Oracle

Exam 1z0-853

Java Standard Edition 5 Programmer Certified Professional Exam

Version: 6.0

[Total Questions: 362]

Topic 1, Volume A

Question No : 1 - (Topic 1)

Given:

10. class One {

11. void foo() { }

12. }

13. class Two extends One {

14. //insert method here

15. }

Which three methods, inserted individually at line 14, will correctly complete class Two? (Choose three.)

A. public void foo() { /* more code here */ }
B. private void foo() { /* more code here */ }
C. protected void foo() { /* more code here */ }
D. int foo() { /* more code here */ }
E. void foo() { /* more code here */ }

Answer: A,C,E

Question No : 2 - (Topic 1)

Which two code fragments correctly create and initialize a static array of int elements? (Choose two.)

A. static final int[] a = { 100,200 };
B. static final int[] a;
static { a=new int[2]; a[0]=100; a[1]=200; }
C. static final int[] a;
static void init() { a = new int[3]; a[0]=100; a[1]=200; }
D. static final int[] a = new int[2]{ 100,200 };

Answer: A,B

Question No : 3 - (Topic 1)

Click the Exhibit button.

Given this code from Class B:

25. A a1 = new A();

26. A a2 = new A();

27. A a3 = new A();

28. System.out.println(A.getInstanceCount());

What is the result?

```
 1. public class A {
 2.
 3.   private int counter = 0;
 4.
 5.   public static int getInstanceCount() {
 6.     return counter;
 7.   }
 8.
 9.   public A() {
10.     counter++;
11.   }
12.
13. }
```

A. Compilation of class A fails.
B. Line 28 prints the value 3 to System.out.
C. Line 28 prints the value 1 to System.out.
D. Compilation fails because of an error on line 28.
E. A runtime error occurs when line 25 executes.

Answer: A

Question No : 4 - (Topic 1)

Given:

```
20. public class CreditCard {
21.
22. private String cardID;
23. private Integer limit;
24. public String ownerName;
25.
26. public void setCardInformation(String cardID,
27. String ownerName,
28. Integer limit) {
29. this.cardID = cardID;
30. this.ownerName = ownerName;
31. this.limit = limit;
32. }
33. }
```

Which statement is true?

A. The cardID and limit variables break polymorphism.
B. The code demonstrates polymorphism.
C. The ownerName variable breaks encapsulation.
D. The setCardInformation method breaks encapsulation.
E. The class is fully encapsulated.

Answer: C

Question No : 5 - (Topic 1)

Given:

```
11. public class Yikes {
12.
13. public static void go(Long n) {System.out.println("Long ");}
14. public static void go(Short n) {System.out.println("Short ");}
15. public static void go(int n) {System.out.println("int ");}
16. public static void main(String [] args) {
17. short y = 6;
18. long z = 7;
19. go(y);
20. go(z);
21. }
22. }
```

What is the result?

A. An exception is thrown at runtime.
B. int Long
C. Compilation fails.
D. Short Long

Answer: B

Question No : 6 - (Topic 1)

Given:

```
11. public class ItemTest {
12. private final int id;
13. public ItemTest(int id) { this.id = id; }
14. public void updateId(int newId) { id = newId; }
```

15.

16. public static void main(String[] args) {

17. ItemTest fa = new ItemTest(42);

18. fa.updateId(69);

19. System.out.println(fa.id);

20. }

21. }

What is the result?

A. A new Item object is created with the preferred value in the id attribute.
B. The attribute id in the Item object is modified to the new value.
C. Compilation fails.
D. An exception is thrown at runtime.
E. The attribute id in the Item object remains unchanged.

Answer: C

Question No : 7 - (Topic 1)

Click the Exhibit button.

Given:

25. try {

26. A a = new A();

27. a.method1();

28. } catch (Exception e) {

29. System.out.print("an error occurred");

30. }

Which two statements are true if a NullPointerException is thrown on line 3 of class C?

(Choose two.)

```
1. public class A {
2.   public void method1() {
3.     B b = new B();
4.     b.method2();
5.     // more code here
6.   }
7. }

1. public class B {
2.   public void method2() {
3.     C c = new C();
4.     c.method3();
5.     // more code here
6.   }
7. }

1. public class C {
2.   public void method3() {
3.     // more code here
4.   }
5. }
```

A. The application will crash.
B. The code on line 29 will be executed.
C. The code on line 5 of class A will execute.
D. The exception will be propagated back to line 27.
E. The code on line 5 of class B will execute.

Answer: B,D

Question No : 8 - (Topic 1)

Given:

10. interface Jumper { public void jump(); }

...

20. class Animal {}

...

30. class Dog extends Animal {

31. Tail tail;

32. }

...

40. class Beagle extends Dog implements Jumper{

41. public void jump() {} 42. }

...

50. class Cat implements Jumper{

51. public void jump() {}

52. }

Which three are true? (Choose three.)

A. Cat is-a Jumper
B. Cat is-a Animal
C. Dog is-a Jumper
D. Dog is-a Animal
E. Beagle has-a Jumper
F. Cat has-a Animal
G. Beagle has-a Tail

Answer: A,D,G

Question No : 9 - (Topic 1)

Given:

11. public static void main(String[] args) {

12. Object obj = new int[] { 1, 2, 3 };

13. int[] someArray = (int[])obj;

14. for (int i : someArray) System.out.print(i + " ");

15. }

What is the result?

A. Compilation fails because of an error in line 13.
B. A ClassCastException is thrown at runtime.
C. 1 2 3
D. Compilation fails because of an error in line 14.
E. Compilation fails because of an error in line 12.

Answer: C

Question No : 10 - (Topic 1)

Given:

```
10. class Line {
11. public static class Point {}
12. }
13.
14. class Triangle {
15. // insert code here
16. }
```

Which code, inserted at line 15, creates an instance of the Point class defined in Line?

A. Line l = new Line() ; l.Point p = new l.Point();
B. Line.Point p = new Line.Point();
C. The Point class cannot be instatiated at line 15.
D. Point p = new Point();

Answer: B

Question No : 11 - (Topic 1)

Click the Exhibit button.

What is the result?

```
 1.  class Computation extends Thread {
 2.
 3.    private int num;
 4.    private boolean isComplete;
 5.    private int result;
 6.
 7.    public Computation(int num) { this.num
= num; }
 8.
 9.    public synchronized void run() {
10.      result = num * 2;
11.      isComplete = true;
12.      notify();
13.    }
14.
15.    public synchronized int getResult() {
16.      while (!isComplete) {
17.        try {
18.          wait();
19.        } catch (InterruptedException e)
{}
20.      }
21.      return result;
22.    }
23.
24.    public static void main(String[] args)
{
25.      Computation[] computations = new
Computation[4];
26.      for (int i = 0; i <
computations.length; i++) {
27.        computations[i] = new
Computation(i);
28.        computations[i].start();
29.      }
30.      for (Computation c : computations)
31.        System.out.print(c.getResult() + "
");
32.    }
33.  }
```

A. The code will deadlock.
B. The code may run with output "2 0 6 4".
C. The code may run with no output.
D. The code may run with output "0 6".
E. An exception is thrown at runtime.
F. The code may run with output "0 2 4 6".

Answer: F

Question No : 12 - (Topic 1)

Given:

1. public class Blip {

2. protected int blipvert(int x) { return 0; }

3. }

4. class Vert extends Blip {

5. // insert code here

6. }

Which five methods, inserted independently at line 5, will compile? (Choose five.)

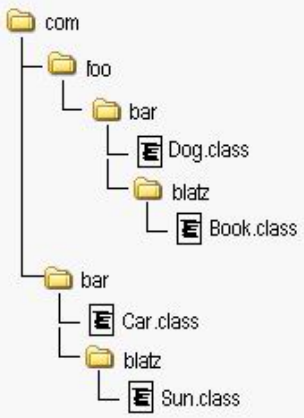
A. protected int blipvert(long x) { return 0; }
B. protected long blipvert(int x) { return 0; }
C. private int blipvert(long x) { return 0; }
D. private int blipvert(int x) { return 0; }
E. public int blipvert(int x) { return 0; }
F. protected long blipvert(long x) { return 0; }
G. protected long blipvert(int x, int y) { return 0; }

Answer: A,C,E,F,G

Question No : 13 DRAG DROP - (Topic 1)

Click the Task button.

The image at right represents a complete package structure for a set of classes: "com" is the beginning of the fully-qualified package name for all classes.
Given this package structure, insert the code needed to make the Car class compile and run successfully.
All three placeholders must be filled. If fewer than three statements are needed, use the "// blank" option.



place here

Place here

Place here

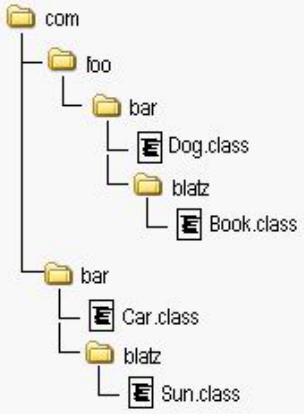
```
public class Car {
  Book book;
  Dog dog;
}
```

import com.foo.bar.blatz.*;	package com.foo.bar.blatz;
import com.bar.*;	import com.*;
package com.bar;	package com;
import com.foo.*;	// blank
import com.foo.bar.*;	import com.foo.bar.Book;

Done

Answer:

The image at right represents a complete package structure for a set of classes: "com" is the beginning of the fully-qualified package name for all classes.
Given this package structure, insert the code needed to make the Car class compile and run successfully.
All three placeholders must be filled. If fewer than three statements are needed, use the "// blank" option.



import com.foo.bar.*;

import com.foo.bar.Book;

package com.foo.bar.blatz;

```
public class Car {
  Book book;
  Dog dog;
}
```

import com.foo.bar.blatz.*;	package com.foo.bar.blatz;
import com.bar.*;	import com.*;
package com.bar;	package com;
import com.foo.*;	// blank
import com.foo.bar.*;	import com.foo.bar.Book;

Done

Question No : 14 - (Topic 1)

Given:

12. System.out.format("Pi is approximately %d.", Math.PI);

What is the result?

A. An exception is thrown at runtime.
B. Compilation fails.
C. Pi is approximately 3.
D. Pi is approximately 3.141593.

Answer: A

Question No : 15 - (Topic 1)

Given the command line java Pass2 and:

15. public class Pass2 {

16. public void main(String [] args) {

17. int x = 6;

18. Pass2 p = new Pass2();

19. p.doStuff(x);

20. System.out.print(" main x = " + x);

21. }

22.

23. void doStuff(int x) {

24. System.out.print(" doStuff x = " + x++);

25. }

26. }

What is the result?

A. doStuff x = 6 main x = 6
B. Compilation fails.
C. doStuff x = 6 main x = 7
D. An exception is thrown at runtime.
E. doStuff x = 7 main x = 6
F. doStuff x = 7 main x = 7

Answer: D

Question No : 16 - (Topic 1)

Given:

13. public static void search(List<String> list) {

14. list.clear();

15. list.add("b");

16. list.add("a");

17. list.add("c");

18. System.out.println(Collections.binarySearch(list, "a"));

19. }

What is the result of calling search with a valid List implementation?

A. 0
B. The result is undefined.
C. a
D. 2
E. 1
F. c
G. b

Answer: B

Question No : 17 - (Topic 1)

Click the Exhibit button.

Given: ClassA a = new ClassA();

a.methodA();

What is the result?

```
10. public class ClassA {
11.   public void methodA() {
12.     ClassB classB = new ClassB();
13.     classB.getValue();
14.   }
15. }

And:

20. class ClassB {
21.   public ClassC classC;
22.
23.   public String getValue() {
24.     return classC.getValue();
25.   }
26. }

And:

30. class ClassC {
31.   public String value;
32.
33.   public String getValue() {
34.     value = "ClassB";
35.     return value;
36.   }
37. }
```

A. The code runs with no output.
B. Compilation fails.
C. An exception is thrown at runtime.
D. ClassC is displayed.

Answer: C

Question No : 18 - (Topic 1)

Given:

```
11. public static void test(String str) {
12. int check = 4;
13. if (check = str.length()) {
14. System.out.print(str.charAt(check -= 1) +", ");
15. } else {
16. System.out.print(str.charAt(0) + ", ");
17. }
18. }
```

and the invocation:

```
21. test("four");
22. test("tee");
23. test("to");
```

What is the result?

A. An exception is thrown at runtime.
B. r, e, o,
C. Compilation fails.
D. r, t, t,

Answer: C

Question No : 19 - (Topic 1)

A JavaBeans component has the following field:

```
11. private boolean enabled;
```

Which two pairs of method declarations follow the JavaBeans standard for accessing this

field? (Choose two.)

A. public boolean setEnabled(boolean enabled)
public boolean getEnabled()
B. public void setEnabled(boolean enabled)
public void isEnabled()
C. public void setEnabled(boolean enabled)
public boolean getEnabled()
D. public void setEnabled(boolean enabled)
public boolean isEnabled()

Answer: C,D

Question No : 20 - (Topic 1)

Given:

```
11. public void genNumbers() {
12. ArrayList numbers = new ArrayList();
13. for (int i=0; i<10; i++) {
14. int value = i * ((int) Math.random());
15. Integer intObj = new Integer(value);
16. numbers.add(intObj);
17. }
18. System.out.println(numbers);
19. }
```

Which line of code marks the earliest point that an object referenced by intObj becomes a candidate for garbage collection?

A. Line 19
B. The object is NOT a candidate for garbage collection.
C. Line 17
D. Line 16
E. Line 18

Answer: A

Question No : 21 - (Topic 1)

Given:

11. String test = "This is a test";

12. String[] tokens = test.split("\s");

13. System.out.println(tokens.length);

What is the result?

A. An exception is thrown at runtime.
B. 1
C. 4
D. Compilation fails.
E. 0

Answer: D

Question No : 22 - (Topic 1)

Given:

12. System.out.format("Pi is approximately %d.", Math.PI);

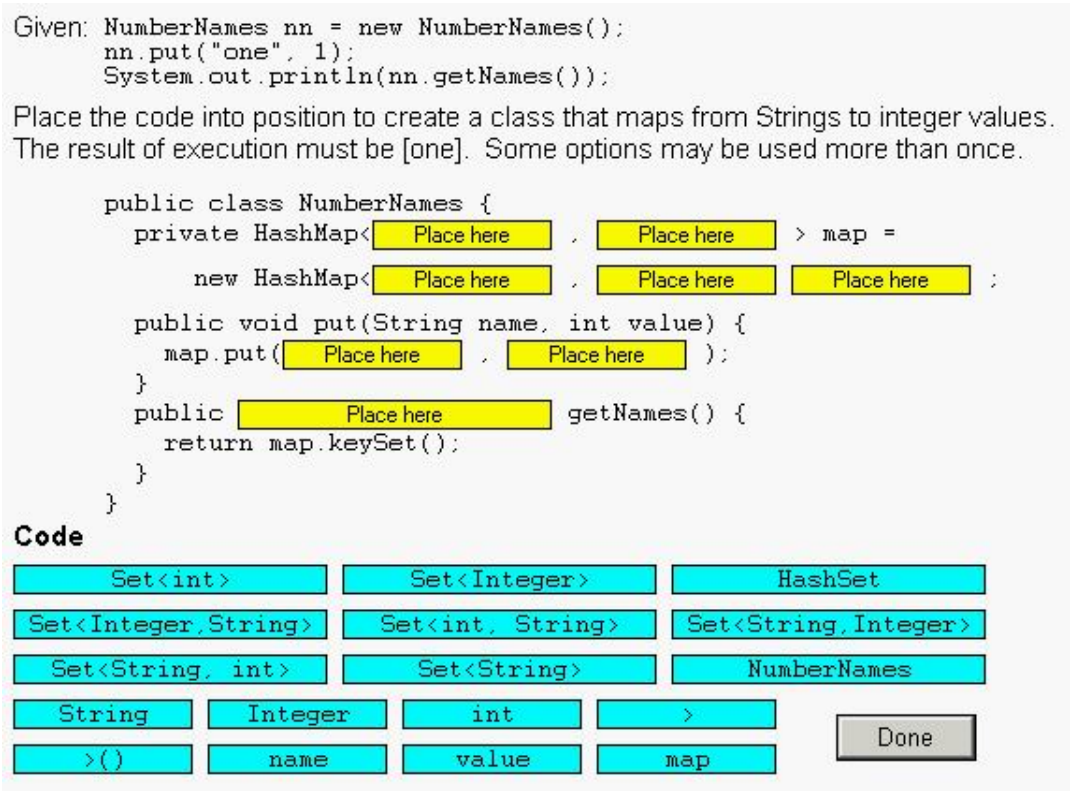
What is the result?

