Started on	Tuesday, 6 September 2022, 6:35 PM
State	Finished
Completed on	Tuesday, 6 September 2022, 6:36 PM
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Marks	7.00/7.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

A switch statement, most often has the form:
switch (expression) {
case constant-1:
statements-1
break;
...
}

The value of the expression can be:
i. int
ii. short
iii. byte
iv. Primitive char
v. Enum
vi. String
vii. Real number

Select one:

- a. iii , iv and v
- b. i , ii, iii and iv
- c. All, except vii ✔
- d. vi and vii
- e. All of the types listed

The correct answer is: All, except vii

Question **2**

Correct

Mark 1.00 out of 1.00

The following code writes out the name of a day of the week depending on the value of *day*. True or False?

```
String dayName = null;
switch (day) {
case 1:
dayName = "Sunday";
break;
case 2:
dayName = "Monday";
break;
case 3:
dayName = "Tuesday";
break;
case 4:
dayName = "Wednesday";
break;
case 5:
dayName = "Thursday";
break;
case 6:
dayName = "Friday";
break;
case 7:
dayName = "Saturday";
break;
}
System.out.println(dayName);
```

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **3**

Correct

Mark 1.00 out of 1.00

Given the following piece of code:

```
class CostCalculationException extends Exception{}
class Item {
      public void calculateCost() throws CostCalculationException {
            //...
            throw new CostCalculationException();
            //...
      }
}
class Company {
       public void payCost(){
            new Item().calculateCost();
      }
}
```

Which of the following statements is correct?

Select one or more:

- a. This code will compile without any problems.
- b. This code will compile if in method payCost()you return a boolean instead of void.
- c. This code will compile if you add a try-catch block in payCost() ✔
- d. This code will compile if you add throws CostCalculationException in the signature of method payCost(). ✔

The correct answers are: This code will compile if you add a try-catch block in payCost(), This code will compile if you add throws CostCalculationException in the signature of method payCost().

Question **4**

Correct

Mark 1.00 out of 1.00

Given the following piece of code:

```
class Student { public void talk(){} }
public class Test{
        public static void main(String args[]){
                Student t = null;
                try {
                    t.talk();
                    } catch(NullPointerException e){
                            System.out.print("There is a NullPointerException. ");
                    } catch(Exception e){
                            System.out.print("There is an Exception. ");
                    }
                    System.out.print("Everything ran fine. ");
        }
}
```

what will be the result?

a. If you run this program, the following is printed:
There is a NullPointerException. Everything ran fine.

b. If you run this program, the following is printed:
There is a NullPointerException.

c. If you run this program, the following is printed:
There is a NullPointerException. There is an Exception.

d. This code will not compile, because in Java there are no pointers.

Select one:

- a. ✔
- b.
- c.
- d.

The correct answer is: a.

Question **5**

Correct

Mark 1.00 out of 1.00

Consider the following code (assume that comments are replaced with real code that works as specified):

```
public class TestExceptions {

  static void e() {
    // Might cause any of the following unchecked exceptions to be
    // thrown:
    // Ex1, Ex2, Ex3, Ex4
  }

  static void April() {
    try {
      e();
    } catch (Ex1 ex) {
      System.out.println("April caught Ex1");
    }
  }

  static void March() {
    try {
      April();
    } catch (Ex2 ex) {
      System.out.println("March caught Ex2");
      // now cause exception Ex1 to be thrown
    }
  }

  static void February() {
    try {
      March();
    } catch (Ex1 ex) {
      System.out.println("February caught Ex1");
    } catch (Ex3 ex) {
      System.out.println("February caught Ex3");
    }
  }

  static void January() {
    try {
      February();
    } catch (Ex4 ex) {
      System.out.println("January caught Ex4");
      // now cause exception Ex1 to be thrown
    } catch (Ex1 ex) {
      System.out.println("January caught Ex1");
    }
  }

  public static void main(String[] args) {
     January();
  }
```

}

Assume now that this program is run four times. The first time, method e throws exception Ex1, the second time, it throws exception Ex2, etc.

What are the results of the four runs (a or b)?

a.

1. The program prints:
   April caught Ex1
2. The program prints:
   March caught Ex2
   February caught Ex1
3. The program prints:
   February caught Ex3
4. The program prints:
   January caught Ex4
   And execution stops due to an uncaught exception Ex1 thrown in main()

b.

1. The program prints:
   April caught Ex3
2. The program prints:
   March caught Ex2
   February caught Ex2
3. The program prints:
   March caught Ex3
4. The program prints:
   January caught Ex4
   And execution stops due to an uncaught exception Ex1 thrown in main()

Select one:

- (•) a. ✔
- ( ) b.

The correct answer is: a.

◄ Learning Journal Unit 1

Jump to...

Correct

Mark 1.00 out of 1.00

Lab 1 Unit 1 ►

Which statements are correct regarding Java's predefined class called *Throwable*?

