310-035

Sun Certified Programmer for Java 2 Platform 1.4

Version 3.0

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Note: Major update with additional questions late May/early June.

QUESTION NO: 1
Given:

```
1. public class Test {
2. public static void main(String args[]) {
3. class Foo {
4. public int i = 3;
5. }
6. Object o = (Object)new Foo();
7. Foo foo = (Foo)o;
8. System.out.println(“i = ‟ + foo.i);
9. }
10. }
```

What is the result?

A. `i = 3`
B. Compilation fails.
C. A ClassCastException is thrown at line 6.
D. A ClassCastException is thrown at line 7.

Answer: A

QUESTION NO: 2
Which two cause a compiler error? (Choose two)

A. `float[] = new float(3);`
B. `float f2[] = new float[];`
C. `float[] f1 = new float[3];`
D. `float f3[] = new float[3];`
E. `float f5[] = { 1.0f, 2.0f, 2.0f };`
F. `float f4[] = new float[] { 1.0f. 2.0f. 3.0f};`

Answer: A, B

QUESTION NO: 3
Given:

```
11. int i =1,j =10;
12. do {
13. if(i++> --j) {
14. continue;
15. }
16. } while (i <5);
17. System.out.println("i = " +i+ "and j = "+j);
```

What is the result?

A. `i = 6 and j = 5`
B. `i = 5 and j = 5`
C. `i = 6 and j = 5`
D. `i = 5 and j = 6`
E. `i = 6 and j = 6`

Answer: D

QUESTION NO: 4
Given:

```
1. class Test {
2. private Demo d;
3. void start() {
4. d = new Demo();
5. this.takeDemo(d);
6. }
7.
8. void takeDemo(Demo demo) {
9. demo = null;
10. demo = new Demo();
11. }
12. }
```

When is the Demo object, created on line 3, eligible for garbage collection?

A. After line 5.
B. After line 9.
C. After the start() method completes.
D. When the takeDemo() method completes.
E. When the instance running this code is made eligible for garbage collection.

Answer: E

QUESTION NO: 5
Given:

```
1. interface Animal {
2. void soundOff();
3. }
4.
5. class Elephant implements Animal {
```

```
public void soundOff() {
System.out.println(“Trumpet”);
}
}

class Lion implements Animal {
public void soundOff() {
System.out.println(“Roar”);
}
}

class Alpha1 {
static Animal get( String choice ) {
if ( choice.equalsIgnoreCase( “meat eater” )) {
return new Lion();
} else {
return new Elephant();
}
}
}
```

Which compiles?

A. `new Animal().soundOff();`
B. `Elephant e = new Alpha1();`
C. `Lion 1 = Alpha.get(“meat eater”);`
D. `new Alpha1().get(“veggie”).soundOff();`

Answer: D

QUESTION NO: 6
Which statement is true?

A. Memory is reclaimed by calling Runtime.gc().
B. Objects are not collected if they are accessible from live threads.
C. Objects that have finalize() methods are never garbage collected.
D. Objects that have finalize() methods always have their finalize() methods called before the program ends.
E. An OutOfMemory error is only thrown if a single block of memory cannot be found that is large enough for a particular requirement.

Answer: B

QUESTION NO: 7

Given:

```
class A {
A() { }
}

class B extends A {
}
```

Which two statements are true? (Choose two)

A. Class B’s constructor is public.
B. Class B’s constructor has no arguments.
C. Class B’s constructor includes a call to this().
D. Class B’s constructor includes a call to super().

Answer: B, D

QUESTION NO: 8
Given:

```
int i = 1,j = 10;
do {
if(i>j) {
break;
}
j--;
} while (++i <5);
System.out.printIn(“i =” +i+” and j = “+j);
```

What is the result?

A. `i = 6 and j = 5`
B. `i = 5 and j = 5`
C. `i = 6 and j = 4`
D. `i = 5 and j = 6`
E. `i = 6 and j = 6`

Answer: D

QUESTION NO: 9
Which statement is true?

A. Assertions can be enabled or disabled on a class-by-class basis.
B. Conditional compilation is used to allow tested classes to run at full speed.
C. Assertions are appropriate for checking the validity of arguments in a method.

D. The programmer can choose to execute a return statement or to throw an exception if an assertion fails.

Answer: A

QUESTION NO: 10
You want a class to have access to members of another class in the same package. Which is the most restrictive access that accomplishes this objective?

A. public
B. private
C. protected
D. transient
E. default access

Answer: E

QUESTION NO: 11
Given:

```
int x = 3;
int y = 1;
if (x = y) {
System.out.println(“x = “ + x);
}
```

What is the result?

A. x = 1
B. x = 3
C. Compilation fails.
D. The code runs with no output.
E. An exception is thrown at runtime.

Answer: C

QUESTION NO: 12
Given:

```
public class Test {
public static void aMethod() throws Exception {
try {
throw new Exception();
} finally {
```

```
6. System.out.println("finally");
7. }
8. }
9. public static void main(String args[]) {
10. try {
11. aMethod();
12. } catch (Exception e) {
13. System.out.println("exception");
14. }
15. System.out.println("finished");
16. }
17. }
```

What is the result?

