[Quick Links](https://blackboard.iit.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_12669_1&course_id=_32173_1&content_id=_261036_1&step=null)

**QUESTION 1**

1. A search algorithm

|  |  |  |
| --- | --- | --- |
|  |  | Arranges elements in descending order |
|  |  | Arranges elements in ascending order |
|  |  | Is a way to locate a specific item in a larger collection of data |
|  |  | Is rarely used with arrays |

**6 points**

**QUESTION 2**

1. Given that String[] str has been initialized, to get a copy of str[0] with all characters converted to upper case, use the following statement

|  |  |  |
| --- | --- | --- |
|  |  | str.toUpperCase(); |
|  |  | str[0].toUpperCase(); |
|  |  | str.uppercase(); |
|  |  | str[0].upperCase(); |

**6 points**

**QUESTION 3**

1. If lower is the first subscript in a contiguous portion of an array, and upper is the last subscript, then the array item in the middle of that array portion is at subscript

|  |  |  |
| --- | --- | --- |
|  |  | (lower — upper)/2 |
|  |  | (lower + upper)/2 |
|  |  | (upper — lower)/2 |
|  |  | lower + upper/2 |

**6 points**

**QUESTION 4**

1. If a class contains an abstract method,

|  |  |  |
| --- | --- | --- |
|  |  | The method must be overridden in subclasses |
|  |  | You cannot create an instance of the class |
|  |  | The method will have only a header, but not a body, and end with a semicolon |
|  |  | All of the above |

**6 points**

**QUESTION 5**

1. In an interface all methods have

|  |  |  |
| --- | --- | --- |
|  |  | private access |
|  |  | protected access |
|  |  | public access |
|  |  | packaged access |

**6 points**

**QUESTION 6**

1. In the following code, assume that inputFile references a Scanner object that has been successfully used to open a file:  
     
   double totalIncome = 0.0;  
   while (inputFile.hasNext())  
   {  
     try  
     {  
     totalIncome += inputFile.nextDouble();  
     }  
     catch(InputMismatchException e)  
     {  
     System.out.println("Non-numeric data encountered " +  
     "in the file.");  
     inputFile.nextLine();  
     }  
     finally  
     {  
     totalIncome = 35.5;  
     }  
   }  
     
   What will be the value of totalIncome after the following values are read from the file?   
   2.5  
   8.5  
   3.0  
   5.5  
   abc  
   1.0

|  |  |  |
| --- | --- | --- |
|  |  | 35.5 |
|  |  | 75.0 |
|  |  | 19.5 |
|  |  | 0.0 |

**6 points**

**QUESTION 7**

1. The binary search algorithm

|  |  |  |
| --- | --- | --- |
|  |  | is less efficient than the sequential search algorithm |
|  |  | will have a maximum number of comparisons equal to the number of elements in the array |
|  |  | will cut the portion of the array being searched in half each time the loop fails to locate the search value |
|  |  | will have an average of N/2 comparisons, where N is the number of elements in the array |

**6 points**

**QUESTION 8**

1. The method findMax shown below is supposed to return the position of the largest  
   value in the portion of an array between 0 and last, inclusive:  
     
    int findMax(int array[ ], int last)  
    {  
    int maxPos = 0;  
    for (int k = 1; k <= last; k++)  
    {  
    // Code is Missing  
     
    }  
    return maxPos;  
    }  
   The missing code is

|  |  |  |
| --- | --- | --- |
|  |  | if (array[k] > array[maxPos]) maxPos = k; |
|  |  | if (array[k] > array[maxPos]) return maxPos; |
|  |  | if (array[k] > maxPos) return maxPos; |
|  |  | if (array[k] > array[maxPos]) k = maxPos; |

**6 points**

**QUESTION 9**

1. The String[] args parameter in the main method header allows the program to receive arguments from the operating system command-line.