Select one or more:

- [x] a. The class Throwable represents all possible objects that can be thrown by a throw statement and caught by a catch clause in a try...catch statement. ✔
- [x] b. The thrown object must belong to the class Throwable or to one of its (many) subclasses such as Exception and RuntimeException. ✔
- [x] c. The object carries information about an exception from the point where the exception occurs to the point where it is caught and handled. ✔
- [x] d. A Throwable contains a snapshot of the execution stack of its thread at the time it was created. ✔

The correct answers are: The class Throwable represents all possible objects that can be thrown by a throw statement and caught by a catch clause in a try...catch statement., The thrown object must belong to the class Throwable or to one of its (many) subclasses such as Exception and RuntimeException., The object carries information about an exception from the point where the exception occurs to the point where it is caught and handled., A Throwable contains a snapshot of the execution stack of its thread at the time it was created.

Question **7**

Correct

Mark 1.00 out of 1.00

"Subclasses of the class *Exception* which are not subclasses of RuntimeException require mandatory exception handling." What are the practical implications of this statement?

Select one or more:

- [x] a. If a method can throw such an exception, then it must declare this fact by adding a throws clause to the method heading. ✔
- [x] b. If a routine includes any code that can generate such an exception, then the routine must deal with the exception. ✔
- [ ] c. The routine cannot handle the exception by adding a throws clause to the method definition.
- [x] d. The routine can handle the exception by including the code in a try statement that has a catch clause to handle the exception. ✔

The correct answers are: If a method can throw such an exception, then it must declare this fact by adding a throws clause to the method heading., If a routine includes any code that can generate such an exception, then the routine must deal with the exception., The routine can handle the exception by including the code in a try statement that has a catch clause to handle the exception.

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Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

What are two parts to recursion?

Select one:

- a. (1) If the problem is easy, solve it immediately, and (2) If the problem can't be solved immediately, divide it into smaller problems. ✔
- b. (1) Divide the problem into smaller problems, and (2) give immediate solutions for the hard problems.
- c. (1) Discard the hard cases , and (2) solve the easy easy cases.
- d. (1) Solve the problem by asking it to solve itself, (2) Solve the easy cases in one step.

The correct answer is: (1) If the problem is easy, solve it immediately, and (2) If the problem can't be solved immediately, divide it into smaller problems.

Question **2**

Correct

Mark 1.00 out of 1.00

How can you drink an entire keg of root beer?

Select one:

- a. (1) take one swallow, then (2) take another swallow.
- b. (1) If the keg is empty do nothing, otherwise (2) take one swallow, then drink the rest of the keg. ✔
- c. (1) take one enormous gulp, and (2) wish you hadn't.
- d. (1) drink one keg, and (2) drink another keg.

The correct answer is: (1) If the keg is empty do nothing, otherwise (2) take one swallow, then drink the rest of the keg.

Question **3**

Correct

Mark 1.00 out of 1.00

How do you study a text book?

Select one:

- a. (1) Read the book on day 1, and (2) read it again each day of the semester.
- b. (1) If you have reached the end of the book you are done, else (2) study one page, then study the rest of the book. ✔
- c. (1) Divide the book in two, and (2) study each half.
- d. (1) Cram all the pages in one horrible session, and (2) forget everything the next night.

The correct answer is: (1) If you have reached the end of the book you are done, else (2) study one page, then study the rest of the book.

Question **4**

Correct

Mark 1.00 out of 1.00

Which answer is a correct skeleton for a recursive Java method?

A.

```
int solution( int N )
{
  if ( base case )
  {
    return something easily computed
  }
  else
  {
    divide problem into pieces
    return something calculated from the solution to each piece
  }
}
```

B.

```
int solution( int N )
{
  if ( base case )
  {
    return something easily computed
  }
  else
  {
    return solution(N)
  }
}
```

C.

```
int solution( int N )
{
  divide problem into pieces
  return something calculated from the solution to each piece
}
```

D.

```
int solution( int N )
{
  divide problem into pieces
  if ( base case )
  {
    return something easily computed
  }
  else
  {
    return something calculated from the solution to each piece
  }
}
```

Select one:

- a. ✔
- b.
- c.
- d.

The correct answer is: a.

Question **5**

Correct

Mark 1.00 out of 1.00

Which of the following statements are true?

Select one:

- a. The Fibonacci series begins with 0 and 1, and each subsequent number is the sum of the preceding two numbers in the series. ✔
- b. The Fibonacci series begins with 1 and 1, and each subsequent number is the sum of the preceding two numbers in the series.
- c. The Fibonacci series begins with 1 and 2, and each subsequent number is the sum of the preceding two numbers in the series.
- d. The Fibonacci series begins with 2 and 3, and each subsequent number is the sum of the preceding two numbers in the series.

The correct answer is: The Fibonacci series begins with 0 and 1, and each subsequent number is the sum of the preceding two numbers in the series.

Question **6**

Correct

Mark 1.00 out of 1.00

In the following method, what is the base case?

```
static int xMethod(int n) {
   if (n == 1)
     return 1;
   else
     return n + xMethod(n - 1);
}
```

Select one:

- a. n is 1 ✔
- b. n is greater than 1.
- c. n is less than 1.
- d. no base case.

