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Q. 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

Q. 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

Q. 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: B

Q. 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

Q. 5 Given:

```
1. interface Animal {
2. void soundOff();
3. }
4.
5. class Elephant implements Animal {
6. public void soundOff() {
7. System.out.println("Trumpet");
8. }
9. }
10.
11. class Lion implements Animal {
12. public void soundOff() {
13. System.out.println("Roar");
14. }
15. }
16.
17. class Alpha1 {
18. static Animal get( String choice ) {
19. if ( choice.equalsIgnoreCase( "meat eater" )) {
20. return new Lion();
21. } else {
```

```
22. return new Elephant();
23. }
24. }
25. }
```

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

Q. 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

Q. 7 Given:

```
1. class A {
2. A() { }
3. }
4.
5. class B extends A {
6. }
```

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

Q. 8 Given:

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

```
18. 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

Q. 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

Q. 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

Q. 11 Given:

```
11. int x = 3;
12. int y = 1;
13. if (x = y) {
14. System.out.println("x = " + x);
15. }
```

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

Q. 12 Given:

```
1. public class Test {
2. public static void aMethod() throws Exception {
3. try {
4. throw new Exception();
```

```
5. } 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 18 Given:

```
1. public class ArrayTest {
2. public static void main(String[] args) {
3. float f1[], f2[];
4. f1 = new float[10];
5. f2 = f1;
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

Q. 19 Given:

```
1. public class Test {
```

```
2. public int aMethod() {
3. static int i = 0;
4. i++;
5. return i;
6. }
7. public static void main (String args[]) {
8. Test test = new Test();
9. test.aMethod();
10. int j = test.aMethod();
11. System.out.println(j);
12. }
13. }
```

What is the result?

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

Answer: D

Q. 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

Q. 21 Given:

```
11. boolean bool = true;
12. if(bool = false) {
13. System.out.println("a");
14. } else if (bool) {
15. System.out.println("c");
16. } else if (!bool) {
17. System.out.println("c");
```

```
18. } else {
19. System.out.println("d");
20. }
```

What is the result?

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

Answer: E

Q. 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

Q. 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

Q. 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

Q. 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

Q. 26 Given:

```
10. int i = 0;
11. for (; i <4; i += 2) {
12. System.out.print(i + "");
13. }
14. 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

Q. 27 Given:

```
1. public class SwitchTest {
2. public static void main(String[] args) {
3. System.out.println("value = " + switchIt(4));
4. }
5. public static int switchIt(int x) {
6. int j = 1;
7. switch (x) {
8. case 1: j++;
9. case 2: j++;
10. case 3: j++;
11. case 4: j++;
12. case 5: j++;
13. default: j++;
14. }
15. return j + x;
16. }
17. }
```

What is the result?

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

Answer: F

Q. 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

Q. 29 Given:

```
1. public class Foo {
2. public static void main(String[] args) {
3. try {
4. return;
5. } finally {
```

```
6. System.out.println( "Finally" );
7. }
8. }
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

Q. 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

Q. 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++ );
8. flag = i < 10;
```

```
9. continue;
10. } while ( (flag)? true:false );
11. }
12. }
```

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

Q. 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

Q. 33 Given:

```
1. class Super {
2. public Integer getLenght() { return new Integer(4); }
3. }
4.
5. public class Sub extends Super {
6. public Long GetLenght() { return new Long(5); }
7.
8. public static void main(String[] args) {
9. Super sooper = new Super();
10. Sub sub = new Sub();
11. System.out.println(
12. sooper.getLenght().toString() + “,” +
13. sub.getLenght().toString() );
14. }
15. }
```

What is the output?

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

Answer: E

Q. 34 Given:

```
1. public class Test {
2. public static String output =””;
3.
4. public static void foo(int i) {
5. try {
6. if(i==1) {
7. throw new Exception();
8. }
9. output += “1”;
10. }
11. catch(Exception e) {
12. output += “2”;
13. return;
14. }
15. 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

Q. 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

Q. 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

Q. 37 Given:

```
11. int i = 1,j = -1;
12. switch (i) {
13. case 0, 1:j = 1;
14. case 2: j = 2;
15. default; j = 0;
16. }
17. System.out.println("j="+j);
```

What is the result?

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

Answer: E

Q. 38 Given:

```
1. public class X {
2. public static void main(String [] args) {
3. try {
4. badMethod();
5. System.out.print("A");
6. }
7. catch (Exception ex) {
8. System.out.print("B");
9. }
10. finally {
11. System.out.print("C");
12. }
13. System.out.print("D");
14. }
15. public static void badMethod() {}
17. }
```

What is the result?

A. AC
B. BD
C. ACD

D. ABCD
E. Compilation fails.

Answer: C

Q. 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

Q. 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

Q. 41 Given:

```
11. Float f = new Float("12");
12. switch (f) {
13. case 12: System.out.println("Twelve");
14. case 0: System.out.println("Zero");
15. default: System.out.println("Default");
16. }
```

What is the result?

A. Zero
B. Twelve
C. Default
D. Twelve
Zero
Default

E. Compilation fails.

Answer: E

Q. 42 Given:

```
1. public class X {
2. public static void main(String [] args) {
3. try {
4. badMethod();
5. System.out.print("A");
6. }
7. catch (Exception ex) {
8. System.out.print("B");
9. }
10. finally {
11. System.out.print("C");
12. }
13. System.out.print("D");
14. }
15. public static void badMethod() {
16. throw new RuntimeException();
17. }
18. }
```

What is the result?

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

Answer: D

Q. 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

Q. 44 Given:

```
11. for (int i =0; i <3; i++) {
12. switch(i) {
13. case 0: break;
14. case 1: System.out.print("one ");
15. case 2: System.out.print("two ");
16. case 3: System.out.print("three ");
17. }
18. }
19. 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

Q. 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

Q. 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

Q. 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

Q. 48 Given:

```
1. class A {
2. final public int method1(int a, int b) {return 0; }
3. }
4. class B extends A {
5. public int method1(int a, int b) { return 1; }
6. }
7. public class Test {
8. public static void main(Strings args[]) {
```

```
9. B b;
10. System.out.println("x = " + b.method1(0, 1));
11. }
12. }
```

What is the result?

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

Answer: C

Q. 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

Q. 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

Q. 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

Q. 52 Given:

```
1. class Super {
2. public int getLenght() { return 4; }
3. }
4.
5. public class Sub extends Super {
6. public long getLenght() { return 5; }
7.
8. public static void main(String[] args) {
9. Super sooper = new Super();
10. Sub sub = new Sub();
11. System.out.println(
12. sooper.getLenght() + “,” + sub.getLenght() );
13. }
14. }
```

What is the output?

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

Answer: E

Q. 53 Given:

```
1. public class Test {
2. public static void main(String[] args) {
```

```
3. int x = 0;
4. assert (x > 0): "assertion failed";
5. System.out.println("finished");
6. }
7. }
```

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

Q. 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

Q. 55 Given:

```
11. switch(x) {
12. default:
13. System.out.println("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

Q. 56 Given:

```
1. public class X {
2. public static void main(String [] args) {
3. try {
```

```
4. badMethod();
5. System.out.print("A");
6. }
7. catch (RuntimeException ex) {
8. System.out.print("B");
9. }
10. catch (Exception ex1) {
11. System.out.print("C");
12. }13. finally {
14. System.out.print("D");
15. }
16. System.out.print("E");
17. }
18. public static void badMethod() {
19. throw new RuntimeException();
20. }
21. }
```

What is the result?

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

Answer: B

Q. 57 Given:

```
1. public class Test {
2. public static void main(String[] args) {
3. int x = 0;
4. assert (x > 0) ? "assertion failed" : "assertion passed";
5. System.out.println("Finished");
6. }
7. }
```

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

Q. 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

Q. 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

Q. 60 Given:

```
1. public class Foo {
2. public void main( String[] args ) {
3. System.out.println( "Hello" + args[0] );
4. }
5. }
```

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

Q. 61 Given:

```
11. public void foo( boolean a, boolean b ){
12. if( a ) {
13. System.out.println( "A" );
14. } else if ( a && b ) {
15. System.out.println( "A&&B" );
16. } else {
17. if ( !b ) {
18. System.out.println( "notB" );
19. } else {
20. System.out.println( "ELSE" );
21. }
22. }
23. }
```

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

Q. 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

Q. 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.println("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

Q. 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

Q. 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.println("j =" +j);
11. }
12. }
```

What is the result?

