COURSE CODE: 12B1WCI733
COURSE NAME: Advanced Java
COURSE CREDITS: 3

MAX. MARKS: 35

MAX. TIME: 2 Hours

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. You are given a table called **STUDENT** (**rollnumber** varchar2, **name** varchar2, **age** integer). Define a PL/SQL function to return the details of all the students. Next, use the **CallableStatement** interface to call this function in a JSP or Servlet and display the result on the client's browser. (CO-3)

   [5 marks]

2. Create a web application for the user registration system, in which the users enter their details such as **name, email,** and **password** through an HTML form (**form.html**). The request through this HTML form is sent to a JSP page (**register.jsp**), which retrieves the parameters and then inserts the user details into a table called **UserRecord** (**userid** varchar2, **uname** varchar2, **upassword** varchar2). The business logic for the application is designed separately using a Java Bean class called **User**. (CO-4)

   [6 marks]

3. Implement an RMI-based distributed application with the following components: (CO-5)
   i. An interface (**ServerInterface.java**) declared two remote methods as: **String getString()** and **void setString(String s).**
   ii. A server (**RMIServer.java**) implements the methods of the interface ServerInterface.
   iii. A client (**RMIClient.java**) invokes both of these remote methods. **[6 marks]**

4. Write an enterprise-based application to find the addition and subtraction of two numbers. Two positive integer numbers are passed through an HTML form to invoke a Servlet called **CalculatorServlet**. The **CalculatorServlet** calls the method **int beanAdd(int, int)** and **int beanSub(int, int)** that have been defined inside a stateless session bean **CalculatorBean**. Assume that the web container and the EJB container are available on the same server. (CO-6)

   [8 marks]

5. Differentiate between the following terms in two-four statements: (CO-5, CO-6)
   i. Stub and Skeleton
   ii. Entity Bean and Entity Bean
   iii. Marshalling and Unmarshalling
   iv. Java Bean and Enterprise Java Bean
   v. Locate.createRegistry() and Locate.getRegistry()

   [5×2= 10 marks]