

COMPUTER SCIENCE III: ITCS 2304
FINAL EXAMINATION
TIME: 2 HOURS

TOTAL POINTS (50)
PAGES (6)

DATE: 20/1/2013

QUESTIONS (4)

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الرقم الجامعي:

الإسم (رباعي):

Question 1: Choose the correct answer

(25 points)

1. Given:

```
1. public class Test {  
2.     static String s = "";  
3.     public static void doStuff(){s += "4"; }  
4.     public static void main(String[] args) {  
5.         try {  
6.             s += "1";  
7.             System.out.println(1/0);  
8.         } catch (Exception e){  
9.             s += "2";  
10.        } finally {  
11.            s += "3"; doStuff();}  
12.        System.out.println(s);  
13.    } }
```

What is the result?

- A. 12
B. 13
C. 123
D. 1234

2. _____ checks whether the JCheckBox jchk is selected.

- A. jchk.getSelected()
B. jchk.selected()
C. jchk.isSelected()
D. jchk.select()

3. The method _____ adds an item s into a JComboBox jcbo.

- A. jcbo.add(s)
B. jcbo.addChoice(s)
C. jcbo.addItem(s)
D. jcbo.addObject(s)

 method that executes immediately after the init() method in an applet is _____.

- A. run ()
B. start ()
C. stop ()
D. paint ()

 .The default layout of the contentPane of a JApplet is _____.

- A. FlowLayout
B. GridLayout
C. BorderLayout
D. None

6. Which of the following methods can be used to know what the user selects from the combo Box?

- A. getSelectedItem()
B. getSelectedChoice()
C. getSelectedIndex()
D. getSelectedObject()

7. Which of the following statements is correct to create a DataOutputStream to write to a file named out.dat?

- A. DataOutputStream outfile = new DataOutputStream(new File("out.dat"));
- B. DataOutputStream outfile = new DataOutputStream(new FileOutputStream("out.dat"));**
- C. DataOutputStream outfile = new DataOutputStream(FileOutputStream("out.dat"));
- D. DataOutputStream outfile = new DataOutputStream("out.dat");

8. Which class do you use to write data into a text file?

- A. File
- B. PrintWriter**
- C. Scanner
- D. System

9. To read a data that are at known positions in a large file, we use class of type

- A. RandomAccessFile**
- B. FileInputStream
- C. File
- D. Scanner

10. To create a list to store integers, use

- A. ArrayList<Object> list = new ArrayList<Integer>();
- B. ArrayList< Integer > list = new ArrayList<Integer>();**
- C. ArrayList<int> list = new ArrayList<int>();
- D. ArrayList<Number> list = new ArrayList<Integer>();

11. The method header is left blank in the following code. Fill in the header.

```
1. public class Test {
2.     public static void main(String[] args ) {
3.         Integer[] integers = {1, 2, 3, 4, 5};
4.         String[] strings = {"London", "Paris", "New York", "Austin"};
5.         print(integers);
6.         print(strings);
7.     }
8.     _____????_____ {
9.     for (int i = 0; i < list.length; i++)
10.         System.out.print(list[i] + " ");
11.         System.out.println(); }
12. }
```

- A. public static void print(Integer[] list)
- B. public static void print(String[] list)
- C. public static void print(Object[] list)
- D. public static <E> void print(E[] list)**

12. Which of the following declarations use raw type?

- A. ArrayList<Object> list = new ArrayList<Object>();
- B. ArrayList<String> list = new ArrayList<String>();
- C. ArrayList< Integer > list = new ArrayList< Integer >();
- D. ArrayList list = new ArrayList();**

13. Given a method declared as

```
1. public static <E super Number> void process(ArrayList<? extends E> nums){..}  
2. public static void main(String[] args ) {  
3. // INSERT DECLARATIONS HERE  
4. _____?????  
5.  
6. process(X);}
```

Which declaration could be placed at ??? to allow the code to compile?

- A. ArrayList<Integer> X ;
- B. ArrayList<String> X;
- C. ArrayList<Number> X;
- D. All of the above.