A. An exception is thrown at runtime.
B. Pi is approximately 3.
C. Pi is approximately 3.141593.
D. Compilation fails.

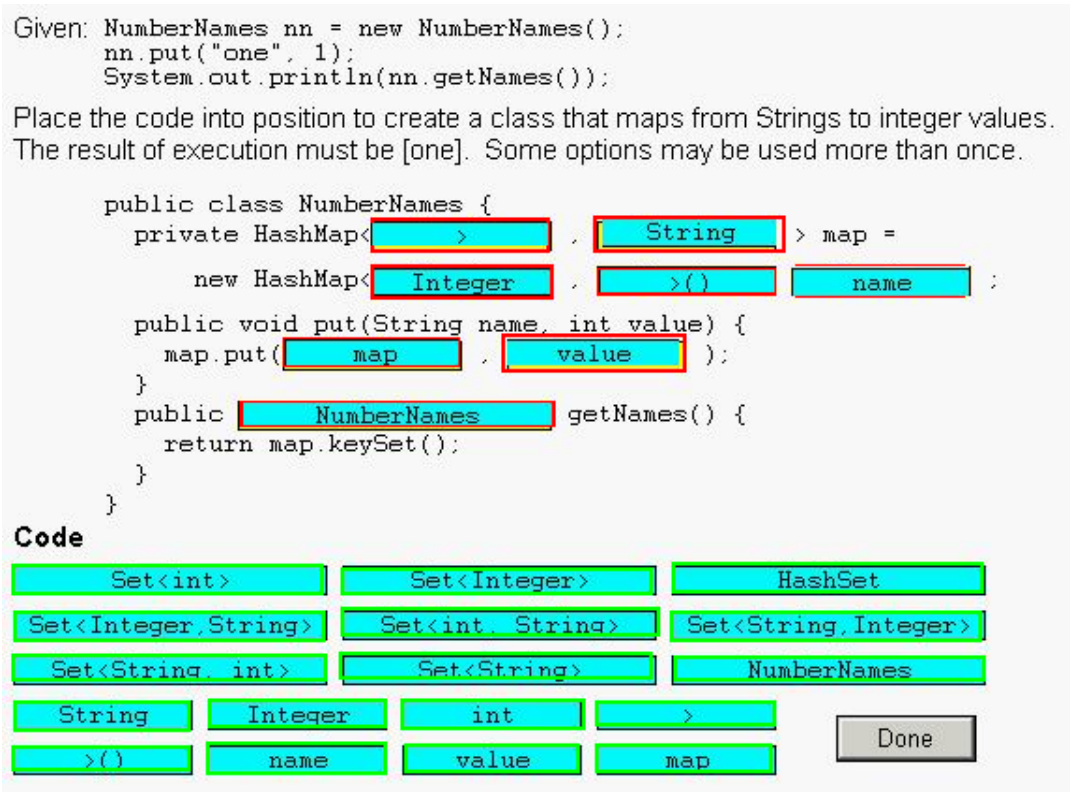
Answer: A

Question No : 23 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 24 - (Topic 1)

Given:

```
11. static class A {
12. void process() throws Exception { throw new Exception(); }
13. }
14. static class B extends A {
15. void process() { System.out.println("B "); }
16. }
17. public static void main(String[] args) {
18. A a = new B();
19. a.process();
20. }
```

What is the result?

A. Compilation fails because of an error in line 19.
B. An exception is thrown at runtime.
C. B
D. Compilation fails because of an error in line 18.
E. Compilation fails because of an error in line 15.
F. The code runs with no output.

Answer: A

Question No : 25 - (Topic 1)

Given:

```
1. interface A { public void aMethod(); }
```

```
2. interface B { public void bMethod(); }
3. interface C extends A,B { public void cMethod(); }
4. class D implements B {
5. public void bMethod(){}
6. }
7. class E extends D implements C {
8. public void aMethod(){}
9. public void bMethod(){}
10. public void cMethod(){}
11. }
```

What is the result?

A. If you define D e = new E(), then e.bMethod() invokes the version of bMethod() defined in Line 5.
B. If you define D e = (D)(new E()), then e.bMethod() invokes the version of bMethod() defined in Line 5.
C. Compilation fails because of an error in line 9.
D. If you define D e = (D)(new E()), then e.bMethod() invokes the version of bMethod() defined in Line 9.
E. Compilation fails because of an error in line 3.
F. Compilation fails because of an error in line 7.

Answer: D

Question No : 26 - (Topic 1)

Click the Exhibit button.

What is the output of the program shown in the exhibit?

```
10. class Foo {
11.  private int x;
12.  public Foo( int x ) { this.x = x; }
13.  public void setX( int x ) { this.x = x;
}
14.  public int getX() { return x; }
15. }
16.
17. public class Gamma {
18.
19.   static Foo fooBar( Foo foo ) {
20.     foo = new Foo( 100 );
21.     return foo;
22.   }
23.
24.   public static void main( String[] args
) {
25.   Foo foo = new Foo( 300 );
26.   System.out.print( foo.getX() + "-" );
27.
28.   Foo fooFoo = fooBar( foo );
29.   System.out.print( foo.getX() + "-" );
30.   System.out.print( fooFoo.getX() + "-"
);
31.
32.   foo = fooBar( fooFoo );
33.   System.out.print( foo.getX() + "-" );
34.   System.out.print( fooFoo.getX() );
35.   }
36. }
```

A. 300-300-100-100-100
B. 300-300-300-100-100
C. 300-300-300-300-100
D. 300-100-100-100-100

Answer: A

Question No : 27 - (Topic 1)

Given:

12. NumberFormat nf = NumberFormat.getInstance();

13. nf.setMaximumFractionDigits(4);

14. nf.setMinimumFractionDigits(2);

15. String a = nf.format(3.1415926);

16. String b = nf.format(2);

Which two statements are true about the result if the default locale is Locale.US? (Choose two.)

A. The value of b is 2.00.
B. The value of a is 3.141.
C. The value of a is 3.14.
D. The value of b is 2.0000.
E. The value of a is 3.1415.
F. The value of a is 3.1416.
G. The value of b is 2.

Answer: A,F

Question No : 28 - (Topic 1)

Given:

11. // insert code here

12. private N min, max;

13. public N getMin() { return min; }

14. public N getMax() { return max; }

15. public void add(N added) {

16. if (min == null || added.doubleValue() < min.doubleValue()) 17. min = added;

18. if (max == null || added.doubleValue() > max.doubleValue()) 19. max = added;

20. }

21. }

Which two, inserted at line 11, will allow the code to compile? (Choose two.)

A. public class MinMax<? extends Object> {
B. public class MinMax<N extends Integer> {

C. public class MinMax<N extends Object> {
D. public class MinMax<N extends Number> {
E. public class MinMax<?> {
F. public class MinMax<? extends Number> {

Answer: B,D

Question No : 29 - (Topic 1)

Given:

```
11. class A {
12. public void process() { System.out.print("A,"); }
13. class B extends A {
14. public void process() throws IOException {
15. super.process();
16. System.out.print("B,");
17. throw new IOException();
18. }
19. public static void main(String[] args) {
20. try { new B().process(); }
21. catch (IOException e) { System.out.println("Exception"); }}
```

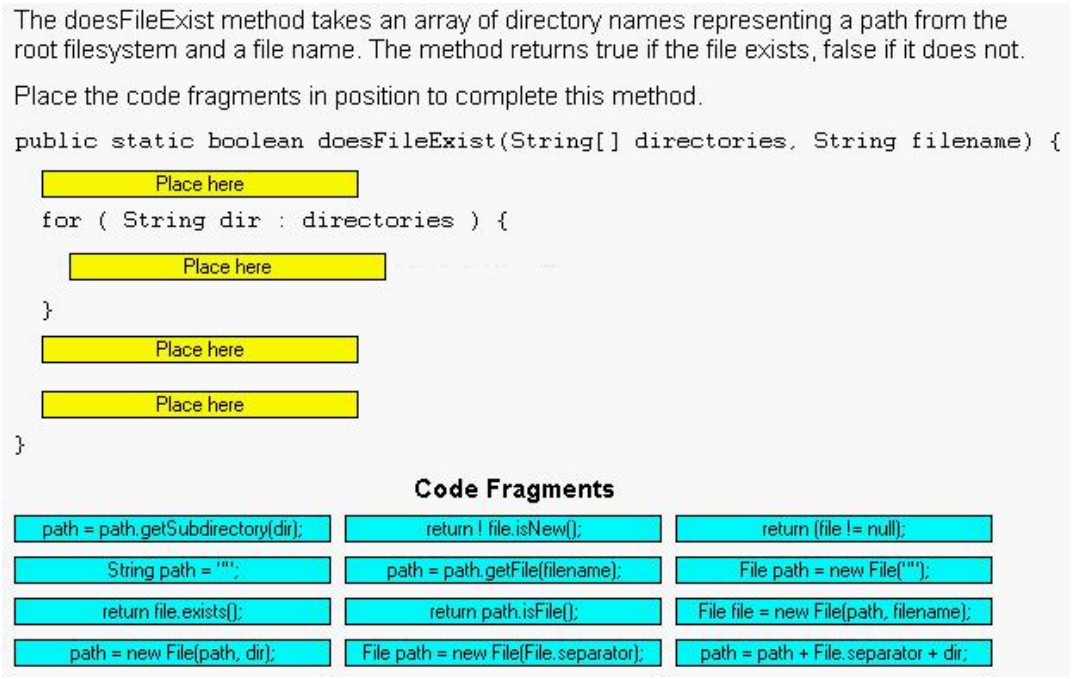
What is the result?

A. Compilation fails because of an error in line 14.
B. Exception
C. A,B,Exception
D. Compilation fails because of an error in line 20.
E. A NullPointerException is thrown at runtime.

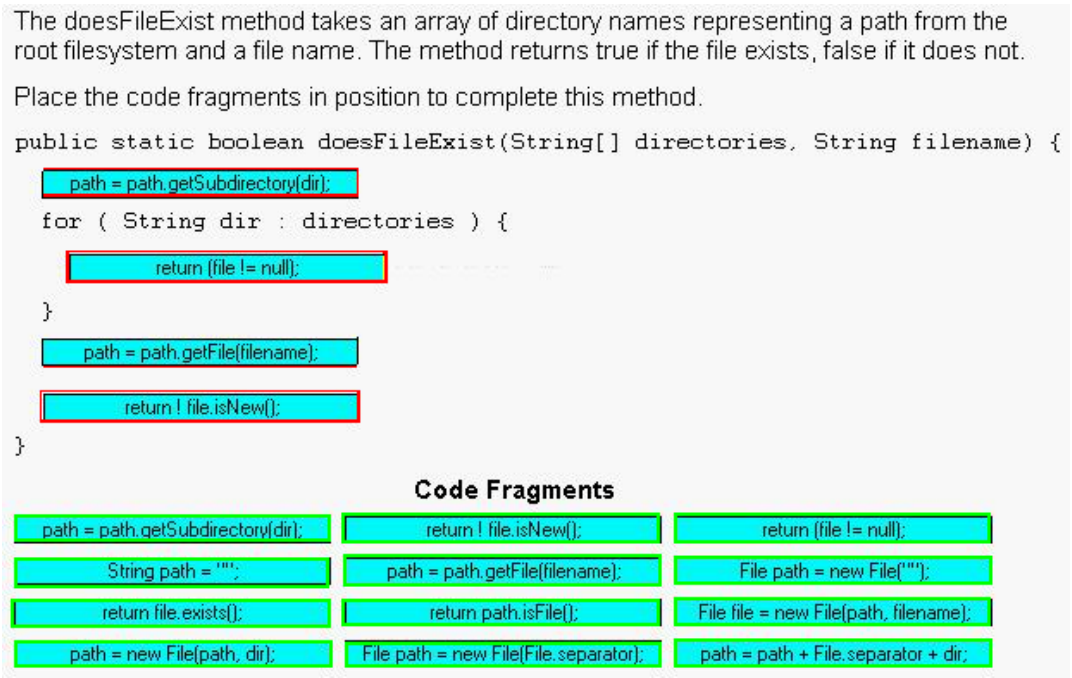
Answer: A

Question No : 30 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 31 - (Topic 1)

Given:

```
12. import java.io.*;
13. public class Forest implements Serializable {
14. private Tree tree = new Tree();
15. public static void main(String [] args) {
16. Forest f = new Forest();
17. try {
18. FileOutputStream fs = new FileOutputStream("Forest.ser");
19. ObjectOutputStream os = new ObjectOutputStream(fs);
20. os.writeObject(f); os.close();
21. } catch (Exception ex) { ex.printStackTrace(); }
22. } }
23.
24. class Tree { }
```

What is the result?

A. An instance of Forest and an instance of Tree are both serialized.
B. An instance of Forest is serialized.
C. Compilation fails.
D. An exception is thrown at runtime.

Answer: D

Question No : 32 - (Topic 1)

Click the Exhibit button.

What is the result?

```
11. public class Bootchy {
12.   int bootch;
13.   String snootch;
14.
15.   public Bootchy() {
16.     this("snootchy");
17.     System.out.print("first ");
18.   }
19.
20.   public Bootchy(String snootch) {
21.     this(420, "snootchy");
22.     System.out.print("second ");
23.   }
24.
25.   public Bootchy(int bootch, String
snootch) {
26.     this.bootch = bootch;
27.     this.snootch = snootch;
28.     System.out.print("third ");
29.   }
30.
31.   public static void main(String[] args)
{
32.     Bootchy b = new Bootchy();
33.     System.out.print(b.snootch + " " +
b.bootch);
34.   }
35. }
```

A. first second third snootchy 420
B. snootchy 420 first second third
C. third first second snootchy 420
D. first second first third snootchy 420
E. snootchy 420 third second first
F. third second first snootchy 420

Answer: F

Question No : 33 - (Topic 1)

Given:

1. public class TestOne implements Runnable {

2. public static void main (String[] args) throws Exception {

3. Thread t = new Thread(new TestOne());

```
4. t.start();
5. System.out.print("Started");
6. t.join();
7. System.out.print("Complete");
8. }
9. public void run() {
10. for (int i = 0; i < 4; i++) {
11. System.out.print(i);
12. }
13. }
14. }
```

What can be a result?

A. The code executes and prints "StartedComplete".
B. Compilation fails.
C. The code executes and prints "Started0123Complete".
D. The code executes and prints "StartedComplete0123".
E. An exception is thrown at runtime.

Answer: C

Question No : 34 - (Topic 1)

Given:

```
1. import java.util.*;
2. public class WrappedString {
3. private String s;
4. public WrappedString(String s) { this.s = s; }
5. public static void main(String[] args) {
```

6. HashSet<Object> hs = new HashSet<Object>();

7. WrappedString ws1 = new WrappedString("aardvark");

8. WrappedString ws2 = new WrappedString("aardvark");

9. String s1 = new String("aardvark");

10. String s2 = new String("aardvark");

11. hs.add(ws1); hs.add(ws2); hs.add(s1); hs.add(s2);

12. System.out.println(hs.size()); } }

What is the result?

A. Compilation fails.
B. 1
C. 4
D. 2
E. 0
F. An exception is thrown at runtime.
G. 3

Answer: G

Question No : 35 - (Topic 1)

Given:

31. // some code here

32. try {

33. // some code here

34. } catch (SomeException se) {

35. // some code here

36. } finally {

37. // some code here

38. }

Under which three circumstances will the code on line 37 be executed? (Choose three.)

A. The code on line 33 executes successfully.
B. The code on line 33 throws an exception.
C. The instance gets garbage collected.
D. The code on line 31 throws an exception.
E. The code on line 35 throws an exception.

