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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 Name:** | **Web Programming** | **Course Code:** | **CS-406** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Fall 2016** |
| **Duration:** | **180 Minutes** | **Total Marks:** | **100** |
| **Paper Date:** | **19-May-17** | **Weight** | **40%** |
| **Section:** | **ALL** | **Page(s):** | **2** |
| **Exam Type:** | **Final** |  |  |
| **Student : Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section:\_\_\_\_\_\_\_** | | | | |
| **Instruction/Notes:** | 1. Please answer all the questions (including multiple choice) on the answer book provided. | | | |

1-Which of the following component Manages lifecycles?

a-Web Server.

b-Container

c-Servlet

Marks 2

2- Which of the following component has a reference to the response object*(select all, which are correct)*?

a-Web Server.

b-Container

c-Servlet

Marks 2

3-Given req is a HttpServletRequest, which gets a binary input stream:

a-BinaryInputStream s = req.getInputStream();

b- ServletInputStream s = req.getInputStream();

c- BinaryInputStream s = req.getBinaryStream();

d- ServletInputStream s = req.getBinaryStream();

Marks 2

4-*You can override the init() method in a servlet.*

*a- True*

*b-False*

Marks 2

5- If an HTML form does not explicitly say "method=POST", the request is still sent as a POST.

a-True

b-False

Marks 2

6- You have been given a project to create a Hospital Management System. You need to manage the following in the web application:

* Patient information
* Doctors information
* Diagnosis
* Prescriptions
* Appointments.

The web application should be able to manage patient information. The doctor should be able to enter diagnosis and prescriptions in the web application.

* Draw a high level architecture diagram of how you would implement such a system.
* Draw a class diagram of related classes needed for this project.
* Briefly describe each component of your proposed architecture.

Marks 30

7- Write a Java Script functions which would validate the following. Write a separate function for each of the following fields:

* id card number [id card should be of the following format: 111111-111111-1]
* email [email be should be of following format: email@domain.com]
* Name [Name should alphabets only]

Marks 20

8- What is Ajax? What are the benefits of Ajax? Describe the states an Ajax object has and what are they used for.

Marks 20

9-What are the different ways to parse XML. Briefly describe how DOM parsing works.

Marks 10

10- Explain in detail the steps of the communication that occurs for Authentication, between a browser and a container when BASIC security is applied.

Marks 10