A. finally

B. exception
finished

C. finally
exception
finished

D. Compilation fails.

Answer: C

QUESTION NO: 13

Given:

```
1. public interface Foo {
2. int k = 4;
3. }
```

Which three are equivalent to line 2? (Choose three)

A. `final int k = 4;`

B. `public int k = 4;`

C. `static int k = 4;`

D. `abstract int k = 4;`

E. `volatile int k = 4;`

F. `protected int k = 4;`

Answer: A, B, C

QUESTION NO: 14

Given:

```
1. package test1;
2. public class Test1 {
```

```
3. static int x = 42;
4. }
1. package test2;
2. public class Test2 extends test1.Test1 {
3. public static void main(String[] args) {
4. System.out.println(“x = “ + x);
5. }
6. }
```

What is the result?

A. x = 0
B. x = 42
C. Compilation fails because of an error in line 2 of class Test2.
D. Compilation fails because of an error in line 3 of class Test1.
E. Compilation fails because of an error in line 4 of class Test2.

Answer: D

QUESTION NO: 15
Given:

```
1. class A {
2. protected int method1(int a, int b) { return 0; }
3. }
```

Which two are valid in a class that extends class A? (Choose two)

A. `public int method1(int a, int b) { return 0; }`
B. `private int method1(int a, int b) { return 0; }`
C. `private int method1(int a, long b) { return 0; }`
D. `public short method1(int a, int b) { return 0: }`
E. `static protected int method1(int a, int b) { return 0; }`

Answer: A, C

QUESTION NO: 16
Given:

```
1. public class Delta {
2. static boolean foo(char c) {
3. System.out.print(c);
4. return true;
5. }
6. public static void main( String[] argv ) {
7. int i =0;
8. for ( foo(‘A’); foo(‘B’)&&(i<2); foo(‘C’)){
9. i++ ;
10. foo('D');
12. }
13. }
14. }
```

What is the result?

A. ABDCBDCB
B. ABCDABCD
C. Compilation fails.
D. An exception is thrown at runtime.

Answer: A

QUESTION NO: 17
Given:

```
1. public class Test{
2. public static void main( String[] argv ){
3. // insert statement here
4. }
5. }
```

Which statement, inserted at line 3, produces the following output?

```
Exception in thread "main" java.lang.AssertionError: true
at Test.main(Test.java:3)
```

A. assert true;
B. assert false;
C. assert false : true;
D. assert false == true;
E. assert false: false;

Answer: C

QUESTION NO: 18
Given:

```
1. public class ArrayTest {
2. public static void main(String[] args) {
3. float fl[], f2[];
4. fl = new float[10];
5. f2 = fl;
6. System.out.println("f2[0]= " + f2[0]);
7. }
8. }
```

What is the result?

A. It prints f2[0] = 0.0.
B. It prints f2[0] = NaN.
C. An error at line 5 causes compile to fail.
D. An error at line 6 causes compile to fail.
E. An error at line 6 causes an expectation at runtime.

Answer: A

QUESTION NO: 19
Given:

```
public class Test {
public int aMethod() {
static int i = 0;
i++;
return i;
}
public static void main (String args[]) {
Test test = new Test();
test.aMethod();
int j = test.aMethod();
System.out.println(j);
}
}
```

What is the result?

A. 0
B. 1
C. 2
D. Compilation fails.

Answer: D

QUESTION NO: 20
Given:

```
1. class Super {
2. public float getNum() { return 3.0f; }
3. }
4.
5. public class Sub extends Super {
6.
7. }
```

Which method, placed at line6, causes compilation to fail?

A. `public void getNum() { }`
B. `public void getNum(double d) { }`
C. `public float getNum() { return 4.0f; }`
D. `public double getNum(float d) { return 4.0d; }`

Answer: A

QUESTION NO: 21
Given:

```
boolean bool = true;
if(bool = false) {
System.out.println(“a”);
} else if (bool) {
System.out.println(“c”);
} else if (!bool) {
System.out.println(“c”);
} else {
System.out.println(“d”);
}
```

What is the result?

A. a
B. b
C. c
D. d
E. Compilation fails.

Answer: E

QUESTION NO: 22
Which statement is true?

A. catch(X x) can catch subclasses of X.
B. The Error class us a RuntimeException.
C. Any statement that can throw an Error must be enclosed in a try block.
D. Any statement that can throw an Exception must be enclosed in a try block.
E. Any statement that can throw a RuntimeException must be enclosed in a try block.

Answer: A

QUESTION NO: 23
Which statement is true about assertion in the Java programming language?

A. Assertion expressions should not contain side effects.
B. Assertion expression values can be any primitive type.
C. Assertion should be used for enforcing preconditions on public methods.
D. An AssertionError thrown as a result of a failed assertion should always be handled by the enclosing method.

Answer: A

QUESTION NO: 24
Given:

```
1. package foo;
2.
3. import java.util.Vector;
4.
5. private class MyVector extends Vector {
6. int i = 1;
7. public MyVector() {
8. i = 2,
9. }
10. }
11.
12. public class MyNewVector extends MyVector {
13. public MyNewVector() {
14. i = 4;
15. }
16. public static void main(String args[]) {
17. MyVector v = new MyNewVector();
18. }
19. }
```

What is the result?