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

Answer: D

Q. 66 Given:

```
1. class A {
2. }
3. class Alpha {
4. private A myA = new A();
5.
6. void dolt( A a ) {
7. a = null;
8. }
9. void tryIt() {
10. dolt( myA );
11. }
12. }
```

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

Q. 67 Given:

```
1. class Super {
2. public int i = 0;
3.
4. public Super(String text) {
5. i = 1;
6. }
```

```
7. }
8.
9. public class Sub extends Super {
10. public Sub(String text) {
11. i = 2;
12. }
13.
14. public static void main(String args[]) {
15. Sub sub = new Sub("Hello");
16. System.out.println(sub.i);
17. }
18. }
```

What is the result?

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

Answer: D

Q. 68 Given:

```
11. int i = 1,j = 10;
12. do{
13. if (i>j) {
14. continue;
15. }
16. j--;
17. } while (++i <6);
18. 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

Q. 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

Q. 70 Given:

```
1. public class X {
2. public X aMethod() { return this;}
3. }
1. public class Y extends X {
2.
3. }
```

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

Q. 71 Given:

```
1. public class X {
2. public static void main(String [] args) {
3. try {
4. badMethod();
5. System.out.print("A");
6. }
7. catch (Exception ex) {
8. System.out.print("B");
9. }
```

```
10. finally {
11. System.out.print("B");
12. }
13. System.out.print("D");
14. }
15. public static void badMethod() {
16. throw new Error();
17. }
18. }
```

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: A

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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

Q. 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
Q. 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
Q. 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
Q. 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

Q. 84 Given:

```
11. int x = 1, y =6;
12. while (y--) {
13. x++;
14. }
15. 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

Q. 85 Given:

```
12. float f[][][] = new float[3][][];
13. float f0 = 1.0f;
14. 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

Q. 86 Given:

```
11. for (int i =0; i < 4; i +=2) {
12. System.out.print(i + "");
13. }
14. 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

Q. 87 Given:

```
12. void start() {
13. A a = new A();
14. B b = new B();
15. a.s(b);
16. b = null;
17. a = null;
18. System.out.println("start completed");
19. }
```

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

Q. 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

Q. 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

Q. 90 Given:

```
11. try {
12. int x = 0;
13. int y = 5 / x;
14. } catch (Exception e) {
15. System.out.println("Exception");
16. } catch (ArithmeticException ae) {
17. System.out.println("Arithmetic Exception");
18. }
19. System.out.println("finished");
```

What is the result?

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

Answer: C
Q. 91 Given:

```
1. 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

Q. 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

Q. 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

Q. 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

Q. 95 Given:

```
11. for( int i = min; i <max; i++) {
12. System.out.println(i);
13. }
```

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

Q.96 Given:

```
11. double d = Match.random();
```

Which is true about `d` after line 11?

A. `d >= 1.0`
B. `0.0 <= d < 1.0`
C. `0.0 <= d < Double.MAX_VALUE`
D. `0.0 <= d <= Double.MAX_VALUE`
E. `Double.MIN_VALUE <= d < Double.MAX_VALUE`

Answer:

Q.97 Given:

```
public class Alpha{
1. private static Character() ids;
2. public static void main( String[] args)
3. { ids = new Character[args.length];
5. for (int i=0; i<ids.length; i++){
6. ids[i] = new Character( args[i] );
7. System.out.print( ids[i] );
```

8. }
9. }
10. }

What is correct?

A. Compilation fails.
B. The code runs with no output.
C. An exception is thrown at runtime.
D. The code runs, outputing a concatenated list of the arguments passed to the program.

Answer: A Explanation: Compilation fails. Line 2: Return Type required

Q.98 Given:

public class Alpha{
2. public static void main(string[] args)
3. { if (args.length == 2) {
4. if (args.[0].equalsIgnoreCase(“-b”))
5. System.out.println(new Boolean(args[1]));
6. }
7. }
8. }

And the code is invoked by using the command:

java Alpha –b TRUE

What is the result?

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

Answer: A

Q.99 Given:

11. int i = 0, j = 1;
12. if ((i++ == 1) && (j++ == 2)) {
13. i = 42; 14 }
15. System.out.println(“i = “ + 1 + “, j = “ + j);

What is the result?

A. i = 1, j = 2
B. i = 1, j = 1
C. i = 42, j = 2
D. i = 42, j = 1
E. Compilation fails.

Answer: B

Q.100 Given:

```
1. public class X (
2. private static int a;
3. public static void main(String [] args) {
4. modify(a);
5. System.out.println(a);
6. }
7. public static void modify(int a) {
8. a++;
9. }10 }
```

What is the result?

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

Answer: A

Q.101 Given:

```
1. public class Test {
2. public static void add3 (Integer i) {
3. int val = i.intValue();
4. val += 3;
5. i = new Integer(val);
6. }
7.
8. public static void main(String args[]) {
9. Integer i = new Integer(0);
10. add3(i);
11. System.out.println(i.intValue());
12 }
13 }
```

What is the result?

A. 0
B. 3
C. Compilation fails.
D. An exception is thrown at runtime.

Answer: A

Q.102 Given:

```
11. public static void main( String[] args ) {
12. Integer a = new Integer(10);
13. Integer b = new Integer(10);
```

14. Integer c = a;
15. int d = 10;
16. double e = 10.0;
17. }

Which three evaluate to `true`? (Choose three)

A. (a == c)
B. (d == e)
C. (b == d)
D. (a == b)
E. (b == c)
F. (d == 10.0)

Answer: A, C, D, E

Q.103 Given:

11. int i = 0, j = 1;
12. if ((i++ == 0) || (j++ == 2)) {
13. i = 42;
14. }
15. System.out.println(" = " + i + ", j = " + j);

What is the result?

A. i = 1, j = 2
B. i = 1, j = 1
C. i = 42, j = 2
D. i = 42, j = 1
E. Compilation fails.

Answer: A

Q.104 Given that `b` and `c` refer to instances of wrapper classes, which two statements are true? (Choose two)

A. b.equals(b) returns true.
B. b.equals(c) returns the same result as b == c.
C. b.eqials(c) can return false even if c.equals(b) returns true.
D. b.equals(c) throws an exception if b and c are different wrapper types.
E. b.equals(c) returns false if the type of wrapper objects being compared are different.

Answer: B, C

Q.105 Given:

1. public class Test {

```
2. public static void main(String [] args) {
3. System.out.println(args.length > 4 &&
4. args[4].equals("-d"));
5. }
6. }
```

If the program is invoked using the command line:
java Test One Two Three –d
What is the result?

A. true
B. false
C. Compilation fails.
D. An exception is thrown at runtime.

Answer: B

Q.106 Given:

```
11. try {
12. if ((new Object))(.equals((new Object()))) {
13. System.out.println("equal");
14. )else{
15. System.out.println("not equal");
16. }
17. }catch (Exception e) {
18. System.out.println("exception");
19. }
```

What is the result?

A. equal
B. not equal
C. exception
D. Compilation fails.

Answer: D

Q.107 Which three demonstrate an "is a" relationship? (Choose three)

A.
```
public class X { }
public class Y extends X { }
```

B.
```
public interface Shape { }
public interface Rectangle extends Shape{ }
```

C.
```
public interface Color { }
public class Shape { private Color color; }
```

D.
```
public interface Species { }
public class Animal { private Species species; }
```

E.
```
public class Person { }
public class Employee {
public Employee(Person person) { }
```

F.
```
interface Component { }
```

```
class Container implements Component {
private Component[] children;
}
```

Answer:

Q.108 Given:

```
1. class BaseClass {
2. private float x = 1.of;
3. protected float getVar() { return x; }
4. }
5. class SubClass extends BaseClass {
6. private float x = 2.Of;
7. // insert code here
8. }
```

Which two are valid examples of method overriding when inserted at line 7? (Choose two)

A. float getVar() { return x; }
B. public float getVar() { return x; }
C. public double getVar() { return x; }
D. protected float getVar() { return x; }
E. public float getVar(float f) { return f; }

Answer:

Q.109 Given:

