CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

Sixth Semester of B. Tech. Examination (CE/IT)

May 2012

CE307 Advanced Java Programming

Date: 11.05.2012, Friday   Time: 01:30 p.m. To 04:30 p.m.   Maximum Marks: 70

Instructions:
1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

Q - 1   1. Which of the following method of InetAddress class returns array of byte?   [07]

   (a) getAddress( )

   (b) getHostAddress( )

   (c) getHostName( )

   (d) isMulticastAddress( )

2. Which of the following exception might be thrown by method(s) of socket class?

   (a) BindException

   (b) ConnectException

   (c) NoRouteToHostException

   (d) All of the above

3. Which of the following is not a valid URL declaration?

   (a) URL u = new URL("http://www.audubon.org/");

   (b) URL u = new URL("http", "www.eff.org", "/blueribbon.html#intro");

   (c) URL u = new URL("http", null, 8000, "/~dma3mjh/jsci/");

   (d) URL u = new URL("finger", "utopia.poly.edu", 79, "/marcus", new com.macfaq.net.www.protocol.finger.Handler( ));

4. In Java RMI objects and primitives are passed by _____ and remote objects are passed by _____.

   (a) value, pointer

   (b) Reference, pointer

   (c) value, reference

   (d) None of the above

5. Compared to connection-oriented sockets, which statement about connectionless sockets is true?

   (a) They support only character streams.

   (b) They do not support two-way communication.

   (c) They provide unreliable data transfer.

   (d) They support three way handshaking.

6. Connection con = DriverManager.getConnection (

   "jdbc:odbc:wombat", "login", "password");

   Statement stmt = con.createStatement();

   ResultSet rs = stmt.executeQuery("SELECT a, b, c FROM Table1");

   while (rs.next()) {

   Integer x = rs.getInt("c");

   String s = rs.getString("a");

   Float f = rs.getFloat("b");

   }

   What is true for above code?

   (a) Retrieval of the fields is in the wrong order.

   (b) The password must be encrypted before being sent to the DriverManager.

   (c) The Driver's URL is in the wrong format.

   (d) The ResultSet class returns primitive types for integers and floats.

7. Which of the following is not proper way to register jdbc driver?

   (a) Class.forName("...");

   (b) DriverManager.registerDriver();

   (c) Using the java.lang.System property jdbc.drivers

   (d) Prop.load();

Q - 2 (a) Write a multithreaded TCP/IP server code using networking classes and *Runnable* interface. [07]

   (b) What is *MalformedURLException*? What does *openConnection()* method of *URL* class do? [07]

OR

Q - 2 (a) List and compare the classes used in connection oriented and connection less socket [07]
   programming. What is *MulticastSocket*?

   (b) What is *InetAddress*? Which exception may be thrown by the static factory methods of [07]
   InetAddress? What are the purposes of the static factory methods of *InetAddress*?

Q - 3 (a) What are the types of statements in JDBC? What does *Class.forName ()* method do? [07]

   (b) Write simple java RMI application in which client will send two numbers to server and server [07]
   will return sum of this number to client.

OR

Q - 3 (a) What is RMI? Explain the use of stub and skeleton in RMI? What is object marshaling? [07]

   (b) Write a jdbc application that finds out No. Of records, No. Of columns and types of the [07]
   columns within a table.

Q - 4

1. Assume that the following servlet mapping is defined in the deployment descriptor of [07] a web application:

   ```
   <servlet-mapping>
   <servlet-name>TestServlet</servlet-name>
   <url-pattern>*.asp</url-pattern>
   </servlet-mapping>
   ```

   Which of the following requests will not be serviced by TestServlet?

   (a) /gui/hello.asp/bye.asp   (b) /gui/*.asp

   (c) /gui/asp   (d) All of the above

2. Which method is used to retrieve an initialization parameter from a Servlet-Context?

   (a) String getInitParameter(String name)   (b) Object getParameter(int index)

   (c) Object getInitParameter(String name)   (d) Object getInitParameter(int index)

3. Which of the following code snippets, when inserted in the doGet( ) method, will correctly count the number of GET requests made by a user?

   (*Assume: HttpSession session = request.getSession();*)

   (a) int count = session.getAttribute("count");

   session.setAttribute("count", count++);

   (b) int count = (int) session.getAttribute("count");

   session.setAttribute("count", count++);

   (c) int count = ((Integer) session.getAttribute("count")).intValue();

   session.setAttribute("count", count++);

   (d) int count = ((Integer) session.getAttribute("count")).intValue(); ·

   session.setAttribute("count", new Integer(count++));

4. Which of the following methods is defined by the JSP engine?

   (a) jspInit()

   (b) _jspService()

   (c) _jspService(ServletRequest, ServletResponse)

   (d) _jspService(HttpServletRequest, HttpServletResponse)

5. Consider the following code and select the correct statement about it from the options below. <html><body>

   <%! int aNum=5 %>

   The value of aNum is <%= aNum %>

   </body></html>

   (a) It will print "The value of aNum is 5" to the output.

   (b) It will flag a compile-time error because of an incorrect declaration.

   (c) It will throw a runtime exception while executing the expression.

   (d) It will not flag any compile time or runtime errors and will not print anything.

6. Which of the following correctly declares that the current page is an error page and also enables it to take part in a session?

    (a) <%@ page pageType="errorPage" session="required" %>

    (b) <%@ page isErrorPage="true" session="mandatory" %>

    (c) <%@ page isErrorPage="true" session="true"%>

    (d) <%@ page errorPage="true" session="true" %>

7. What will be the output of the following code?

    <html><body>

    <% x=3; %>

    <% int x=5; %>

    <%! int x=7; %>

    x = <%= x %>, <%= this.x %>

    </body></html>

    (a) x = 3, 5 (b) x = 5, 3 (c) x = 5, 7 (d) Error

Q - 5 (a) Explain the life cycle of servlet. Give the difference between *GenericServlet* and *HttpServlet*. [07]

    (b) What are *ServletConfig* and *ServletContext*? What are the differences between attributes and parameters? [07]

OR

Q - 5 (a) What are the advantages of servlet over CGI? What are the difference between web server and servlet container? [07]

    (b) Explain session management in servlet. What events to be generated during the life time of session? [07]

Q - 6 Write a short note on *any TWO*. [14]

    1. Expression Language

    2. Implicit objects of JSP

    3. JSP <jsp:usebean> tag

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