A. Compilation succeeds.
B. Compilation fails because of an error at line 5.
C. Compilation fails because of an error at line 6.
D. Compilation fails because of an error at line 14.
E. Compilation fails because of an error at line 17.

Answer: B

QUESTION NO: 25
Given:

```
1. class TestSuper {
2. TestSuper(int i) { }
3. }
4. class TestSub extends TestSuper{ }
5. class TestAll {
6. public static void main (String [] args) {
7. new TestSub();
8. }
9. }
```

Which is true?

A. Compilation fails.
B. The code runs without exception.
C. An exception is thrown at line 7.
D. An exception is thrown at line 2.

Answer: A

QUESTION NO: 26
Given:

```
int i = 0;
for (; i <4; i += 2) {
System.out.print(i + “”);
}
System.out.println(i);
```

What is the result?

A. 0 2 4
B. 0 2 4 5
C. 0 1 2 3 4
D. Compilation fails.
E. An exception is thrown at runtime.

Answer: A

QUESTION NO: 27
Given:

```
public class SwitchTest {
public static void main(String[] args) {
System.out.println(“value = “ + switchIt(4));
}
public static int switchIt(int x) {
int j = 1;
switch (x) {
```

```
case 1: j++;
case 2: j++;
case 3: j++;
case 4: j++;
case 5: j++;
default: j++;
}
return j + x;
}
}
```

What is the result?

A. value = 3
B. value = 4
C. value = 5
D. value = 6
E. value = 7
F. value = 8

Answer: F

QUESTION NO: 28
Which three form part of correct array declarations? (Choose three)

A. `public int a []`
B. `static int [] a`
C. `public [] int a`
D. `private int a [3]`
E. `private int [3] a []`
F. `public final int [] a`

Answer: A, B, F

QUESTION NO: 29
Given:

```
public class Foo {
public static void main(String[] args) {
try {
return;
} finally {
System.out.println( "Finally" );
}
}
9. }
```

What is the result?

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

Answer: A

QUESTION NO: 30
Given:

```
ClassOne.java:
1. package com.abe.pkg1;
2. public class ClassOne {
3. private char var = ‘a’;
4. char getVar() { return var; }
5. }
ClassTest.java:
1. package com.abe.pkg2;
2. import com.abc.pkg1.ClassOne;
3. public class ClassTest extends ClassOne {
4. public static void main(String[] args) {
5. char a = new ClassOne().getVar();
6. char b = new ClassTest().getVar();
7. }
8. }
```

What is the result?

A. Compilation fails.
B. Compilation succeeds and no exceptions are thrown.
C. An exception is thrown at line 5 in ClassTest.java.
D. An exception is thrown at line 6 in ClassTest.java.

Answer: A

QUESTION NO: 31
Given:

```
1. public class Alpha1 {
2. public static void main( String[] args ) {
3. boolean flag; int i=0;
5. do {
6. flag = false;
7. System.out.println( i++ );
flag = i < 10;
continue;
} while ( (flag)? true:false );
}
}
```

What is the result?

A. 000000000
B. 0123456789
C. Compilation fails.
D. The code runs with no output.
E. The code enters an infinite loop.
F. An exception is thrown at runtime.

Answer: B

QUESTION NO: 32
Given:

```
1. package foo;
2.
3. import java.util.Vector;
4.
5. protected class MyVector Vector {
6. init i = 1;
7. public MyVector() {
8. i = 2;
9. }
10. }
11.
12. public class MyNewVector extends MyVector {
13. public MyNewVector() {
14. i = 4;
15. }
16. public static void main(String args[]) {
17. MyVector v = new MyNewVector();
18. }
19. }
```

What is the result?

A. Compilation succeeds.
B. Compilation fails because of an error at line 5.
C. Compilation fails because of an error at line 6.
D. Compilation fails because of an error at line 14.
E. Compilation fails because of an error at line 17.

Answer: B

QUESTION NO: 33
Given:

```
class Super {
public Integer getLenght() { return new Integer(4); }
}

public class Sub extends Super {
public Long GetLenght() { return new Long(5); }

public static void main(String[] args) {
Super sooper = new Super();
Sub sub = new Sub();
System.out.println(
sooper.getLenght().toString() + “,” +
sub.getLenght().toString() );
}
}
```

What is the output?

A. 4,4
B. 4,5
C. 5,4
D. 5,5
E. Compilation fails.

Answer: A

QUESTION NO: 34
Given:

```
public class Test {
public static String output =””;

public static void foo(int i) {
try {
if(i==1) {
throw new Exception();
}
output += “1”;
}
catch(Exception e) {
output += “2”;
return;
}
finally {
```

```
16. output += “3”;
17. }
18. output += “4”;
19. }
20.
21. public static void main(String args[]) {
22. foo(0);
23. foo(1);
24.
25. }
26. }
```

What is the value of the variable output at line 23?

