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M.Sc. Engg. CSE (1) 06 August 2018 (Afternoon)

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION **SUMMER SEMESTER, 2017-2018**

DURATION: 1 Hour 30 Minutes **FULL MARKS: 75**

CSE 6255: Advanced Internet Computing

Programmable calculators are not allowed. Do not write anything on the question paper.

There are **4 (four)** questions. Answer any **3 (three)** of them.

Figures in the right margin indicate marks.

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1. a) Briefly discuss on various types of Internet Computing applications including the technologies you will use for the implementation. 10
   b) Explain the structure of HTTP transactions with example. 10
   c) Can you run multiple TCP applications in a single server machine? Explain your answer. 5

2. a) What is XML? Mention different applications of XML. 5
   b) Suppose you want to design a 'StudentML' language. It would contain, student id, name, department, CGPA, and program. Define your own XML tags to describe student information. Use appropriate attributes and properties as XML elements. 10
   c) What is XSLT? Using XSLT elements write an XSL file to display only the name of the students having CGPA greater than 3.15. 10

3. a) With an example Servlet code explain how you can construct a front-end controller as a delegator to access different web resources. 10
   b) What is session tracking? Show a simple servlet that uses session tracking to count the number of times a client has accessed a web page. 10
   c) When a client request is sent to the servlet container, how does the container choose which servlet to invoke? Explain. 5

4. a) What is JSTL? Write a JSP code using JSTL which will print numeral values from one to ten. 8
   b) Suppose you want to implement a distributed web application according to the architecture given in Figure 1. Redraw the architecture using appropriate links and labeling to different components and explain with a real life example. 10

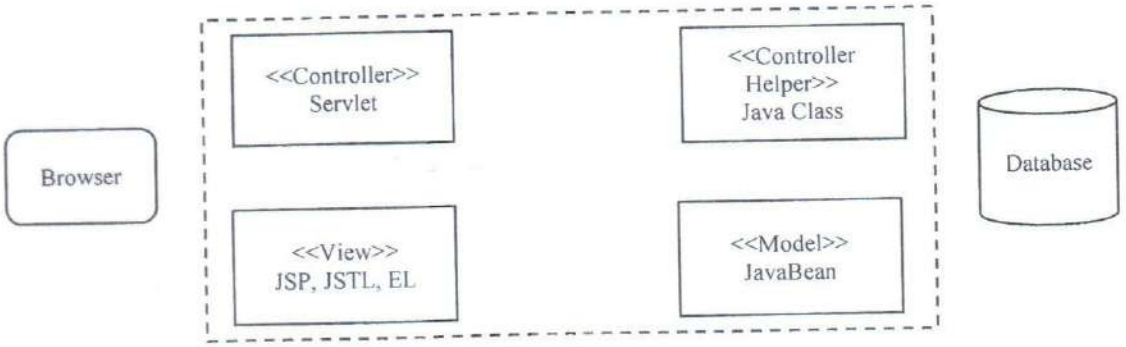

Figure 1: An Internet application architecture

c) Suppose you have a HTML form whose source code is shown in Figure 2. Write a JSP page using JSP Expression Language (EL) to fetch 'student name' and 'roll number' using 'param' variable and display in a JSP page named 'display.jsp'. 7

```
<html>
<head>
 <title>Expression language example2</title>
</head>
<body>
<form action="display.jsp">
Student Name: <input type="text" name="stuname" /><br>
Student RollNum:<input type="text" name="rollno" /><br>
<input type="submit" value="Submit Details!!"/>
</form>
</body>
</html>
```

Figure 2: An HTML form