The correct answer is: n is 1

Question **7**

Correct

Mark 1.00 out of 1.00

Consider the following two programs:

A.

```
public class Test {
    public static void main(String[] args) {
        xMethod(5);
    }

    public static void xMethod(int length) {
        if (length > 1) {
            System.out.print((length - 1) + " ");
            xMethod(length - 1);
        }
    }
}
```

B.

```
public class Test {
    public static void main(String[] args) {
        xMethod(5);
    }

    public static void xMethod(int length) {
        while (length > 1) {
            System.out.print((length - 1) + " ");
            xMethod(length - 1);
        }
    }
}
```

Select one:

- a. The two programs produce the same output 5 4 3 2 1.
- b. The two programs produce the same output 1 2 3 4 5.
- c. The two programs produce the same output 4 3 2 1.
- d. The two programs produce the same output 1 2 3 4.
- e. Program A produces the output 4 3 2 1 and Program B prints 4 3 2 1 1 1 .... 1 infinitely ✔

The correct answer is: Program A produces the output 4 3 2 1 and Program B prints 4 3 2 1 1 1 .... 1 infinitely

Question **8**

Correct

◄ Learning Journal Unit 2

Jump to...

Lab 3 Unit 2 ►

What code is missing to complete the following method for sorting a list?

```
public static void sort(double[] list) {
_____;
}

public static void sort(double[] list, int high) {
  if (high > 1) {
    // Find the largest number and its index
    int indexOfMax = 0;
    double max = list[0];
    for (int i = 1; i <= high; i++) {
      if (list[i] > max) {
        max = list[i];
        indexOfMax = i;
      }
    }

// Swap the largest with the last number in the list
list[indexOfMax] = list[high];
list[high] = max;

// Sort the remaining list
sort(list, high - 1);
}
}
```

Select one:

- a. sort(list)
- b. sort(list, list.length)
- c. sort(list, list.length - 1) ✔
- d. sort(list, list.length - 2)

The correct answer is: sort(list, list.length - 1)

Question **9**

Correct

Mark 1.00 out of 1.00

For a linked list to be used in a program, that program needs:

i. A variable that refers to the first node in the list.
ii. A pointer to the first node.
iii. A null pointer in the last node.

Select one:

- a. i and ii
- b. i
- c. ii and iii
- d. i, ii and iii ✔

The correct answer is: i, ii and iii

Question **10**

Correct

Mark 1.00 out of 1.00

Suppose cursor refers to a node in a linked list (using the IntNode class with instance variables called data and link). What statement changes cursor so that it refers to the next node?

Select one:

- a. cursor++;
- b. cursor = link;
- c. cursor += link;
- d. cursor = cursor.link; ✔

The correct answer is: cursor = cursor.link;

Started on	Sunday, 18 September 2022, 6:36 PM
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Completed on	Sunday, 18 September 2022, 6:40 PM
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Marks	9.00/9.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Which statement is true?

Select one:

- a. Queues require linked lists, but stacks do not.
- b. Stacks require linked lists, but queues do not.
- c. Queues use two ends of the structure; stacks use only one. ✔
- d. Stacks use two ends of the structure, queues use only one.

The correct answer is: Queues use two ends of the structure; stacks use only one.

Question **2**

Correct

Mark 1.00 out of 1.00

If the characters 'D', 'C', 'B', 'A' are placed in a queue (in that order), and then removed one at a time, in what order will they be removed?

Select one:

- a. ABCD
- b. ABDC
- c. DCAB
- d. DCBA ✔

The correct answer is: DCBA

Question **3**

Correct

Mark 1.00 out of 1.00

In the linked list implementation of the queue class, where does the insert method place the new entry on the linked list?

Select one:

- a. At the head.
- b. At the tail. ✔
- c. After all other entries that are greater than the new entry.
- d. After all other entries that are smaller than the new entry.

The correct answer is: At the tail.

Question **4**

Correct

Mark 1.00 out of 1.00

Study the following three pieces of code. Comments have been removed intentionally.
Can you guess what each does?

(i)

```
public class ProcForInts {
  private int[] items = new int[10];

  private int top = 0;

  /**
   * Procedure
   */
  public void push( int N ) {
     if (top == items.length) {
        int[] newArray = new int[ 2*items.length ];
        System.arraycopy(items, 0, newArray, 0, items.length);
        items = newArray;
     }
     items[top] = N;
     top++;
  }

  /**
   * Procedure
   */
  public int pop() {
     if ( top == 0 )
       throw new IllegalStateException("Can't...");
     int topItem = items[top - 1]
     top--;
     return topItem;
  }

  /**
   * Procedure
   */
  public boolean isEmpty() {
    return (top == 0);
  }
}
```