 True

 False

**6 points**

**QUESTION 10**

1. The catch clause

|  |  |  |
| --- | --- | --- |
|  |  | contains code to gracefully handle the exception type listed in the parameter list |
|  |  | starts with the word catch followed by a parameter list in parentheses containing an *ExceptionType* parameter variable |
|  |  | follows the try clause |
|  |  | All of the above |

**6 points**

**QUESTION 11**

1. This ArrayList class method is used to insert an item into an ArrayList.

|  |  |  |
| --- | --- | --- |
|  |  | store |
|  |  | insert |
|  |  | add |
|  |  | putItem |

**6 points**

**QUESTION 12**

1. To convert the double variable, d = 543.98, to a string, use the following statement.

|  |  |  |
| --- | --- | --- |
|  |  | String str = double(d); |
|  |  | String str = Double.toString(d); |
|  |  | String str = double.toString(d); |
|  |  | String str = d.Double.toString(str); |

**6 points**

**QUESTION 13**

1. Use the following import statement when using the Character wrapper class

|  |  |  |
| --- | --- | --- |
|  |  | import java.lang.Char |
|  |  | import java.String |
|  |  | import java.Char |
|  |  | No import statement is needed |

**6 points**

**QUESTION 14**

1. What is the value of str after the following code has been executed?  
     
   String str;  
   String sourceStr = "Hey diddle, diddle, the cat and the fiddle";  
   str = sourceStr.substring(12,17);

|  |  |  |
| --- | --- | --- |
|  |  | diddle |
|  |  | , didd |
|  |  | Iddle |
|  |  | diddl |

**6 points**

**QUESTION 15**

1. What is wrong with the following code?  
     
   public class ClassB extends ClassA  
   {  
     public ClassB()  
     {  
     int init = 10;  
     super(40);  
     }  
   }

|  |  |  |
| --- | --- | --- |
|  |  | Nothing is wrong with the code |
|  |  | The call to the method super must be the first statement in the constructor |
|  |  | No values may be passed to super |
|  |  | The method super is not defined |

**6 points**

**QUESTION 16**

1. What will be printed when the following code is executed?  
     
   double x = 45678.259;  
   DecimalFormat formatter =   
     new DecimalFormat("#,##0.0");  
   System.out.println(formatter.format(x));

|  |  |  |
| --- | --- | --- |
|  |  | 45,678.26 |
|  |  | 45,678.3 |
|  |  | 45678.259 |
|  |  | 45,678.259 |

**6 points**

**QUESTION 17**

1. API 4.0 best describes which framework?

|  |  |  |
| --- | --- | --- |
|  |  | Honeycomb |
|  |  | KitKat |
|  |  | Jelly Bean |
|  |  | Ice Cream Sandwich |

**6 points**

**QUESTION 18**

1. JDBC connectivity requires drivers for any database.

 True

 False

**6 points**

**QUESTION 19**

1. The statement below puts the app to sleep for how long?

Thread.sleep(1000);

|  |  |  |
| --- | --- | --- |
|  |  | 1 second |
|  |  | 1000 seconds |
|  |  | 1 miliisecond |
|  |  | 1 minute |

**6 points**

**QUESTION 20**

1. Which best defines a class that takes care of creating an Android window for you in which you can place your UI?

|  |  |  |
| --- | --- | --- |
|  |  | An event |
|  |  | An activity |
|  |  | A view component |
|  |  | The content provider |

**6 points**

**QUESTION 21**

1. Which best describes a JDBC driver?

|  |  |  |
| --- | --- | --- |
|  |  | An interface for a Java app to interact with a database. |
|  |  | A class for a Java app to interact with a database. |
|  |  | A statement that allows for a connection to a database. |
|  |  | A pool of classes to allow for a connection to a database. |

**6 points**

**QUESTION 22**

1. Which is not a class or interface of JDBC DriverManager?

|  |  |  |
| --- | --- | --- |
|  |  | Statement |
|  |  | Connection |
|  |  | DriverManagaer |
|  |  | JDBC |

**6 points**

**QUESTION 23**

1. Which is a proper URL connection string to connect a mysql database called sales located on your local machine in the tempdb directory in the root of the c: drive?

|  |  |  |
| --- | --- | --- |
|  |  | jdbc:mysql//localhost/c:/tempdb/sales |
|  |  | jdbc//mysql//localhost/c:/tempdb/sales |
|  |  | jdbc:mysql://localhost/c:/tempdb/sales |
|  |  | jdbc:mysql:localhost/c:/tempdb/sales |

**6 points**

**QUESTION 24**

1. Suppose that x and y are int variables and x = 7 and y = 8. After the statement: x = x \* y - 2; executes, the value of x is \_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | 42 |
|  |  | 54 |
|  |  | 56 |
|  |  | 58 |

**6 points**

**QUESTION 25**

1. Consider a class that uses the following variables to implement an array-based stack:  
     
   The boolean method to check for an empty stack can be written as:

|  |  |  |
| --- | --- | --- |
|  |  | return top; |
|  |  |  |
|  |  |  |
|  |  |  |

**6 points**

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