Answer: A,B,E

Question No : 36 - (Topic 1)

Given:

```
11. public static void main(String[] args) {
12. try {
13. args = null;
14. args[0] = "test";
15. System.out.println(args[0]);
16. } catch (Exception ex) {
17. System.out.println("Exception");
18. } catch (NullPointerException npe) {
19. System.out.println("NullPointerException");
20. }
21. }
```

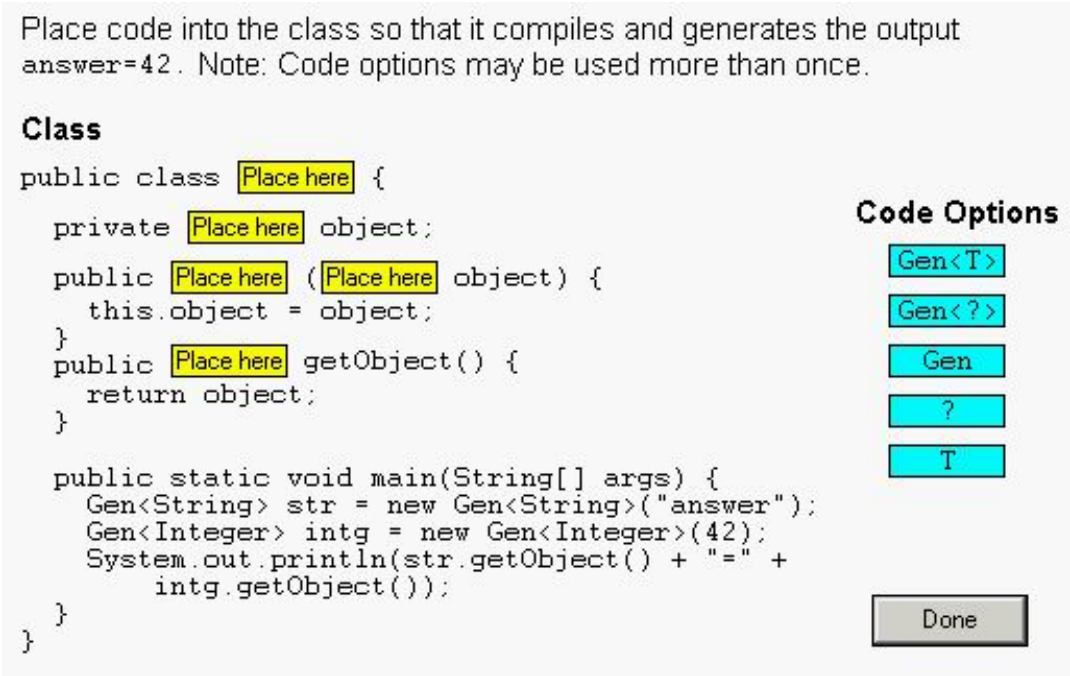
What is the result?

A. test
B. NullPointerException
C. Exception
D. Compilation fails.

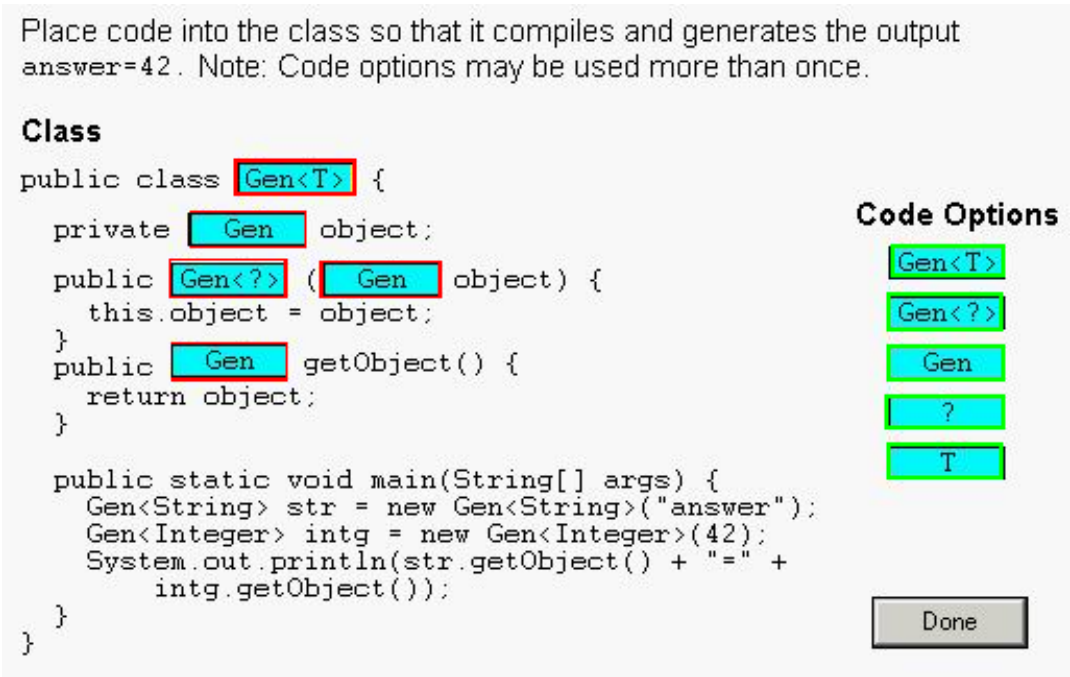
Answer: D

Question No : 37 DRAG DROP - (Topic 1)

Click the Task button.

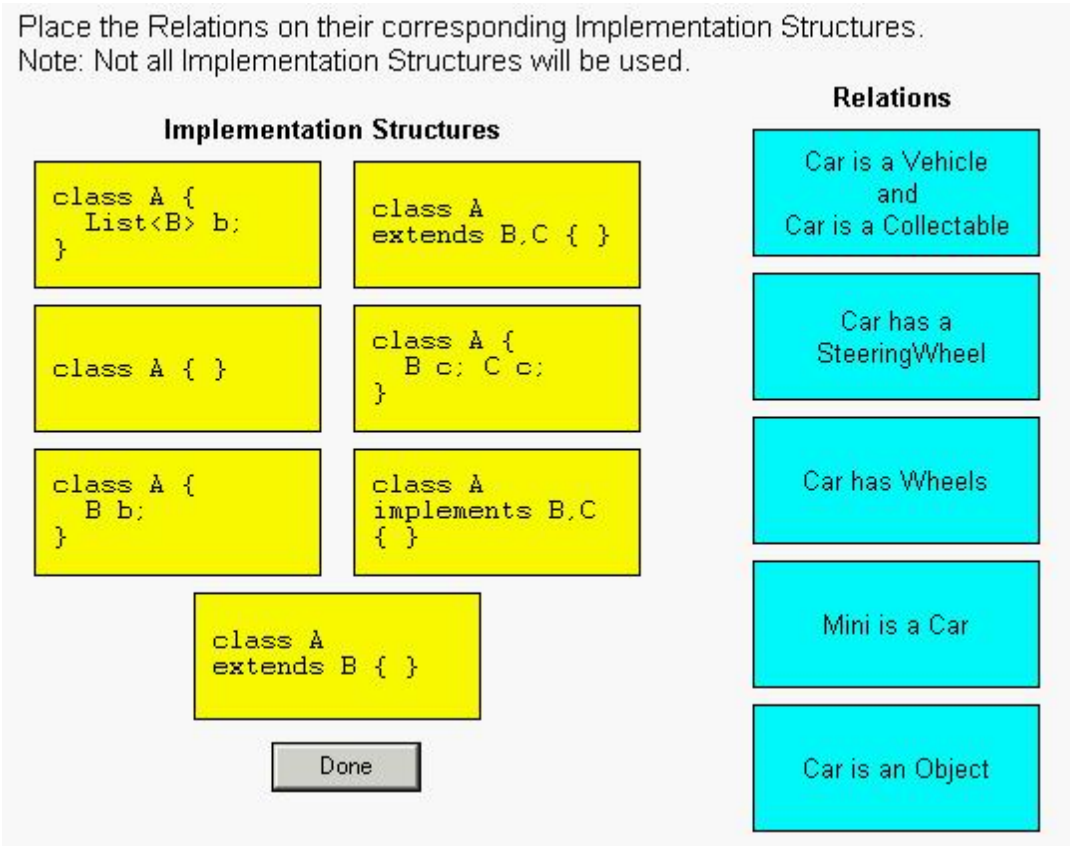


Answer:

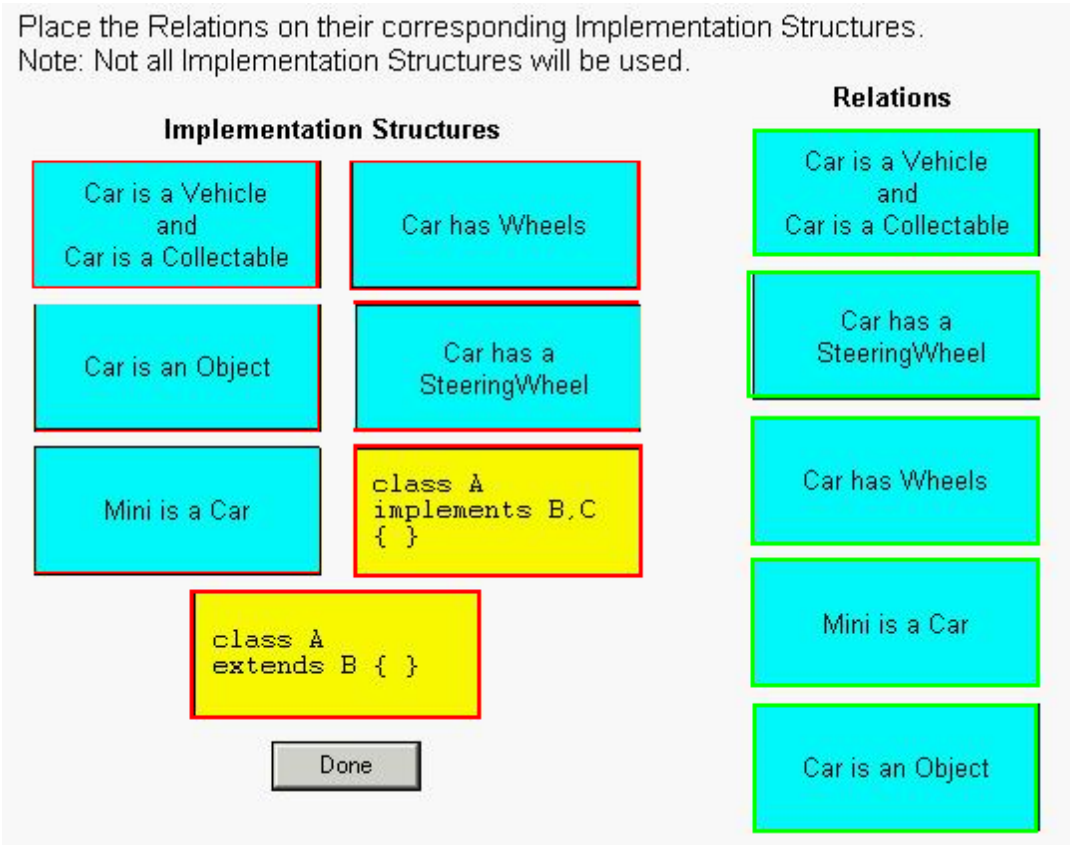


Question No : 38 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 39 - (Topic 1)

Given a pre-generics implementation of a method:

11. public static int sum(List list) {

12. int sum = 0;

13. for (Iterator iter = list.iterator(); iter.hasNext();) {

14. int i = ((Integer)iter.next()).intValue();

15. sum += i;

16. }

17. return sum;

18. }

Which three changes must be made to the method sum to use generics? (Choose three.)

A. replace line 13 with "for (int i : intList) {"
B. replace the method declaration with "sum(List<int> intList)"
C. replace the method declaration with "sum(List<Integer> intList)"
D. replace line 14 with "int i = iter.next();"
E. replace line 13 with "for (Iterator iter : intList) {"
F. remove line 14

Answer: A,C,F

Question No : 40 - (Topic 1)

Given:

```
1. public class Threads5 {
2. public static void main (String[] args) {
3. new Thread(new Runnable() {
4. public void run() {
5. System.out.print("bar");
6. }}).start();
7. }
8. }
```

What is the result?

A. Compilation fails.
B. An exception is thrown at runtime.
C. The code executes normally, but nothing prints.
D. The code executes normally and prints "bar".

Answer: D

Question No : 41 - (Topic 1)

Given:

```
1. public class Plant {
2. private String name;
3. public Plant(String name) { this.name = name; }
4. public String getName() { return name; }
5. }
```

```
1. public class Tree extends Plant {
2. public void growFruit() { }
3. public void dropLeaves() { }
4. }
```

Which statement is true?

A. The code will compile if public Tree() { Plant(); } is added to the Tree class.
B. The code will compile if public Plant() { this("fern"); } is added to the Plant class.
C. The code will compile without changes.
D. The code will compile if public Plant() { Tree(); } is added to the Plant class.
E. The code will compile if public Plant() { Plant("fern"); } is added to the Plant class.

Answer: B

Question No : 42 - (Topic 1)

Given:

```
1. public interface A {
2. String DEFAULT_GREETING = "Hello World";
3. public void method1();
4. }
```

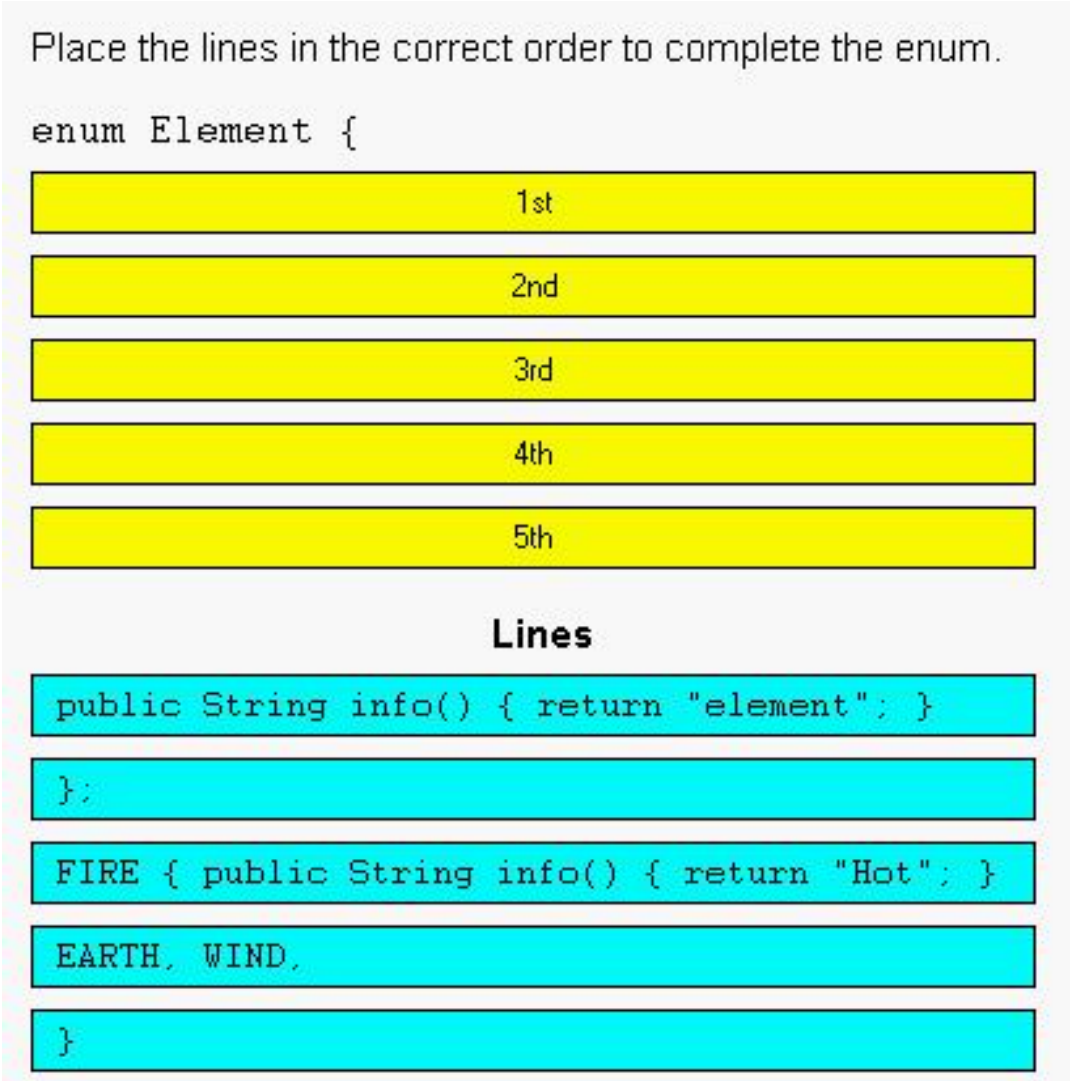
A programmer wants to create an interface called B that has A as its parent. Which interface declaration is correct?