(ii)

```
public class ProcForInts {
  /**
   * Procedure
   */
  private static class Node {
    int item;
```

```
    Node next;
  }
  private Node head = null;

  private Node tail = null;
  /**
   * Procedure
   */
  public void enqueue( int N ) {
    Node newTail = new Node();
    newTail.item = N;
    if (head == null) {
      head = newTail;
      tail = newTail;
    }
    else {
      tail.next = newTail;
      tail = newTail;
    }
  }

  /**
   * Procedure
   */
  public int dequeue() {
    if ( head == null)
       throw new IllegalStateException("Can't...");
    int firstItem = head.item;
    head = head.next;
    if (head == null) {
        tail = null;
    }
    return firstItem;
  }

  /**
   * Procedure
   */
  boolean isEmpty() {
    return (head == null);
  }

}
```

(iii)

```
public class ProcForInts {
  private static class Node {
    int item;
    Node next;
  }

  private Node top;

  /**
```

```
   * Procedure
   */
  public void push( int N ) {
    Node newTop;
    newTop = new Node();
    newTop.item = N;
    newTop.next = top;
    top = newTop;
  }

  /**
   * Procedure
   */
  public int pop() {
    if ( top == null )
      throw new IllegalStateException("Cannot...");
    int topItem = top.item;
    top = top.next;
    return topItem;
  }

  /**
   * Procedure
   */
  public boolean isEmpty() {
    return (top == null);
  }
}
```

Select one:

- a. (i) is a linked list implementation of a stack; (ii) is an array implementation of a stack; (iii) is a queue
- b. (i) is an array implementation of a stack; (ii) is a linked list implementation of a stack; (iii) is a queue
- c. (i) is a queue; (ii) is a linked list implementation of a stack; (iii) is an array implementation of a stack
- d. (i) is an array implementation of a queue; (ii) is a linked list implementation of a queue; (iii) is a stack
- e. (i) is an array implementation of a stack; (ii) is a queue; (iii) is a linked list implementation of a stack ✔

The correct answer is: (i) is an array implementation of a stack; (ii) is a queue; (iii) is a linked list implementation of a stack

Question **5**

Correct

Mark 1.00 out of 1.00

Given the following code:

```
static void showOutput(int mark) {
   if (mark == 0) {
      System.out.print("*");
   }
   else {
      System.out.println("[");
      showOutput(mark - 1);
      System.out.print(",");
      showOutput(mark - 1);
      System.out.println("]");
   }
}
```

Can you determine what is produced by the following subroutine calls:
showOutput(0), showOutput(1), showOutput(2), and showOutput(3)?

a.

showOutput(0) outputs: *
showOutput(1) outputs: [*,*]
showOutput(2) outputs: [[*,*],[*,*]]
showOutput(3) outputs: [[[*,*],[*,*]],[[*,*],[*,*]]]

b.

showOutput(0) outputs: [
showOutput(1) outputs: *,*
showOutput(2) outputs: [[],[]]
showOutput(3) outputs: [[[*,*],[*,*]],[[*,*],[*,*]]]

Select one:

- a. ✔
- b.

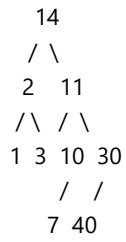
The correct answer is: a.

Question **6**

Correct

Mark 1.00 out of 1.00

Consider the tree below. How many leaves does the tree below have?



Select one:

- a. 2
- b. 4 ✔
- c. 6
- d. 8
- e. 9

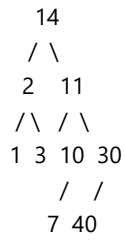
The correct answer is: 4

Question **7**

Correct

Mark 1.00 out of 1.00

What is the value stored in the parent node of the node containing 30?



Select one:

- a. 10
- b. 11 ✔
- c. 14
- d. 40
- e. None of the above

The correct answer is: 11

Question **8**

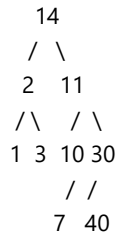
Correct

Mark 1.00 out of 1.00

◄ Learning Journal Unit 3

Jump to...

Graded Quiz Unit 3 ►



Select one:

- a. 1 2 3 7 10 11 14 30 40
- b. 1 2 3 14 7 10 11 40 30
- c. 1 3 2 7 10 40 30 11 14
- d. 14 2 1 3 11 10 7 30 40 ✔

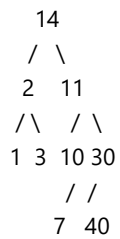
The correct answer is: 14 2 1 3 11 10 7 30 40

Question **9**

Correct

Mark 1.00 out of 1.00

Consider the tree below. What is the order of nodes visited using an in-order traversal?



Select one:

- a. 1 2 3 7 10 11 14 30 40
- b. 1 2 3 14 7 10 11 40 30 ✔
- c. 1 3 2 7 10 40 30 11 14
- d. 14 2 1 3 11 10 7 30 40

The correct answer is: 1 2 3 14 7 10 11 40 30

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Completed on	Tuesday, 27 September 2022, 11:08 AM
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Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Java's generic programming does not apply to the primitive types. True or False?

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **2**

Correct

Mark 1.00 out of 1.00

Which of the following statements is correct?

Select one or more:

- a. Generics can help detect type errors at compile time, thus make programs more robust. ✔
- b. Generics can make programs easy to read. ✔
- c. Generics can avoid cumbersome castings. ✔
- d. Generics can make programs run faster.