Answer: 13423

QUESTION NO: 35

Given:

```
10. public Object m() {
11. Object o = new Float(3.14F);
12. Object [] oa = new Object[1];
13. oa[0] = o;
14. o = null;
15. return oa[0];
16. }
```

When is the Float object, created in line 11, eligible for garbage collection?

A. Just after line 13.
B. Just after line 14.
C. Never in this method.
D. Just after line 15 (that is, as the method returns).

Answer: B

QUESTION NO: 36

Given:

```
1. class Base {
2. Base() { System.out.print(“Base”); }
3. }
4. public class Alpha extends Base {
5. public static void main( String[] args ) {
6. new Alpha();
7. new Base();
8. }
9. }
```

What is the result?

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

Answer: B

QUESTION NO: 37
Given:

```
int i = 1,j = -1;
switch (i) {
case 0, 1:j = 1;
case 2: j = 2;
default; j = 0;
}
System.out.printIn(“j=”+j);
```

What is the result?

A. `j = -1`
B. `j = 0`
C. `j = 1`
D. `j = 2`
E. Compilation fails.

Answer: E

QUESTION NO: 38
Given:

```
public class X {
public static void main(String [] args) {
try {
badMethod();
System.out.print(“A”);
}
catch (Exception ex) {
System.out.print(“B”);
}
finally {
System.out.print(“C”);
}
System.out.print(“D”);
}
public static void badMethod() {}
}
```

What is the result?

A. AC
B. BD
C. ACD
D. ABCD
E. Compilation fails.

Answer: C

QUESTION NO: 39
Which two are valid declarations within an interface definition? (Choose two)

A. `void methoda();`
B. `public double methoda();`
C. `public final double methoda();`
D. `static void methoda(double d1);`
E. `protected void methoda(double d1);`

Answer: A, B

QUESTION NO: 40
Which two allow the class Thing to be instantiated using new Thing()? (Choose two)

A.
```
public class Thing {
}
```
B.
```
public class Thing {
public Thing() {}
}
```
C.
```
public class Thing {
public Thing(void) {}
}
```
D.
```
public class Thing {
public Thing(String s) {}
}
```
E.
```
public class Thing {
public void Thing() {}
public Thing(String s) {}
}
```

Answer: A, B

QUESTION NO: 41
Given:

```
Float f = new Float(“12”);
switch (f) {
case 12: System.out.printIn(“Twelve”);
case 0: System.out.printIn(“Zero”);
default: System.out.printIn(“Default”);
}
```

What is the result?

A. Zero
B. Twelve
C. Default
D. Twelve
Zero
Default
E. Compilation fails.

Answer: E

QUESTION NO: 42
Given:

```
public class X {
public static void main(String [] args) {
try {
badMethod();
System.out.print(“A”);
}
catch (Exception ex) {
System.out.print(“B”);
}
finally {
System.out.print(“C”);
}
System.out.print(“D”);
}
public static void badMethod() {
throw new RuntimeException();
}
}
```

What is the result?

A. AB
B. BC
C. ABC
D. BCD
E. Compilation fails.

Answer: D

QUESTION NO: 43
Given:

```
1. class TestA {
2. TestB b;
3. TestA() {
4. b = new TestB(this);
5. }
6. }
7. class TestB {
8. TestA a;
9. TestB(TestA a) {
10. this.a = a;
11. }
12. }
13. class TestAll {
14. public static void main (String args[]) {
15. new TestAll().makeThings();
16. // ...code continues on
17. }
18. void makeThings() {
19. TestA test = new TestA();
20. }
21. }
```

Which two statements are true after line 15, before main completes? (Choose two)

A. Line 15 causes a stack overflow.
B. An exception is thrown at runtime.
C. The object referenced by a is eligible for garbage collection.
D. The object referenced by b is eligible for garbage collection.
E. The object referenced by a is not eligible for garbage collection.
F. The object referenced by b is not eligible for garbage collection.

Answer: C, F

QUESTION NO: 44

Given:

```
for (int i =0; i <3; i++) {
switch(i) {
case 0: break;
case 1: System.out.print(“one “);
case 2: System.out.print(“two “);
case 3: System.out.print(“three “);
}
}
System.out.println(“done”);
```

What is the result?

A. done
B. one two done
C. one two three done
D. one two three two three done
E. Compilation fails.

Answer: D

QUESTION NO: 45
Which three statements are true? (Choose three)

A. The default constructor initializes method variables.
B. The default constructor has the same access as its class.
C. The default constructor invoked the no-arg constructor of the superclass.
D. If a class lacks a no-arg constructor, the compiler always creates a default constructor.
E. The compiler creates a default constructor only when there are no other constructors for the class.

Answer: B, C, E

QUESTION NO: 46
Which three statements are true? (Choose three)

A. Assertion checking is typically enabled when a program is deployed.
B. It is never appropriate to write code to handle failure of an assert statement.
C. Assertion checking is typically enabled during program development and testing.
D. Assertion checking can be selectively enabled or disable an a per-package basis, but not on a per-class basis.
E. Assertion checking can be selectively enabled or disabled on both a per-package basis and a per-class basis.

