Unique Paper Code	32341501_OC
Name of the Course	B.Sc. (H) Computer Science
Name of the Paper	Internet Technologies
Semester	V
Year of admission	2015-2018

Duration: 3 Hours   Maximum Marks: 75

Attempt any four questions.
All questions carry equal marks.

Q1.   Identify the JSP element that can be used directly in template text and in attribute values for action attributes declared to accept request-time attribute values, for both standard and custom actions. Describe any two different ways with example where we use these elements in JSP.

Create an HTML form as shown below. Write a JSP program to access the data submitted by the user in the following form, using JSTL action elements:

Q2. Identify and explain the JDBC statement that will be used in a situation where the user has to provide `departmentName` as "Computer Science" at the time of execution of a query.

Create a JDBC program that fetches `LoanTypes` from the `Bank` table having the schema (`BankID`, `BankName`, `LoanTypes`) by giving the `BankName` as input to the query at the time of its execution. The program should display the result when a query to fetch all bank records is triggered and should also have the functionality to go to the first, last, previous, next or a particular record.

Q3. Mr. Suresh wants to automate his medical store and has hired you to develop an application for the same. He wants to keep a record of medicines in the store under the following heads: `BatchNo, MedName, ManufacturingDate, ExpiryDate, Price`

Mr. Suresh has provided you with a list of his requirements for this application which are as follows:
- To add one or more medicines
- To delete one or more medicines
- To display one or all medicine records
- To count the number of medicines
- To delete all medicines for which `ExpiryDate` has passed
- To directly copy either the full array or some of the elements of this array to another array without going through the loop

Given the above-mentioned requirements, develop the application in Java.
[Note: Use ArrayList for implementing the records of medicines.]

Q4. Which interface is implemented by JavaBeans and why? How does JavaBeans help us achieve re-usability?

Create a Java bean named `StudentBean` having the properties (`StudentId`, `StudentName`, `DOB`). Create a JSP page `StudentInfo.jsp` that instantiates the bean in session scope and sets its properties by accepting data from an HTML form `StudentForm.html` having the same fields as `StudentBean`. The page should then forward the bean properties to another JSP page `DisplayStudentInfo.jsp` that print these bean properties.

Q5. Create an HTML form that has text fields for `FirstName`, `LastName`, `AddressLine1`, and checkboxes for `favDesserts` having values `Vanilla_IceCream`, `Chocolate_pudding` and `Semolina_dessert`.

Create a custom tag "concat" with two mandatory attributes `str1` and `str2` which should be concatenated to form one string using tag handler class and a descriptor file. The

values for `str1` and `str2` should be obtained from the fields `FirstName` and `LastName`, respectively, from the given form.

Design a JSP page to perform the following:
- Implement custom tag to display full name
- Pass all attributes of the above form as the parameters to the page `displayInput.jsp` and displays the same

Q6. What would be the output for the code given below? Explain the reasons for each output.

```html
<html>

<head>
  <title>JavaScript String concat() Method</title>
</head>

<body>
 <script type="text/javascript">
      var re="m"
      var re2=/kyc/
  var str1 = new String( "Tommorrow is holiday" );
  var str = new String( "james monte marlin" );
  var str2 = new String( "This is string two" );
  var str3 = str1.slice(5,7);
  var str4 = str1.split(re);
  var str5 = str.split(re);

var statement= "my 3 kings beat your 2 aces";
var match3=re.match(statement);
var matches = statement.match(/[abc]/g);
// matches is set up to ["b", "a", "a"]


document.write("str1 is :" + str1 + "<br>");
document.write("str3 is :" + str3+ "<br>");

document.write("str4 is :" + str4+ "<br>");
document.write("str5 is :" + str5+ "<br>");

document.write("statement is :" + statement + "<br>");
document.write("matches is :" + matches + "<br>");
document.write("search is :" + statement.search(re2) + "<br>");
document.write("test is :" + re2.test(statement) + "<br>");
document.write("exec is :" + re2.exec(statement) + "<br>"+"<br>");
document.write("statement.test(re) is :" + statement.test(re2) + "<br>");

 </script>
</body>

</html>
```