The correct answers are: Generics can help detect type errors at compile time, thus make programs more robust., Generics can make programs easy to read., Generics can avoid cumbersome castings.

Question **3**

Correct

Mark 1.00 out of 1.00

Fill in the code in Comparable_____ c = new Date();

a. <String>
b. <?>
c. <Date>
d. <E>

Select one:

- a.
- b.
- c. ✔
- d.

The correct answer is: c.

Question **4**

Correct

Mark 1.00 out of 1.00

Suppose List list = new ArrayList(). Which of the following operations are correct?

Select one or more:

- a. list.add("Red"); ✔
- b. list.add(new Integer(100)); ✔
- c. list.add(new java.util.Date()); ✔
- d. list.add(new ArrayList()); ✔

The correct answers are: list.add("Red");, list.add(new Integer(100));, list.add(new java.util.Date());, list.add(new ArrayList());

Question **5**

Correct

Mark 1.00 out of 1.00

Suppose List<String> list = new ArrayList<String>. Which of the following operations are correct?

Select one:

- a. list.add("Red"); ✔
- b. list.add(new Integer(100));
- c. list.add(new java.util.Date());
- d. list.add(new ArrayList());

The correct answer is: list.add("Red");

Question **6**

Correct

Mark 1.00 out of 1.00

In what way can a Set be distinguished from other types of Collections?
"A Set cannot contain duplicate elements."

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **7**

Correct

Mark 1.00 out of 1.00

To declare a class named A with a generic type, use

a. public class A<E> { ... }
b. public class A<E, F> { ... }
c. public class A(E) { ... }
d. public class A(E, F) { ... }

Select one:

- a. ✔
- b.
- c.
- d.

The correct answer is: a.

Question **8**

Correct

Mark 1.00 out of 1.00

To declare a class named A with two generic types, use

a. public class A<E> { ... }
b. public class A<E, F> { ... }
c. public class A(E) { ... }
d. public class A(E, F) { ... }

Select one:

- a.
- b. ✔
- c.
- d.

The correct answer is: b.

Question **9**

Correct

Mark 1.00 out of 1.00

To declare an interface named A with two generic types, use

a. public interface A<E> { ... }
b. public interface A<E, F> { ... }
c. public interface A(E) { ... }
d. public interface A(E, F) { ... }

Select one:

- a.
- b. ✔
- c.
- d.

The correct answer is: b.

◄ Learning Journal Unit 4

Jump to...

Code Unit 4 ►

Question **10**

Correct

Mark 1.00 out of 1.00

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>();

Select one:

- a.
- b. ✔
- c.
- d.

The correct answers are: a., b.

Started on	Tuesday, 4 October 2022, 3:48 PM
State	Finished
Completed on	Tuesday, 4 October 2022, 4:09 PM
Time taken	21 mins 8 secs
Marks	9.37/12.00
Grade	**7.81** out of 10.00 (**78**%)

Question **1**

Partially correct

Mark 0.17 out of 1.00

Which of these statements is true?

a. The hash code of an object is an integer that tells where that object should be stored in a h

b. A hash table is an array of linked lists. When an object is stored in a hash table, it is added t

c. The object's hash code is the index of the position in the array where the object is stored.

d. All objects with the same hash code go into the same linked list.

e. In Java, every object obj has a method obj.hashCode() that is used to compute hash codes f

f. If the object is to be stored in a hash table of size N, then the hash code that is used for the Math.abs(obj.hashCode())%N.

Select one or more:

- [ ] a.
- [ ] b.
- [ ] c.
- [ ] d.
- [x] e.
- [ ] f.

The correct answers are: a., b., c., d., e., f.

Question **2**

Correct

Mark 1.00 out of 1.00

Which of the data types below does not allow duplicates?

Select one:

- a. List
- b. Vector
- c. Stack
- d. Set
- e. LinkedList

The correct answer is: Set

Question **3**

Correct

Mark 1.00 out of 1.00

Which of the following data types do not have iterators?

Select one:

- a. HashSet
- b. TreeSet
- c. Map
- d. ArrayList
- e. LinkedList

The correct answer is: Map

Question **4**

Correct

Mark 1.00 out of 1.00

Given the following code:

```
public class Test {
  public static void main(String[] args) {
    Map map = new HashMap();
    map.put("123", "John Smith");
    map.put("111", "George Smith");
    map.put("123", "Steve Yao");
    map.put("222", "Steve Yao");
  }
}
```

Which statement is correct?

Select one:

- a. After all the four entries are added to the map, "123" is a key that corresponds to the
- b. After all the four entries are added to the map, "123" is a key that corresponds to the
- c. After all the four entries are added to the map, "Steve Yao" is a key that corresponds t
- d. After all the four entries are added to the map, "John Smith" is a key that corresponds
- e. A runtime error occurs because two entries with the same key "123" are added to the

The correct answer is: After all the four entries are added to the map, "123" is a key that corres

Question **5**

Partially correct

Mark 0.20 out of 1.00

You can use the methods in the Collections class to:

Select one or more:

- [ ] a. find the maximum object in a collection based on the compareTo method.
- [x] b. find the maximum object in a collection using a Comparator object.
- [ ] c. sort a collection.
- [ ] d. shuffle a collection.
- [ ] e. do a binary search on a collection.

