

National University of Computer and Emerging Sciences, Lahore Campus



Course: Web Programming
Program: BS(Computer Science)
Duration: 60 Minutes
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Section: ALL
Exam: Mid 2

Course Code: CS-406
Semester: Spring 2017
Total Marks: 40
Weight: 15%
Page(s): 2
Roll No:

Instruction/Notes: **Note: Please use the answer sheet to answer the questions.**

Question1- What is MVC design pattern? What are its benefits?

Marks 10

Question 2- What is Service Oriented Architecture (SOA)? Please give an example of an implementation of SOA.

Marks 10

Question 3- Describe in detail a JSP life cycle. Explain how does the container use a jsp to give a client an output from a jsp.

Marks 10

Question 4- Which statements about HttpSession object is true?

Marks 2

A-A session object whose timeout is set to -1 will never expire

B-A session will expire as soon as the user closes all browser windows

C-A session will become invalid after a timeout period defined by the servlet container.

D-A session may be explicitly invalidated by calling HttpSession.invalidateSession()

Question 5- What is wrong in this class?

Marks 2

```
import javax.servlet.http.*;
```

```
public class MySessionListener implements HttpSessionListener {
```

```
    public void sessionCreated(){
```

```
        System.out.println("Session created");
```

```
    }
```

```
    public void sessionDestroyed(){
```

```

        System.out.println("Session destroyed");
    }
}

```

- A- The method signature on line 3 is incorrect.
- B- The method signature on line 3 is incorrect.
- C-The import statement will not import HttpSessionListener
- D- sessionCreated and sessionDestroyed are not the only methods defined by the interface HttpSessionListener interface.

Question 6- Which directive specify an HTTP response that will of type "image/svg"?

Marks 2

- A- <%@ page type = "image/svg" %>
- B- <%@ page mimeType = "image/svg" %>
- C- <%@ page language = "image/svg" %>
- D- <%@ page contentType = "image/svg" %>

Question 7-Which about EL access operators is true:

Marks 2

- A- Anywhere the .(dot) operator is used , the [] could be used instead.
- B- Anywhere the [] operator is used , the .(dot) could be used instead.
- C-If the .(dot) operator is used to access a bean property, but the property does not exist, then a runtime expectation is thrown.
- D-There are some situations where the .(dot) operator must be used and other situations where the [] operator must be used.

Question 8- Given:

Marks 2

```
public class MyBean {  
    private java.util.Map prams;  
    private java.util.List objects;  
    private String name;  
    public java.util.Map getParams() {return prams;}  
    public String getName() {return name;}  
    private java.util.List getObjects() { return objects;}
```

Which will cause errors (assume that attribute mybean can be found and is of type MyBean)

```
}
```

A- \${mybean.name}

B- \${mybean["name"]}

C- \${mybean.objects.a}

D- \${mybean.["params"].a}

E- \${mybean.["objects"].a}