \jars
- C. \WEB-INF
- D. \WEB-INF\classes

b - Which security mechanism proves that data has not been tampered with during its transit through the network?

- A. Packet sniffing
- B. Data integrity
- C. Data validation
- D. Authentication
- E. Data privacy
- F. Authorization

d - A JSP page has the following page directives:

<%@page isErrorPage='false' %>

<%@page errorPage='/jsp/myerror.jsp' %>

Which of the following implicit object is NOT available to the jsp page?

- A. session
- B. response
- C. application
- D. exception

c - Which statements are BEST describe uri attribute of <%@ taglib uri=\_%>directive of JSP file?

- A. The scripting language used in the JSP. Currently, the only valid value for this attribute is java.
- B. Allows programmers to include their own new tags in the form of tag libraries. These libraries can be used to encapsulate functionality and simplify the coding of a JSP.
- C. Specifies the relative or absolute URI of the tag library descriptor.

D. Specifies the required prefix that distinguishes custom tags from built-in tags. The prefix names jsp, jsp, java, javax, servlet sun and sunw are reserved.

a - A custom tag can be nested inside another custom tag.

- A. true
- B. false

a - Which is NOT a standard technique for a session to be definitely invalidated?

- A. If the session timeout is set to 0 using `setMaxInactiveInterval()` method.
- B. No request comes from the client for more than "session timeout" period.
- C. A servlet explicitly calls `invalidate()` on a session object
- D. The container is shutdown and brought up again.

b - Objects with application scope are part of a particular Web application.

- A. False
- B. True

b - Which of the following tasks may happen in the translation phase of JSP page? (Choose one)

- A. Instantiation of the servlet class.
- B. Creation of the servlet class corresponding to the JSP file.
- C. None of the others
- D. Execution of `JspServiceQ` method.

b - When implementing a tag, if the tag does not include the body, then the tag handler class must extend the `BodyTagSupport` class. Is this statement true or false?

- A. True
- B. False

b - How can you ensure the continuity of the session while using `HttpServletResponse.sendRedirect()` method when cookies are not supported by the client?

- A. By using `HttpServletRequest.encodeURL()` method.
- B. By encoding the redirect path with `HttpServletResponse.encodeRedirectURL()` method.
- C. By using hidden parameters.

c - Which of the following is a sensible way of sending an error page to the client in case of a business exception that extends from `java.lang.Exception`? (Choose one)

- A. Don't do anything, the servlet container will automatically send a default error page.
- B. Don't catch the exception and define the 'exception to error-page' mapping in `web.xml`
- C. Catch the exception, wrap it into `ServletException` and define the 'business exception to error-page' mapping in `web.xml`

c - What is the output of the following code snippet of a JSP page?

```
{empty}

{empty"sometext"}
```

- A. false
- B. false true
- C. true false
- D. true

b - Which option can be used to predefine Java Persistence queries for easy use?

- A. `@NamedNativeQuery` annotation
- B. `@NamedQuery` annotation
- C. using the `named-native-query` element in the XML descriptor

b - Servlet methods are executed automatically.

- A. False
- B. True

b - Which is NOT associated with the business tier in a JEE (J2EE) web-based application?

- A. Entity Beans
- B. JSP
- C. Stateless Session Beans

d - Which of the following statements is correct? Select the one correct answer.

- A. The response from the server to a GET request does not contain a document
- B. The setStatus method defined in the HttpServletRequest class takes an int as an argument and sets the status of Http response
- C. The response from the server to a HEAD request consists of status line, content type and the document
- D. The HttpServletResponse defines constants like SC\_NOT\_FOUND that may be used as a parameter to setStatus method.

a - Which of the following classes define the methods setStatus(...) and sendError(...) used to send an HTTP error back to the browser? (Choose one)

- A. Both are defined in HttpServletResponse.
- B. Both are defined in ServletResponse
- C. HttpServletResponse and ServletResponse respectively.
- D. ServletResponse and HttpServletResponse respectively.

a - Identify the correct element is required for a valid <taglib> tag in web.xml (Choose one)

- A. <taglib-uri>
- B. <uri>
- C. <uri-name>
- D. <uri-location>
- E. <tag-uri>

d - (Choose 1 answer)

Which of the statements regarding the following code are correct?

```
public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException {
 ServletException {
 res.getWriter().print("Hello");
 RequestDispatcher rd = getServletContext().getRequestDispatcher("/testjsp");
 rd.include(req, res);
 res.getWriter().print("World");
}
```

- A. Only "World" will be a part of the output
- B. Neither will be a part of the output
- C. Only "Hello" will be a part of the output
- D. "Hello" and "World" both will be a part of the output

c - Which technology is used for processing HTTP requests and mapping those requests to business objects

- A. EJB
- B. JMS
- C. Servlets
- D. MOM (Message-Oriented Middleware Product)

a - A stateful session bean must commit a transaction before a business method

- A. False
- B. True

b - If you want the same Servlet to handle both GET and POST and to take the same action for each , you can simply have doGet call doPost , or vice versa

A.False

B.True

C - 10. Which of the given jsp statement is equivalent to

`<% = userbean.getAge() %>`

Assume that userbean.getAge() returns an integer. (Choose one)

A . `<jsp:getProperty name = "userbean" property = "Age" />`

B. `<jsp:getProperty name = "userbean" method= "getAge" />`

C. `<jsp:getProperty name = "userbean" property = "age" />`

D . `<jsp:getProperty name = "userbean" property = "getAge" />`

C - 1. Which statements are BEST describe errorPage attribute of `<%@ page errorPage=. %>` directive?

A. Specifies the MIME type of the data in the response to the client. The default type is text/html

B. Specifies the class from which the translated JSP will be inherited . This attribute must be a fully qualified package and class name.

C. Any exception in the current page that are not caught are sent to the error page for processing . The error page implicit object exception references the original exception.

D. Specifies if the current page is an error page that will be invoked in response to an error on another page. If the attribute value is true, the implicit object exception is created and references th...

C - 2. What gets printed when the following code snippet is compiled? Select the one correct answer .

`<% int y =0 ; %>`

`<% int z =0; %>`

`<%for(int x =0; x<3; x++) { %>`

`<% z++ ; ++y; %>`

`<% } %>`

`<% if(z<y) { %>`

`<%=z%>`

`<%} else { %>`

`<%= z-1 %>`

`<%} %>`

A. 0

B. 1

C. 2

D. 3

E. The program generates compilation error.

A - 3. Which of these is a correct fragment within the web-app element of deployment descriptor

A. `<error-page> <error-code>404 </error-code> <location></error-page>`

B. `<error-page> <exception-type> mypackage.MyException</exception-type> <error-code>404 </error-code> <location>/error.jsp</location></error-page>`

C. `<error-page> <exception-type> mypackage.MyException</exception-type> <error-code>404 </error-code> <location></error-page>`

B - 4. A tag library defines a set of element that can be inserted into JSP file.

A. False

B. True

B - 5. The HttpServletRequest has methods by which you can find out about incoming information such as:

- A. the client's hostname
- B. All of the others
- C. cookies
- D. HTTP request headers
- E. form data

D - 6. Which of the following classes define the methods setStatus(\_\_\_\_) and sendError(\_\_\_\_) used to send an HTTP error back to the browser?

- A . Both are defined in ServletRequest
- B . Both are defined in ServletResponse
- C . Both are defined in HttpServletRequest
- D .Both are defined in HttpServletResponse\_

A - 7. Host names are translated into IP addresses by web servers.

- A False
- B\_ True

B - 8. Which of the following defines the type of the content that a tag can accept?

- A. content-type
- B .body-content
- C . content
- D. tag-content-type

A - 9. Which technique is likely to return an initialization parameter for a JSP page?

- A. <% String s = getInitParameter("myParm");%>
- B. String s = getAttribute("myParm"); %>

- C. <% = getParameter("myParm") %>
- D. <% = application.getInitParameter("myParm") %>
- E. <% = request.getParameter("myParm") %>

B - 11. A custom tag can be nested inside another custom tag.

- A. false
- B. true

C - 12.

Identify the parent element of <session-timeout> element in web\_xml

- A <session-configuration>
- B . <session config>
- C. <session-config>
- D . <webapp >

A - 13. The well-known port number for Web requests is 55\_

- A False
- B\_ True

E - 14. In which of the following case will the method doStartTag() of a tag handler be invoked?

- A, If doEndTag() returns EVAL TAG AGAIN
- B . This method is invoked if doTag() method returns true.
- C .It will be invoked only If the use of that tag is not enclosed in another custom tag.
- D. This method is invoked if doTag() method returns DO START
- E. This method is always invoked whenever the tag's use is encountered in the jsp page.

C - 15. To send binary output in a response, the following method of HttpServletResponse may be used to get the appropriate Writer/Stream object

- A getWriter
- B getBinaryStream
- C getOutputStream
- D getStream

C - 16. Which statements are BEST describe name attribute of <jsp:setProperty name:\_\_\_ /> action?

- A The name of the property to set. Specifying " \*" for this attribute causes the JSP to match the request parameters to the properties of the bean.
- B . The ID of the JavaBean for which a property (or properties) will be set.
- C, If request parameter names do not match bean property names, this attribute can be used to specify which request parameter should be used to obtain the value for a specific bean property
- D. The value to assign to a bean property The value typically is the result of a JSP expression

C - 17. How can you ensure the continuity of the session while using HttpServletResponse.sendRedirect() method when cookies are not supported by the client?

- A By using hidden parameters.
- B By using HttpServletRequest.encodeURL() method.
- C By encoding the redirect path with HttpServletResponse.encodeRedirectURL() method
- D HttpServletResponse.encodeRedirectURL() method

A - 18. Which of the following implicit variables should be used by a jsp page to access a resource and to forward a request to another jsp page?(Choose one)

- A pageContext and config
- B config and pageContext
- C application for both
- D config for both.

B - 19. Which of the following is a properly formatted taglib element occurring in web.xml?