A. public interface B extends A {}
B. public interface B inheritsFrom A {}
C. public interface B implements A {}
D. public interface B instanceOf A {}

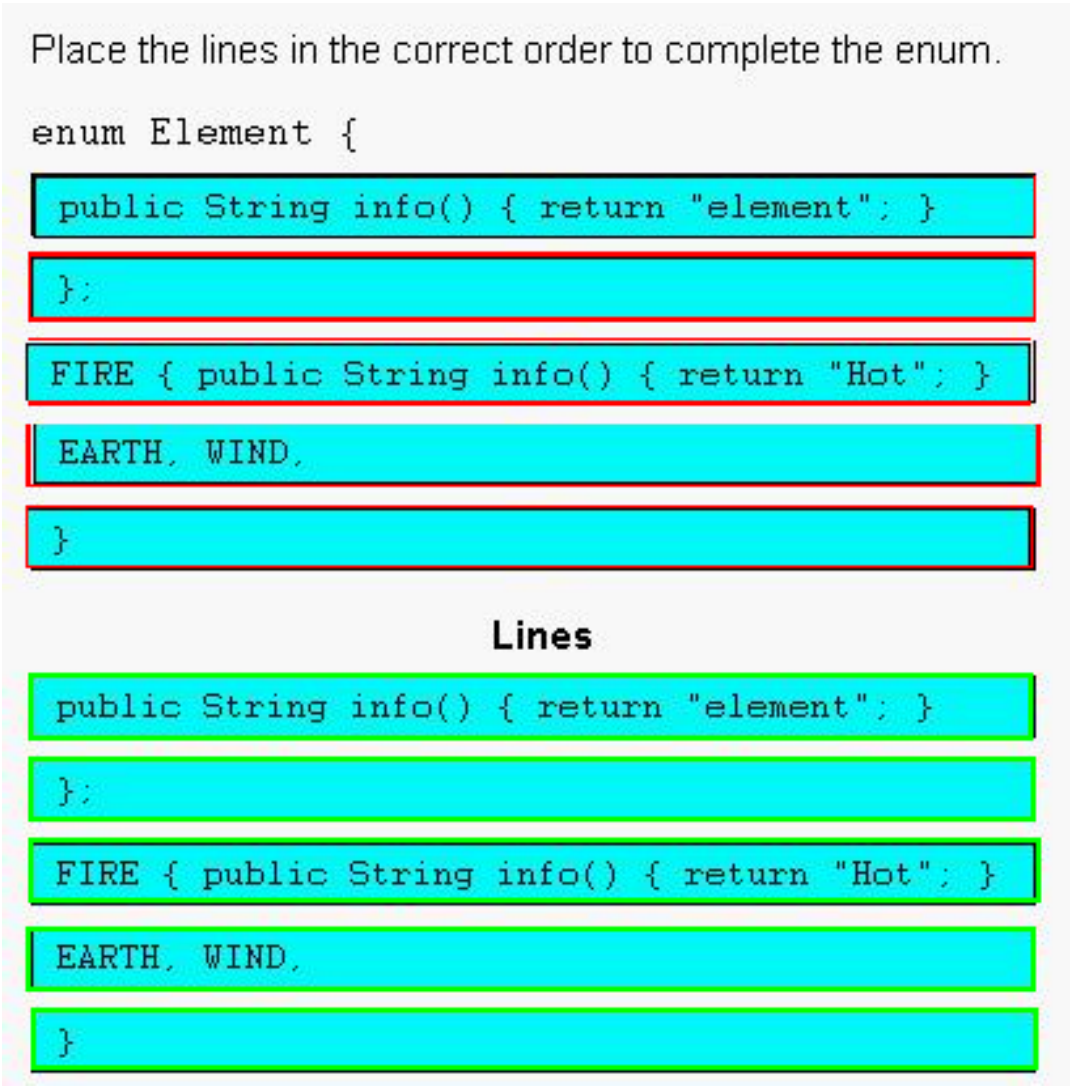
Answer: A

Question No : 43 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 44 - (Topic 1)

Given:

11. rbo = new ReallyBigObject();

12. // more code here

13. rbo = null;

14. /* insert code here */

Which statement should be placed at line 14 to suggest that the virtual machine expend effort toward recycling the memory used by the object rbo?

A. System.freeMemory();
B. Runtime.gc();
C. Runtime.getRuntime().freeMemory();
D. Runtime.getRuntime().growHeap();
E. System.gc();

Answer: E

Question No : 45 - (Topic 1)

Given:

```
11. class A {
12. public void process() { System.out.print("A,"); }
13. class B extends A {
14. public void process() throws IOException {
15. super.process();
16. System.out.print("B,");
17. throw new IOException();
18. }
19. public static void main(String[] args) {
20. try { new B().process(); }
21. catch (IOException e) { System.out.println("Exception"); }
```

What is the result?

A. A NullPointerException is thrown at runtime.
B. A,B,Exception
C. Compilation fails because of an error in line 14.
D. Compilation fails because of an error in line 20.
E. Exception

Answer: C

Question No : 46 - (Topic 1)

Which two statements are true about has-a and is-a relationships? (Choose two.)

A. Interfaces must be used when creating a has-a relationship.
B. Instance variables can be used when creating a has-a relationship.
C. Inheritance represents an is-a relationship.
D. Inheritance represents a has-a relationship.

Answer: B,C

Question No : 47 DRAG DROP - (Topic 1)

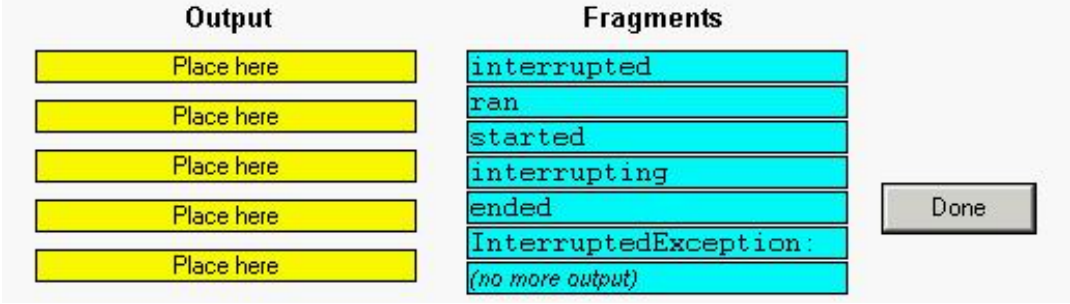
Click the Task button.

Given:

```
10.  Runnable r = new Runnable() {
11.    public void run() {
12.      try {
13.        Thread.sleep(1000);
14.      } catch (InterruptedException e) {
15.        System.out.println("interrupted");
16.      }
17.      System.out.println("ran");
18.    }
19.  };
20.  Thread t = new Thread(r);
21.  t.start();
22.  System.out.println("started");
23.  t.sleep(2000);
24.  System.out.println("interrupting");
25.  t.interrupt();
26.  System.out.println("ended");
```

Assume that sleep(n) executes in exactly n milliseconds, and all other code executes in an insignificant amount of time.

Place the fragments in the output area to show the result of running this code.



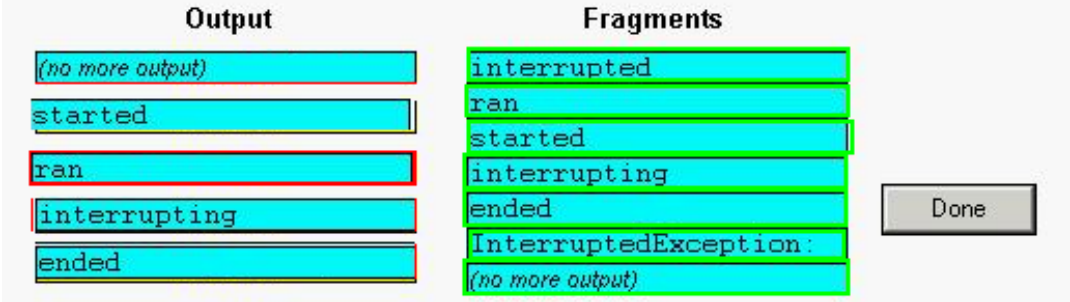
Answer:

Given:

```
10.  Runnable r = new Runnable() {
11.    public void run() {
12.      try {
13.        Thread.sleep(1000);
14.      } catch (InterruptedException e) {
15.        System.out.println("interrupted");
16.      }
17.      System.out.println("ran");
18.    }
19.  };
20.  Thread t = new Thread(r);
21.  t.start();
22.  System.out.println("started");
23.  t.sleep(2000);
24.  System.out.println("interrupting");
25.  t.interrupt();
26.  System.out.println("ended");
```

Assume that sleep(n) executes in exactly n milliseconds, and all other code executes in an insignificant amount of time.

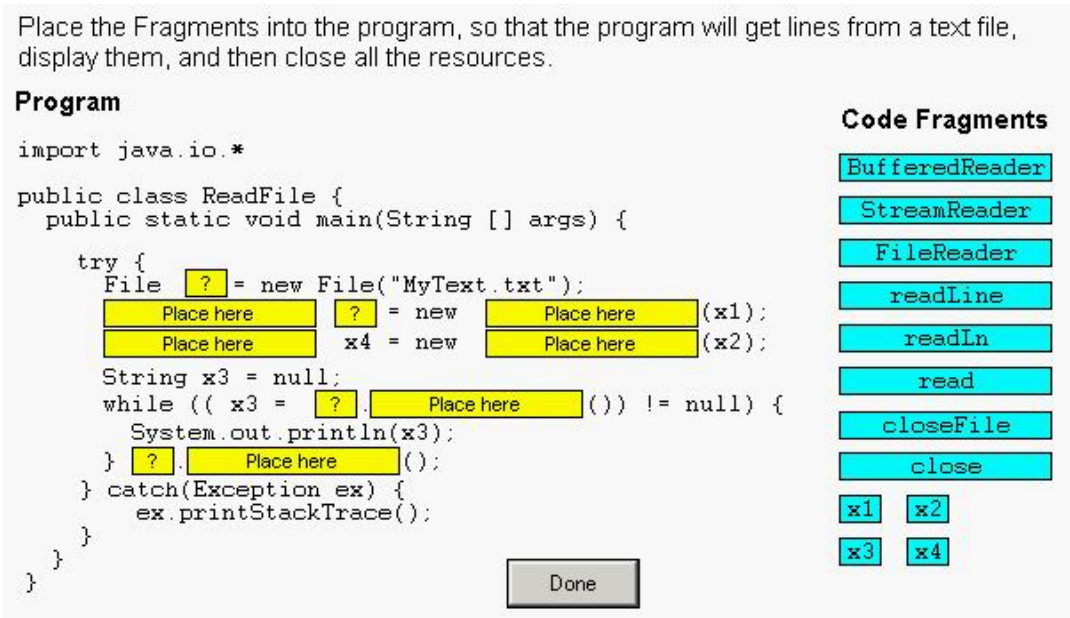
Place the fragments in the output area to show the result of running this code.



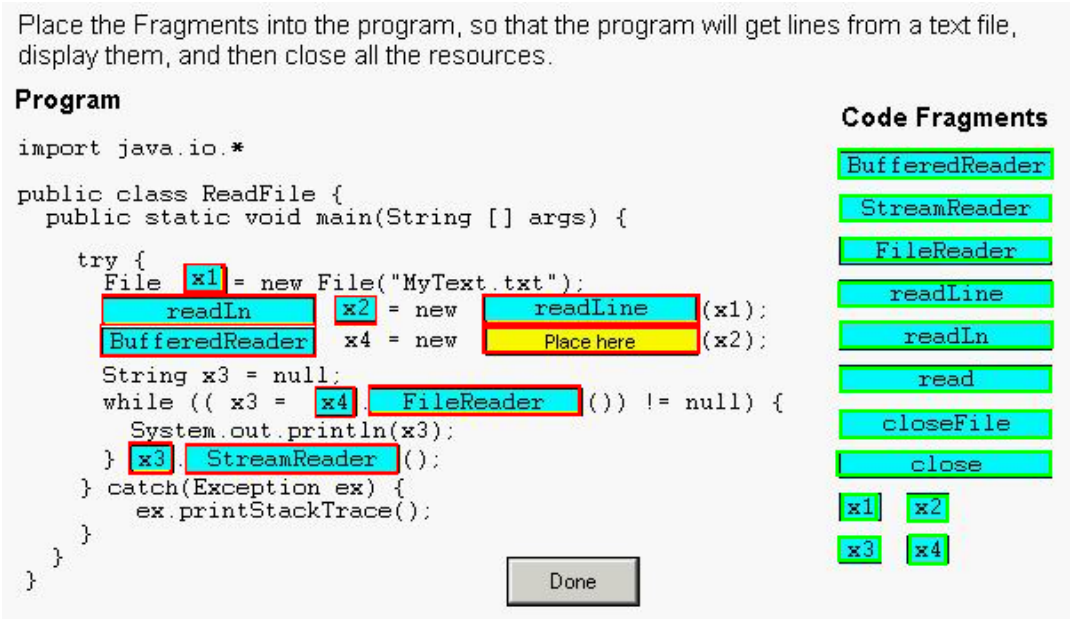
Question No : 48 DRAG DROP - (Topic 1)

Click the Task button.

Place the Fragments into the program, so that the program will get lines from a text file, display them, and then close all the resources.



Answer:



Question No : 49 - (Topic 1)

Click the Exhibit button.

Which two statements are true if this class is compiled and run? (Choose two.)

```
 1.  import java.util.*;
 2.
 3.  public class NameList {
 4.    private List names = new ArrayList();
 5.    public synchronized void add(String
name) { names.add(name); }
 6.    public synchronized void printAll() {
 7.      for (int i = 0; i < names.size();
i++) {
 8.        System.out.print(names.get(i) + "
");
 9.      }
10.    }
11.    public static void main(String[] args)
{
12.      final NameList sl = new NameList();
13.      for (int i = 0; i < 2; i++) {
14.        new Thread() {
15.          public void run() {
16.            sl.add("A");
17.            sl.add("B");
18.            sl.add("C");
19.            sl.printAll();
20.          }
21.        }.start();
22.      }
23.    }
24.  }
```

A. The code may run with no output, exiting normally.
B. The code may run with output "A A A B C A B C C ", then exit.
C. The code may run with output "A B A B C C ", then exit.
D. An exception may be thrown at runtime.
E. The code may run with no output, without exiting.
F. The code may run with output "A B C A B C A B C ", then exit.
G. The code may run with output "A B C A A B C A B C ", then exit.

Answer: F,G

Question No : 50 - (Topic 1)

Click the Exhibit button.

Given:

ClassA a = new ClassA();

a.methodA();

What is the result?

```
10. public class ClassA {
11.   public void methodA() {
12.     ClassB classB = new ClassB();
13.     classB.getValue();
14.   }
15. }

And:

20. class ClassB {
21.   public ClassC classC;
22.
23.   public String getValue() {
24.     return classC.getValue();
25.   }
26. }

And:

30. class ClassC {
31.   public String value;
32.
33.   public String getValue() {
34.     value = "ClassB";
35.     return value;
36.   }
37. }
```

A. Compilation fails.
B. ClassC is displayed.
C. The code runs with no output.
D. An exception is thrown at runtime.

Answer: D

Question No : 51 - (Topic 1)

Given:

```
1. public class TestString1 {
2. public static void main(String[] args) {
3. String str = "420";
4. str += 42;
5. System.out.print(str);
6. }
7. }
```

What is the output?

A. Compilation fails.
B. 42042
C. An exception is thrown at runtime.
D. 462
E. 42
F. 420

Answer: B

Question No : 52 - (Topic 1)

Given a correctly compiled class whose source code is:

```
1. package com.sun.sjcp;
2. public class Commander {
3. public static void main(String[] args) {
4. // more code here
5. }
6. }
```

Assume that the class file is located in /foo/com/sun/sjcp/, the current directory is /foo/, and that the classpath contains "." (current directory).

