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Exam : 310-035

Title : Sun Certified Programmer for Java 2 Platform 1.4

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Note:

Section A contains 147 questions.

Section B contains 147 questions.

The total number of questions is 294.

Section A

QUESTION 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 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

The F. statement is incorrect. The float numbers should be separated with commas and not dots.

QUESTION 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 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 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 l = Alpha.get("meat eater");
- D. new Alpha1().get("veggie").soundOff();

Answer: D

QUESTION 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 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

QUESTION 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

QUESTION 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 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 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

QUESTION 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

QUESTION 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 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: C

QUESTION 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 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 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 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

QUESTION 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

QUESTION 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 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: C

First of all, the second println statement should print the character 'b' instead of 'c'. Also, the answer is not E. but C. Indeed, the following line is perfectly legal: if '(bool = false)'. The bool variable will simply take the value of false and the IF statement will be evaluated to false. Therefore, the correct answer is C.

QUESTION 22

Which statement is true?

- A. catch(X x) can catch subclasses of X.
- B. The Error class is 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 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 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 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 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

QUESTION 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

QUESTION 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 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

QUESTION 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 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. 0000000000
- 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 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 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: A

QUESTION 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

QUESTION 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: C

The correct answer to this question is C. The object is never garbage collected simply because the method returns it. Think about it, the message that receives the object might depend on it so it must be sure that the object received by the method won't be garbage collected. Only in this situation a local object won't be eligible for garbage collection. Otherwise, a local object is eligible for garbage collection as soon as the method ends.

QUESTION 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 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

QUESTION 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

QUESTION 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 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 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

QUESTION 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

QUESTION 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, D

This is a typical example of the island of isolation. On line 15, the two objects TestA and TestB have a reference to one another. Therefore, the correct answers are C. and D. A key point to remember is that an object that is referenced by another object can be eligible for garbage collection if the two objects form an island of isolated objects.

QUESTION 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

QUESTION 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 invokes 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 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 disabled on 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 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 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. An exception is thrown at runtime.

Answer: C

QUESTION 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.     print '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: C

First of all, there is an error on line 16. It should print 'return o' rather than 'return 0'. Also, the correct answer is C. rather than B. In fact, two different references that points to the same object are created. The first one is 'o' and the second one is oa[0]. Therefore, both objects need to be assigned the null value before the object is eligible for garbage collection.

QUESTION 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 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 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

QUESTION 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

This question is a bit tricky because it lacks the following information: It should include a statement that says whether or not assertions are enabled. If they are indeed enabled, the correction answer is C. but if they are not, the correct answer is

A. Assertions are not enabled

by default so if the question is not changed, the most logical answer is A.

QUESTION 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 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

QUESTION 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: C

QUESTION 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

QUESTION 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 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 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

QUESTION 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

QUESTION 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 63

Given:

- 11. `int i = 0, j = 5;`
 - 12. `tp;`
 - 13. `for (;;) {`
 - 14. `i++;`
 - 15. `for(;;) {`
 - 16. `if (i> --j) {`
 - 17. `break tp;`
 - 18. `break tp;`
 - 19. `}`
 - 20. `}`
 - 21. `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

QUESTION 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 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

QUESTION 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 instances 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 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

The compilation fails with the above method since the instance of Class Sub which is sub calls the super() in the above method by default which is not implemented in the Super Class. So this generates a Compilation error.

To run this program without compilation error and to print the value 2 it must be coded as given:

```
class Super
{
public int i = 0;
public Super()
{
}
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);
}
}
```

Incorrect Answers:

A. The output of 0 will not be provided even if the class is not extended to super as the default value if instance is properly created would be 2

B. The output of 1 will not be provided even if the class is not extended to super as the default value if instance is properly created would be 2

C. The output of 2 will be provided only when the empty super() method exists in Class Super.

QUESTION 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: A

QUESTION 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 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

QUESTION 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("C");
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: B

The correct answer is : B is printed and then an error message is printed. The exception catch can not catch an Error because this class does not extend Exception but it implements throwable.