- A. <taglib>  
<uri>/graph</taglib-uri>  
<location>/WEB-INF/Charts.tld</location>  
</taglib>
- B. <taglib>  
<taglib-uri>/graph</taglib-uri>  
<taglib-location>/WEB-INF/Charts.tld</taglib-location>  
</taglib>
- C. <taglib>  
<taglib-name>/graph</taglib-name>  
<taglib-location>/WEB-INF/Charts.tld</taglib-location>  
</taglib>

C - 21. Your web application logs a user in when she supplies username/password\_ At that time a session is created for the user. You want to let the user to be logged in only for 20 r

- A getLastAccessTime()
- B getLastAccessedTime()
- C getMaxInactiveInterval()
- D getCreationTime()

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

<jsp:useBean id="fruit"

Which statement may be used to set the color property of the bean.



- A <jsp:setColor id="fruit" property= "color" value="white"/>
- B <jsp:setColor name="fruit" property= "color" value="white"/>
- C <jsp:setValue name="fruit" property= "color" value="white"/>
- D <jsp:setProperty name="fruit" property= "color" value="white">
- E <jsp:setProperty name="fruit" property= "color" value="white"/>
- F <jsp:setProperty id="fruit" property= "color" value="white">

C - 23. Consider the HTML code below. Which of the following method calls can retrieve the "email" value sent from the browser? (Choose one)

- A getFormValue("email") of HttpServletRequest
- B getParameters("email") of HttpServlet
- C getParameter("email") of ServletRequest
- D getField("email") of HttpServletRequest

A - 24. Which of the following is NOT a standard technique for providing a sense of "state" to HTTP?

- A HTTP is already a stateful protocol
- B Cookies
- C URL rewriting
- D SSL Sessions

C - 25. Following is the code for doGet() and doPost() methods of TestServlet  
Which of the statement is correct?

- A This will only work for HTTP GET requests
- B This will only work for HTTP POST requests
- C This will work for GET as well as POST requests
- D It'll throw an exception at runtime, as you cannot call doGet() from doPost()\_
- E It'll throw an exception at runtime only if a POST request is sent to it.

A - 26. Identify the method used to get an object available in a session. (Choose one)

- A getAttribute of HttpSession
- B getValue of HttpSession
- C get of Session
- D getAttribute of Session

E - 27. \_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

- A <jsp:forward>
- B. <jsp:useBean>
- C import directive
- D <jsp:include>
- E . include directive

C - 28. Which of these is legal attribute of page directive?

- A include
- B scope
- C errorPage
- D debug

A - 30. Complete the statement:

<taglib> element in the Web application deployment descriptor is used to \_\_\_\_\_

- A specify the mapping of the name and the TLD file for a tag library
- B specify the parameters needed by a tag library
- C specify a URI identifying a tag library

A - 29. Which of the following XML fragments correctly specify the class name for a sennet in a deployment descri

ptor of a webapp?

A <servlet-class> com.abcinc.OrderServlet</servlet-class>

B <servlet> com.abcinc.OrderServlet</servlet>

C <class> com.abcinc.OrderServlet</class>

D <servlet-class> com.abcinc.OrderServlet.class</servlet-class>

B - 31. When implementing a tag, if the tag does not include the body, then the tag handler class must extend the BodyTagSupport class.

Is this statement true or false?

A True

B False

B - 32. HTTP is a "stateless" protocol: each time a client retrieves a Web page, it opens a separate connection to the Web server, and the server does not automatically maintain : each time a client retrieves a Web page, it opens a separate connection to the Web server, and the server does not automatically maintain contextual information about a client

A False

B True

A - 33. Browsers typically cache the server's response to a POST request.

A False

B True

B - 34. You can set a page to be an error page either through web.xml or by adding a page directive

A <%@page errorPage="errorPage.jsp" %>

B <%@page isErrorPage="true" %>

B <%@page isErrorPage="false" %>

B - 35. The two most common HTTP requests are get and post.

A False

B True

B - 36. (Choose 1 answer)

Study the statements:

1) The context path contains a special directory called WEB-INF which contains the deployment descriptor file, web.xml

2) A client application may directly access resources in WEB-INF or its subdirectories through HTTP\_

A Both 1 and 2 are true

B Only statement 1 is true

C Only statement 2 is true

D Both 1 and 2 are not true

A - 37. (Choose 1 answer)

The web.xml file for a webapp contains the following XML fragment for configuring session timeout.

<session-config>

<session-timeout>300</session-timeout>

</session-config>

What would be the session timeout interval for the sessions created in this web application?

A. 300 minutes

B. 300 hours

C. 300 milliseconds

D. 300 seconds

A - 38. HttpSession objects live on the server \_

- A True
- B False

B - 39. JSP \_\_\_\_\_ let you inserts arbitrary code into servlet's `_jspService` method (which is called by service)

- A declarations
- B scriptlets
- C expressions

E - 47. Which is NOT a scope of implicit objects of JSP file?

- A. application
- B session
- C page
- D request
- E response

B - 48. A JavaBeans component has the following field.

`private boolean enabled`

Which pairs of method declarations follow the JavaBeans standard for accessing this field?

- A. `public boolean setEnabled( boolean enabled)`  
`public boolean getEnabled()`
- B. `public void setEnabled( boolean enabled)`  
`public boolean getEnabled()`
- C. `public Boolean setEnabled( boolean enabled)`  
`public boolean isEnabled()`
- D. `public void setEnabled( boolean enabled)`  
`public void isEnabled()`

B - 49. statement true or false?

The deployment descriptor of a web application must have the name `web.xml` In the same way the tag library descriptor file must be called `taglib.xml`

- A. True
- B. False

C - 50. Name the default value of the scope attribute of `<jsp:useBean`

- A session
- B request
- C page
- D application

C - 40. Which are the correct lines of code to get information in the following `<context-param>` tag,

Assume that `response` and `request` refer to `HttpServletResponse` and `HttpServletRequest`

```
<web-app>
<context-param>
<param-name>machineName</param-name >
<param-value>cms-server</param-value>
</context-param>
</web-app>
```

- A. `request.getParameter("machineName");`
- B. `ServletConfig sc = getServletConfig();`

```
String serverName = sc.getInitParameter("machineName");
```

```
C. ServletConfig sc = getServletContext();
String serverName = sc.getInitParameter("machineName");
```

```
D. response.getParameter("machineName");
```

```
A - 41. <html>
<body>
<form action="loginPage.jsp">
Login ID:<input type "text" name="loginID">

Password:<input type "password" name="password">

<input type "submit" value="Login">
<input type "reset" value="Reset">
</form>
</body>
</html>
```

Study the above html code. Assume that user clicks button Reset.

What is the correct statement?

A. All inputs are cleared.

B. Nothing changes.

B - 42. Which of the following is NOT a valid attribute for a useBean tag?

A. beanName

B. className

C. scope

D - 43. You need to modify the deployment descriptor for a web application installed in MyWebApp directory. Which file would you look for?

A. MyWebApp.xml MyWebApp

B. web.xml in MyWebApp

C. MyWebApp.xml in MyWebApp/WEB-INF

D. web.xml in MyWebApp/WEB-INF

D - 44. For JSP scopes of request and page, what type of object is used to store the attributes?

A, HttpServletRequest and ServletContext respectively

B, ServletRequest and ServletConfig respectively.

C, HttpServletRequest and PageContext respectively.

D. ServletRequest and PageContext respectively.

E. ServletConfig for both.

B - 45. Your web application named "FWorks" uses SpecialMath\_class. This is an unbundled class and is not contained in any jar file.

Where Will you keep this class file?

A. FWorks/WEB-INF/classes

B. FWorks/classes

C. FWorks/WEB-INF

D. FWorks/WEB-INF/lib/classes

C - 46.

Which of the following are correct JSP expressions?

A. `<%=out.println("hello");%>`

B. `<%= "Hello World"; %>`

C. `<%= new Date() %>`

D. `<% "Hello World"; %>`

Consider the following HTML page code:

```
<html><body>
POST
</body></html>
```

Which method of HelloServlet will be invoked when the hyperlink displayed by the above page is clicked?

Choose one answer.

- a. doPost
- b. doGet
- c. doHref
- d. doForm
- e. serviceGet - b

Consider the following HTML page code:

```
<html><body>
<form name="data" action="/servlet/DataServlet" method="POST">
<input type="text" name="name">
<input type="submit" name="submit">
</form>
</body></html>
```

Identify the TWO methods that can be used to retrieve the value of the name parameter when the form is submitted.

Choose one answer.

- a. getParameters("name");
- b. getParameterValue("name");
- c. getValue("name");
- d. getParameter("name"); - d

Which method in the HttpServlet class services the HTTP POST request?

Choose one answer.

- a. doPost(HttpServletRequest, HttpServletResponse)
- b. servicePost(HttpServletRequest, HttpServletResponse)
- c. doPost(HttpServletRequest, HttpServletResponse)
- d. doPost(ServletRequest, ServletResponse)
- e. doPost(ServletRequest, ServletResponse) - c

The HttpServletResponse lets you:

Choose one answer.

- a. specify response headers (Content-Type, Set-Cookie, etc.)
- b. specify outgoing information such as HTTP status codes (200, 404, etc.)
- c. All of the others.
- d. obtain a PrintWriter used to send the document content back to the client. - c

The HttpServletRequest has methods by which you can find out about incoming information such as:

Choose one answer.

- a. form data
- b. HTTP request headers
- c. the client's hostname
- d. All of the others.
- e. cookies - d

Which of the following methods can be used to add cookies to a servlet response?

Choose one answer.

- a. ServletResponse.addCookie(String contents)
- b. HttpServletResponse.addCookie(String contents)
- c. ServletResponse.addHeader(String name, String value)
- d. HttpServletResponse.addCookie(Cookie cookie)
- e. ServletResponse.addCookie(Cookie cookie) - d

Consider the following declarations:

1.

GET http://cms.fpt.edu.vn/index.jsp HTTP/1.1

Accept: image/\*, application/vnd.txt

Accept-Language: en-cd

User-Agent: Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 4.0)

Host: www.fpt.edu.vn

2.