Which command line correctly runs Commander?

A. java Commander
B. java com/sun/sjcp/Commander
C. java com.sun.sjcp.Commander
D. java -cp com/sun/sjcp Commander
E. java -cp com.sun.sjcp Commander

Answer: C

Question No : 53 - (Topic 1)

Given a class Repetition:

```
1. package utils;
2.
3. public class Repetition {
4. public static String twice(String s) { return s + s; }
5. }
```

and given another class Demo:

```
1. // insert code here
2.
3. public class Demo {
4. public static void main(String[] args) {
5. System.out.println(twice("pizza"));
6. }
7. }
```

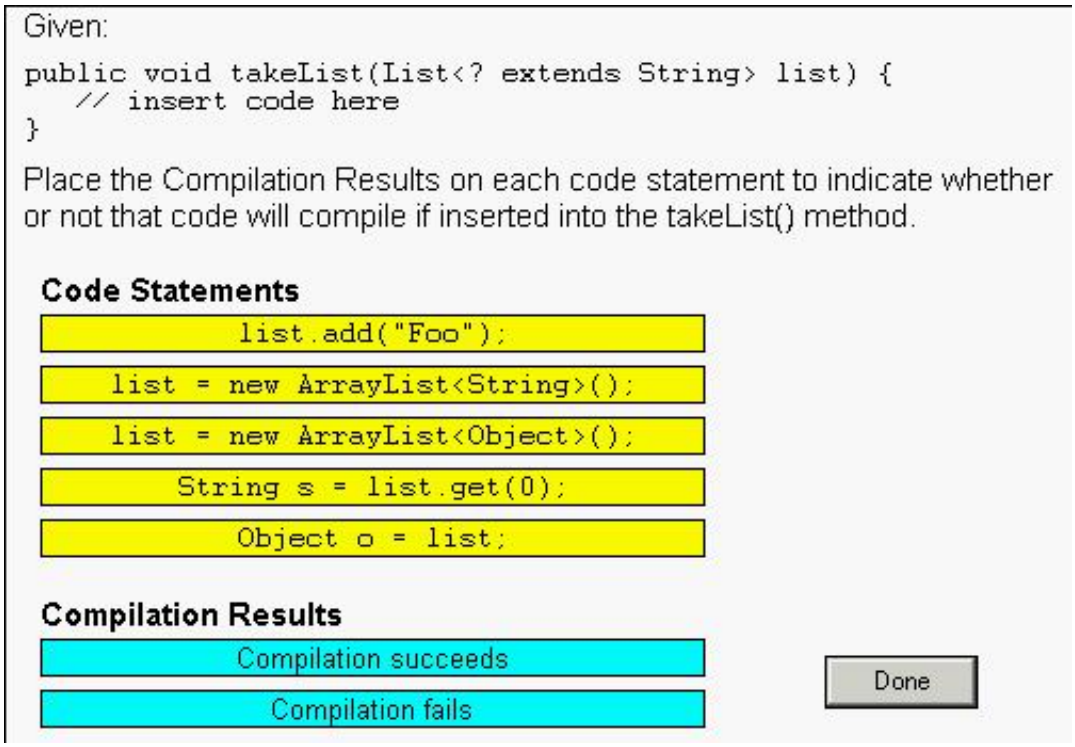
Which code should be inserted at line 1 of Demo.java to compile and run Demo to print "pizzapizza"?

A. import static utils.Repetition.twice;
B. static import utils.*;
C. static import utils.Repetition.*;
D. import utils.Repetition.*;
E. import utils.*;
F. import utils.Repetition.twice();
G. static import utils.Repetition.twice;

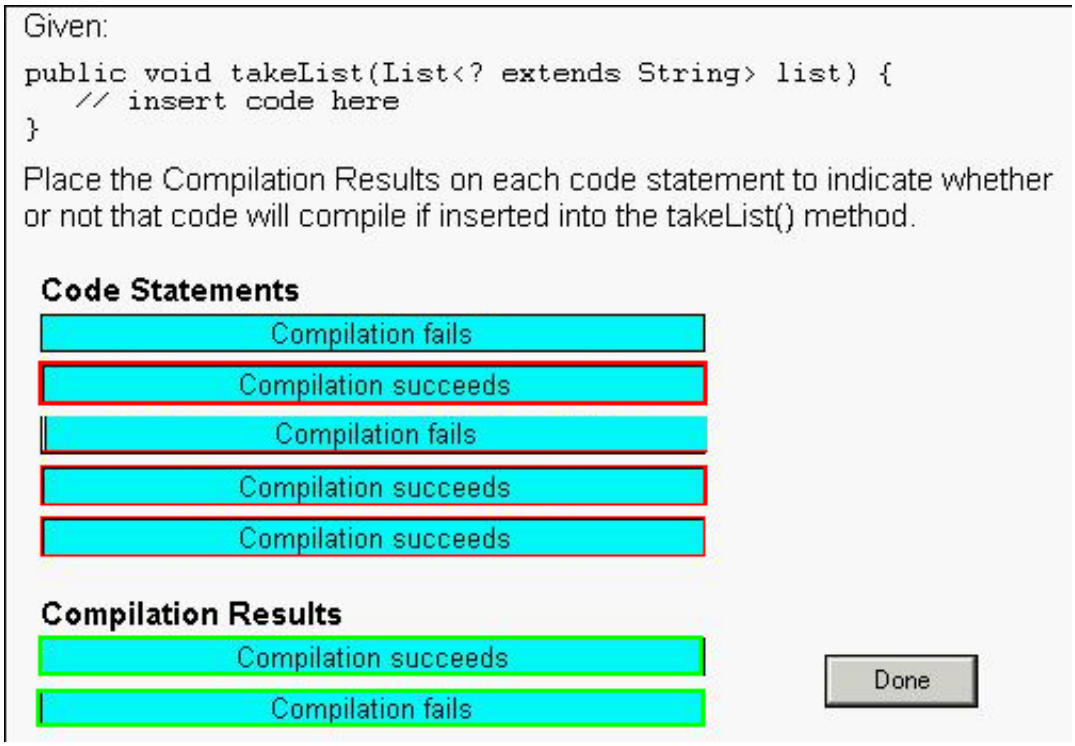
Answer: A

Question No : 54 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 55 - (Topic 1)

Given

11. public interface Status {

12. /* insert code here */ int MY_VALUE = 10;

13. }

Which three are valid on line 12? (Choose three.)

A. static
B. native
C. abstract
D. final
E. private
F. protected
G. public

Answer: A,D,G

Question No : 56 - (Topic 1)

Which three will compile and run without exception? (Choose three.)

A. void go() {
synchronized() { /* code here */ }
B. private synchronized(this) void go() { /* code here */ }
C. void go() {
Object o = new Object();
synchronized(o) { /* code here */ }
D. private synchronized Object o;
E. void go() {
synchronized(Object.class) { /* code here */ }
F. public synchronized void go() { /* code here */ }

Answer: C,E,F

Question No : 57 - (Topic 1)

Given:

1. import java.util.*;

2. public class Old {

3. public static Object get0(List list) {

4. return list.get(0);

5. }

6. }

Which three will compile successfully? (Choose three.)

A. String s = Old.get0(new LinkedList<String>());
B. String s = (String)Old.get0(new LinkedList<String>());
C. Object o = Old.get0(new LinkedList<?>());
D. Object o = Old.get0(new LinkedList<Object>());
E. Object o = Old.get0(new LinkedList());

Answer: B,D,E

Question No : 58 - (Topic 1)

Given:

```
10. class One {
11. public One() { System.out.print(1); }
12. }
13. class Two extends One {
14. public Two() { System.out.print(2); }
15. }
16. class Three extends Two {
17. public Three() { System.out.print(3); }
18. }
19. public class Numbers{
20. public static void main( String[] argv ) { new Three(); }
21. }
```

What is the result when this code is executed?

A. 321
B. 3
C. 1
D. 123
E. The code runs with no output.

Answer: D

Question No : 59 - (Topic 1)

Given:

10. package com.sun.scjp;

11. public class Geodetics {

12. public static final double DIAMETER = 12756.32; // kilometers

13. }

Which two correctly access the DIAMETER member of the Geodetics class? (Choose two.)

A. import static com.sun.scjp.Geodetics.*;
public class TerraCarta {
public double halfway() { return DIAMETER/2.0; } }
B. package com.sun.scjp;
public class TerraCarta {
public double halfway() { return DIAMETER/2.0; } }
C. import static com.sun.scjp.Geodetics;
public class TerraCarta{
public double halfway() { return DIAMETER/2.0; } }
D. import com.sun.scjp.Geodetics;
public class TerraCarta {
public double halfway()
{ return Geodetics.DIAMETER/2.0; }

Answer: A,D

Question No : 60 - (Topic 1)

Given:

enum Example { ONE, TWO, THREE }

Which statement is true?

A. The expressions (ONE == ONE) and ONE.equals(ONE) are both guaranteed to be true.
B. The Example values cannot be used in a raw java.util.HashMap; instead, the programmer must use a java.util.EnumMap.
C. The expression (ONE < TWO) is guaranteed to be true and ONE.compareTo(TWO) is guaranteed to be less than one.
D. The Example values can be used in a java.util.SortedSet, but the set will NOT be sorted because enumerated types do NOT implement java.lang.Comparable.

Answer: A

Question No : 61 - (Topic 1)

Given:

11. Float pi = new Float(3.14f);

12. if (pi > 3) {

13. System.out.print("pi is bigger than 3. ");

14. }

15. else {

16. System.out.print("pi is not bigger than 3. ");

17. }

18. finally {

19. System.out.println("Have a nice day.");

20. }

What is the result?

A. pi is not bigger than 3. Have a nice day.
B. pi is bigger than 3. Have a nice day.
C. pi is bigger than 3.
D. Compilation fails.
E. An exception occurs at runtime.

Answer: D

Question No : 62 - (Topic 1)

Given:

11. public static void append(List list) { list.add("0042"); }

12. public static void main(String[] args) {

13. List<Integer> intList = new ArrayList<Integer>();

14. append(intList);

15. System.out.println(intList.get(0));

16. }

What is the result?

A. An exception is thrown at runtime.
B. Compilation fails because of an error in line 14.
C. Compilation fails because of an error in line 13.
D. 0042
E. 42

Answer: D

Question No : 63 - (Topic 1)

Given:

10. interface Jumper { public void jump(); }

...

20. class Animal {}

...

30. class Dog extends Animal {

31. Tail tail;

32. }

...

40. class Beagle extends Dog implements Jumper{

41. public void jump() {}

42. }

...

50. class Cat implements Jumper{

51. public void jump() {}

52. }

Which three are true? (Choose three.)

A. Dog is-a Jumper
B. Beagle has-a Jumper
C. Cat has-a Animal
D. Dog is-a Animal
E. Cat is-a Jumper
F. Beagle has-a Tail
G. Cat is-a Animal

Answer: D,E,F

Question No : 64 - (Topic 1)

Given:

12. public class Yippee2 {

13.

14. static public void main(String [] yahoo) {

15. for(int x = 1; x < yahoo.length; x++) {

16. System.out.print(yahoo[x] + " ");

17. }

18. }

19. }

and the command line invocation:

java Yippee2 a b c

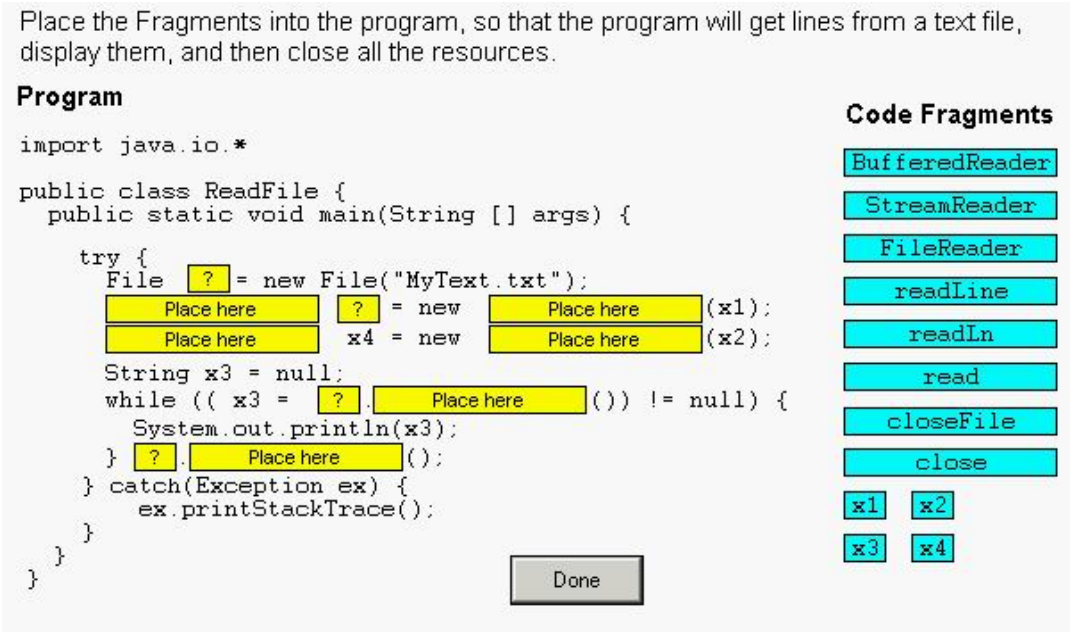
What is the result?

A. a b c
B. Compilation fails.
C. a b
D. An exception is thrown at runtime.
E. b c

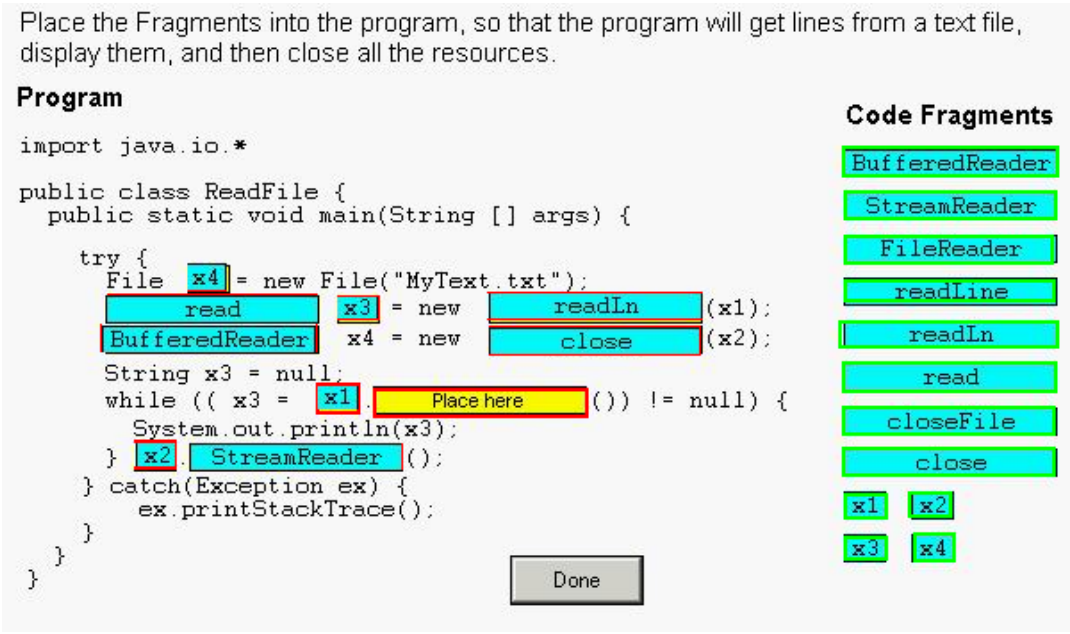
Answer: E

Question No : 65 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 66 - (Topic 1)

A programmer needs to create a logging method that can accept an arbitrary number of arguments. For example, it may be called in these ways:

logIt("log message1");

logIt("log message2","log message3");

logIt("log message4","log message5","log message6");

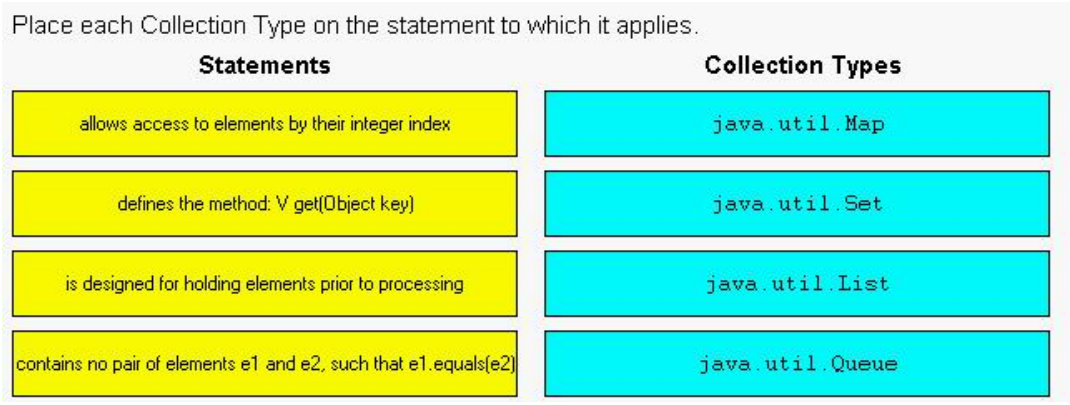
Which declaration satisfies this requirement?

