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Q&A

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Exam : **310-055**

Title : Sun Certified Programmer
for the Java 2 Platform.SE
5.0

Version : Demo

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

2.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

3.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

4.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

5.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

6. 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

7. 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

8. 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

9.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

10.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 instantiated at line 15.
- D. Point p = new Point();

Answer: B

11.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

12. 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

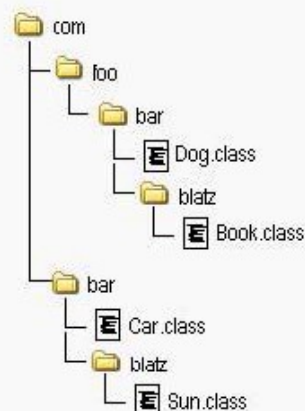
13.DRAG DROP

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;
}
```

<code>import com.foo.bar.blatz.*;</code>	<code>package com.foo.bar.blatz;</code>
<code>import com.bar.*;</code>	<code>import com.*;</code>
<code>package com.bar;</code>	<code>package com;</code>
<code>import com.foo.*;</code>	<code>// blank</code>
<code>import com.foc.bar.*;</code>	<code>import com.foo.bar.Book;</code>

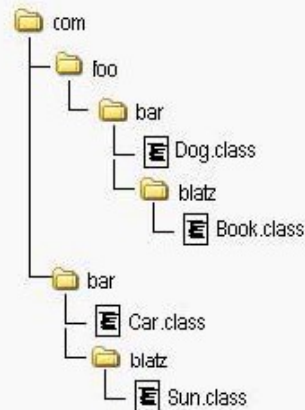
Done

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.




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


14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

22.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

23.DRAG DROP

Click the Task button.

Given: `NumberNames nn = new NumberNames();`
`nn.put("one", 1);`
`System.out.println(nn.getNames());`

Place the code into position to create a class that maps from Strings to integer values.
 The result of execution must be [one]. Some options may be used more than once.

```
public class NumberNames {
    private HashMap<Place here , Place here > map =
        new HashMap<Place here , Place here Place here >;
    public void put(String name, int value) {
        map.put(Place here , Place here );
    }
    public Place here getNames() {
        return map.keySet();
    }
}
```

Code

Set<int>	Set<Integer>	HashSet
Set<Integer,String>	Set<int, String>	Set<String,Integer>
Set<String, int>	Set<String>	NumberNames
String	Integer	int
>()	name	value
		map

Done

Answer:

Given: `NumberNames nn = new NumberNames();`
`nn.put("one", 1);`
`System.out.println(nn.getNames());`

Place the code into position to create a class that maps from Strings to integer values. The result of execution must be [one]. Some options may be used more than once.

```
public class NumberNames {
    private HashMap< > . String > map =
        new HashMap< Integer . >() name ;
    public void put(String name, int value) {
        map.put( map . value );
    }
    public < NumberNames > getNames() {
        return map.keySet();
    }
}
```

Code

Set<int>	Set<Integer>	HashSet
Set<Integer,String>	Set<int, String>	Set<String,Integer>
Set<String, int>	Set<String>	NumberNames
String	Integer	int
>()	name	value
		map

Done

24. 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

25. 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

26. 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. ) {
26.         Foo foo = new Foo( 300 );
27.         System.out.print( foo.getX() + "-" );
28.
29.         Foo fooFoo = fooBar( foo );
30.         System.out.print( foo.getX() + "-" );
31.         System.out.print( fooFoo.getX() + "-" );
32.
33.         foo = fooBar( fooFoo );
34.         System.out.print( foo.getX() + "-" );
35.         System.out.print( fooFoo.getX() );
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

27. 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

28. 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

29. 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

30.DRAG DROP

Click the Task button.

The `doesFileExist` method takes an array of directory names representing a path from the root filesystem and a file name. The method returns true if the file exists, false if it does not.

Place the code fragments in position to complete this method.

```

public static boolean doesFileExist(String[] directories, String filename) {
    Place here
    for ( String dir : directories ) {
        Place here
    }
    Place here
    Place here
}

```

Code Fragments

<code>path = path.getSubdirectory(dir);</code>	<code>return ! file.isNew();</code>	<code>return (file != null);</code>
<code>String path = "";</code>	<code>path = path.getFile(filename);</code>	<code>File path = new File("");</code>
<code>return file.exists();</code>	<code>return path.isFile();</code>	<code>File file = new File(path, filename);</code>
<code>path = new File(path, dir);</code>	<code>File path = new File(File.separator);</code>	<code>path = path + File.separator + dir;</code>

Answer:

The `doesFileExist` method takes an array of directory names representing a path from the root filesystem and a file name. The method returns true if the file exists, false if it does not.

Place the code fragments in position to complete this method.

```
public static boolean doesFileExist(String[] directories, String filename) {
    path = path.getSubdirectory(dir);
    for ( String dir : directories ) {
        return (file != null);
    }
    path = path.getFile(filename);
    return file.isNew();
}
```

Code Fragments

<code>path = path.getSubdirectory(dir);</code>	<code>return ! file.isNew();</code>	<code>return (file != null);</code>
<code>String path = "";</code>	<code>path = path.getFile(filename);</code>	<code>File path = new File("");</code>
<code>return file.exists();</code>	<code>return path.isFile();</code>	<code>File file = new File(path, filename);</code>
<code>path = new File(path, dir);</code>	<code>File path = new File(File.separator);</code>	<code>path = path + File.separator + dir;</code>