HTTP/1.0 404 File Not Found

Connection: Close

Date: Sat, 07 Aug 2010 08:30:30 GMT

Content-Type: text/html

Server: J2EE/ 2.0

Which of the following statements is true?

Choose one answer.

- a. The first fragment text describes the HTTP Response
- b. None of the other choices
- c. The first fragment text describes the HTTP Request
- d. The second fragment text describes the HTTP Request - c

Consider the following code statement:

```
response.sendRedirect("/abc/FinalServlet");
```

Assume that the current context root of application is Final. Which of the following statements about the servlet container translating above code statements to the following URL is true?

1. `http://localhost:8080/Final/abc/FinalServlet`
2. `http://localhost:8080/abc/FinalServlet`
3. `http://localhost:8080/FinalServlet/abc`
4. `http://localhost:8080/FinalServlet/abc/Final`

Choose one answer.

- a. 1
- b. 1, 4
- c. 2, 3
- d. 2 - d

Consider the following descriptions:

- The method is called by the servlet container in response to a client request
- The method is implemented in `HttpServlet` classes
- The method accepts a `HttpServletRequest` and `HttpServletResponse` as parameters
- The method dispatches to the appropriate `doXXX()` methods
- The method is one of important methods in Servlet Life Cycle

What's the method's name?

Choose one answer.

- a. `processRequest`
- b. `doGet`
- c. `doPost`
- d. `service` - d

Which of the following statements about Request and Response message structure are false?

Choose one answer.

- a. Request message structure consists of request line and header information
- b. Request line returns the User-Agent along with the Accept header
- c. Header information in response message contains information such as server, last modified date, content-length and content type - b

Which of the following statements about the Servlet is false?

Choose one answer.

- a. Servlets are easy to use
- b. Initialization code in servlets is executed every time the program is made to run
- c. Servlets are portable - b

User-defined Servlet use two methods such are:

Choose one answer.

- a. get and post

- b. init and post
- c. init and get
- d. init and destroy - d

In the web-based application model, data in textfields of a client form will be sent to server as .....

Choose one answer.

- a. None of the others
- b. integers
- c. real numbers
- d. strings
- e. numbers - d

Which of the following methods of HTTP will send data from clients to servers using security format in the body of the request?

Choose one answer.

- a. POST
- b. GET and POST
- c. GET
- d. None of the others - a

The \_\_\_\_\_ method called by the servlet container to allow the servlet to response to a request

Choose one answer.

- a. service()
- b. getServletContext()
- c. init()
- d. getInitParameter() - a

The \_\_\_\_\_ method returns the actual length of the request sent by the client

Choose one answer.

- a. getContentLength()
- b. getServerName()
- c. getParameter()
- d. getAttribute() - a

Which of the following error code is associated with the message "Resource not found"?

Choose one answer.

- a. 403
- b. 404
- c. 401
- d. 500 - b

Which HTTP method represents a request for information about the supported methods on an HTTP server?

Choose one answer.

- a. HEAD
- b. GET
- c. OPTIONS
- d. TRACE - c

The response.setContentLength() method take a/an \_\_\_\_\_ argument

Choose one answer.



- a. number of Bits
- b. nothing
- c. number of Words
- d. number of Bytes - d

In the web deployment descriptor, the url-pattern tag of servlet-mapping tag is used for \_\_\_\_\_

Choose one answer.

- a. accessing or calling the servlet instance
- b. informing server about the location of servlet in web application directory
- c. applying the filter on the servlet instance
- d. applying the security on the servlet instance - a

The HttpServletRequest has methods by which you can find out about incoming information such as:

Choose one answer.

- a. the client's hostname
- b. cookies
- c. form data
- d. All of the others.
- e. HTTP request headers - d

Which of the following methods can be used to add cookies to a servlet response?

Choose one answer.

- a. ServletResponse.addHeader(String name, String value)
- b. ServletResponse.addCookie(Cookie cookie)
- c. HttpServletResponse.addCookie(Cookie cookie)
- d. ServletResponse.addCookie(String contents)
- e. HttpServletResponse.addCookie(String contents) - c

When a Web server responds to a request from a browser or other Web client, the response typically consists of: (choose one)

Choose one answer.

- a. a status line, a blank line, and the document.
- b. a status line, some response headers, a blank line, and the document.
- c. a blank line, a status line, some response headers and the document.
- d. a status line, some response headers, and the document. - b

When a servlet is accessed from a client, the client will receive .....

Choose one answer.

- a. a file of binary code
- b. None of the others
- c. a file of Java code
- d. a text or HTML response - d

Select the correct statement.

Choose one answer.

- a. The url pattern of a servlet must be different with the name of the servlet.
- b. The url pattern of a servlet must match the name of the servlet.
- c. None of the others.
- d. The url pattern of a servlet is a string that specifies the physical position of the servlet. - c

A web application is located in a directory named sales. Where should its deployment descriptor be located?

Choose one answer.

- a. sales/deployment

- b. sales/WEB-INF
- c. sales/WEB
- d. WEB-INF/sales
- e. sales - b

What file is the deployment descriptor of a web application named BankApp stored in?

Choose one answer.

- a. BankApp.xml
- b. WebApp.xml
- c. deployment.xml
- d. server.xml
- e. web.xml - e

Your servlet class depends on a utility class named com.abc.TaxUtil. Where would you keep the TaxUtil.class file?

Choose one answer.

- a. WEB-INF/lib
- b. WEB-INF
- c. WEB-INF/jars
- d. WEB-INF/classes
- e. WEB-INF/classes/com/abc - e

Which of the following directories are legal locations for the deployment descriptor file? Note that all paths are shown as from the root of the machine or drive.

Choose one answer.

- a. /WEB-INF
- b. /WEB-INF/classes
- c. /WEB-INF/xml - a

What would be the best directory in which to store a supporting JAR file for a web application? Note that in the list below, all directories begin from the context root.

Choose one answer.

- a. /WEB-INF/classes
- b. /WEB-INF
- c. /jars
- d. /WEB-INF/ lib - d

A \_\_\_\_\_ has a name, a single value, and optional attributes such as a comment, path and domain qualifiers, a maximum age, and a version number.

Choose one answer.

- a. session
- b. request
- c. cookie
- d. response - c

Which sub-element is used to define a logical name of servlet in web deployment descriptor?

Choose one answer.

- a. url-pattern
- b. servlet-name
- c. All of the other choices
- d. servlet-class - b

Which of the followings is a correct syntax of the method that is used to get the initialized parameter in ServletContext or ServletConfig?

Choose one answer.

- a. `String getContextParameter(String name);`
- b. `String getInitParameter(String name);`
- c. All of the others.
- d. `String getInitializedParameter(String name);` - b

Servlets and JavaBean classes that are parts of a packages are placed in the \_\_\_\_\_ directory.

Choose one answer.

- a. `tld`
- b. `classes`
- c. All of the others.
- d. `lib` - b

Which of the following statements about Web Container is true.

Choose one answer.

- a. The Web Container takes request from a servlet and passes it to a Web Server for processing
- b. Container is a program, which manages the execution of servlets
- c. A Web application is accessible to all users connected to the Web
- d. The performance of a servlet is independent of the efficiency of the container - b

In request dispatcher, both \_\_\_\_\_ and \_\_\_\_\_ methods are used for servlet communication

Choose one answer.

- a. `include/ forward`
- b. `forward/ sendRedirect`
- c. `forward/ response`
- d. `include/ sendRedirect` - a

Which of these characteristics of a filter is true?

Choose one answer.

- a. A filter optimises the time it takes to send back a response from your Web server
- b. A logging and auditing filter allow users to log in to a Web application
- c. An authentication filter tracks the activities of users of a Web application
- d. All of the others. - a

What's directory of a Web Application that developer must copy \*.class?

Choose one answer.

- a. `WEB-INF/lib`
- b. `WEB-INF/tlds`
- c. `WEB-INF/tag`
- d. `WEB-INF/classes` - d

What does the FilterChain do?

Choose one answer.

- a. It does nothing.
- b. It invokes the next filter in the chain, or if the calling filter is the last filter in the chain, it invokes the resource at the end of the chain.
- c. It invokes the first filter in the chain.
- d. None of the others. - b

How can a servlet call a JSP error page?

Choose one answer.

- a. This capability is not supported.
- b. When the servlet throws an exception, it will automatically be caught by the calling JSP page.

- c. The servlet needs to redirect the response to the specific error page, saving the exception off in a cookie.
- d. The servlet needs to forward the request to the specific error page URL. The exception is passed along as an attribute named "javax.servlet.jspException". - d

The \_\_\_\_\_ directory contains the archive files requires for Web Application such as database drivers

Choose one answer.

- a. lib
- b. tlds
- c. classes
- d. tags - a

The deployment descriptor file using in Web application is named as \_\_\_\_\_ and placed under the \_\_\_\_\_ directory

Choose one answer.

- a. ejb-jar.xml/META-INF
- b. web.xml/ WEB-INF
- c. jboss.xml/META-INF
- d. \*.xml/WEB-INF - b

The \_\_\_\_\_ method returns a reference to the ServletContext Object

Choose one answer.

- a. getServletContext()
- b. getInitParameter()
- c. init()
- d. service() - a

The \_\_\_\_\_ method returns a string containing the value of the named initialisation parameter

Choose one answer.

- a. getInitParameter()
- b. getServletConfig()
- c. init()
- d. jspInit - a

Which of the following commands will successfully build a WAR file?

Choose one answer.

- a. jar -war myfile.war \*.\*
- b. jar -cfv myfile.war \*.class
- c. jar -cvf myfile.war \*.\*
- d. jar -tvf myfile.war \*.\* - c

Which element is the parent of the <filter> tag in the web application deployment descriptor?

Choose one answer.

- a. <filter-list>
- b. <web-app>
- c. <filters>
- d. <servlet> - b

\_\_\_\_\_ provides a way to identify a user across more than one page request or visit to a Web site and to store information about that user.

Choose one answer.