14. Name of the method that is used to load ODBC driver class of a database

- A. DriverManager.getConnection(...)
- B. Class.forName(...)
- C. DriverManager.forName(...)
- D. Class.loadClass(...)

15. Name of the method that returns an object used to get a data about the query's result set

- A. getResultSetMetaData()
- B. getMetaData()
- C. getResultSet()
- D. getData()

16. Calling _____ on a ResultSet rset object moves the ResultSet cursor five rows ahead of its current position.

- A. rset.absolute(rset.getRow() + 5)
- B. rset.relative (5)
- C. rset.absolute (5)
- D. A and B

17. To create a statement on a Connection object conn, use

- A. Statement statement = conn.statement();
- B. Statement statement = Connection.createStatement();
- C. Statement statement = conn.createStatement();
- D. Statement statement = connection.create();

18. What is the return value from stmt.executeUpdate("insert into T values (100, 'Ali')")

- A. void
- B. an int value indicating how many rows are effected from the invocation
- C. a value indicating whether the SQL statement has been executed successfully
- D. an object that contains the status of the execution

19. Result set meta data are retrieved through _____.

- A. a Connection object
- B. a Statement object
- C. a ResultSet Object
- D. a PreparedStatement object.

20. Given:

1. `PreparedStatement Stmt =`
2. `con.prepareStatement("UPDATE EMPLOYEE SET SALARY = ? WHERE EMP_NAME LIKE ?");`
3. `//insert your code here`
4. _____????_____
5. _____????_____
6. `Stmt.updateRow();`

Which code could be placed at ???? to to update the salary for the employee whose name is "Rami" to be 5000 ?

- A. `Stmt.setString(0, "Rami"); Stmt.setDouble(1, 5000);`
- B. `Stmt.setDouble(0, 5000); Stmt.setString(1, "Rami");`
- C. `Stmt.setDouble(1, 5000); Stmt.setString(2, "Rami");`
- D. `Stmt.UpdateDouble(0, 5000); Stmt.UpdateString(1, "Rami");`

Table of Answers:

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.

Question 2: Write Java code (5 points)

1 Given:



1. `class App {`
2. `public static void main(String [] args) {`
3. `System.out.println("WELCOME TO MY WEBSITE");`
4. `System.out.println();`
5. `System.out.println(" Currently Under Construction ");`
6. `}}`

Convert the above Java program to an applet with the text output in the applet window.

1. Given an array list declared as:

```
ArrayList<Integer> numList = new ArrayList<Integer> ();
```

A. Write a Java code segment to display the maximum element of the array list.

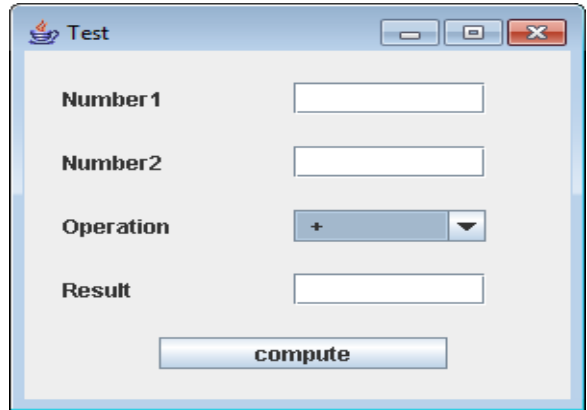
```
public static <E extends Comparable<E>> E maximum(ArrayList<E> list) throws Exception {  
    E max = list.get(0);  
    for(E element : list) {  
        if(element.compareTo(max)>0)  
            max = element;  
    }  
    return max;  
}
```

B. Write a Java code segment to replace odd numbers elements of the array list with zeroes.

```
public static void replaceOddNumbers(ArrayList<Integer> list) {  
    for(int i=0;i<list.size();i++) {  
        if(list.get(i)%2 != 0)  
            list.set(i, 0);  
    }  
}
```

1. Given a frame doing simple calculations on two numbers as shown in the below figure. The frame enables the user to enter two numbers, select an operation(+, -, *) from a combo box and then apply the operation on the numbers by clicking a compute button.

A. Write a Java code segment to define the GUI components as shown in the frame.



B. Write a Java code for function that perform the compute button action.