QUESTION 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 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 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 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 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: D

Reference: <http://java.sun.com/docs/books/tutorial/java/data/garbagecollection.html>

According to sun the object will be eligible for garbage collection only when another objects reference is passed to it since the original value is dropped or when the object is set to null provided if all the reference of the object is dropped. In the above method the Bar object i.e b created in line 3 is returned to main method where its value is not reset using another object or it is not indirectly set to null thro another object so the object will be eligible for garbage collection only after line 11, when main() completes.

Incorrect Answers:

- A. At line 8 a new Bar object is created but the object's reference is not made equal to b object created at line 3 or b is not indirectly set to null value for being eligible for garbage collection. thus this is not true.
- B. At line 10 another Bar object is created but the object's reference is not made equal to b object created at line 3 or b is not indirectly set to null value for being eligible for garbage collection. thus this is not true.
- C. After line 4 when doBar completes the method returns the value of object b created at line 3 to the main method thus b is not eligible for garbage collection.

QUESTION 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 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 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 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 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 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 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 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: E

A 'while' statement can only evaluate a Boolean expression. The expression while(y--) returns an int rather than a Boolean. Therefore, the correct answer is E.

QUESTION 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

QUESTION 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

QUESTION 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: D

The correct answer to this question is D. The member method `s` is not defined so there is no way to be certain of the result.

QUESTION 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 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 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: D

The correct answer to this question is D. When an int value is divided by zero, a runtime exception occurs. There are no compilation errors.

QUESTION 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: C

The correct answer to this question is C. The default constructor always takes the same access of the class. In this case, the class is public and so does the default constructor.

QUESTION 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 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 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 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

QUESTION 96

Given:

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

Which is true about d after line 11?

- A. $d \geq 1.0$
- B. $0.0 \leq d < 1.0$
- C. $0.0 \leq d < \text{Double.MAX_VALUE}$
- D. $0.0 \leq d \leq \text{Double.MAX_VALUE}$
- E. $\text{Double.MIN_VALUE} \leq d < \text{Double.MAX_VALUE}$

Answer: B

QUESTION 97

Given:

```
1. public class Alpha{
2. private static Character() ids;
3.
4. public static void main( String[] args){
4. 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, outputting a concatenated list of the arguments passed to the program.

Answer: A

Explanation: Compilation fails. Line 2: Return Type required

QUESTION 98

Given:

```
1. 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

QUESTION 99

Given:

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

QUESTION 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

QUESTION 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

QUESTION 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, B, F

QUESTION 103

Given:

```
11. String a = null;  
12. a.concat("abc");  
13. a.concat("def");  
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)

QUESTION 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.equals(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

QUESTION 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: D

The correct answer to this question is D. The args[4] generates a runtime exception error because there are only 4 strings and the expression args[4] prints the 5th String but like it was said earlier, there are only 4 strings.

QUESTION 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

QUESTION 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: A, B, F

QUESTION 108

Given:

```
1. class BaseClass {  
2. private float x = 1.0f;  
3. protected float getVar() { return x; }  
4. }  
5. class SubClass extends BaseClass {  
6. private float x = 2.0f;  
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: B, D

QUESTION 109

Given:

```
1. class A {  
2. public byte getNumber() {
```

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

QUESTION 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: B, E

QUESTION 111

Given:

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

```
7. public B () {  
8. System.out.println("hello from b");  
9. super();  
10 }  
11. }  
12. public class Test {  
13. public static void main(String args[]) {  
14. A a = new B();  
15. }  
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

EXPLANATION : Call to super must be first statement in constructor.

QUESTION 112

Given:

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

QUESTION 113

Given:

```
1. public class SyncTest {  
2. private int x;  
3. private int y;
```

```
4. private synchronized void setX( int i ) { x = i; }  
5. private synchronized void setY( int i ) { y = i; }  
6. public void setXY( int i ) { setX(i); setY(i); }  
7. public synchronized boolean check() { return x != y; }  
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: B

QUESTION 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: F

QUESTION 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: B

QUESTION 116

Given:

```
1. class MyThread extends Thread {  
2. public void run() { System.out.println("AAA"); }  
3. public void run(Runnable r) { System.out.println("BBB"); }  
}
```

```
4.  
5. public static void main(String[] args) {  
6.   new Thread(new MyThread()).start();  
7. }  
8. }
```

What is the result?