- a. Hidden Field
- b. URL Rewrite
- c. Session management
- d. Cookie - c

A \_\_\_\_\_ has a name, a single value, and optional attributes such as a comment, path and domain qualifiers, a maximum age, and a version number.

Choose one answer.

- a. session
- b. response
- c. cookie
- d. request - c

Study the statements:

1)The special directory /WEB-INF/lib contains Java class files—servlets and supporting code.

2)The special directory /WEB-INF/classes contains JAR files with supporting libraries of code.

Choose one answer.

- a. Only statement 1 is true.
- b. Only statement 2 is true.
- c. Both 1 and 2 are not true.
- d. Both 1 and 2 are true. - c

Study the statements:

1)Every web application within a web container has a unique context path.

2)The context path and any directories you choose to create within it contain resources that are accessible through HTTP.

Choose one answer.

- a. Only statement 2 is true
- b. Both 1 and 2 are true
- c. Only statement 1 is true
- d. Both 1 and 2 are not true. - b

Which of these is true about deployment descriptors (web.xml)?. Select the one correct answer.

Choose one answer.

- a. The web-app element must include the servlet element.
- b. The elements of deployment descriptor are case sensitive.
- c. None of the others.
- d. The servlet-mapping element, if defined, must be included within the servlet element. - b

Which of the following files is the correct name and location of deployment descriptor of a web application?. Assume that the web application is rooted at \doc-root. Select the one correct answer.

Choose one answer.

- a. \doc-root\web.xml
- b. \doc-root\WEB-INF\web.xml
- c. \doc-root\WEB\_META\web.xml
- d. \doc-root\dd.xml
- e. \doc-root\WEB\_INF\dd.xml - b

When a specific request is processed, some servlets must be called and they need to access some common data. These common data should be put to dynamic variables in the ..... scope( select the most correct option).

Choose one answer.

- a. request
- b. None of the others.
- c. session
- d. application - a

A servlet can contain instance variables but the developer can not create the servlet based on its constructors and parameters. A way to assign parameters to these variables is .....

Choose one answer.

- a. getting parameters from the request's query string.
- b. getting parameters from the deployment descriptor file.
- c. All of the others.
- d. getting parameters from the cookies attached in the request. - c

Which of the following interfaces or classes is used to retrieve the session associated with a user?

Choose one answer.

- a. HttpServletRequest
- b. ServletConfig
- c. HttpServletResponse
- d. ServletContext
- e. HttpServlet - a

Which of the following methods will erase a session object?

Choose one answer.

- a. session.invalidate();
- b. session.close();
- c. session.destroy();
- d. session.erase();
- e. session.end(); - a

Which method is required for using the URL rewriting mechanism of implementing session support?

Choose one answer.

- a. HttpServletRequest.encodeURL()
- b. HttpServletResponse.encodeURL()
- c. HttpServletResponse.decodeURL()
- d. HttpServletRequest.rewriteURL()
- e. HttpServletResponse.rewriteURL() - b

Study the statements:

1) Every web application within a web container has a unique context path.

2) The context path and any directories you choose to create within it contain resources that are accessible through HTTP.

Choose one answer.

- a. Only statement 2 is true.
- b. Only statement 1 is true.
- c. Both 1 and 2 are true.
- d. Both 1 and 2 are not true. - c

Study the statements about web.xml file:

1) The deployment descriptor file is called web.xml, and it must be located in the WEB-INF directory.

2)web.xml is in XML (extended markup language) format. Its root element is <web>.

Choose one answer.

- a. Both 1 and 2 are not true.
- b. Only statement 1 is true.
- c. Both 1 and 2 are true.
- d. Only statement 2 is true. - b

Which object is passed as parameter in attributedAdded, attributedReplaced, and attributedRemoved method of the HttpSessionAttributeListener?

Choose one answer.

- a. HttpSession
- b. HttpSessionBindingEvent
- c. HttpSessionListenerEvent
- d. HttpSessionEvent - b

A session is begun when servlet code invokes \_\_\_\_\_

Choose one answer.

- a. HttpServletRequest.getSession() method
- b. HttpServletResponse.getSession() method
- c. HttpSession.getSession() method
- d. All of the others. - a

Choose one answer.

- a. 1 is invalid syntax but 2 is correct syntax
- b. None of the others.
- c. 1 and 2 are different meaning
- d. 1 and 2 are same meaning - d

What time is recorded as the last accessed time for an HttpSession object?

Choose one answer.

- a. The last time a method was executed against an HttpSession object.
- b. The last time an attribute was bound to or unbound from the HttpSession object.
- c. The last time the client sent a request associated with the session.
- d. None of the others. - c

Which of the following is a correct syntax of the getAttribute() method of web development context?

Choose one answer.

- a. public Object getAttribute(String name, Object obj)
- b. public Name getAttribute(String name)
- c. public Object getAttribute(Object obj)
- d. public Object getAttribute(String name) - d

Which of the following statements about the ServletContext is true ?

Choose one answer.

- a. All of the others
- b. Servlets running in the same server sometimes share resources
- c. The ServletContext API is used to set the information common to all servlets in an application
- d. The attributes of ServletContext class can be used to share information among a group of servlets - a

Which of the following statements relating to URL rewriting is incorrect?

Choose one answer.

- a. None of the others
- b. Generally, the extra information appended in the URL rewriting is the unique session ID and tracking can be don

e by retrieving this session ID

c. Only information after ? is sent to the next page and information before ? is detached

d. URL rewriting technique adds some extra data at the end of the URL to identify the session - c

Why should we use RequestDispatcher to forward a request to another resource, instead of using a sendRedirect?

Choose one answer.

a. Redirects are no longer supported in the current servlet API.

b. The RequestDispatcher does not use the reflection API.

c. The RequestDispatcher does not require a round trip to the client, and thus is more efficient and allows the server to maintain the request state.

d. Redirects are not a cross-platform portable mechanism. - c

What is the difference between doing an include and a forward with a RequestDispatcher?

Choose one answer.

a. The forward method is deprecated as of JSP 1.1 and the include method should be used in order to substitute portions of a dynamic display at runtime.

b. The two methods provide the same functionality, but with different levels of persistence.

c. The forward method transfers control to the designated resource, while the include method invokes the designated resource, substitutes its output dynamically in the display, and returns control to the calling page.

d. The include method transfers control to a dynamic resource, while the forward method allows for dynamic substitution of another JSP pages. - c

\_\_\_\_\_ are small pieces of information that are deposited on the client by the server.

Choose one answer.

a. Session

b. Cookie

c. Scriptlet

d. Directive - b

The \_\_\_\_\_ method returns an array containing all the Cookie objects the client sent along with the request

Choose one answer.

a. getHeader()

b. getCookie()

c. getCookies()

d. getHeaders() - c

Which of these statements is true about the Filter implementation?

Choose one answer.

a. The doFilter(request, response) method examines the request or response headers and also customises them as per requirement

b. The Filter Interface must be implemented to create a filter class

c. All of the others

d. The init() method is called by the servlet container many times to initialise the filter - b

Which statement is true about web container session management?

Choose one answer.

a. None of the others

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. Access to session-scoped attributes is guaranteed to be thread-safe by the web container - c

Which classes or interfaces provide a getSession method?



Choose one answer.

- a. javax.servlet.http.HttpServletRequest
- b. javax.servlet.http.HttpSessionContext
- c. javax.servlet.http.HttpSessionAttributeEvent
- d. javax.servlet.http.HttpServletResponse - a

Given that session is a valid HttpSession object:

```
int max = session.getAttribute("MyReallyLongName");
```

Which is true?

Choose one answer.

- a. The HttpSession attribute name must NOT exceed eight characters.
- b. Primitives CANNOT be stored in the HttpSession.
- c. All of the others
- d. The getAttribute method takes two arguments. - b

Which statement is true about request.getSession(true) method?

Choose one answer.

- a. All of the others
- b. Get currently session.
- c. If session is not existed, new session is forced creating - a

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

Choose one answer.

- a. HttpServletRequest
- b. SessionContext
- c. SessionConfig
- d. HttpServletResponse - a

The session time-out value is controlled in which way(s)?

Choose one answer.

- a. Individual Session Setting.
- b. Application Server Global Default.
- c. All of the others.
- d. Web Application Default. - c

Study the following statements:

- 1) A session object can be accessed by all web applications in the same server.
- 2) Session object exists longer than the application object.
- 3) The request object lives longer than the session object.

The statement (1) is ....., (2) is ..... and (3) is .....

Choose one answer.

- a. None of the others
- b. false, false, true
- c. true, false, true
- d. true, true, true
- e. true, false, false - a

The value of the default session timeout is set in the web deployment descriptor using the unit of .....

Choose one answer.

- a. None of the others.
- b. hour
- c. minute
- d. second - c

What is the term for determining whether a user has access to a particular resource?

Choose one answer.

- a. Secrecy
- b. Authentication
- c. Confidentiality
- d. Privacy
- e. Authorization - e

Which one of the following must be done before authorization takes place?

Choose one answer.

- a. Auditing
- b. Data compression
- c. User authentication
- d. Data encryption
- e. Data validation - c

Identify TWO authentication mechanisms that are built into the HTTP specification.

Choose at least one answer.

- a. Client-Cert
- b. FORM
- c. Digest
- d. Client-Digest
- e. Basic - c,e

The session time-out value is controlled in which way(s)?

Choose one answer.

- a. All of the others.
- b. Individual Session Setting.
- c. Application Server Global Default.
- d. Web Application Default. - a

Study the statements:

1)URL rewriting may be used when a browser is disabled.

2)In URL encoding the session id is included as part of the URL.

Choose one answer.

- a. Both 1 and 2 are not true.
- b. Only statement 2 is true.
- c. Both 1 and 2 are true.
- d. Only statement 1 is true. - c

Name the class that includes the getSession() method that is used to get the HttpSession object.

Choose one answer.

- a. HttpServletRequest
- b. HttpServletResponse
- c. SessionConfig

d. SessionContext - a

What will be outcome of running the following servlet code for the given deployment descriptor file?

