

1. Consider the following code and select the correct statement about it from the options below. (Select one)

```
<html><body>
  <%! int aNum=5 %>
  The value of aNum is <%= aNum %>
</body></html>
```

- 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 throw a runtime exception while executing the expression.
- d It will not flag any compile time or runtime errors and will not print anything to the output.

Answer: b

Explanation

It will flag a compile-time error because the variable declaration `<%! int aNum=5 %>` is missing a `;` at the end. It should be

```
<%! int aNum=5; %>
```

2. Which of the following tags can you use to print the value of an expression to the output stream? (Select two)

- a `<%@ %>`
- b `<%! %>`
- c `<% %>`
- d `<%= %>`
- e `<%-- --%>`

Answers: c and d

Explanation

You can use a JSP expression to print the value of an expression to the output stream. For example, if the expression is `x+3`, you can write `<%= x+3 %>`. Answer d is a JSP expression and is therefore the correct answer. But you can also use a scriptlet to print the value of an expression to the output stream as `<% out.print(x+3); %>`. Answer c is a scriptlet and is therefore also correct. If the exam asks you to select one correct option, then select the expression syntax, as in answer d. But if the exam asks for two correct answers, then select the scriptlet syntax as well.

3. Which of the following methods is defined by the JSP engine? (Select one)

- a `jspInit()`
- b `_jspService()`
- c `_jspService(ServletRequest, ServletResponse)`
- d `_jspService(HttpServletRequest, HttpServletResponse)`
- e `jspDestroy()`

Answer: d

Explanation

The `_jspService()` method of the `javax.servlet.jsp.HttpJspPage` class is defined by the JSP engine. `HttpJspPage` is meant to serve HTTP requests, and therefore the `_jspService()` method accepts the `javax.servlet.http.HttpServletRequest` and `javax.servlet.http.HttpServletResponse` parameters.

4. Which of the following exceptions may be thrown by the `_jspService()` method? (Select one)

- a `javax.servlet.ServletException`
- b `javax.servlet.jsp.JSPException`
- c `javax.servlet.ServletException` and `javax.servlet.jsp.JSPException`
- d `javax.servlet.ServletException` and `java.io.IOException`
- e `javax.servlet.jsp.JSPException` and `java.io.IOException`

Answer: d

Explanation

The `_jspService()` method may throw a `javax.servlet.ServletException`, a `java.io.IOException`, or a subclass of these two exception classes. Note that the `_jspService()` method does not define `javax.servlet.jsp.JspException` in its throws clause.

5. Write the name of the method that you can use to initialize variables declared in a JSP declaration in the space provided. (Write only the name of the method. Do not write the return type, parameters, or parentheses.)

a [_____]

Answer: *jspInit*

Explanation

The `jspInit()` method is the first method called by the JSP engine on a JSP page. It is called only once to allow the page to initialize itself. You can use this method to initialize variables declared in JSP declarations (`<%! %>`).

6. Which of the following correctly declares that the current page is an error page and also enables it to take part in a session? (Select one)

a `<%@ page pageType="errorPage" session="required" %>`

b `<%@ page isErrorPage="true" session="mandatory" %>`

c `<%@ page errorPage="true" session="true" %>`

d `<%@ page isErrorPage="true" session="true" %>`

e None of the above.

Answer: *d*

Explanation

The `isErrorPage` attribute accepts a Boolean value (`true` or `false`) and indicates whether the current page is capable of handling errors. The `session` attribute accepts a Boolean value (`true` or `false`) and indicates whether the current page must take part in a session. Therefore, answer d is correct. Since the `pageType` attribute is not a valid attribute for a `page` directive, answer a is not correct. The `mandatory` value is not a valid value for the `session` attribute, which means answer b is not correct. The `errorPage` attribute is a valid attribute, but it is used for specifying another page as an error handler for the current page. Therefore, answer c is also incorrect.