```
1.      1. class A {
2.      2. public byte getNumber() {
3.      3. return 1;
4.      4. }
5.      5. }
6.      6.
7.      7. class B extends A {
8.      8. public short getNumber() {
9.      9. return 2;
10.     10. }
11.     11.
12.     12. public static void main(String args[]) {
13.     13. B b = new B();
14.     14. System.out.pringIn(b.getNumber());
15.     15. }
16.     16. }
```

What is the result?

A. 1
B. 2
C. An exception is thrown at runtime.
D. Compilation fails because of an error in line 8.
E. Compilation fails because of an error in line 14.

Answer: D Explanation: getNumber() in B cannot override getNumber() in A; attempting to use incompatible return type: short to byte.

Q.110 Which two are benefits of fully encapsulating a class? (Choose two)

A. Performance of class methods is improved.
B. Implementation details of the class are hidden.
C. Access modifiers can be omitted on class data members.
D. Code that uses the encapsulation class can access data members directly.
E. Internal operation of the class can be modified without impacting clients of that class.

Answer: Q.111 Given:

```
1.  1. class A {
2.  2. public A() {
3.  3. System.out.println("hello from a");
4.  4. }
5.  5. }
6.  6. class B extends A {
7.  7. public B () {
8.  8. System.out.println("hello from b");
9.  9. super(); 10 }

1.  11. }
2.  12. public class Test {
3.  13. public static void main(String args[]) {
4.  14. A a = new B();
5.  15. }
6.  16. }
```

What is the result when main is executed?

A. Compilation fails.
B. hello from a
C. hello from b
D. hello from b
   hello from a
E. hello from a
   hello from b

Answer: A EXPLAINATION : Call to super must be first statement in constructor.

Q.112 Given:

```
1.  1. package foo;
2.  2. public class Outer {
3.  3. public static class Inner {
4.  4. }
5.  5. }
```

Which statement is true?

A. Compilation fails.
B. An instance of the Inner class can be constructed with "new Outer.Inner()".
C. An instance of the Inner class cannot be constructed outside of package foo.
D. An instance of the Inner class can be constructed only from within the Outer class.
E. From within the package foo, and instance of the Inner class can be constructed with "new Inner()".

Answer:

Q.113 Given:

```
1.  1. public class SyncTest {
2.  2. private int x;
3.  3. private int y;
4.  4. private synchronized void setX( int i ) { x = i; }
5.  5. private synchronized void setY( int i ) { y = i; }
6.  6. public void setXY( int i ) { setX(i); setY(i); }
7.  7. public synchronized boolean check() { return x != y; }
8.  8. }
```

Under which condition will `check` return `true` when called from a different class?

A. check can never return true.
B. check can return true when setXY is called by multiple threads.
C. check can return true when multiple threads call setX and setY separately.
D. check can return true only if SyncTest is changed to allow x and y to be set separately.

Answer:

Q.114
Thread Z holds the lock on object A. Thread X is blocked inside a wait call on ObjectA.
What allows thread X to become runnable?

A. Thread X is interrupted.
B. Thread X is interrupted.
C. Thread X's wait() times out.
D. Thread Z calls Thread.sleep(100);
E. Thread Z releases the lock on A and calls the notify() method on thread X.
F. Thread Z releases the lock on A and calls the notifyAll() method on objectA.

Answer: Q.115 What happens when thread X executes a `wait()` method on object A, without owning object A's lock?

A. Compilation fails.
B. An exception is thrown.
C. The wait() method has no effect.
D. Thread X receives the lock immediately.

E. Object A moves the thread to the wait pool.

Answer:

Q.116 Given:

```
1.  1. class MyThread extends Thread {
2.  2. public void run() { System.out.println("AAA"); }
3.  3. public void run(Runnable r) { System.out.println("BBB"); }
4.  4.
5.  5. public static void main(String[] args) {
6.  6. new Thread(new MyThread()).start();
7.  7. }
8.  8. }
```

What is the result?

A. AAA
B. BBB
C. Compilation fails.
D. The code runs with no output.

Answer: A

Q.117 Given:

```
1.  1. public class X implements Runnable {
2.  2. private int x;
3.  3. private int y;
4.  4.
5.  5. public static void main(String [] args) {
6.  6. X that = new X();
7.  7. (new Thread( that )).start();
8.  8. (new Thread( that )).start();
9.  9. }
10. 10.
11. 11. public void run() {
12. 12. for (;;) {
13. 13. synchronized (this) {
14. 14. x++;
15. 15. y++;
16. 16. }
17. 17. System.out.println(Thread.currentThread().getName() +
18. 18. "x = " + x + ", y = " + y);
19. 19. }
20. 20. }
21. 21. }
```

What is the result?

A. Compilation fails.
B. The program prints pairs of values for x and y that might not always be the same on the same line (for

example, "x = 2, y = 1").

C. The program prints pairs of values for x and y that are always the same on the same line (for example, "x = 1, y = 1"). In addition, each value appears only once (for example, "x = 1, y = 1" followed by "x = 2, y = 2"). The thread name at the start of the line shows that both threads are executing concurrently.

D. The program prints pairs of values for x and y that are always the same on the same line (for example, "x = 1, y = 1"). In addition, each value appears only once (for example, "x = 1, y = 1" followed by "x = 2, y = 2"). The thread name at the start of the line shows that only a single thread is actually executing.

Answer: D

Q.118 Which statement is true?

A. To call the wait() method, a thread most own the lock of the current thread.

B. To call the wait() method, a thread must own the lock of the object on which the call is to be made.

C. To call the join() method, a thread must own the lock of the object on which the call is to be made.

D. To call the sleep() method, a thread must own the lock of the object which the call is to be made.

E. To call the yield() method, a thread must own the lock of the object on which the cal is to be made.

Answer:

Q.119 Given:

```
1.      1. public class A extends Thread {
2.      2. A() {
3.      3. setDaemon(true);
4.      4. }
5.      5.
6.      6. public void run() {
7.      7. (new B()).start();
8.      8. try {
9.      9. Thread.sleep(60000);
10.     10. } catch (InterruptedException x) {}
11.     11. System.out.println("A done");
12.     12. }
13.     13.
14.     14. class B extends Thread {
15.     15. public void run() {
16.     16. try {
17.     17. Thread.sleep(60000);
18.     18. } catch (InterruptedException x) {}
19.     19. System.out.println("B done");
20.     21. }
21.     22. }
22.     23.
23.     24. public static void main(String[] args) {
24.     25. (new A()).start();
25.     26. }
26.     27. }
```

What is the result?

A. A done
B. B done
C. A done
   B done
D. B done
   A done
E. There is no exception that the application will print anything.
F. The application outputs "A done" and "B done", in no guaranteed order.

Answer: E

Q.120 What can cause a thread to become non-runnable?

A. Exiting from a synchronized block.
B. Calling the wait method on an object.
C. Calling the notify method on an object.
D. Calling the notifyAll method on an object.

Answer: B

Q.121 Given:

```
1.  11. ArraryList a = new ArrayList();

2.  12. a.add("Alpha");

3.  13. a.add("Bravo"):

4.  14. a.add("Charlie");

5.  15. a.add("Delta");
16.Iterator iter = a.iterator();

6.  17.
```

Which two, added at line 17, print the names in the `ArrayList` in alphabetical order? (Choose two)

A.
```
for (int i=0; i< a.size(); i++)
System.out.println(a.get(i)));
```

B.
```
for (int i=0; i< a.size(); i++)
System.out.println(a[i]);
```

C.
```
while( iter.hasNext() )
System.out.println(iter.next()) ;
```

D.
```
for (int i=0, i< a.size(); i++)
System.out.println(iter[i]);
```

E. for (int i=0; i< a.size(); i++)
System.out.println(iter.get(i));

Answer:

Q.122 Given:

```
1.  1. // Point X
2.  2. public class foo {
3.  3. public static void main(String[] args) throws Exception {
4.  4. jave.io.PrintWriter out = new jave.io.PrintWriter(
5.  5. new jave.io.OutputStreamWriter(System.out), true);
6.  6. out.println("Hello");
7.  7. }
8.  8. }
```

Which statement at Point X on line 1 is required to allow this code to compile?

A. No statement is required.
B. import jave.io.*;
C. include java.io.*;
D. import jave.io.PrintWriter;
E. include java.io.PrintWriter;

Answer: A

Q.123 Which two are valid declarations of a `float`? (Choose two)

A. float f = 1F;
B. float f = 1.0.;
C. float f = '1';
D. float f = "1";
E. float f = 1.0d;

Answer: A, C

Q.124 Given:

```
1.  1. public class Test {
2.  2. private static int[] x;
3.  3. public static void main(String[] args) {
4.  4. System.out.println(x[0]);
5.  5. }
6.  6. }
```

What is the result?

A. 0

B. null
C. Compilation fails.
D. A NullPointerException is thrown at runtime.
E. An ArrayIndexOutOfBoundsException is thrown at runtime.

Answer: D

Q.125 Given:

