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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Web Programming** | **Course Code:** | **CS-406** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Spring 2017** |
| **Duration:** | **60 Minutes** | **Total Marks:** | **40** |
| **Paper Date:** | **06-April-17** | **Weight** | **15%** |
| **Section:** | **ALL** | **Page(s):** | **2** |
| **Exam:** | **Mid 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 {

pubilc void sessionCreated(){

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

}

pubilc 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 contentTpye = "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 params;}

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}