A. public void logIt(String msg1, String msg2, String msg3)
B. public void logIt(String [] msgs)
C. public void logIt(String * msgs)
D. public void logIt(String... msgs)

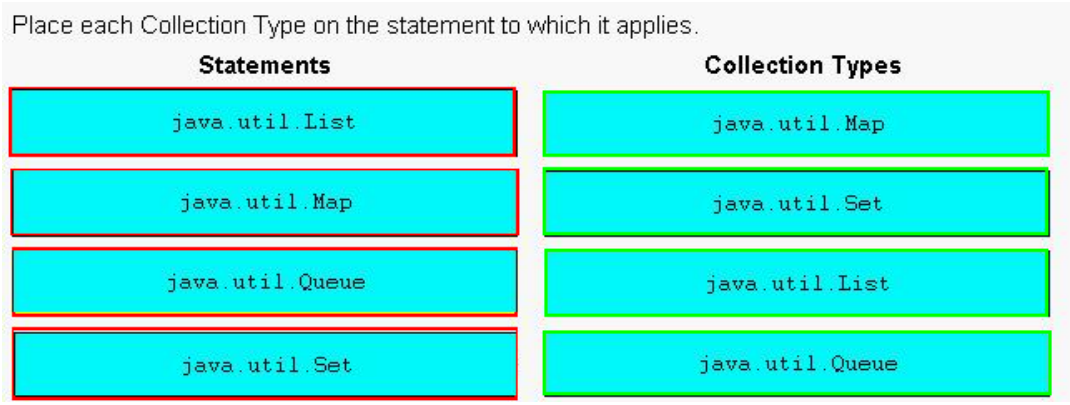
Answer: D

Question No : 67 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 68 - (Topic 1)

Given:

1. import java.util.*;
2. public class PQ {
3. public static void main(String[] args) {
4. PriorityQueue<String> pq = new PriorityQueue<String>();
5. pq.add("carrot");
6. pq.add("apple");
7. pq.add("banana");
8. System.out.println(pq.poll() + ":" + pq.peek());

9. }

10. }

What is the result?

A. apple:apple
B. banana:apple
C. carrot:apple
D. apple:banana
E. carrot:banana
F. carrot:carrot

Answer: D

Question No : 69 - (Topic 1)

Given:

1. public class Threads3 implements Runnable {

2. public void run() {

3. System.out.print("running");

4. }

5. public static void main(String[] args) {

6. Thread t = new Thread(new Threads3());

7. t.run();

8. t.run();

9. t.start();

10. }

11. }

What is the result?

A. Compilation fails.
B. The code executes and prints "runningrunning".
C. The code executes and prints "runningrunningrunning".
D. The code executes and prints "running".
E. An exception is thrown at runtime.

Answer: C

Question No : 70 - (Topic 1)

Given:

int[] myArray = new int[] {1, 2, 3, 4, 5};

What allows you to create a list from this array?

A. List myList = Arrays.asList(myArray);
B. List myList = Collections.fromArray(myArray);
C. List myList = new ArrayList(myArray);
D. List myList = myArray.asList();

Answer: A

Question No : 71 - (Topic 1)

Given:

1. public class TestSeven extends Thread {

2. private static int x;

3. public synchronized void doThings() {

4. int current = x;

5. current++;

6. x = current;

7. }

8. public void run() {

9. doThings();

10. }

11.}

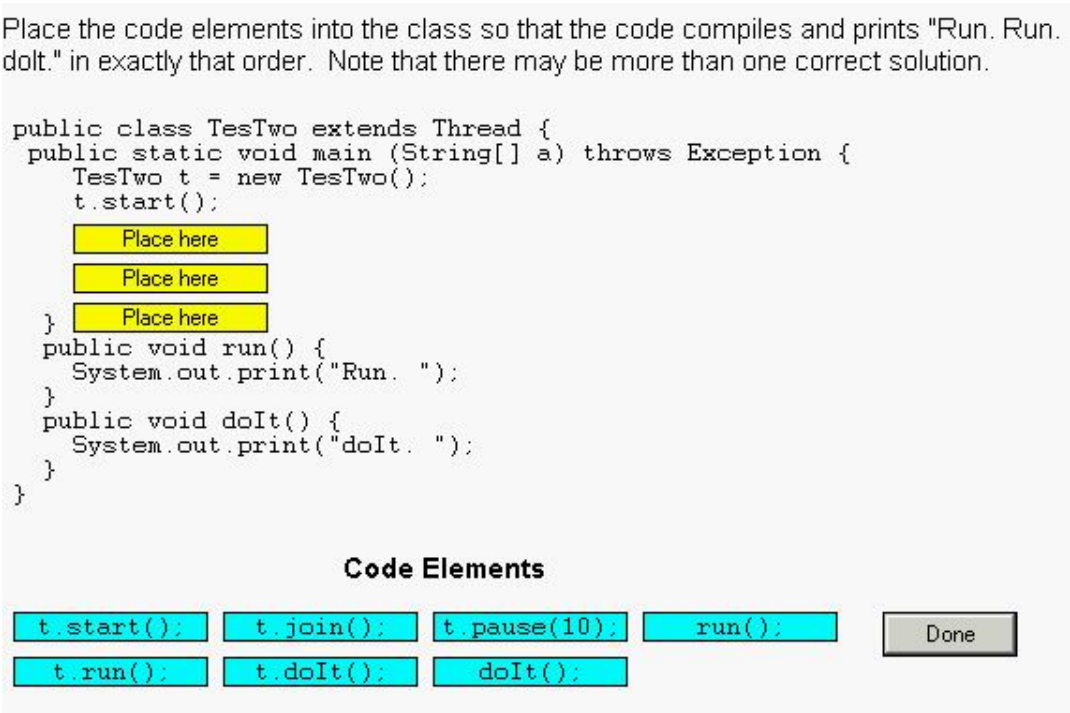
Which statement is true?

A. Compilation fails.
B. Declaring the doThings() method as static would make the class thread-safe.
C. Synchronizing the run() method would make the class thread-safe.
D. Wrapping the statements within doThings() in a synchronized(new Object()) { } block would make the class thread-safe.
E. An exception is thrown at runtime.
F. The data in variable "x" are protected from concurrent access problems.

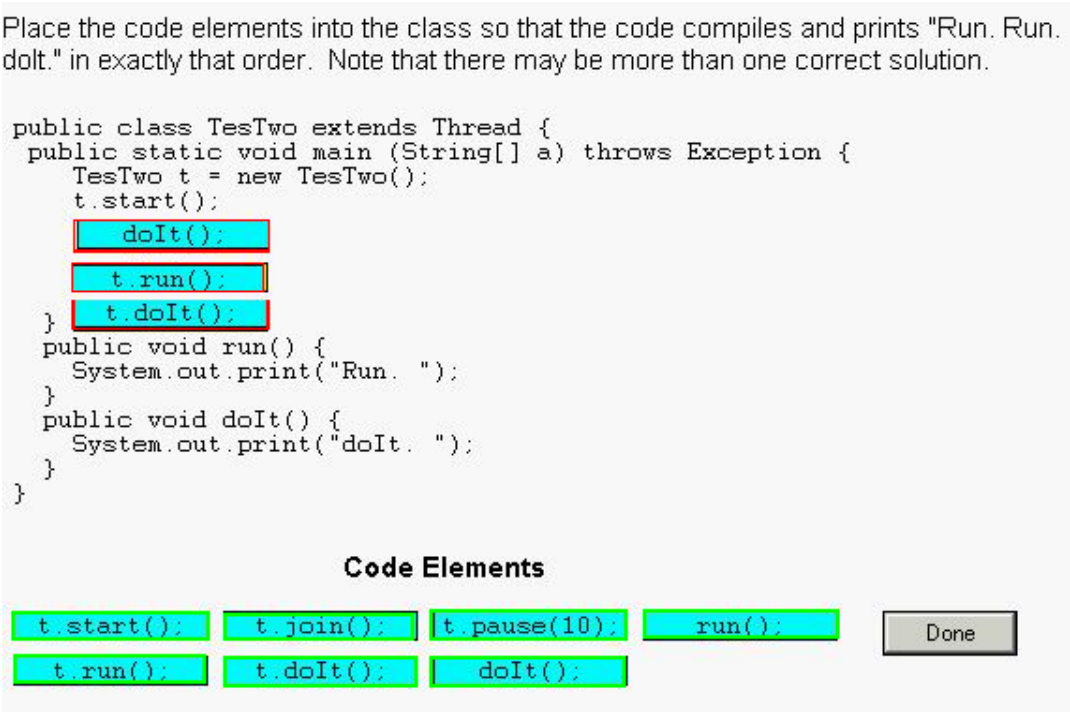
Answer: B

Question No : 72 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 73 - (Topic 1)

Given:

1. public class TestFive {
2. private int x;
3. public void foo() {
4. int current = x;
5. x = current + 1;
6. }
7. public void go() {
8. for(int i = 0; i < 5; i++) {
9. new Thread() {
10. public void run() {
11. foo();

12. System.out.print(x + ", ");

13. } }.start();

14. } }

Which two changes, taken together, would guarantee the output: 1, 2, 3, 4, 5, ? (Choose two.)

A. change the variable declaration on line 2 to private volatile int x;
B. wrap the code inside the foo() method with a synchronized(this) block
C. change line 7 to public synchronized void go() {
D. wrap the for loop code inside the go() method with a synchronized block
synchronized(this) { // for loop code here }
E. move the line 12 print statement into the foo() method

Answer: B,E

Question No : 74 - (Topic 1)

Given:

11. public static void main(String[] args) {

12. String str = "null";

13. if (str == null) {

14. System.out.println("null");

15. } else (str.length() == 0) {

16. System.out.println("zero");

17. } else {

18. System.out.println("some");

19. }

20. }

What is the result?

A. An exception is thrown at runtime.
B. null
C. Compilation fails.
D. zero
E. some

Answer: C

Question No : 75 - (Topic 1)

Given:

```
11. public void genNumbers() {
12. ArrayList numbers = new ArrayList();
13. for (int i=0; i<10; i++) {
14. int value = i * ((int) Math.random());
15. Integer intObj = new Integer(value);
16. numbers.add(intObj);
17. }
18. System.out.println(numbers);
19. }
```

Which line of code marks the earliest point that an object referenced by intObj becomes a candidate for garbage collection?

A. Line 19
B. Line 16
C. Line 17
D. The object is NOT a candidate for garbage collection.
E. Line 18

Answer: A

Question No : 76 - (Topic 1)

Given:

31. // some code here

32. try {

33. // some code here

34. } catch (SomeException se) {

35. // some code here

36. } finally {

37. // some code here

38. }

Under which three circumstances will the code on line 37 be executed? (Choose three.)

A. The code on line 31 throws an exception.
B. The code on line 35 throws an exception.
C. The code on line 33 executes successfully.
D. The code on line 33 throws an exception.
E. The instance gets garbage collected.

Answer: B,C,D

Question No : 77 - (Topic 1)

Given:

11. class Cup { }

12. class PoisonCup extends Cup { }

...

21. public void takeCup(Cup c) {

22. if (c instanceof PoisonCup) {

23. System.out.println("Inconceivable!");

```
24. } else if (c instanceof Cup) {
25. System.out.println("Dizzying intellect!");
26. } else {
27. System.exit(0);
28. }
29. }
```

And the execution of the statements:

```
Cup cup = new PoisonCup();
takeCup(cup);
```

What is the output?

A. An exception is thrown at runtime.
B. Compilation fails because of an error in line 22.
C. Dizzying intellect!
D. Inconceivable!
E. The code runs with no output.

Answer: D

Question No : 78 - (Topic 1)

Given:

```
10. public class Bar {
11. static void foo( int... x ) {
12. // insert code here
13. }
14. }
```

Which two code fragments, inserted independently at line 12, will allow the class to

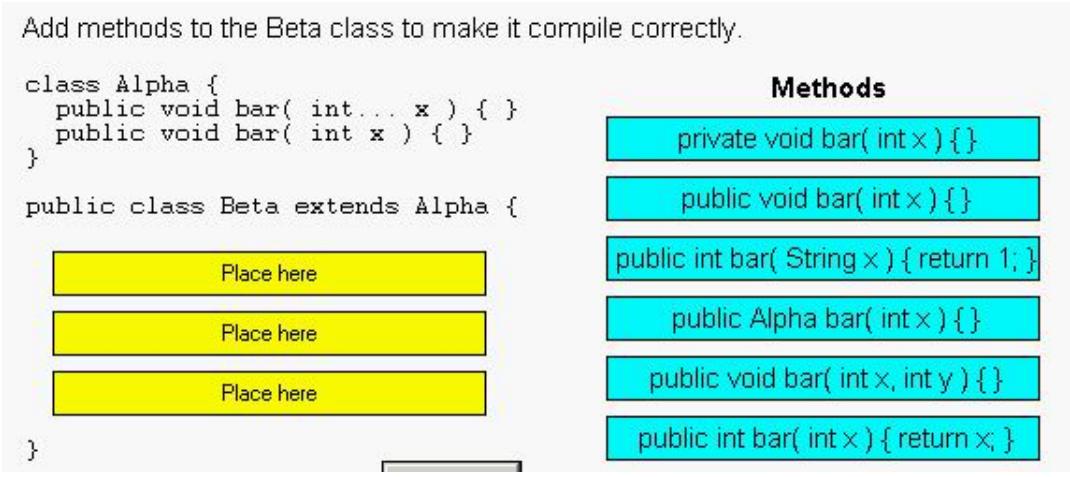
compile? (Choose two.)

A. for(int i=0; i< x.length; i++) System.out.println(x[i]);
B. for(int z : x) System.out.println(z);
C. foreach(x) System.out.println(z);
D. while(x.hasNext()) System.out.println(x.next());

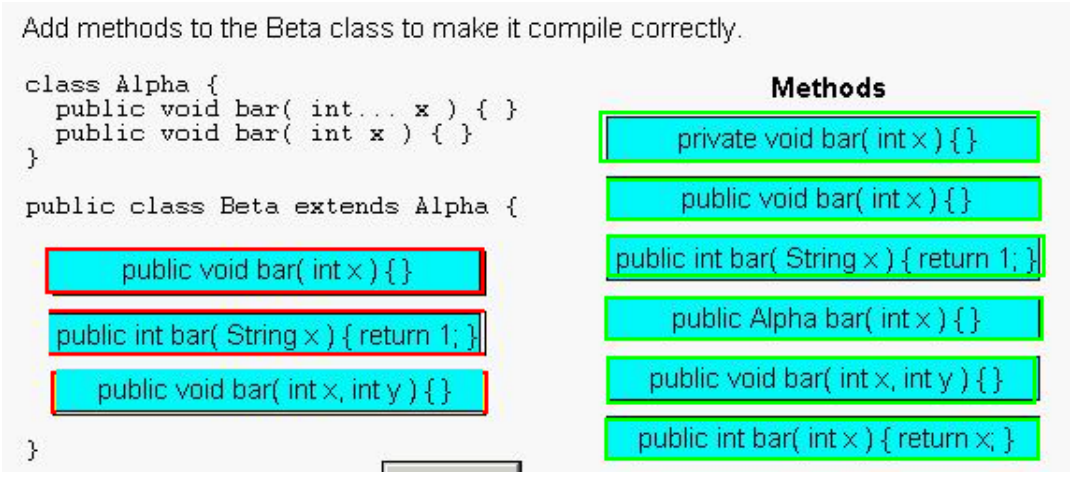
Answer: A,B

Question No : 79 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 80 - (Topic 1)

Given:

```
11. public static Collection get() {
12. Collection sorted = new LinkedList();
13. sorted.add("B"); sorted.add("C"); sorted.add("A");
14. return sorted;
15. }
16. public static void main(String[] args) {
17. for (Object obj: get()) {
18. System.out.print(obj + ", ");
19. }
20. }
```

What is the result?