```
1.  1. public class Test {
2.  2. public static void main( String[] args) {
3.  3. String foo = args[1];
4.  4. String bar = args[2];
5.  5. String baz = args[3];
6.  6. System.out.println("baz = " + baz);
7.  7. }
8.  8. }
```

And the command line invocation:

java Test red green blue

What is the result?

A. baz =
B. baz = null
C. baz = blue
D. Compilation fails.
E. An exception is thrown at runtime.

Answer: E EXPLAINATION: A java.lang.ArrayIndexOutOfBoundsException is thrown because of line 3, should be args[0].

Q.126 Which method must be defined by a class implementing the `java.lang.Runnable` interface?

A. void run()
B. public void run()
C. public void start()
D. void run(int priority)
E. public void run(int priority)
F. public void start(int priority)

Answer: B

Q.127 Given:

```
1.  11. public static void main(String[] args) {
2.  12. Object obj = new Object() {
3.  13. public int hashCode() {
4.  14. returns 42;
5.  15. }

1.  15. };
2.  17. System.out.println(obj.hashCode());
3.  18. }
```

What is the result?

A. 42
B. An exception is thrown at runtime.
C. Compilation fails because of an error on line 12.
D. Compilation fails because of an error on line 16.
E. Compilation fails because of an error on line 17.

Answer: A

Q.128 Which two are reserved words in the Java programming language? (Choose two)

A. run
B. import
C. default
D. implement

Answer: B, C

Q.129 Which two statements are true regarding the return values of property written `hashCode` and `equals` methods from two instances of the same class? (Choose two)

A. If the hashCode values are different, the objects might be equal.
B. If the hashCode values are the same, the object must be equal.
C. If the hashCode values are the same, the objects might be equal.
D. If the hashCode values are different, the objects must be unequal.

Answer:

Q.130 What is the numerical range of a `char`?

A. 0 ... 32767
B. 0 ... 65535
C. –256 ... 255
D. –32768 ... 32767
E. Range is platform dependent.

Answer: B Explanation: Range for char/Character = 0 ==> 65535

Q.131 Given:

```
1.  1. public class Test {
2.  2. private static float[] f = new float[2];
3.  3. public static void main(String args[]) {
4.  4. System.out.println("f[0] = " + f[0]);
5.  5. }
6.  6. }
```

What is the result?

A. f[0] = 0
B. f[0] = 0.0
C. Compilation fails.
D. An exception is thrown at runtime.

Answer: B

Q.132 Given:

```
1.  1. public class Test {
2.  2. public static void main(String[] args) {
3.  3. String str = NULL;
4.  4. System.out.println(str);
5.  5. }
6.  6. }
```

What is the result?

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

Answer: B Explanation: NULL should be "null"

Q.133 Which interface does `java.util.Hashtable` implement?

A. java.util.Map
B. java.util.List
C. java.util.Hashable
D. java.util.Collection

Answer: A

Q.134 Given:

```
11. System.out.println(Match.sqrt(-4D));
```

What is the result?

A. –2
B. NaN
C. Infinity
D. Compilation fails.
E. An exception is thrown at runtime.

Answer: D

Q.135 Given:

```
1.  11. String a = “ABCD”;
```

2. 12. String b = a.toLowerCase();
3. 13. b.replace('a', 'd');
4. 14. b.replace('b', 'c');
5. 15. System.out.println(b);

What is the result?

A. abcd
B. ABCD
C. dccd
D. dcba
E. Compilation fails.
F. An exception is thrown at runtime.

Answer: A

Q.136 Given:

1. 11. String a = null;
2. 12. a.concat("abc");
3. 13. a.concat("def");
4. 14. System.out.println(a);

What is the result?

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

Answer: F Explanation:

Exception in thread "main"
java.lang.NullPointerException
at X.main(X.java:12)

Note: Answers to the unanswered questions will be provided shortly. First customer, if any, faster than the 21certify team in proving the answers will receive credit for each answer provided.
Unanswered questions: 107, 108, 110, 112, 113, 114, 115, 118, 121, 129

Send answers to feedback@21certify.com.