Answer: B, C, E

QUESTION NO: 47
Which statement is true?

A. A try statement must have at least one corresponding catch block.
B. Multiple catch statements can catch the same class of exception more than once.
C. An Error that might be thrown in a method must be declared as thrown by that method, or be handled within that method.
D. Except in case of VM shutdown, if a try block starts to execute, a corresponding finally block will always start to execute.
E. Except in case of VM shutdown, if a try block starts to execute, a corresponding finally block must always run to completion.

Answer: E

QUESTION NO: 48
Given:

```
class A {
final public int method1(int a, int b) {return 0; }
}
class B extends A {
public int method1(int a, int b) { return 1; }
}
public class Test {
public static void main(Strings args[]) {
B b;
System.out.println(“x = “ + b.method1(0, 1));
}
}
```

What is the result?

A. x = 0
B. x = 1
C. Compilation fails.
D. En exception is thrown at runtime.

Answer: C

QUESTION NO: 49
Given:

```
10. public Object m() {
```

```
11. Object o = new Float(3.14F);
12. Object [] oa = new Object[1];
13. oa[0] = o;
14. o = null;
15. oa[0] = null;
16. return 0;
17. }
```

When is the Float object, created in line 11, eligible for garbage collection?

A. Just after line 13.
B. Just after line 14.
C. Just after line 15.
D. Just after line 16 (that is, as the method returns).

Answer: B

QUESTION NO: 50
Given:

```
11. public void test(int x) {
12. int odd = x%2;
13. if (odd) {
14. System.out.println(“odd);
15. } else {
16. System.out.println(“even”);
17. }
18. }
```

Which statement is true?

A. Compilation fails.
B. “odd” will always be output.
C. “even” will always be output.
D. “odd” will be output for odd values of x, and “even” for even values.
E. “even” will be output for add values of x, and “odd” for even values.

Answer: A

QUESTION NO: 51
Which two create an instance of an array? (Choose two)

A. `int[] ia = new int[15];`
B. `float fa = new float[20];`
C. `char[] ca = “Some String”;`
D. `Object oa = new float[20];`

E. `int ia[][] = { 4, 5, 6, }, { 1, 2, 3 };`

Answer: A, D

QUESTION NO: 52

Given:

```
class Super {
public int getLenght() { return 4; }
}

public class Sub extends Super {
public long getLenght() { return 5; }

public static void main(String[] args) {
Super sooper = new Super();
Sub sub = new Sub();
System.out.println(
sooper.getLenght() + “,” + sub.getLenght() );
}
}
```

What is the output?

A. 4,4
B. 4,5
C. 5,4
D. 5,5
E. Compilation fails.

Answer: E

QUESTION NO: 53

Given:

```
public class Test {
public static void main(String[] args) {
int x = 0;
assert (x > 0): “assertion failed”;
System.out.printIn(“finished”);
}
}
```

What is the result?

A. finished
B. Compilation fails.
C. An AssertionError is thrown.

D. An AssertionError is thrown and finished is output.

Answer: A

QUESTION NO: 54
You want to limit access to a method of a public class to members of the same class. Which access accomplishes this objective?

A. public
B. private
C. protected
D. transient
E. default access

Answer: B

QUESTION NO: 55
Given:

```
11. switch(x) {
12. default:
13. System.out.printIn("Hello");
14. }
```

Which two are acceptable types for x? (Choose two)

A. byte
B. long
C. char
D. float
E. Short
F. Long

Answer: A, C

QUESTION NO: 56
Given:

```
1. public class X {
2. public static void main(String [] args) {
3. try {
4. badMethod();
5. System.out.print("A");
6. }
catch (RuntimeException ex) {
System.out.print(“B”);
}
catch (Exception ex1) {
System.out.print(“C”);
}
finally {
System.out.print(“D”);
}
System.out.print(“E”);
}
public static void badMethod() {
throw new RuntimeException();
}
}
```

What is the result?

A. BD
B. BCD
C. BDE
D. BCDE
E. ABCDE
F. Compilation fails.

Answer: C

QUESTION NO: 57
Given:

```
public class Test {
public static void main(String[] args) {
int x = 0;
assert (x > 0) ? “assertion failed” : “assertion passed”;
System.out.println(“Finished”);
}
}
```

What is the result?

A. finished
B. Compilation fails.
C. An AssertionError is thrown and finished is output.
D. An AssertionError is thrown with the message “assertion failed”.
E. An AssertionError is thrown with the message “assertion passed”.

Answer: B

QUESTION NO: 58
Given:

```
1. public class ReturnIt {
2. return Type methodA(byte x, double y) {
3. return (long)x / y * 2;
4. }
5. }
```

What is the narrowest valid returnType for methodA in line2?