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

Answer: A

QUESTION 117

Given:

```
1. public class X implements Runnable {  
2.   private int x;  
3.   private int y;  
4.  
5.   public static void main(String [] args) {  
6.     X that = new X();  
7.     (new Thread( that )).start();  
8.     (new Thread( that )).start();  
9.   }  
10.  
11.   public void run() {  
12.     for (;;) {  
13.       synchronized (this) {  
14.         x++;  
15.         y++;  
16.       }  
17.  
18.       System.out.println(Thread.currentThread().getName() +  
19.         "x = " + x + ", y = " +  
20.         y);  
21.     }  
22.   }
```

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

QUESTION 118

Which statement is true?

A. To call the wait() method, a thread must 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 call is to be made.

Answer: B

QUESTION 119

Given:

```
1. public class A extends Thread {  
2. A() {  
3. setDaemon(true);  
4. }  
5.  
6. public void run() {  
7. (new B()).start();  
8. try {  
9. Thread.sleep(60000);  
10. } catch (InterruptedException x) {}  
11. System.out.println("A done");  
12. }  
13.  
14. class B extends Thread {  
15. public void run() {  
16. try {
```



```
17. Thread.sleep(60000);
18. } catch (InterruptedException x) {}
19. System.out.println("B done");
21. }
22. }
23.
24. public static void main(String[] args) {
25. (new A()).start();
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

QUESTION 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

QUESTION 121

Given:

```
11. ArrayList a = new ArrayList();
12. a.add("Alpha");
13. a.add("Bravo");
14. a.add("Charlie");
15. a.add("Delta");
16. Iterator iter = a.iterator();
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: A, C

QUESTION 122

Given:

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

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

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

Answer: A

QUESTION 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

QUESTION 124

Given:

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

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

QUESTION 125

Given:

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

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

QUESTION 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

QUESTION 127

Given:

```
11. public static void main(String[] args) {  
12.     Object obj = new Object() {  
13.     public int hashCode() {  
14.         returns 42;  
15.     }  
15. };  
17. System.out.println(obj.hashCode());  
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

QUESTION 128

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

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

Answer: B, C

QUESTION 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: C, D

QUESTION 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

QUESTION 131

Given:

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

QUESTION 132

Given:

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

QUESTION 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

QUESTION 134

Given:

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

What is the result?

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

Answer: B

QUESTION 135

Given:

```
11. String a = "ABCD";
```

```
12. String b = a.toLowerCase();
```

```
13. b.replace('a', 'd');
```

```
14. b.replace('b', 'c');
```

```
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

QUESTION 136

Given:

```
1. public class Foo {  
2. public static void main (String [] args) {  
3. StringBuffer a = new StringBuffer ("A");  
4. StringBuffer b = new StringBuffer ("B");  
5. operate (a,b);  
6. system.out.println{a + "," +b};  
7. }  
8. static void operate (StringBuffer x, StringBuffer y) {  
9. x.append {y};  
10. y = x;  
11. }  
12. }
```

What is the result?

- A. The code compiles and prints "A,B".
- B. The code compiles and prints "A,A".
- C. The code compiles and prints "B,B".
- D. The code compiles and prints "AB,B".
- E. The code compiles and prints "AB,AB".
- F. The code does not compile because "+" cannot be overloaded for StringBuffer.

Answer: D

QUESTION 137

Exhibit:

```
1. Public class test (  
2. Public static void stringReplace (String text) (  
3. Text = text.replace ('j' , 'i');  
4. )  
5.  
6. public static void bufferReplace (StringBuffer text) (  
7. text = text.append ("C")  
8. )  
9.  
10. public static void main (String args[]) { (  
11. String textString = new String ("java");  
12. StringBuffer text BufferString = new StringBuffer ("java");  
13.  
14. stringReplace (textString);  
15. bufferReplace (textBuffer);  
16.  
17. System.out.println (textString + textBuffer);  
18. }  
19. )
```

What is the output?

Answer: javajavaC

QUESTION 138

Which method is an appropriate way to determine the cosine of 42 degrees?