- Servlet code

```
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
```

```
 ServletConfig config = getServletConfig();
```

```
 String oneA = config.getInitParameter("first");
```

```
 String oneB = config.getInitParameter("first");
```

```
 String two = config.getInitParameter("two");
```

```
 PrintWriter out = response.getWriter();
```

```
 out.write(oneA + oneB + two);
```

```
}
```

- web.xml fragment

```
<context-param>
```

```
 <param-name>first</param-name>
```

```
 <param-value>1a</param-value>
```

```
</context-param>
```

```
<context-param>
```

```
 <param-name>first</param-name>
```

```
 <param-value>1b</param-value>
```

```
</context-param>
```

```
<context-param>
```

```
 <param-name>second</param-name>
```

```
 <param-value>2</param-value>
```

```
</context-param>
```

Choose one answer.

a. 1a1a2 Incorrect

b. 1a1b2 Incorrect

c. nullnullnull Incorrect

d. None of the others - d

For what reason does the following JSP fail to translate and compile?

```
<html>

<body>

<%! int x; %>

<%

public String getDescription() {

return "JAD Final Test";

}

%>

<%=getDescription() %>

</body>

</html>
```

Choose one answer.

- a. Expression embedded in declaration. Incorrect
- b. Data member x not initialized before use. Incorrect
- c. Local variable x not initialized before use. Incorrect
- d. Method declared in scriptlet. Correct
- e. The page actually compiles and translates without any problem. - d

What is output to the web page on the second access to the same instance of the following JSP?

```
<html>
<body>
<%! int x = 0; %>
<%!
public void jspInit() {
 System.out.println(x++);
}
%>
<%= x++ %>
<% System.out.println(x); %>
<% jspInit(); %>
</body>
</html>
```

Choose one answer.

- a. 3 Correct
- b. 2 Incorrect
- c. 1 Incorrect
- d. 4 Incorrect
- e. 0 Incorrect
- f. The page can not be translated. Incorrect - a

For what reason does the following JSP fail to translate and compile?

```
<html>

<body>

<%! int x; %>

<%

public String getDescription() {

return "JAD Final Test";

}

%>

<%=getDescription() %>

</body>

</html>
```

Choose one answer.

- a. The page actually compiles and translates without any problem. Incorrect
- b. Expression embedded in declaration. Incorrect
- c. Local variable x not initialized before use. Incorrect
- d. Method declared in scriptlet. Correct
- e. Data member x not initialized before use. Incorrect - d

Given:

- 1. <% String value ="beanValue"; %>
- 2. <%request.setAttribute("com.example.bean", value); %>
- 3. <%-- insert code here --%>

Which EL expression, inserted at line 3, is valid and evaluates to "beanValue"?

Choose one answer.

- a. \${bean} Incorrect
- b. \${value} Incorrect
- c. \${request.get("com.example.bean").toString()} Incorrect
- d. \${requestScope['com.example.bean']} Correct - d

What is the output from the following JSP?

```
<%! Integer num = new Integer(7); %>
```

A: \${num}

B: <%= num %>

```
<% Integer num = new Integer(6);
```

```
request.setAttribute("num", num); %>
```

C: \${num}

Choose one answer.

- a. A: 7B: 7C: 6 Incorrect
- b. A: B: 7C: 6 Correct
- c. A: B: 6C: 6 Incorrect
- d. A: 6B: 7C: 6 Incorrect - b

Which of the following is/are legal line(s) of JSP source?

Select one:

- a. <% String beanName = "beanName3"; %>  
<jsp:useBean id="<%=beanName3%>" />
- b. <% String className = "a.b.MyBean"; %>  
<jsp:useBean id="beanName2" />
- c. <% String propName = "soleProp"; %>  
<jsp:getProperty name="beanName1" property="<%=propName%>" />
- d. <jsp:useBean id="beanName1" type="a.b.MyInterface" />
- e. None of the others. - d

Given a JSP error page, which implicit object refers to the uncaught Throwable that resulted in the page being invoked?

Select one:

- a. request.exception
- b. None of the others
- c. throwable
- d. error
- e. exception - e

Given:

```
10. public void service (HttpServletRequest request,
11. HttpServletResponse response) {
12. // your code here
13.}
```

Which code snippet inserted at line 12 cause the client to redirect to <http://www.example.com>?

Select one:

- a.  
RequestDispatcher rd= getServletContext ().getRequestDispatcher  
("http://www.example.com");  
rd. forward (request, response);
- b. None of the others.
- c.  
response.send Redirect (new URL ("http://www.example.com"));
- d.  
response.sendRedirect ("http://www.example.com");
- e.  
RequestDispatch rd= getServletContext().getRequestDispatcher(new URL  
("http://www.example.com"));  
rd. forward (request.response); - d

Given:

```
1. //insert code
```

```
2. ...
3. protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
4. PrintWriter out = response.getWriter();
5. out.println ("Hello");
7. }
```

Which statement at line 1 allows this code to compile and run?

Select one:

- a. None of the others.
- b. #include java.io.OutputStream Writer;
- c. import java.io.OutputStreamWriter;
- d. #include java.io.PrintWriter;
- e. import java.io.PrintWriter; - e

Given:

```
10. public void service (HttpServletRequest request,
11. HttpServletResponse response) {
12. // your code here
13. }
```

Which code snippet inserted at line 12 cause the client to forward the request object to <http://www.example.com>?

Select one:

- a. <http://www.example.com>
- b. None of the others.
- c. requestDispatcher rd = request.getRequestDispatcher ("http://www.example.com");  
rd.forward(request, response);
- d. requestDispatch rd= getRequestDispatcher(new URL ("http://www.example.com"));
- rd. include (request.response);
- e. response.send Redirect (new URL ("http://www.example.com")); - b

With respect to JSP elements/actions. Which of the followings will insert text of source page to destination page before executing compilation?

Select one:

- a. <jsp:include>
- b. None of the others
- c. <jsp:import>
- d. <jsp:insert>
- e. <%@include> - a

Which among the following components acts as a Controller in Struts 2 framework?

Select one:

- a. FilterDispatcher
- b. Configuration Manager
- c. Interceptors
- d. ActionMapper
- e. None of the others - a

What will be the outcome of executing the following code?

```
public void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
response.setContentType("text/plain");
response.setContentLength(6);
PrintWriter out = response.getWriter();
out.write("What's your name? ");
```

```
out.write("" + response.isCommitted());
}
```

Select one:

- a. "What's" is returned to the client.
- b. An `IllegalStateException` is thrown.
- c. Won't execute because of a compilation error.
- d. A blank page is returned to the client.
- e. An `IllegalArgumentException` is thrown.
- f. None of the others.
- g. "What's your name?" is returned to the client. - a

Which of these characteristics of a filter is true?

Select one:

- a. An authentication filter tracks the activities of users of a Web application
- b. All of the others.
- c. A filter optimises the time it takes to send back a response from your Web server
- d. A logging and auditing filter allow users to log in to a Web application - c

Upon a user's first visit to the web site, which operation is always performed when the `getSession` method is called with no arguments in a servlet?

Select one:

- a. The user name and password of the user are checked.
- b. All URLs returned by the server are rewritten.
- c. All of the others
- d. An `HttpSession` object is created if necessary. - d

What is the purpose of `@RequiredFieldValidator` annotation?

Select one:

- a. This annotation validates a supplied regular expression
- b. This annotation validates a string field using a regular expression
- c. This annotation checks that a numeric field has a value within a specified range
- d. None of the others
- e. This annotation checks that a field is non-null - e

Which of the elements defined within the `taglib` element of `taglib` descriptor file are required?

Select one or more:

- a. `short-name`
- b. `description`
- c. `name`
- d. `validator`
- e. `tag` - b,c,e

Which of the following result type redirects the user to a configured action?

Select one:

- a. None of the others
- b. `RedirectAction`
- c. `Redirect`
- d. `Dispatcher`
- e. `Chain` - b

To specify a form-bean of dynamic validation form, which of the following is used in `<formbean>` tag

Select one:

- a. `type="org.apache.struts.validator.DynaValidatorForm"`
- b. `type="org.apache.struts.validator.DynaValid Form"`



- c. type="org.apache.struts.validator.DynaValidateForm"
- d. None of the others
- e. type="org.apache.struts.validator.DynaValidationForm" - a

Which of the following listeners will respond to events that a request comes to server or gets out of its scope?

Select one:

- a. ServletContextListener
- b. ServletResponseListener
- c. ServletRequestListener
- d. ServletRequestAttributeListener
- e. None of the others - c

In the request life cycle of Struts 2, which component invokes the Interceptors to apply the common functionalities?

Select one:

- a. ActionInvocation
- b. None of the others
- c. ActionMapping
- d. ActionServlet
- e. FilterDispatcher - c

Which of the following delegates the request handling to the RequestProcessor instance?

Select one:

- a. Action class
- b. None of the others
- c. ActionServlet
- d. Deployment descriptor - c

The JSP developer wants a comment to be visible in the final output to the browser. Which comment style needs to be used in a JSP page?

Select one:

- a. `<%-- this is a comment --%>`
- b. `<% /** this is a comment **/ %>`
- c. `<!-- this is a comment -->`
- d. `<% // this is a comment %>`
- e. None of the others - a

Given a JSP code fragment

```
<jsp:useBean id="book1" scope="session"/>
```

Choose the correct statement . Assume that the book class has the title attribute that is declared both get and set method

Select one:

- a. The title attribute of book1 can be accessed using EL as `${sessionScope.book1.getTitle}`
- b. The title attribute of book1 can be accessed using EL as `${requestScope.book1.title}`
- c. The title attribute of book1 can be accessed using EL as `${sessionScope.book1.title}`
- d. None of the others
- e. The title attribute of book1 can be accessed using EL as `${session.book1.title}` - c

Which of the following annotation ensures that the property cannot be null?

Select one:

- a. None of the others
- b. RequiredField

- c. Namespace
- d. RequiredFieldValidator
- e. ResultField - d

Which is the correct syntax of the execute() method declared in the Action class?