A. int
B. byte
C. long
D. short
E. float
F. double

Answer: F

QUESTION NO: 59
Given:

```
1. public class OuterClass {
2. private double d1 = 1.0;
3. // insert code here
4. }
```

Which two are valid if inserted at line 3? (Choose two)

```
A. static class InnerOne {
   public double methoda() { return d1; }
   }
B. static class InnerOne {
   static double methoda() { return d1; }
   }
C. private class InnerOne {
   public double methoda() { return d1; }
   }
D. protected class InnerOne {
   static double methoda() { return d1; }
   }
E. public abstract class InnerOne {
   public abstract double methoda();
   }
```

Answer: C, E

QUESTION NO: 60
Given:

```
public class Foo {
public void main( String[] args ) {
System.out.printIn( “Hello” + args[0] );
}
}
```

What is the result if this code is executed with the command line?

```
java Foo world
```

A. Hello
B. Hello Foo
C. Hello world
D. Compilation fails.
E. The code does not run.

Answer: E

QUESTION NO: 61
Given:

```
public void foo( boolean a, boolean b ){
if( a ) {
System.out.println( “A” );
} else if ( a && b ) {
System.out.println( “A&&B” );
} else {
if ( !b ) {
System.out.println( “notB” );
} else {
System.out.println( “ELSE” );
}
}
}
```

What is correct?

A. If a is true and b is true then the output is “A&&B”.
B. If a is true and b is false then the output is “notB”.
C. If a is false and b is true then the output is “ELSE”.
D. If a is false and b is false then the output is “ELSE”.

Answer: C

QUESTION NO: 62
Which two cause a compiler error? (Choose two)

A. `int[] scores = {3, 5, 7};`
B. `int [][] scores = {2,7,6}, {9,3,45};`
C. `String cats[] = {“Fluffy”, “Spot”, “Zeus”};`
D. `boolean results[] = new boolean [3] {true, false, true};`
E. `Integer results[] = {new Integer(3), new Integer(5), new Integer(8)};`
F. `String[] dogs = new String[]{new String(“Fido”),new String(“Spike”), new String(“Aiko”)};`

Answer: B, D

QUESTION NO: 63
Given:

```
11. int i = 0, j = 5;12. tp; for (;;) {
12. i++;
13. for(;;) {
14. if (i> --j) {
15. break tp;
16. break tp;
17. }
18. }
19. System.out.printIn(“i=” +i “,j =”+j);
```

What is the result?

A. `i = 1, j = 0`
B. `i = 1, j = 4`
C. `i = 3, j = 4`
D. `i = 3, j = 0`
E. Compilation fails.

Answer: E

QUESTION NO: 64
Given:

```
1. public abstract class Test {
2. public abstract void methodA();
3.
4. public abstract void methodB()
5. {
```

```
6. System.out.println(“Hello”);
7. }
8. }
```

Which two changes, independently applied, allow this code to compile? (Choose two)

A. Add a method body to methodA.
B. Replace lines 5 – 7 with a semicolon (“;”).
C. Remove the abstract qualifier from the declaration of Test.
D. Remove the abstract qualifier from the declaration of methodA.
E. Remove the abstract qualifier from the declaration of methodB.

Answer: B, E

QUESTION NO: 65

Given:

```
1. public class Test {
2. public static void main(String Args[]) {
3. int i =1, j = 0;
4. switch(i) {
5. case 2: j +=6;
6. case 4: j +=1;
7. default: j +=2;
8. case 0: j +=4;
9. }
10. System.out.printIn(“j =” +j);
11. }
12. }
```

What is the result?

A. 0
B. 2
C. 4
D. 6
E. 9
F. 13

Answer: D

QUESTION NO: 66

Given:

```
1. class A {
2. }
3. class Alpha {
4. private A myA = new A();

void dolt( A a ) {
a = null;
}
void tryIt() {
dolt( myA );
}
}
```

Which two statements are correct? (Choose two)

A. There are no instanced of A that will become eligible for garbage collection.
B. Explicitly setting myA to null marks that instance to be eligible for garbage collection.
C. Any call on tryIt() causes the private instance of A to be marked for garbage collection.
D. Private instances of A become eligible for garbage collection when instances of Alpha become eligible for garbage collection.

Answer: B, D

QUESTION NO: 67
Given:

```
class Super {
public int i = 0;

public Super(String text) {
i = 1;
}
}

public class Sub extends Super {
public Sub(String text) {
i = 2;
}

public static void main(String args[]) {
Sub sub = new Sub("Hello");
System.out.println(sub.i);
}
}
```

What is the result?

A. 0
B. 1
C. 2
D. Compilation fails.

Answer: D

QUESTION NO: 68
Given:

```
int i = 1,j = 10;
do{
if (i>j) {
continue;
}
j--;
} while (++i <6);
System.out.println(“i = ‟ +i+” and j = ‟+j);
```

What is the result?

```
A. i = 6 and j = 5
B. i = 5 and j = 5
C. i = 6 and j = 4
D. i = 5 and j = 6
E. i = 6 and j = 6
```

Answer: D

QUESTION NO: 69
Which fragment is an example of inappropriate use of assertions?

```
A. assert (!(map.contains(x)));
   map.add(x);
B. if (x > 0) {
   } else {
   assert (x==0);
   }
C. public void aMethod(int x) {
   assert (x > 0);
   }
D. assert (invariantCondition());
   return retval;
E. switch (x) {
   case 1: break;
   case 2: creak;
   default: assert (x == 0);
```