- A. Double d = Math.cos(42);
- B. Double d = Math.cosine(42);
- C. Double d = Math.cos(Math.toRadians(42));
- D. Double d = Math.cos(Math.toDegrees(42));
- E. Double d = Math.cosine(Math.toRadians(42));

Answer: C

QUESTION 139

Exhibit:

```
1. class A implements Runnable (  
2. int i;  
3. public void run () (  
4. try (  
5. thread.sleep(5000);  
6. i= 10;  
7. ) catch(InterruptedException e) {}  
8. )  
9. )  
10.  
11. public class Test {  
12. public static void main (string args[]) (  
13. try (  
14. A a = new A ();  
15. Thread t = new Thread (a);  
16. t.start();  
17.  
18. int j= a.i;  
19.  
20. ) catch (Exception e) {}  
21. )  
22. )  
Which statement al line 17 will ensure that j=10 at line 19?
```

- A. a.wait();
- B. t.wait();
- C. t.join();
- D. t.yield();
- E. t.notify();

- F. a.notify();
- G. t.interrupt();

Answer: C

QUESTION 140

Which code determines the int value foo closest to, but not greater than, a double value bar?

- A. Int foo = (int) Math.max(bar);
- B. Int foo = (int) Math.min(bar);
- C. Int foo = (int) Math.abs(bar);
- D. Int foo = (int) Math.ceil(bar);
- E. Int foo = (int) Math.floor(bar);
- F. Int foo = (int) Math.round(bar);

Answer: E

QUESTION 142

Given:

- 1. class BaseClass{
- 2. private float x= 1.0f;
- 3. protected void setVar (float f) {x = f;}
- 4. }
- 5. class SubClass extends BaseClass {
- 6. private float x = 2.0f;
- 7. //insert code here
- 8. }

Which two are valid examples of method overriding? (Choose Two)

- A. Void setVar(float f) {x = f;}
- B. Public void setVar(int f) {x = f;}
- C. Public void setVar(float f) {x = f;}
- D. Public double setVar(float f) {x = f;}
- E. Public final void setVar(float f) {x = f;}
- F. Protected float setVar() {x=3.0f; return 3.0f; }

Answer: C, E

QUESTION 143

Exhibit:

- 1. public class Mycircle {
- 2. public double radius;
- 3. public double diameter;
- 4.
- 5. public void setRadius(double radius)

```
6. this.radius = radius;
7. this.diameter= radius * 2;
8. }
9.
10. public double getRadius() {
11. return radius;
12. }
13. }
```

Which statement is true?

- A. The Mycircle class is fully encapsulated.
- B. The diameter of a given MyCircle is guaranteed to be twice its radius.
- C. Lines 6 and 7 should be in a synchronized block to ensure encapsulation.
- D. The radius of a MyCircle object can be set without affecting its diameter.

Answer: B

QUESTION 144

Which is a valid identifier?

- A. false
- B. default
- C. _object
- D. a-class

Answer: C

QUESTION 145

Given:

```
1. public class X {
2. public static void main (String[] args) {
3. byte b = 127;
4. byte c = 126;
5. byte d = b + c;
6. }
7. }
```

Which statement is true?

- A. Compilation succeeds and d takes the value 253.
- B. Line 5 contains an error that prevents compilation.
- C. Line 5 throws an exception indicating "Out of range"
- D. Line 3 and 4 contain error that prevent compilation.
- E. The compilation succeeds and d takes the value of 1.

Answer: B

QUESTION 146

Which two are equivalent? (Choose Two)

- A. $3/2$
- B. $3 < 2$
- C. $3 * 4$
- D. $3 < < 2$
- E. $3 * 2^2$
- F. $3 < < < 2$

Answer: C, D

QUESTION 147

What is the numerical range of a byte?

- A. 0...32767
- B. 0...65535
- C. -128...127
- D. -256...255
- E. Range is platform dependent

Answer: C

Section B

QUESTION 1

Given:

1. public class test (
2. public static void main (String args[]) {
3. int i = 0xFFFFFFFF1;
4. int j = ~i;
- 5.
6. }
7.)

What is the decimal value of j at line 5?

- A. 0
- B. 1
- C. 14
- D. -15
- E. An error at line 3 causes compilation to fail.
- F. An error at line 4 causes compilation to fail.