Select one:

- a. public String execute(ActionForm form, ServletRequest request, ServletResponse response) throws ServletException, IOException
- b. public void execute(ActionMapping mapping, ActionForm form, HttpServletRequest request, HttpServletResponse response) throws IOException
- c. None of the others
- d. public ActionForward execute(ActionMapping mapping, ActionForm form, ServletRequest request, ServletResponse response) throws Exception
- e. public String execute() throws Exception - d

Which of the following components are available using ActionContext map? (Access using OGNL)

Select one:

- a. app - application scoped variables.
- b. None of the others
- c. sessionScope - session scoped variables
- d. root / value stack - action variables. - c

To send text output in a response, the following method of HttpServletResponse may be used to get the appropriate Writer/Stream object.

Select one or more:

- a. getBinaryStream
- b. getStream
- c. getOutputStream
- d. getWriter - c,d

Which of the following files are the correct name and location of deployment descriptor of a web application. Assume that the web application is rooted at \doc-root. Select the one correct answer

Select one:

- a. \doc-root\WEB-INF\web.xml
- b. \doc-root\WEB-INF\dd.xml
- c. \doc-root\web.xml
- d. \doc-root\dd.xml
- e. \doc-root\WEB\_INF\dd.xml
- f. None of the others
- g. \doc-root\WEB\_INF\web.xml - a

What is the purpose of @IntRangeFieldValidator annotation?

Select one:

- a. None of the others
- b. This annotation checks that a numeric field has a value within a specified range
- c. This annotation checks that a field is a valid e-mail address if it contains a non-empty String
- d. This annotation validates a supplied regular expression
- e. This annotation checks that a double field has a value within a specified range - b

What is the limitation of creating ActionServlet instances per web application?

Select one:

- a. 1
- b. 2
- c. None of the others
- d. 3 - a

Given a JSP code fragment

```
<% int a = Integer.parseInt("a"); %>
```

Choose the correct statement

Select one:

- a. The code is generated in `jspInit` method by JSP engine
- b. None of the others
- c. The code is generated in `_jspService` method by JSP engine
- d. The code is generated besides of `_jspService` method by JSP engine - c

Which annotation does evaluate the OGNL expression using the `ValueStack`?

Select one:

- a. `RequiredFieldValidator`
- b. `RequiredStringValidator`
- c. None of the others
- d. `ExpressionValidator`
- e. `DateRangeValidator` - d

Which of the following constitute valid ways of importing Java classes into JSP page source?

Select one:

- a. `<%@ page import="java.util.*" %>`
- b. `<%! import java.util.*; %>`
- c. `<%@ import java.util.* %>`
- d. None of the others - a

Which of the following statement(s) regarding Struts 2 framework are true?

Select one or more:

- a. Struts 2 is an extensible framework can be easily integrated with any other frameworks
- b. Struts 2 framework supports the development of persistence logic in the enterprise applications
- c. Struts 2 framework is an extension of Struts and JSF framework
- d. Struts 2 is based on a pull-MVC framework
- e. In Struts 2 framework, the component information is configured in `struts.xml` file - b,d,e

Which method returns the actual length of the request sent by the client?

Select one:

- a. None of the others
- b. `getParameter()`
- c. `getServerName()`
- d. `getAttribute()`
- e. `getContentLength()` - e

Which of the elements defined within the `taglib` element of `taglib` descriptor file are required?

Select one or more:

- a. `display-name`
- b. `tlib-version`
- c. `jsp-version`
- d. `uri` - a,d

Which of the following statements is/are true about the role of framework?

Select one or more:

- a. They allow faster building of application
- b. They can be written in any programming language such as Java and C++.
- c. They propagate code reuse over design reuse
- d. They are not created and used for a particular application domain - a,c

\_\_\_\_\_ is the process of ensuring that an authenticated party gains access only to the resources it is entitled to.

Choose one answer.

- a. Authentication
- b. Authorization
- c. Data integrity
- d. Confidentiality - b

The custom web page for logging in using FORM-based authentication must contain an html Form. The form must contain \_\_\_\_\_

Choose one answer.

- a. None of the other choices
- b. action attribute must equal j\_security\_check and method attribute must equal POST
- c. action attribute must equal j\_security\_check
- d. method attribute must equal GET - b

Which of the following statement is false about security mechanisms used in Web application?

Choose one answer.

- a. In HTTP digest authentication, the server has the digest value of password based on a hash function.
- b. In form-based authentication, an error page is shown at user's side if the login failed.
- c. None of the others.
- d. In basic security mechanism, the Web browser never pops-up a login page - b

The login page in basic security prompts the user for \_\_\_\_\_

Choose one answer.

- a. None of the others.
- b. Identical and Signature
- c. Password and Encryption
- d. User-ID and password - d

Digest authentication is based on \_\_\_\_\_

Choose one answer.

- a. A decoded password and encrypted username
- b. A plaintext and SSL
- c. None of the others.
- d. A hash function and encryption - d

The \_\_\_\_\_ security allows password matching strategies

Choose one answer.

- a. Declarative
- b. Programmatic
- c. None of the others.
- d. Basic authentication - d

Authentication is specified in .....

Choose one answer.

- a. web.config
- b. config.xml
- c. web.xml
- d. Configuration.xml - c

In Tomcat webserver, container Security will check username and password based on the content of the file .....

Choose one answer.

- a. server.xml
- b. config.xml
- c. tomcat-users.xml
- d. web.xml - c

Which of the following security mechanisms will identify a client?

Choose one answer.

- a. Authentication
- b. Data integrity
- c. Authorization
- d. Confidentiality - a

In form-based authentication, a/an \_\_\_\_\_ is available if the login fails from the user side

Choose one answer.

- a. Error page
- b. None of the others
- c. Login page
- d. 404 messages - a

Which security mechanism can be directed through the <login-config> element in a web application deployment descriptor?

Choose one answer.

- a. Authentication
- b. Authorization
- c. Data integrity
- d. Confidentiality - a

When using Form Based Authentication, which pair of fields must be used in the login form?

Choose one answer.

- a. j\_login and j\_password
- b. j\_id and j\_password
- c. j\_username and j\_password
- d. j\_user and j\_password - c

Which of information are needed when declaring the web resource collection in the deployment descriptor?

Choose one answer.

- a. The URL pattern that requires authorization
- b. The authentication mechanism required by the web resource
- c. None of the others
- d. The users allowed access to the web resource - a

When adding a <login-config> element to a web application deployment descriptor, the inclusion of which sub-element

ent requires the definition of an error page?

Choose one answer.

- a. <realm-name>
- b. <auth-method>
- c. <user-data-constant>

d. <form-login-config> - d

When using form-based authentication, which action must be used in the login form?

Choose one answer.

- a. j\_security\_check
- b. jsecurity\_check
- c. jsecuritycheck
- d. j\_securitycheck - a

Which security mechanism proves that data has not been tampered with during its transit through the network?

Choose one answer.

- a. Authorization
- b. Data integrity
- c. Data validation
- d. Data privacy
- e. Authentication
- f. Packet sniffing - b

Which security mechanism limits access to the availability of resources to permitted groups of users or programs?

Choose one answer.

- a. Data integrity
- b. MD5 encryption
- c. Authorization
- d. Authentication
- e. Confidentiality
- f. Checksum validation - c

With respect to the authentication and the authorization in the Java security mechanism.

.....is the process of proving "you are who" and .... is a mechanism controlling "what you are allowed to do" in a system.

Choose one answer.

- a. the authorization, the authentication
- b. the authorization, the authorization
- c. the authentication, the authentication
- d. the authentication, the authorization - d

Java Security Mechanism will be activated when .....

Choose one answer.

- a. All of the others.
- b. a protected resource is accessed by clients.
- c. the login page is accessed by clients.
- d. The page for registration is accessed by clients. - a

Consider the following code and select the correct statement about it from the options below.

```
<html><body>
<%! int aNum=5 %>
The value of aNum is <%= aNum %>
</body></html>
```

Choose one answer.

- a. It will print "The value of aNum is 5" to the output.
- b. It will flag a compile-time error because of an incorrect declaration.
- c. It will not flag any compile time or runtime errors and will not print anything to the output.
- d. It will throw a runtime exception while executing the expression.
- e. If you remove "!", it will not flag any compile time or runtime errors. - b

Which of the following methods is defined by the JSP engine?

Choose one answer.

- a. jspInit()
- b. \_jspService(ServletRequest, ServletResponse)
- c. \_jspService()
- d. jspDestroy()
- e. \_jspService(HttpServletRequest, HttpServletResponse) - e

Which of the followings correctly declares that the current page is an error page and also enables it to take part in a session?

Choose one answer.

- a. <%@ page pageType="errorPage" session="required" %>
- b. <%@ page isErrorPage="true" session="true" %>
- c. <%@ page isErrorPage="true" session="mandatory" %>
- d. <%@ page errorPage="true" session="mandatory" %>
- e. <%@ page errorPage="true" session="true" %> - b

Which security mechanism proves that data has not been tampered with during its transit through the network?

Choose one answer.

- a. Authorization
- b. Data privacy
- c. Packet sniffing
- d. Data validation
- e. Authentication
- f. Data integrity - f

Which security mechanism limits access to the availability of resources to permitted groups of users or programs?

Choose one answer.

- a. Authorization
- b. Authentication
- c. MD5 encryption
- d. Data integrity
- e. Confidentiality
- f. Checksum validation - b

Use a \_\_\_\_\_ to place code in the generated servlet outside of the \_jspService() method

Choose one answer.

- a. expression
- b. comment
- c. declaration
- d. scriptlet - d

Which method(s) must be generated in servlet when the jsp page is translated?

Choose one answer.

- a. jspInit
- b. jspDestroy
- c. All of the others.
- d. \_jspService - c

The page, request, session, or application object in JSP has some methods as \_\_\_\_\_

Choose one answer.