A. Compilation fails.
B. B, C, A,
C. The code runs with no output.
D. A, B, C,
E. An exception is thrown at runtime.

Answer: B

Question No : 81 - (Topic 1)

Given:

```
11. public class Yikes {
12.
```

```
13. public static void go(Long n) {System.out.println("Long ");}
14. public static void go(Short n) {System.out.println("Short ");}
15. public static void go(int n) {System.out.println("int ");}
16. public static void main(String [] args) {
17. short y = 6;
18. long z = 7;
19. go(y);
20. go(z);
21. }
22. }
```

What is the result?

A. An exception is thrown at runtime.
B. Short Long
C. Compilation fails.
D. int Long

Answer: D

Question No : 82 DRAG DROP - (Topic 1)

Click the Task button.

Place the Output Options in the Actual Output Sequence to indicate the output from this code:

```
class Alpha {
  public void foo( String... args )
    { System.out.print("Alpha:foo "); }
  public void bar( String a )
    { System.out.print("Alpha:bar "); }
}

public class Beta extends Alpha {
  public void foo( String a )
    { System.out.print("Beta:foo "); }
  public void bar( String a )
    { System.out.print("Beta:bar "); }
  public static void main( String[] argv ) {
    Alpha a = new Beta();
    Beta  b = (Beta)a;
    a.foo( "test" ); b.foo( "test" );
    a.bar( "test" ); b.bar( "test" );
  }
}
```

Actual Output Sequence

Place here | Place here | Place here | Place here

Output Options

Alpha:foo | Alpha:bar | Beta:foo | Beta:bar

Done

Answer:

Place the Output Options in the Actual Output Sequence to indicate the output from this code:

```
class Alpha {
  public void foo( String... args )
    { System.out.print("Alpha:foo "); }
  public void bar( String a )
    { System.out.print("Alpha:bar "); }
}

public class Beta extends Alpha {
  public void foo( String a )
    { System.out.print("Beta:foo "); }
  public void bar( String a )
    { System.out.print("Beta:bar "); }
  public static void main( String[] argv ) {
    Alpha a = new Beta();
    Beta  b = (Beta)a;
    a.foo( "test" ); b.foo( "test" );
    a.bar( "test" ); b.bar( "test" );
  }
}
```

Actual Output Sequence

Alpha:foo | Place here | Beta:bar | Beta:foo

Output Options

Alpha:foo | Alpha:bar | Beta:foo | Beta:bar

Done

Question No : 83 - (Topic 1)

Given:

```
1. public class Threads2 implements Runnable {
2.
3. public void run() {
4. System.out.println("run.");
5. throw new RuntimeException("Problem");
6. }
7. public static void main(String[] args) {
8. Thread t = new Thread(new Threads2());
9. t.start();
10. System.out.println("End of method.");
11. }
12. }
```

Which two can be results? (Choose two.)

A. java.lang.RuntimeException: Problem
B. run.
java.lang.RuntimeException: Problem
C. End of method.
java.lang.RuntimeException: Problem
D. run.
java.lang.RuntimeException: Problem
End of method.
E. End of method.
run.
java.lang.RuntimeException: Problem

Answer: D,E

Question No : 84 - (Topic 1)

Given:

```
13. public class Pass {
14. public static void main(String [] args) {
15. int x = 5;
16. Pass p = new Pass();
17. p.doStuff(x);
18. System.out.print(" main x = " + x);
19. }
20.
21. void doStuff(int x) {
22. System.out.print(" doStuff x = " + x++);
23. }
24. }
```

What is the result?

A. An exception is thrown at runtime.
B. doStuff x = 6 main x = 6
C. doStuff x = 5 main x = 5
D. Compilation fails.
E. doStuff x = 6 main x = 5
F. doStuff x = 5 main x = 6

Answer: C

Question No : 85 - (Topic 1)

A class games.cards.Poker is correctly defined in the jar file Poker.jar. A user wants to execute the main method of Poker on a UNIX system using the command:

java games.cards.Poker

What allows the user to do this?

A. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include /stuff/java/*.jar
B. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include /stuff/java
C. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include /stuff/java/Poker.jar
D. Put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java/Poker.jar
E. put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java/*.jar
F. put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java

Answer: D

Question No : 86 - (Topic 1)

Assuming that the serializeBanana() and the deserializeBanana() methods will correctly use Java serialization and given:

13. import java.io.*;

14. class Food implements Serializable {int good = 3;}

15. class Fruit extends Food {int juice = 5;}

16. public class Banana extends Fruit {

17. int yellow = 4;

18. public static void main(String [] args) {

19. Banana b = new Banana(); Banana b2 = new Banana();

20. b.serializeBanana(b); // assume correct serialization

21. b2 = b.deserializeBanana(); // assume correct

22. System.out.println("restore "+b2.yellow+ b2.juice+b2.good);

24. }

25. // more Banana methods go here 50. }

What is the result?

A. restore 403
B. An exception is thrown at runtime.
C. restore 453
D. Compilation fails.
E. restore 400

Answer: C

Question No : 87 - (Topic 1)

Given classes defined in two different files:

```
1. package util;
2. public class BitUtils {
3. public static void process(byte[]) { /* more code here */ }
4. }
```

```
1. package app;
2. public class SomeApp {
3. public static void main(String[] args) {
4. byte[] bytes = new byte[256];
5. // insert code here
6. }
7. }
```

What is required at line 5 in class SomeApp to use the process method of BitUtils?

A. process(bytes);
B. import util.BitUtils.*; process(bytes);
C. BitUtils.process(bytes);
D. SomeApp cannot use methods in BitUtils.
E. util.BitUtils.process(bytes);

Answer: E

Question No : 88 - (Topic 1)

Given:

12. String csv = "Sue,5,true,3";

13. Scanner scanner = new Scanner(csv);

14. scanner.useDelimiter(",");

15. int age = scanner.nextInt();

What is the result?

A. After line 15, the value of age is 3.
B. Compilation fails.
C. An exception is thrown at runtime.
D. After line 15, the value of age is 5.

Answer: C

Question No : 89 - (Topic 1)

Given:

1. class Super {

2. private int a;

3. protected Super(int a) { this.a = a; }

4. }

...

11. class Sub extends Super {

12. public Sub(int a) { super(a); }

13. public Sub() { this.a = 5; }

14. }

Which two, independently, will allow Sub to compile? (Choose two.)

A. Change line 2 to:
protected int a;
B. Change line 13 to:
public Sub() { super(a); }
C. Change line 13 to:
public Sub() { this(5); }
D. Change line 13 to:
public Sub() { super(5); }
E. Change line 2 to:
public int a;

Answer: C,D

Question No : 90 - (Topic 1)

Given:

10. class One {

11. public One() { System.out.print(1); }

12. }

13. class Two extends One {

14. public Two() { System.out.print(2); }

15. }

16. class Three extends Two {

17. public Three() { System.out.print(3); }

18. }

19. public class Numbers{

20. public static void main(String[] argv) { new Three(); }

21. }

What is the result when this code is executed?

A. 1
B. 321
C. 3
D. The code runs with no output.
E. 123

Answer: E

Question No : 91 - (Topic 1)

Given:

```
11. public static Collection get() {
12. Collection sorted = new LinkedList();
13. sorted.add("B"); sorted.add("C"); sorted.add("A");
14. return sorted;
15. }
16. public static void main(String[] args) {
17. for (Object obj: get()) {
18. System.out.print(obj + ", ");
19. }
20. }
```

What is the result?

A. Compilation fails.
B. A, B, C,
C. The code runs with no output.
D. An exception is thrown at runtime.
E. B, C, A,

Answer: E

Question No : 92 - (Topic 1)

Click the Exhibit button.

Given this code from Class B:

25. A a1 = new A();

26. A a2 = new A();

27. A a3 = new A();

28. System.out.println(A.getInstanceCount());

What is the result?

```
 1. public class A {
 2.
 3.   private int counter = 0;
 4.
 5.   public static int getInstanceCount() {
 6.     return counter;
 7.   }
 8.
 9.   public A() {
10.     counter++;
11.   }
12.
13. }
```

A. Compilation fails because of an error on line 28.
B. Line 28 prints the value 3 to System.out.
C. Compilation of class A fails.
D. Line 28 prints the value 1 to System.out.
E. A runtime error occurs when line 25 executes.

Answer: C

Question No : 93 - (Topic 1)

Given:

1. package test;
2.
3. class Target {
4. public String name = "hello";
5. }

What can directly access and change the value of the variable name?

A. only the Target class
B. any class in the test package
C. any class that extends Target
D. any class

Answer: B

Question No : 94 - (Topic 1)

Given:

1. public class Plant {
2. private String name;
3. public Plant(String name) { this.name = name; }
4. public String getName() { return name; }
5. }

1. public class Tree extends Plant {
2. public void growFruit() { }
3. public void dropLeaves() { }
4. }

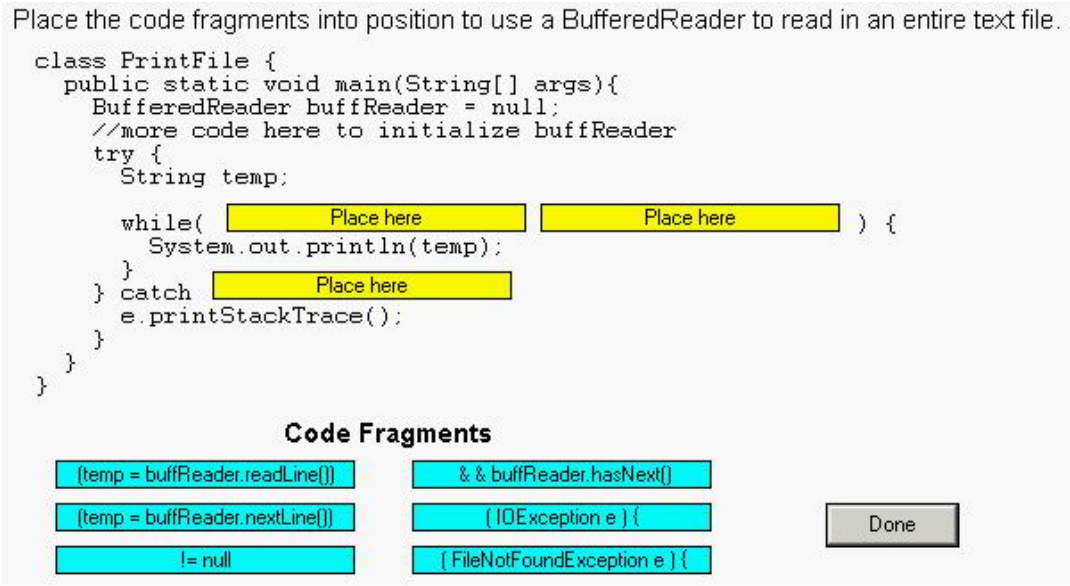
Which statement is true?

A. The code will compile if public Plant() { this("fern"); } is added to the Plant class.
B. The code will compile if public Plant() { Tree(); } is added to the Plant class.
C. The code will compile if public Plant() { Plant("fern"); } is added to the Plant class.
D. The code will compile without changes.
E. The code will compile if public Tree() { Plant(); } is added to the Tree class.

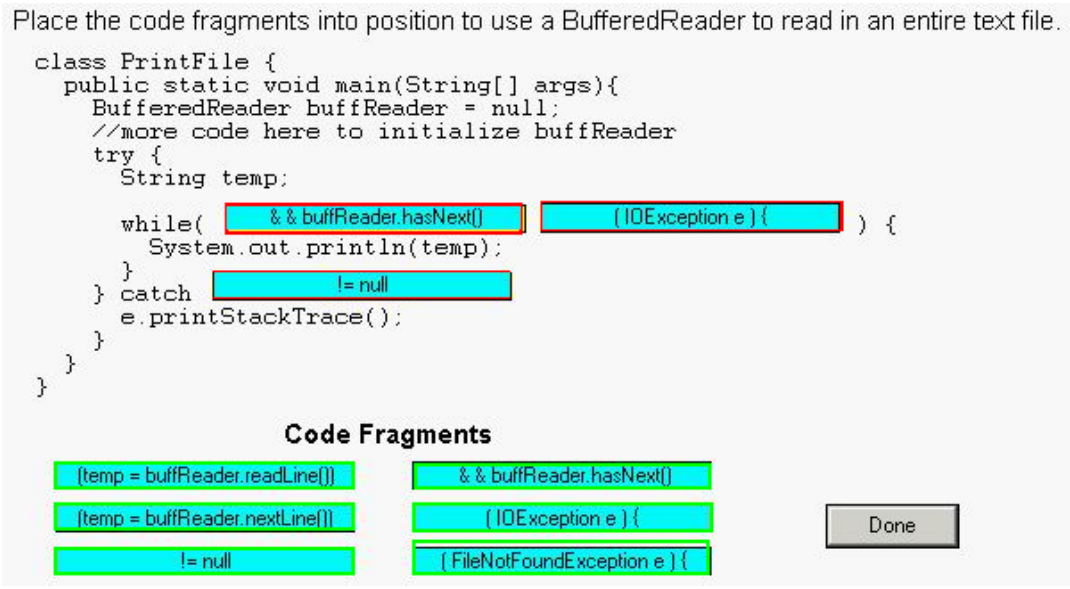
Answer: A

Question No : 95 DRAG DROP - (Topic 1)

Click the Task button.



Answer:



Question No : 96 - (Topic 1)

Given:

1. class SuperClass {

2. public A getA() {

3. return new A();

4. }

5. }

6. class SubClass extends SuperClass {

7. public B getA(){

8. return new B();

9. }

10. }

Which statement is true?

A. Compilation will always fail because of an error in line 8.
B. Compilation will succeed if A extends B.
C. Compilation will succeed if B extends A.

D. Compilation will always fail because of an error in line 7.

Answer: C

Question No : 97 DRAG DROP - (Topic 1)

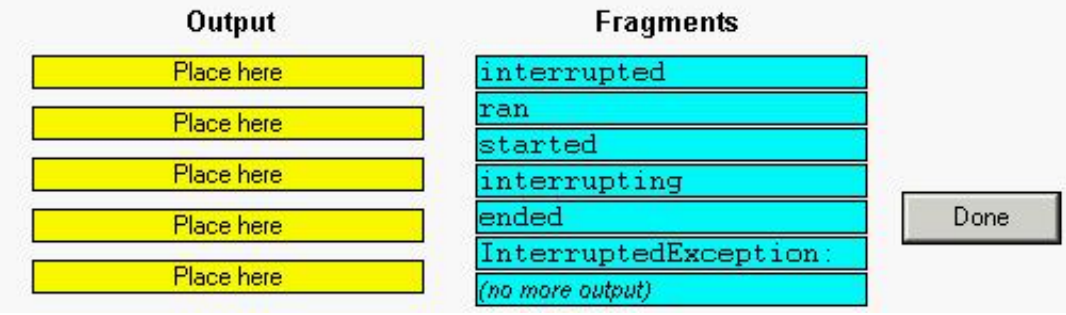
Click the Task button.

Given:

```
10.  Runnable r = new Runnable() {
11.    public void run() {
12.      try {
13.        Thread.sleep(1000);
14.      } catch (InterruptedException e) {
15.        System.out.println("interrupted");
16.      }
17.      System.out.println("ran");
18.    }
19.  };
20.  Thread t = new Thread(r);
21.  t.start();
22.  System.out.println("started");
23.  t.sleep(2000);
24.  System.out.println("interrupting");
25.  t.interrupt();
26.  System.out.println("ended");
```

Assume that sleep(n) executes in exactly n milliseconds, and all other code executes in an insignificant amount of time.