The correct answers are: find the maximum object in a collection based on the compareTo me collection using a Comparator object., sort a collection., shuffle a collection., do a binary searc

Question **6**

Correct

Mark 1.00 out of 1.00

The Collection interface is the base interface for ...

Select one or more:

- [x] a. Set
- [x] b. List
- [x] c. ArrayList
- [x] d. LinkedList
- [ ] e. Map

The correct answers are: Set, List, ArrayList, LinkedList

Question **7**

Correct

Mark 1.00 out of 1.00

The Map is the base interface for ...

Select one or more:

- [x] a. TreeMap
- [x] b. HashMap
- [x] c. LinkedHashMap
- [ ] d. ArrayList
- [ ] e. LinkedList

The correct answers are: TreeMap, HashMap, LinkedHashMap

Question **8**

Correct

Mark 1.00 out of 1.00

Which of the following statements are true?

Select one or more:

- a. The Collection interface is the root interface for manipulating a collection of objects.
- b. The Collection interface provides the basic operations for adding and removing eleme
- c. The AbstractCollection class is a convenience class that provides partial implementati
- d. Some of the methods in the Collection interface cannot be implemented in the concr method would throw java.lang.UnsupportedOperationException, a subclass of Runtim
- e. All interfaces and classes in the Collections framework are declared using generic type

The correct answers are: The Collection interface is the root interface for manipulating a collec interface provides the basic operations for adding and removing elements in a collection., The convenience class that provides partial implementation for the Collection interface., Some of t interface cannot be implemented in the concrete subclass. In this case, the method would thro java.lang.UnsupportedOperationException, a subclass of RuntimeException., All interfaces and framework are declared using generic type in JDK 1.5.

Question **9**

Correct

Mark 1.00 out of 1.00

To store non-duplicated objects in the order in which they are inserted, use ....

Select one:

a. HashSet

c. TreeSet

d. ArrayList

e. LinkedList

The correct answer is: LinkedHashSet

◄ Learning Journal Unit 5

Jump to...

Question **10**

Partially correct

Mark 0.50 out of 1.00

Which of the following statements are true?

Select one or more:

- [x] a. The Comparable interface contains the compareTo method with the signature "public
- [ ] b. The Comparator interface contains the compare method with the signature "public in
- [ ] c. A Comparable object can compare this object with the other object.
- [x] d. A Comparator object contains the compare method that compares two objects.

The correct answers are: The Comparable interface contains the compareTo method with the s compareTo(Object)"., The Comparator interface contains the compare method with the signat Object)"., A Comparable object can compare this object with the other object., A Comparator method that compares two objects.

Question **11**

Correct

Mark 1.00 out of 1.00

Which of the following statements are true?

Select one or more:

- [x] a. An ArrayList can grow automatically.
- [ ] b. An ArrayList can shrink automatically.
- [x] c. You can reduce the capacity of an ArrayList by invoking the trimToSize() method on th
- [ ] d. You can reduce the capacity of a LinkedList by invoking the trimToSize() method on th

The correct answers are: An ArrayList can grow automatically., You can reduce the capacity of trimToSize() method on the list.

Question **12**

Partially correct

Mark 0.50 out of 1.00

Which of the following are correct methods in Map?

Select one or more:

- [x] a. put(Object key, Object value)
- [ ] b. put(Object value, Object key)
- [x] c. get(Object key)
- [x] d. get(int index)

The correct answers are: put(Object key, Object value), get(Object key)

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State	Finished
Completed on	Monday, 10 October 2022, 7:06 PM
Time taken	1 min 7 secs
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Which of the following statements are true?

Select one or more:

- a. A socket is a kind of opening.
- b. A socket represents one endpoint of a network connection.
- c. A program uses a socket to communicate with another program over the network.
- d. Data written by a program to the socket at one end of the connection is transmitted t of the connection, where it can be read by the program at that end.

The correct answers are: A socket is a kind of opening., A socket represents one endpoint of a uses a socket to communicate with another program over the network., Data written by a pro the connection is transmitted to the socket on the other end of the connection, where it can b

Question **2**

Correct

Mark 1.00 out of 1.00

What does this code do?

```
import java.io.*;
// (TextReader.class must be available to this program.)
public class TenLinesWithTextReader {

   public static void main(String[] args) {
      try {
         TextReader in = new TextReader( new FileReader(args[0]) );
         for (int lineCt = 0; lineCt < 10; lineCt++)) {
            String line = in.getln();
            System.out.println(line);
         }
      }
      catch (Exception e) {
         System.out.println("Error: " + e);
      }
   }

}  // end class TenLinesWithTextReader
```

Select one:

- a. This code accesses a remote computer and requests 10 HTML pages.
- b. This code displays the first ten lines from a text file. The lines are written to standard c
- c. This code reads a file name, 10 characters long from a graphic file chooser dialog box

The correct answer is: This code displays the first ten lines from a text file. The lines are writter

Question **3**

Correct

Mark 1.00 out of 1.00

The class named URL resides in the java.io package. Which of the following statements describ

Select one or more:

- [x] a. A URL is an address for a web page (or other information) on the Internet.
- [ ] b. A URL constructor creates an Address field in a Web browser.
- [x] c. A URL object represents a Universal Resource Locator.
- [x] d. Once you have a URL object, you can call its openConnection() method to access the that it represents.