- a. setAttribute, getAttribute, removeAttribute
- b. setContent, getAttribute, invalidate
- c. None of the others.
- d. setAttribute, getSession, getParameter - a

The Java code in scriplet in JSP is inserted into the \_\_\_\_\_ method of the servlet.

Choose one answer.

- a. service()
- b. doPost()
- c. doGet()
- d. \_jspService() - d

JSP expression is evaluated and the result is converted into a string at \_\_\_\_\_

Choose one answer.

- a. Run-time
- b. All of the others.
- c. Tested-time
- d. Compiled-time - b

Whenever the Web browser send a request to the Web server, the Web server passes the file to the \_\_\_\_\_ engine, then the HTML output from the servlet is send through the Internet and HTML results are displayed in the Web Browser

Choose one answer.

- a. JSP
- b. JSP Servlet
- c. All of the others. - a

Which of the following statements about JSP declaration is true?

Choose one answer.

- a. All of the others.
- b. The users are allowed to define methods in a JSP file
- c. A single declaration tag can be used to define unique variable.
- d. The JSP declarations allows the variable using in application scopes. - a

The translation unit consists of the JSP source file as well as all of its \_\_\_\_\_ include files .

Choose one answer.

- a. None of the others.
- b. Half static-Half dynamic
- c. Dynamic
- d. Static - c

What is the initial contact point for handling a web request in a Page-Centric architecture?



Choose one answer.

- a. A JSP page.
- b. A servlet.
- c. A session manager.
- d. A Java bean. - c

The `<jsp:include/>` action can pass parameters to the page which it is included. How does this second page obtain the value of these parameters?

Choose one answer.

- a. All of the others.
- b. Use the `request.getParameter()` method
- c. Use the action
- d. Use the action - a

What object will represent the output stream for the JSP page?

Choose one answer.

- a. writer
- b. dispatch
- c. response
- d. out - d

Which statement(s) is(are) applied during JSP page translation?

Choose one answer.

- a. All of the others
- b. The JSP page implementation class is created
- c. The JSP page is validated for syntactic correctness
- d. The associated tag files are validated for syntactic correctness - a

The JSP developer wants a comment to be visible in the final output to the browser. Which comment style needs to be used in a JSP page?

Choose one answer.

- a. `<% /** this is a comment **/ %>`
- b. `<% // this is a comment %>`
- c. `<!-- this is a comment -->`
- d. `<%-- this is a comment --%>` - d

Given a JSP error page, which implicit object refers to the uncaught Throwable that resulted in the page being invoked?

Choose one answer.

- a. `request.exception`
- b. `throwable`
- c. `error`
- d. `exception` - d

A JSP page needs to perform some operations before servicing the first request. Where can this be done?

Choose one answer.

- a. within a method called `jspInit`
- b. within the page directive of the JSP page
- c. within the `<jsp:initialize>` XML element
- d. within a scriptlet at the top of the JSP page - a

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

Choose one answer.

- a. `<%@ page contentType="text/plain" %>`
- b. `<%@ page contentType="text/plain" %>`
- c. `<%@ page pageEncoding="text/plain" %>`
- d. `<%@ page mimeType="text/plain" %>` - b

Which is a benefit of precompiling a JSP page?

Choose one answer.

- a. It provides the ability to debug runtime errors in the application.
- b. It provides better performance on the first request for the JSP page.
- c. It avoids execution of the `_jspService` method on the first request.
- d. It avoids initialization on the first request. - b

A JavaBeans component has the following field:

```
private boolean enabled;
```

Which pairs of method declarations follow the JavaBeans standard for accessing this field? (Choose one.)

Choose one answer.

- a.  
`public boolean setEnabled( boolean enabled)`  
`public boolean getEnabled()`
- b.  
`public void setEnabled( boolean enabled)`  
`public boolean getEnabled()`
- c.  
`public void setEnabled( boolean enabled)`  
`public void isEnabled()`
- d.  
`public Boolean setEnabled( boolean enabled)`  
`public boolean sEnabled()` - b

JSP \_\_\_\_\_ let you insert arbitrary code into the servlet's `_jspService` method (which is called by service).

Choose one answer.

- a. expressions
- b. declarations
- c. scriptlets - c

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

Choose one answer.

- a.  
`<%@page contentType="xml">`
- b.  
`<%@page contentType="text/xml">`
- c.  
`<%@page contentType="text/html">`
- d.  
`<%@page contentType="html/xml">` - b

Which syntax is correct for JSP Declarations?

Choose one answer.

- a.

<%= code %>

b.

<% code %>

c.

<%! code %> - c

Which syntax is correct for JSP Scriptlets?

Choose one answer.

a.

<%= code %>

b.

<%! code %>

c.

<% code %> - c

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

Choose one answer.

a. <jsp:include page="a.jsp"/>

b. <jsp:include file="a.jsp"/>

c. There is no XML equivalent of include directive.

d. <jsp:directive.include file="a.jsp"/> - d

A JSP file is a .....

Choose one answer.

a. None of the others.

b. text file.

c. a Java binary code file.

d. a Java binary file containing a class declaration. - d

Scripting elements in JSP can be used to .....

Choose one answer.

a. print out a value of an expression to client screen

b. refer to Java code block executed for every request.

c. define variables

d. implement methods.

e. All of the others. - e

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? (Select two)

Choose at least one answer.

a. <title>\${titleStr}</title>

b. <title>\${params[0].titleStr}</title>

c. <title>\${paramValues.titleStr}</title>

d. <title>\${iParam.titleStr}</title>

e. <title>\${iParam['titleStr']}</title> - d,e

Which of the followings is a correct way to pass a parameter equivalent to the query string user=mary at request time to an

included component?

Choose one answer.

- a. `<jsp:include page="other.jsp"><jsp:param param="user" value="mary"/></jsp:include>`
- b. `<jsp:include page="other.jsp"><jsp:param user="mary" /></jsp:include>`
- c. `<jsp:include page="other.jsp"><jsp:param value="mary" name="user" /></jsp:include>`
- d. `<jsp:include page="other.jsp"><jsp:param name="mary" value="user" /></jsp:include>`
- e. `<jsp:include page="other.jsp"><jsp:param paramName="user" paramValue="mary" /></jsp:include>` - d

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 at least one answer.

- a. `${paramValues.productID[0]}`
- b. `${params.productID}`
- c. `${params.productID[1]}`
- d. `${param.productID}`
- e. `${paramValues.productID}` - a,d

Which of the following constitute valid ways of importing Java classes into JSP page source?

Choose one answer.

- a. `<%@ import java.util.* %>`
- b. `<%! import java.util.*; %>`
- c. `<%@ page import="java.util.*" %>`
- d. None of the others. - c

Which syntax is correct for JSP Expressions?

Choose one answer.

- a. `<% expression;%>`
- b. `<% expression %>`
- c. `<%=expression %>` - c

Which syntax is correct for JSP Scriptlets?

Choose one answer.

- a. `<%! code %>`
- b. `<% code %>`
- c. `<%= code%>` - b

Choose one answer.

- a. The code fragment affects all the properties of the FinalClass bean whose names match the names of request parameters
- b. The code fragment is invalid syntax at the position of the \* character
- c. None of the others.
- d. The code fragment affects all the properties of all bean in web application whose name match "FinalClass" - a

The empty operator in EL language returns true value for \_\_\_\_\_

Choose one answer.

- a. None of the others.
- b. Only null value
- c. Only empty Strings because the null value in EL is converted to empty String
- d. null, empty Strings, empty arrays, and empty collections - c

Which of the following statements about the standard actions is false?

Choose one answer.

- a. JSP standard actions are performed when a browser requests for a JSP page
- b. In standard action, the values in the attributes must be enclosed in double quotes
- c. None of the others.
- d. Standard actions take the form of an XML tag with a name suffixed jsp - c

Which of the following statements about the jsp:forward is false?

Choose one answer.

- a. To pass parameter names and values to the target file, you can use a jsp:param clause with jsp:forward element
- b. The jsp:forward element is used to redirect the request object
- c. In the source JSP file, the code before the jsp:forward element is not processed.
- d. To redirect the request, the target file can be an HTML file, JSP file or a servlet - c

Which of the following statements about the JavaBean is true?

Choose one answer.

- a. All of the others.
- b. It is impossible initialise the JavaBeans with arguments using jsp:useBean.
- c. JavaBean component property must only be write-only format.
- d. The public methods give access to the properties of the bean. - a

Which of the following statements about the jsp:include are true?

Choose one answer.

- a. In case of static file, the content is excluded from the calling JSP file.
- b. jsp:include is designed to include only a static file in a JSP file.
- c. It is easy to determine whether a file is static or dynamic from a path name.
- d. In case of a dynamic file, it acts on a request and sends back a result that is included in the JSP page. - d

The \_\_\_\_\_ element allows to pass one or more name and value pairs as parameters.

Choose one answer.

- a. jsp:forward
- b. jsp:param
- c. jsp:useBean - b

Which of the followings is not a valid setting for the scope attribute of <jsp:useBean> tag?

Choose one answer.

- a. application
- b. local
- c. session
- d. request - b

Which of the following statements about the standard actions is true?

Choose one answer.

- a. Standard actions take the form of an XML tag with a name suffixed jsp
- b. The attributes in standard action can not distinguish between uppercase and lowercase.
- c. All of the others.
- d. JSP uses standard actions for calling the JavaBean methods. - c

What will be the output of the code snippet `${"2" + "2"}`?

Choose one answer.

- a. 4
- b. None of the others.
- c. 22
- d. 2+2 - a

Which of the following statements about the standard actions are true?

Choose one answer.

- a. JSP uses standard actions for calling the JavaBean methods
- b. None of the others
- c. Standard actions take the form of an XML tag with a name suffixed jsp
- d. The Attributes in standard action can not distinguish between uppercase and lowercase - a

Which of the following statements about the jsp:useBean is (are) true?

Choose one answer.

- a. To locate and instantiate the Bean, the jsp:useBean attempts to locate a Bean within the scope
- b. The jsp:useBean first tries to locate an instance of the bean, otherwise it instantiates the Bean from a class
- c. All of the others
- d. The jsp:useBean is used to locate or instantiate a JavaBean component - c

What will be the output of the code snippet `${"2" + "2"}`?