Answer: C

QUESTION NO: 70
Given:

```
public class X {
public X aMethod() { return this;}
}
public class Y extends X {

}
```

Which two methods can be added to the definition of class Y? (Choose two)

A. `public void aMethod() {}`
B. `private void aMethod() {}`
C. `public void aMethod(String s) {}`
D. `private Y aMethod() { return null; }`
E. `public X aMethod() { return new Y(); }`

Answer: C, E

QUESTION NO: 71
Given:

```
public class X {
public static void main(String [] args) {
try {
badMethod();
System.out.print(“A”);
}
catch (Exception ex) {
System.out.print(“B”);
}
finally {
System.out.print(“B”);
}
System.out.print(“D”);
}
public static void badMethod() {
throw new Error();
}
}
```

What is the result?

A. ABCD
B. Compilation fails.
C. C is printed before exiting with an error message.
D. BC is printed before exiting with an error message.

E. BCD is printed before exiting with an error message.

Answer: C

QUESTION NO: 72
You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective?

A. public
B. private
C. protected
D. transient
E. default access

Answer: C

QUESTION NO: 73
Given:

```
1. class Exc0 extends Exception { }
2. class Exc1 extends Exc0 { }
3. public class Test {
4. public static void main(String args[]) {
5. try {
6. throw new Exc1();
7. } catch (Exc0 e0) {
8. System.out.println(“Ex0 caught”);
9. } catch (Exception e) {
10. System.out.println(“exception caught”);
11. }
12. }
13. }
```

What is the result?

A. `Ex0 caught`
B. `exception caught`
C. Compilation fails because of an error at line 2.
D. Compilation fails because of an error at line 6.

Answer: A

QUESTION NO: 74

Given:

```
20. public float getSalary(Employee e) {
21. assert validEmployee(e);
22. float sal = lookupSalary(e);
23. assert (sal>0);
24. return sal;
25. }
26. private int getAge(Employee e) {
27. assert validEmployee(e);
28. int age = lookupAge(e);
29. assert (age>0);
30. return age;
31. }
```

Which line is a violation of appropriate use of the assertion mechanism?

A. line 21
B. line 23
C. line 27
D. line 29

Answer: A

QUESTION NO: 75

Given:

```
1. public class A {
2. void A() {
3. System.out.println("Class A");
4. }
5. public static void main(String[] args) {
6. new A();
7. }
8. }
```

What is the result?

A. Class A
B. Compilation fails.
C. An exception is thrown at line 2.
D. An exception is thrown at line 6.
E. The code executes with no output.

Answer: E

QUESTION NO: 76

Given:

```
1. class Bar { }
1. class Test {
2. Bar doBar() {
3. Bar b = new Bar();
4. return b;
5. }
6. public static void main (String args[]) {
7. Test t = new Test();
8. Bar newBar = t.doBar();
9. System.out.println(“newBar”);
10. newBar = new Bar();
11. System.out.println(“finishing”);
12. }
13. }
```

At what point is the Bar object, created on line 3, eligible for garbage collection?

A. After line 8.
B. After line 10.
C. After line 4, when doBar() completes.
D. After line 11, when main() completes.

Answer: C

QUESTION NO: 77
Given:

```
1. interface Beta {}
2.
3. class Alpha implements Beta {
4. String testIt() {
5. return “Tested”;
6. }
7. }
8.
9. public class Main1 {
10. static Beta getIt() {
11. return new Alpha();
12. }
13. public static void main( String[] args ) {
14. Beta b = getIt();
15. System.out.println( b.testIt() );
16. }
17. }
```

What is the result?

A. Tested
B. Compilation fails.
C. The code runs with no output.

D. An exception is thrown at runtime.

Answer: B

QUESTION NO: 78
Given:

```
11. public class Test {
12. public void foo() {
13. assert false;
14. assert false;
15. }
16. public void bar(){
17. while(true){
18. assert false;
19. }
20. assert false;
21. }
22. }
```

What causes compilation to fail?

A. Line 13
B. Line 14
C. Line 18
D. Line 20

Answer: D

QUESTION NO: 79
Which statement is true?

A. Programs will not run out of memory.
B. Objects that will never again be used are eligible for garbage collection.
C. Objects that are referred to by other objects will never be garbage collected.
D. Objects that can be reached from a live thread will never be garbage collected.
E. Objects are garbage collected immediately after the system recognizes they are eligible.

Answer: D

QUESTION NO: 80

In which two cases does the compiler supply a default constructor for class A? (Choose two)

A.
```
class A {
}
```
B.
```
class A {
public A() {}
}
```
C.
```
class A {
public A(int x) {}
}
```
D.
```
class Z {}
class A extends Z {
void A() {}
}
```

Answer: A, D

QUESTION NO: 81
Given:
```
1. public class ReturnIt {
2. return Type methodA(byte x, double y) {
3. return (short)x / y * 2;
4. }
5. }
```
What is the narrowest valid returnType for methodA in line2?