The correct answers are: A URL is an address for a web page (or other information) on the Inte Universal Resource Locator., Once you have a URL object, you can call its openConnection() m the url address that it represents.

Question **4**

Correct

Mark 1.00 out of 1.00

The server listens for a connection request from a client using the following statement:

Select one:

- ( ) a. Socket s = new Socket(ServerName, port);
- (•) b. Socket s = serverSocket.accept()
- ( ) c. Socket s = serverSocket.getSocket()
- ( ) d. Socket s = new Socket(ServerName);

The correct answer is: Socket s = serverSocket.accept()

Question **5**

Correct

Mark 1.00 out of 1.00

Which of the following statements describe a client/server model ?

Select one or more:

- [x] a. Computer transactions using the client/server model are very common.
- [ ] b. Client/server describes the relationship between two computer programs in which on service request from another program, the client, which fulfills the request.
- [x] c. Although the client/server idea can be used by programs within a single computer, it network.
- [x] d. In a network, the client/server model provides a convenient way to interconnect prog efficiently across different locations.
- [x] e. Client/server computing or networking is a distributed application architecture that p between service providers (servers) and service requesters, called clients.

The correct answers are: Computer transactions using the client/server model are very commc can be used by programs within a single computer, it is a more important idea in a network., I model provides a convenient way to interconnect programs that are distributed efficiently acr Client/server computing or networking is a distributed application architecture that partitions service providers (servers) and service requesters, called clients.

Question **6**

Correct

Mark 1.00 out of 1.00

To create an InputStream to read from a file on a Web server, you use the class _____.

Select one:

- a. URL
- b. Server
- c. ServerSocket
- d. ServerStream

The correct answer is: URL

Question **7**

Correct

Mark 1.00 out of 1.00

Consider the following code:

BufferedImage OSC = new BufferedImage(32,32,BufferedImage.TYPE_INT_RGB);

Select one or more:

- a. A BufferedImage is a region in memory that can be used as a drawing surface.
- b. In this statement, the image that is created is 32 pixels wide and 32 pixels high, and th color that has red, green, and blue components in the range 0 to 255.
- c. The picture in a BufferedImage can easily be copied into a graphics context g by callir methods.
- d. The image drawn here is so small, it seems likely that is going to be used to define an

The correct answers are: A BufferedImage is a region in memory that can be used as a drawin image that is created is 32 pixels wide and 32 pixels high, and the color of each pixel is an RGI blue components in the range 0 to 255., The picture in a BufferedImage can easily be copied i one of the g.drawImage methods., The image drawn here is so small, it seems likely that is go ImageIcon.

Question **8**

Correct

Mark 1.00 out of 1.00

Which of these statements describe the *FontMetrics* class?

Select one or more:

- a. FontMetrics resides in the java.io package.
- b. The FontMetrics(Font font)constructor creates a new FontMetrics object for finding ou that are drawn in a specific font.
- c. The font is specified when the FontMetrics object is created.
- d. If fm is a variable of type FontMetrics, then, for example, fm.stringWidth(str) gives the fm.getHeight() is the usual amount of vertical space allowed for one line of text.

The correct answers are: The FontMetrics(Font font)constructor creates a new FontMetrics obj characters and strings that are drawn in a specific font., The font is specified when the FontMe

◄ Learning Journal Unit 6

Jump to...

Question **9**

Correct

Mark 1.00 out of 1.00

Interaliasing ....

Select one or more:

- a. Is intended to make an image look fuzzier.
- b. Is the smoothing of the image roughness caused by aliasing
- c. Is achieved by adjusting pixel positions or setting pixel intensities so that there is a m the color of a line and the background color.
- d. Makes images look perfect.

The correct answers are: Is the smoothing of the image roughness caused by aliasing, Is achie setting pixel intensities so that there is a more gradual transition between the color of a line a

Question **10**

Correct

Mark 1.00 out of 1.00

How is the *ButtonGroup* class used?

Select one or more:

- [x] a. A ButtonGroup object is used with a set of radio buttons (or radio button menu items of the radio buttons in the group can be selected at any given time.
- [x] b. To use the ButtonGroup class, you have to create a ButtonGroup object, grp. Then eac supposed to be part of the group is added to the group by calling grp.add(rb). Nothir with the ButtonGroup object.
- [ ] c. Creating a set of buttons with the same ButtonGroup object means that turning "on" other buttons in the group.
- [x] d. Typically a button group contains instances of JRadioButton, JRadioButtonMenuItem,

The correct answers are: A ButtonGroup object is used with a set of radio buttons (or radio bu that at most one of the radio buttons in the group can be selected at any given time., To use t create a ButtonGroup object, grp. Then each radio button, rb, that is supposed to be part of th calling grp.add(rb). Nothing further needs to be done with the ButtonGroup object., Typically of JRadioButton, JRadioButtonMenuItem, or JToggleButton.