Choose one answer.

- a. 4
- b. 22
- c. 2+2
- d. None of the others - a

A given JSP yields the following output: Test page `${49}`49

Which of the following page sources and conditions will produce this output?

Choose one answer.

- a. Page source: Test page `\${49}\${49}`
- b. Page source: Test page `<%= "${49}" %>49`
- c. All of the others
- d. Having the `<el-ignored>` setting to "true" for the URL pattern pointing to this JSP, with page source: Test page `${49}49` - d

A JSP page needs to set the property of a given JavaBean to a value that is calculated with the JSP page.

Which jsp:setProperty attributes must be used to perform this initialization?

Choose one answer.

- a. value
- b. property
- c. name
- d. All of the others - d

What will be the output of the code snippet `${2 + "2"}`?

Choose one answer.

- a. None of the others
- b. 4
- c. 22
- d. 2+2 - b

\_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements.

Choose one answer.

- a. include directive
- b. `<jsp:include>`
- c. import directive
- d. `<jsp:useBean>`
- e. `<jsp:forward>` - b

\_\_\_\_\_ sends a request to an object and includes the result in a JSP file.

Choose one answer.

- a. <jsp:include>
- b. include directive
- c. <jsp:forward>
- d. import directive - c

In JSP, the prefix of a tag .....

Choose one answer.

- a. is used for the symmetric syntax
- b. is used for making easiness in detecting the body of the tag.
- c. is used for distinguishing tags for a library
- d. None of the others. - b

The JSP element <%!.....%> will be replaced by the tag .... in the JSP document.

Choose one answer.

- a.  
<jsp:method>></jsp:method>
- b. All of the others.
- c.  
<jsp:declaration> ... </jsp:declaration>
- d.  
<jsp:variable> ... </jsp:variable> - c

Which of the followings is a valid return value for doAfterBody()?

Choose one answer.

- a. SKIP\_PAGE
- b. EVAL\_BODY\_INCLUDE
- c. EVAL\_PAGE
- d. SKIP\_BODY
- e. EVAL\_REST\_PAGE - d

Consider the following TLD excerpt:

```
<body-content>empty</body-content>
<attribute>
 <name>color</name>
 <rtexprvalue>>true</rtexprvalue>
</attribute>
<dynamic-attributes>>true</dynamic-attributes>
```

If the name of the tag is tagname and its prefix is pre, which of the following JSP statements is valid?

Choose one answer.

- a. <pre:tagname color="yellow" size=\${sizenum} />
- b.  
<pre:tagname color="green" size="30">font="Times New Roman"</pre:tagname>
- c. <pre:tagname color="\${colorname}" size="18"></pre>
- d. <pre:tagname color="\${colorname}" size="22" font="verdana"></pre:tagname>
- e. <pre:tagname size="18" color="red"> </pre:tagname> -

You are given a tag library that has a tag named printReport. This tag may accept an attribute, department, which cannot take a dynamic value. Which of the following are correct uses of this tag? (Select two)

Choose at least one answer.

- a. <mylib:printReport/>
- b. <mylib:printReport attribute="department" attribute-value="finance"/>
- c. <mylib:printReport attribute="department" value="finance"/>
- d. <mylib:printReport><jsp:attribute name="department" value="finance" /></mylib:printReport>
- e. <mylib:printReport department="finance"/> -

Which of the following are potentially legal lines of JSP source?

Choose one answer.

- a.  
<% String beanName = "beanName3"; %>  
<jsp:useBean id="<%=beanName3%>" />
- b.  
<jsp:useBean id="beanName1" type="a.b.MyInterface" />
- c.  
<% String propName = "soleProp"; %>  
<jsp:getProperty name="beanName1" property="<%=propName%>" />
- d.  
<% String className = "a.b.MyBean"; %>  
<jsp:useBean id="beanName2" /> - c

\_\_\_\_\_ sends a request to an object and includes the result in a JSP file.

Choose one answer.

- a. include directive
- b.  
<jsp:include>
- c.  
<jsp:forward>
- d. import directive - c

\_\_\_\_\_ includes a static file in a JSP file, parsing the file's JSP elements

Choose one answer.

- a.  
<jsp:useBean>
- b.  
<jsp:include>
- c. import directive
- d.  
<jsp:forward>
- e. include directive - b

The \_\_\_\_\_ tag libraries in JSTL is used for formatting dates and numbers, and for internationalization of text

Choose one answer.

- a. sql
- b. core
- c. fmt
- d. xml - c

Which constant is used to support buffering in the tag body in implementing the classic custom tag?



Choose one answer.

- a. All of the others.
- b. EVAL\_BODY\_BUFFERED
- c. EVAL\_BODY\_CONTENT
- d. EVAL\_BUFFERED - b

Which of the following statements about the simple and classic modes is true?

Choose one answer.

- a. Both simple and classic tags can be declared in tlds.
- b. Simple and classic tags use different types of objects to hold contextual information.
- c. Simple tags use an exception mechanism to skip rest of page processing.
- d. All of the others. -

The \_\_\_\_\_ tags generally do not contain any body.

Choose one answer.

- a. Complex
- b. None of the others.
- c. Basic
- d. Iteration - c

Which of the following actions breaks out of a looping custom tag?

Choose one answer.

- a. returning SKIP\_PAGE from doEndTag() method
- b. All of the others.
- c. returning SKIP\_BODY from doEndTag() method
- d. returning SKIP\_BODY from doAfterBody() method. - b

If true value is passed in the \_\_\_\_\_ element then it suggests that the attribute needs to be evaluated at the time of request or during run time or dynamically.

Choose one answer.

- a. required
- b. attribute
- c. name
- d. rtexprvalue -

<c:forTokens> is a tag in the ....library.

Choose one answer.

- a. Core tag
- b. I18N tag
- c. Database tag
- d. SQL tag - a

A custom tag implements BodyTag interface. What is the valid return value of the doEndTag() method?

Choose one answer.

- a. BodyTag.EVAL\_BODY\_BUFFERED
- b. Tag.SKIP\_CONTAINER
- c. Tag.EVAL\_PAGE
- d. BodyTag.SKIP\_PAGE - c

To iterate over a collection of tokens separated by user-specified delimiters, we can use the tag ....

Choose one answer.

- a. <c:forEach>
- b. <c:forToken>

- c. <c:forSeparate>
- d. <c:forTokens> - d

Which of the following descriptions most closely matches what happens when a tag file is used for the first time?

Choose one answer.

- a. None of the others
- b. The tag file is located, and its source is included in the calling JSP. The combined source is treated as a translation unit and generated into servlet source, which is compiled
- c. The tag file is located, and its source is used for the generation and compilation of a separate servlet invoked from the calling JSP
- d. The tag file is located, and source is generated into a class which implements the SimpleTag interface, then compiled. The calling JSP makes calls to SimpleTag life cycle methods -

Which of the following statement about the JSTL core iteration custom tags are true?

Choose one answer.

- a. The body of the tag may contain EL code, but not scripting code
- b. None of the others
- 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 - b

A custom JSP tag must be able to support an arbitrary number of attributes whose names are unknown when the tag class is designed. Which are true?

Choose one answer.

- a. The echo tag handler must define the setAttribute(String key, String value) method.
- b. The <dynamic-attributes>true</dynamic-attributes> element must appear in the echo tag TLD.
- c. The <body-content> element in the echo tag TLD must have the value JSP.
- d. The class implementing the echo tag handler must implement the javax.servlet.jsp.tagext.IterationTag interface. - d

Which of the following are legal types for the items attribute in a JSTL c:forEach action?

Choose one answer.

- a. An instance of the java.util.Arrays class, Objects, A Collection
- b. All of the others
- c. An array of primitives or Objects, A String, A Collection
- d. Only array of String - c

Given that a scoped attribute cart exists only in a user's session. Choose the option taken independently ensure the scoped attribute cart no longer exists?

Choose one answer.

- a. <c:remove var="cart" scope="session" />
- b. None of the others
- c. <c:remove scope="session">\${cart}</remove>
- d. <c:remove var="\${cart}" /> - a

Under what circumstances is the setJspBody method NOT called in a tag class that implements the SimpleTag interface?

Choose one answer.

- a. The doTag method throws an exception

- b. The <body-content> element has the value empty
- c. All of the others
- d. The tag is called with the attribute skip-body=true - c

Which of the elements defined within the taglib element of taglib descriptor file are required? Select one correct answer.

Choose one answer.

- a. info
- b. display-name
- c. taglib-location
- d. taguri - c

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

Choose one answer.

- a. prefix
- b. name
- c. tagname
- d. tag - b

If you forget to include the taglib directive for a tag library in a JSP page, the JSP compiler will treat any invocation of a custom tag from that library as .....

Choose one answer.

- a. static data and will simply insert the text of the custom tag call into the response.
- b. blank string
- c. a compile-time error
- d. a run-time error - a

The core tag library in JSP contains functions for ....

Choose one answer.

- a. All of the others.
- b. Some miscellaneous function such as out, catch
- c. Variable support
- d. Flow control
- e. URL management - a

Which of these is legal return type of the doStartTag method defined in a class that extends TagSupport class?

Choose one answer.

- a. EVAL\_PAGE
- b. EVAL\_PAGE\_INCLUDE
- c. EVAL\_BODY
- d. EVAL\_BODY\_INCLUDE
- e. SKIP\_PAGE - c

A JSP file uses a tag as <myTaglib:myTag>. The myTag element here should be defined in the tag library descriptor file in the taglib element using which element?

Choose one answer.

- a. prefix
- b. name
- c. tagname
- d. tag - b

Which services are the container provided?

1. Transactions
2. Securities
3. Persistence
4. Location translation
5. Process and Thread Management

Choose one answer.

- a. 1, 2, 3, 4, 5
- b. 1, 3, 5
- c. 1, 2, 3
- d. 1, 2, 4, 5 - c