Place the fragments in the output area to show the result of running this code.



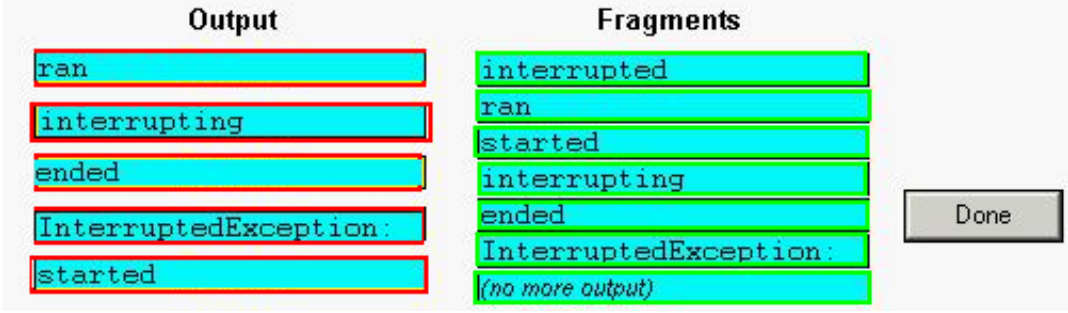
Answer:

Given:

```
10.  Runnable r = new Runnable() {
11.    public void run() {
12.      try {
13.        Thread.sleep(1000);
14.      } catch (InterruptedException e) {
15.        System.out.println("interrupted");
16.      }
17.      System.out.println("ran");
18.    }
19.  };
20.  Thread t = new Thread(r);
21.  t.start();
22.  System.out.println("started");
23.  t.sleep(2000);
24.  System.out.println("interrupting");
25.  t.interrupt();
26.  System.out.println("ended");
```

Assume that sleep(n) executes in exactly n milliseconds, and all other code executes in an insignificant amount of time.

Place the fragments in the output area to show the result of running this code.



Question No : 98 - (Topic 1)

Given:

10. class Line {

11. public class Point { public int x,y;}

12. public Point getPoint() { return new Point(); }

13. }

14. class Triangle {

15. public Triangle() {

16. // insert code here

17. }

18. }

Which code, inserted at line 16, correctly retrieves a local instance of a Point object?

A. Line.Point p = Line.getPoint();
B. Point p = (new Line()).getPoint();
C. Point p = Line.getPoint();
D. Line.Point p = (new Line()).getPoint();

Answer: D

Question No : 99 - (Topic 1)

Given:

1. public class Threads4 {
2. public static void main (String[] args) {
3. new Threads4().go();
4. }
5. public void go() {
6. Runnable r = new Runnable() {
7. public void run() {
8. System.out.print("foo");
9. }
10. };
11. Thread t = new Thread(r);
12. t.start();
13. t.start();
14. }
15. }

What is the result?

A. An exception is thrown at runtime.
B. The code executes normally, but nothing is printed.
C. Compilation fails.
D. The code executes normally and prints "foo".

Answer: A

Question No : 100 - (Topic 1)

Which three statements are true? (Choose three.)

A. A public static method in class X can be called by a subclass of X without explicitly referencing the class X.
B. A non-static public final method in class X can be overridden in any subclass of X.
C. A private static method can be called only within other static methods in class X.
D. A protected method in class X can be overridden by any subclass of X.
E. A protected method in class X can be overridden by a subclass of A only if the subclass is in the same package as X.
F. A method with the same signature as a private final method in class X can be implemented in a subclass of X.
G. A final method in class X can be abstract if and only if X is abstract.

Answer: A,D,F

Topic 2, Volume B

Question No : 101 - (Topic 2)

Given:

```
12. import java.io.*;
13. public class Forest implements Serializable {
14. private Tree tree = new Tree();
15. public static void main(String [] args) {
16. Forest f = new Forest();
17. try {
```

18. FileOutputStream fs = new FileOutputStream("Forest.ser");

19. ObjectOutputStream os = new ObjectOutputStream(fs);

20. os.writeObject(f); os.close();

21. } catch (Exception ex) { ex.printStackTrace(); }

22. } }

23.

24. class Tree { }

What is the result?

A. An instance of Forest is serialized.
B. Compilation fails.
C. An exception is thrown at runtime.
D. An instance of Forest and an instance of Tree are both serialized.

Answer: C

Question No : 102 - (Topic 2)

Which two statements are true about the hashCode method? (Choose two.)

A. The hashCode method for a given class can be used to test for object equality and object inequality for that class.
B. The hashCode method is used by the java.util.HashSet collection class to group the elements within that set into hash buckets for swift retrieval.
C. The only important characteristic of the values returned by a hashCode method is that the distribution of values must follow a Gaussian distribution.
D. The hashCode method is used by the java.util.SortedSet collection class to order the elements within that set.
E. The hashCode method for a given class can be used to test for object inequality, but NOT object equality, for that class.

Answer: B,E

Question No : 103 - (Topic 2)

Given:

```
12. public class Wow {
13. public static void go(short n) {System.out.println("short");}
14. public static void go(Short n) {System.out.println("SHORT");}
15. public static void go(Long n) {System.out.println(" LONG");}
16. public static void main(String [] args) {
17. Short y = 6;
18. int z = 7;
19. go(y);
20. go(z);
21. }
22. }
```

What is the result?

A. short LONG
B. Compilation fails.
C. SHORT LONG
D. An exception is thrown at runtime.

Answer: B

Question No : 104 - (Topic 2)

Given:

```
11. public class Person {
12. private name;
13. public Person(String name) {
14. this.name = name;
```

15. }

16. public int hashCode() {

17. return 420;

18. }

19. }

Which statement is true?

A. Deleting a Person key from a HashMap will delete all map entries for all keys of type Person.
B. The time to find the value from HashMap with a Person key depends on the size of the map.
C. The time to determine whether a Person object is contained in a HashSet is constant and does NOT depend on the size of the map.
D. Inserting a second Person object into a HashSet will cause the first Person object to be removed as a duplicate.

Answer: B

Question No : 105 - (Topic 2)

Given:

12. import java.io.*;

13. public class Forest implements Serializable {

14. private Tree tree = new Tree();

15. public static void main(String [] args) {

16. Forest f = new Forest();

17. try {

18. FileOutputStream fs = new FileOutputStream("Forest.ser");

19. ObjectOutputStream os = new ObjectOutputStream(fs);

20. os.writeObject(f); os.close();

21. } catch (Exception ex) { ex.printStackTrace(); }

22. } }

23.

24. class Tree { }

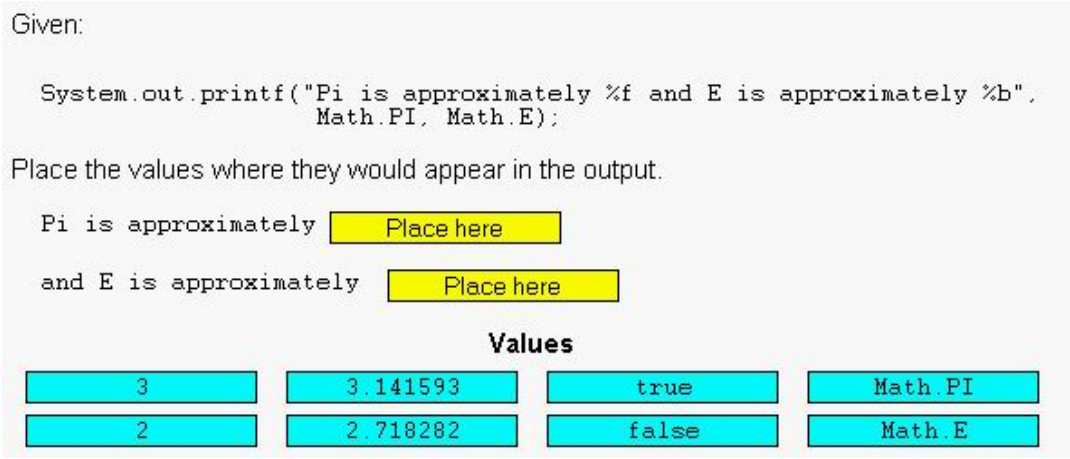
What is the result?

A. An instance of Forest and an instance of Tree are both serialized.
B. An instance of Forest is serialized.
C. An exception is thrown at runtime.
D. Compilation fails.

Answer: C

Question No : 106 DRAG DROP - (Topic 2)

Click the Task button.



Answer:

Given:

```
System.out.printf("Pi is approximately %f and E is approximately %b",
                  Math.PI, Math.E);
```

Place the values where they would appear in the output.

Pi is approximately [Math.PI]

and E is approximately [2.718282]

Values

3	3.141593	true	Math.PI
2	2.718282	false	Math.E

Question No : 107 - (Topic 2)

Given:

1. class Pizza {
2. java.util.ArrayList toppings;
3. public final void addTopping(String topping) {
4. toppings.add(topping);
5. }
6. }
7. public class PepperoniPizza extends Pizza {
8. public void addTopping(String topping) {
9. System.out.println("Cannot add Toppings");
10. }
11. public static void main(String[] args) {
12. Pizza pizza = new PepperoniPizza();
13. pizza.addTopping("Mushrooms");
14. }
15. }

What is the result?

Given:

```
10. public class Pizza {
11.    ArrayList toppings;
12.
13.    public final void addTopping(String
topping) {
14.       toppings.add(topping);
15.    }
16.
17.    public void removeTopping(String
topping) {
18.       toppings.remove(topping);
19.    }
20. }
```

And:

```
30. class PepperoniPizza extends Pizza {
31.   public void addTopping(String topping) {
32.     System.out.println("Cannot add
Toppings");
33.   }
34.
35.   public void removeTopping(String
topping) {
36.     System.out.println("Cannot remove
Pepperoni");
37.   }
38.}
```

And:

```
50. Pizza pizza = new PepperoniPizza();
51. pizza.addTopping("Mushrooms");
52. pizza.removeTopping("Pepperoni");
```

A. The code runs with no output.
B. Cannot add Toppings
C. A NullPointerException is thrown in Line 4.
D. Compilation fails.

Answer: D

Question No : 108 - (Topic 2)

Given:

11. public static void main(String[] args) {

12. for (int i = 0; i <= 10; i++) {

13. if (i > 6) break;

14. }

15. System.out.println(i);

16. }

What is the result?

A. Compilation fails.
B. 10
C. 7
D. 6
E. 11
F. An exception is thrown at runtime.

Answer: A

Question No : 109 - (Topic 2)

Given:

10. interface Data { public void load(); }

11. abstract class Info { public abstract void load(); }

Which class correctly uses the Data interface and Info class?

A. public class Employee extends Info implements Data{
public void Data.load() { /*do something*/ }
public void Info.load() { /*do something*/ }
}
B. public class Employee extends Info implements Data
public void load(){ /*do something*/ }
public void Info.load(){ /*do something*/ }

}
C. public class Employee extends Info implements Data {
public void load() { /*do something*/ }
}
D. public class Employee implements Info extends Data {
public void Data.load(){ /*do something*/ }
public void load(){ /*do something*/ }
}
E. public class Employee implements Info extends Data {
public void load() { /*do something*/ }
}
F. public class Employee implements Info extends Data {
public void load(){ /*do something*/ }
public void Info.load(){ /*do something*/ }
}

Answer: C

Question No : 110 - (Topic 2)

Given:

11. public static void parse(String str) {

12. try {

13. float f = Float.parseFloat(str);

14. } catch (NumberFormatException nfe) {

15. f = 0;

16. } finally {

17. System.out.println(f);

18. }

19. }

20. public static void main(String[] args) {

21. parse("invalid");

22. }

What is the result?

A. A NumberFormatException is thrown by the parse method at runtime.
B. A ParseException is thrown by the parse method at runtime.
C. Compilation fails.
D. 0.0

Answer: C

Question No : 111 - (Topic 2)

Which two statements are true about has-a and is-a relationships? (Choose two.)

A. Interfaces must be used when creating a has-a relationship.
B. Instance variables can be used when creating a has-a relationship.
C. Inheritance represents a has-a relationship.
D. Inheritance represents an is-a relationship.

Answer: B,D

Question No : 112 - (Topic 2)

Click the Exhibit button.

What is the outcome of the code?

```
 1. public class Item {
 2.    private String desc;
 3.    public String getDescription() { return
desc; }
 4.    public void setDescription(String d) {
desc = d; }
 5.
 6.    public static void modifyDesc(Item
item, String desc) {
 7.      item = new Item();
 8.      item.setDescription(desc);
 9.    }
10.    public static void main(String[] args)
{
11.      Item it = new Item();
12.      it.setDescription("Gobstopper");
13.      Item it2 = new Item();
14.      it2.setDescription("Fizzylifting");
15.      modifyDesc(it,
"Scrumdiddlyumptious");
16.
System.out.println(it.getDescription());
17.
System.out.println(it2.getDescription());
18.    }
19. }
```

A. Scrumdiddlyumptious
B. Compilation fails.
C. Gobstopper
Fizzylifting
D. Scrumdiddlyumptious
Fizzylifting
E. Gobstopper
Scrumdiddlyumptious

Answer: C

Question No : 113 - (Topic 2)

Given:

55. int [] x = {1, 2, 3, 4, 5};

56. int y[] = x;

57. System.out.println(y[2]);

Which statement is true?

A. Compilation will fail because of an error in line 55.
B. Line 57 will print the value 2.
C. Compilation will fail because of an error in line 56.
D. Line 57 will print the value 3.

Answer: D

Question No : 114 - (Topic 2)

Which two code fragments will execute the method doStuff() in a separate thread? (Choose two.)

A. new Thread(new Runnable() {
public void run() { doStuff(); }
}).run();
B. new Thread() {
public void start() { doStuff(); }
};
C. new Thread() {
public void run() { doStuff(); }
};
D. new Thread(new Runnable() {
public void run() { doStuff(); }
}).start();
E. new Thread() {
public void start() { doStuff(); }
}.run();
F. new Thread() {
public void run() { doStuff(); }
}.start();

Answer: D,F

Question No : 115 - (Topic 2)

Click the Exhibit button.

What is the result?

```
11. public class Bootchy {
12.   int bootch;
13.   String snootch;
14.
15.   public Bootchy() {
16.     this("snootchy");
17.     System.out.print("first ");
18.   }
19.
20.   public Bootchy(String snootch) {
21.     this(420, "snootchy");
22.     System.out.print("second ");
23.   }
24.
25.   public Bootchy(int bootch, String
snootch) {
26.     this.bootch = bootch;
27.     this.snootch = snootch;
28.     System.out.print("third ");
29.   }
30.
31.   public static void main(String[] args)
{
32.     Bootchy b = new Bootchy();
33.     System.out.print(b.snootch + " " +
b.bootch);
34.   }
35. }
```

A. third first second snootchy 420
B. first second first third snootchy 420
C. first second third snootchy 420
D. snootchy 420 third second first
E. snootchy 420 first second third
F. third second first snootchy 420

Answer: F

Question No : 116 - (Topic 2)

A UNIX user named Bob wants to replace his chess program with a new one, but he is not sure where the old one is installed. Bob is currently able to run a Java chess program

starting from his home directory /home/bob using the command:

java -classpath /test:/home/bob/downloads/*.jar games.Chess

Bob's CLASSPATH is set (at login time) to:

/usr/lib:/home/bob/classes:/opt/java/lib:/opt/java/lib/*.jar

What is a possible location for the Chess.class file?

A. /usr/lib/games/Chess.class
B. /home/bob/Chess.class
C. inside jarfile /opt/java/lib/Games.jar (with a correct manifest)
D. /test/Chess.class
E. /home/bob/games/Chess.class
F. inside jarfile /home/bob/downloads/Games.jar (with a correct manifest)
G. /test/games/Chess.class

Answer: G

Question No : 117 - (Topic 2)

Which four statements are true? (Choose four.)

A. Is-a relationships can be implemented using the implements keyword.
B. The relationship between Movie and Actress is an example of an is-a relationship.
C. Is-a relationships can be implemented using the extends keyword.
D. An array or a collection can be used to implement a one-to-many has-a relationship.
E. Has-a relationships should be implemented using inheritance.
F. Has-a relationships should never be encapsulated.
G. Has-a relationships can be implemented using instance variables.

Answer: A,C,D,G

Question No : 118 DRAG DROP - (Topic 2)

Click the Task button.