A. int
B. byte
C. long
D. short
E. float
F. double

Answer: F

QUESTION NO: 82
Given:
```
1. public class Outer{
2. public void someOuterMethod() {
3. // Line 3
4. }
5. public class Inner{}
6. public static void main( String[]argv ) {
7. Outer o = new Outer();
8. // Line 8
9. }
10. }
```

Which instantiates an instance of Inner?

A. `new Inner(); // At line 3`
B. `new Inner(); // At line 8`
C. `new o.Inner(); // At line 8`
D. `new Outer.Inner(); // At line 8`

Answer: A

QUESTION NO: 83
What allows the programmer to destroy an object x?

A. `x.delete()`
B. `x.finalize()`
C. `Runtime.getRuntime().gc()`
D. Explicitly setting the object’s reference to null.
E. Ensuring there are no references to the object.
F. Only the garbage collection system can destroy an object.

Answer: F

QUESTION NO: 84
Given:

```
int x = 1, y =6;
while (y--) {
x++;
}
System.out.println(“x =” + x + “y =” +y);
```

What is the result?

A. `x = 6 y = 0`
B. `x = 7 y = 0`
C. `x = 6 y = -1`
D. `x = 7 y = -1`
E. Compilation fails.

Answer: D

QUESTION NO: 85

Given:

```
float f[][][] = new float[3][][];
float f0 = 1.0f;
float[][] farray = new float[1][1];
```

What is valid?

A. `f[0] = f0;`
B. `f[0] = farray;`
C. `f[0] = farray[0];`
D. `f[0] = farray[0][0];`

Answer: B

QUESTION NO: 86

Given:

```
for (int i =0; i < 4; i +=2) {
System.out.print(i + "");
}
System.out.println(i);
```

What is the result?

A. 0 2 4
B. 0 2 4 5
C. 0 1 2 3 4
D. Compilation fails.
E. An exception is thrown at runtime.

Answer: D

QUESTION NO: 87

Given:

```
void start() {
A a = new A();
B b = new B();
a.s(b);
b = null;
a = null;
System.out.printIn("start completed");
}
```

When is the B object, created in line 14, eligible for garbage collection?

A. After line 16.
B. After line 17.
C. After line 18 (when the methods ends).
D. There is no way to be absolutely certain.
E. The object is NOT eligible for garbage collection.

Answer: C

QUESTION NO: 88
Given:

```
1. public class Exception Test {
2. class TestException extends Exception {}
3. public void runTest() throws TestException {}
4. public void test() /* Point X */ {
5. runTest();
6. }
7. }
```

At Point X on line 4, which code is necessary to make the code compile?

A. No code is necessary.
B. `throws Exception`
C. `catch ( Exception e )`
D. `throws RuntimeException`
E. `catch ( TestException e)`

Answer: B

QUESTION NO: 89
Given:

```
11. int i = 0;
12. while (true) {
13. if(i==4) {
14. break;
15. }
16. ++i;
17. }
18. System.out.println("i="+i);
```

What is the result?

A. `i = 0`
B. `i = 3`

C. i = 4
D. i = 5
E. Compilation fails.

Answer: C

QUESTION NO: 90
Given:

```
try {
int x = 0;
int y = 5 / x;
} catch (Exception e) {
System.out.println(“Exception”);
} catch (ArithmeticException ae) {
System.out.println(“Arithmetic Exception”);
}
System.out.println(“finished”);
```

What is the result?

A. finished
B. Exception
C. Compilation fails.
D. Arithmetic Exception

Answer: C

QUESTION NO: 91
Given:

```
public class Test { }
```

What is the prototype of the default constructor?

A. Test()
B. Test(void)
C. public Test()
D. public Test(void)
E. public void Test()

Answer: A

QUESTION NO: 92

Given:

```
1. abstract class AbstractIt {
2. abstract float getFloat();
3. }
4. public class AbstractTest extends AbstractIt {
5. private float f1 = 1.0f;
6. private float getFloat() { return f1; }
7. }
```

What is the result?

A. Compilation succeeds.
B. An exception is thrown.
C. Compilation fails because of an error at line 2.
D. Compilation fails because of an error at line 6.

Answer: D

QUESTION NO: 93
Which four can be thrown using the throw statement? (Choose four)

A. Error
B. Event
C. Object
D. Throwable
E. Exception
F. RuntimeException

Answer: A, D, E, F

QUESTION NO: 94
What produces a compiler error?

A.
```
class A {
public A(int x) {}
}
```

B.
```
class A {
}
class B extends A {
B() {}
}
```

C.
```
class A {
A() {}
}
```

```
class B {
public B() {}
}
```

D.

```
class Z {
public Z(int) {}
}
class A extends Z {
}
```

Answer: D

QUESTION NO: 95
Given:

```
for( int i = min; i <max; i++) {
System.out.println(i);
}
```

If min and max are arbitrary integers, what gives the same result?

A.

```
init i = min;
while( i < max ) {
}
```

B.

```
int i = min;
do
System.out.println(i++);
} while( i< max );
```

C.

```
for (int i=min; i<max; System.out.println(++I));
```

D.

```
for (int i=; i++<max; System.out.println(i));
```

Answer: B