Examination	: First Sessional	**Seat No.**	:	
Date	: 30/07/2013	**Day**	: Tuesday	
Time	:	**Max. Marks**	: 36	

INSTRUCTIONS:
1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 **Do as directed**.
   (a) Write about responsibilities of Stub/Skeleton layer and remote reference layer. [2]
   (b) JDBC-ODBC Bridge is multi-threaded. State True/False and Justify. [2]
   (c) What is the difference between a Statement and a PreparedStatement? [2]
   (d) What are the benefits of connection pooling? [2]
   (e) What are the standard isolation levels defined by JDBC? [2]
   (f) What is the difference between .WAR and .EAR file? [2]

Q.2 Attempt **Any Two** from the following questions.
   (a) Describe the interaction between a client web browser, Http Server, Server Container and Servlet with diagram, Also explain servlet lifecycle methods. [6]
   (b) Create RMI based client server application. The server stores students' exam result in an array. For each student, array maintains following information:StudentName, InternalExamMarks and ExternalExamMarks. The server provides two remote methods:getInternalMarks(StudentName) and getExternalMarks(StudentName). Create RMI server program and also create RMI client program to test the server. Show various steps we need to follow for whole development process. [6]
   (c) In context of RMI discuss following. [6]
      (i) Distributed Garbage Collection Algorithm.
      (ii) Dynamic stub downloading.

Q.3 Attempt *ALL* from the following questions.
   (a) Write a servlet program which display system date of a server on the browser. [6]
   (b) What are the types of ResultSet in JDBC? Explain it with Example. [6]
OR
Q.3 Attempt *ALL* from the following questions.
   (a) Consider Employee table with attributes empID, empName, empAdd and empPin. Write a database application which allows insertion, updation and deletion of records in Employee table. Print values of all employees whose city name starting with Ahm. [**Note:** Use Type-4 Driver for connection] [6]
   (b) What is Metadata? Explain ResultSetMetaData and DatabaseMetaData? [6]