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State	Finished
Completed on	Saturday, 15 October 2022, 11:49 AM
Time taken	1 min 6 secs
Marks	8.00/8.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Given the following code:

```
public void paintComponent(Graphics g) {
  super.paintComponent(g);
  Graphics2D g2 = (Graphics2D)g;
  g2.translate( getWidth()/2, getHeight()/2 );
  g2.rotate( 30 * Math.PI / 180 );
  g2.fillRect(0,0,200,200);
}
```

Which of the following describes the output?

Select one or more:

- a. A filled black square that is 100-by-100 pixels in size.
- b. The corner of the square is at the center of the component that is being painted, and descends at a 30 degree angle from that point.
- c. The rotate command rotates the picture by 30 degrees in a clockwise direction about
- d. The top of the square is rotated from the horizontal position onto a line that is 30 deg horizontal. That line descends at a 30 degree angle.

The correct answers are: The corner of the square is at the center of the component that is be square descends at a 30 degree angle from that point., The rotate command rotates the pictu direction about the origin., The top of the square is rotated from the horizontal position onto of the horizontal. That line descends at a 30 degree angle.

Question **2**

Correct

Mark 1.00 out of 1.00

What does the following code do?

```
Action openAction = new AbstractAction( "Open..." ) {
  public void actionPerformed( ActionEvent e ) {
    doOpen();
  }
};

JButton openButton = new JButton( openAction );

JMenuItem openCommand = new JMenuItem( openAction );
```

Select one or more:

- [x] a. This code creates an Action that represents the opening of a file in the doOpen() insta
- [x] b. This code creates a button from the Action.
- [x] c. This code creates a menu item from the Action.
- [ ] d. This code reads a text file.

The correct answers are: This code creates an Action that represents the opening of a file in th code creates a button from the Action., This code creates a menu item from the Action.

Question **3**

Correct

Mark 1.00 out of 1.00

Which of the following code is correct to create an instance of ResourceBundle?

Select one:

- a. ResourceBundle.getBundle();
- b. ResourceBundle.getBundle(locale);
- c. ResourceBundle.getBundle(resourcefilename);
- d. None of the above;

The correct answer is: ResourceBundle.getBundle(resourcefilename);

Question **4**

Correct

Mark 1.00 out of 1.00

Which of the following code displays the numbers with at least two digits before and after the

a.
```
NumberFormat numberForm = NumberFormat.getNumberInstance();
DecimalFormat df = (DecimalFormat)numberForm;
df.applyPattern("00.00");
```

b.
```
NumberFormat numberForm = NumberFormat.getNumberInstance();
numberForm.setMaximumFractionDigits(2);
numberForm.setMinimumFractionDigits(2);
```

c.
```
NumberFormat numberForm = NumberFormat.getNumberInstance();
numberForm.setMaximumFractionDigits(2);
```

d.
a and b.

Select one:

- a.
- b.
- c.
- d.

The correct answer is: a.

Question **5**

Correct

Mark 1.00 out of 1.00

How do you create a locale for the United States?

Select one:

- a. new Locale("en", "US");
- b. new Locale("US", "en");
- c. Locale.US;
- d. a and c;

The correct answer is: a and c;

◄ Learning Journal Unit 7

Jump to...

Question **6**

Correct

Mark 1.00 out of 1.00

Which statements about Preferences are true?

Select one or more:

- a. Preferences are best saved in a file in the user's home directory.
- b. Preferences represent a snapshot of a program saved between sessions.
- c. To handle preferences, Java provides a class Preferences in the java.util.prefs package.
- d. Every time the program starts up, it reads the preferences, if any are available. Every t saves the preferences.

The correct answers are: Preferences represent a snapshot of a program saved between sessic provides a class Preferences in the java.util.prefs package., Every time the program starts up, it available. Every time the program terminates, it saves the preferences.

Question **7**

Correct

Mark 1.00 out of 1.00

To be a listener for ActionEvent, an object must be an instance of ...

Select one:

- a. ActionEvent
- b. ActionListener
- c. EventObject
- d. WindowListener
- e. WindowEvent

The correct answer is: ActionListener

Question **8**

Correct

Mark 1.00 out of 1.00

Which of the following statements are true?

Select one or more:

- a. Dialog boxes are defined by subclasses of the class JDialog.
- b. The main difference between JDialogs and JFrames is that a dialog box has a parent, v dialog box to closes, too.
- c. When a modeless dialog is put up on the screen, the rest of the application is blocked
- d. Modal dialog boxes are like independent windows, since they can stay on the screen v windows.

The correct answers are: Dialog boxes are defined by subclasses of the class JDialog., The mai JFrames is that a dialog box has a parent, which if closed, causes the dialog box to closes, too.