Answer: C

QUESTION2

Given:

Integer i = new Integer (42);

Long l = new Long (42);

Double d = new Double (42.0);

Which two expressions evaluate to True? (Choose Two)

- A. (i ==1)
- B. (i == d)
- C. (d == 1)
- D. (i.equals (d))
- E. (d.equals (i))
- F. (i.equals (42))

Answer: D, E

QUESTION3

Exhibit :

1. public class test (
2. private static int j = 0;
- 3.
4. private static boolean methodB(int k) (
5. j += k;
6. return true;
6.)
- 7.
8. public static void methodA(int i) {
9. boolean b:
10. b = i < 10 | methodB (4);
11. b = i < 10 || methodB (8);
12.)
- 13.
14. public static void main (String args[] } (
15. methodA (0);
16. system.out.println(j);
17.)
18.)

What is the result?

- A. The program prints "0"
- B. The program prints "4"
- C. The program prints "8"
- D. The program prints "12"
- E. The code does not complete.

Answer: B

QUESTION4

Given

1. Public class test (
2. Public static void main (String args[]) (
3. System.out.println (6 ^ 3);
4.)
5.)

What is the output?

Answer: 5

QUESTION5

Given:

13. public class Foo {
14. public static void main (String [] args) {
15. StringBuffer a = new StringBuffer ("A");
16. StringBuffer b = new StringBuffer ("B");
17. operate (a,b);
18. system.out.println{a + "," +b};
19.)
20. static void operate (StringBuffer x, StringBuffer y)
- {
21. x.append {y};
22. y = x;
23.)
24. }

What is the result?

- A. The code compiles and prints "A,B".
- B. The code compiles and prints "A,A".
- C. The code compiles and prints "B,B".
- D. The code compiles and prints "AB,B".
- E. The code compiles and prints "AB,AB".
- F. The code does not compile because "+" cannot be overloaded for StringBuffer.

Answer: D

QUESTION6

Exhibit:

20. Public class test (
21. Public static void stringReplace (String text) (
22. Text = text.replace ('j' , 'i');
23.)
- 24.
25. public static void bufferReplace (StringBuffer text)

```
(  
26. text = text.append ("C")  
27. )  
28.  
29. public static void main (String args[]) {  
30. String textString = new String ("java");  
31. StringBuffer text BufferString = new StringBuffer  
("java");  
32.  
33. stringReplace (textString);  
34. BufferReplace (textBuffer);  
35.  
36. System.out.println (textString + textBuffer);  
37. }  
38. )
```

What is the output?

Answer: JAVAJAVA

QUESTION7

Exhibit:

```
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. Compilation will fail.
- B. The program prints "0".
- C. The program prints "3".
- D. Compilation will succeed but an exception will be thrown at line 3.

Answer: B

QUESTION8

Given:

```
1. public class ConstOver {
```

```
2. public ConstOver (int x, int y, int z) {  
3. }  
4. }
```

Which two overload the ConstOver constructor? (Choose Two)

- A. ConstOver () { }
- B. Protected int ConstOver () { }
- C. Private ConstOver (int z, int y, byte x) { }
- D. Public Object ConstOver (int x, int y, int z) { }
- E. Public void ConstOver (byte x, byte y, byte z) { }

Answer: A, C

QUESTION9

Given:

```
1. public class MethodOver {  
2. public void setVar (int a, int b, float c) {  
3. }  
4. }
```

Which two overload the setVar method? (Choose Two)

- A. Private void setVar (int a, float c, int b) { }
- B. Protected void setVar (int a, int b, float c) { }
- C. Public int setVar (int a, float c, int b) (return a;)
- D. Public int setVar (int a, int b, float c) (return a;)
- E. Protected float setVar (int a, int b, float c) (return c;)

Answer: A, C

QUESTION10

Given:

```
1. class BaseClass {  
2. Private float x = 1.0f ;  
3. protected float getVar ( ) ( return x;)  
4. }  
5. class Subclass extends BaseClass (  
6. private float x = 2.0f;  
7. //insert code here  
8. )
```

Which two are valid examples of method overriding? (Choose Two)

- A. Float getVar () { return x;}
- B. Public float getVar () { return x;}
- C. Float double getVar () { return x;}
- D. Public float getVar () { return x;}
- E. Public float getVar (float f) { return f;}

Answer: B, D

QUESTION11

Which two demonstrate an "is a" relationship? (Choose Two)

- A. public interface Person { }
- public class Employee extends Person { }
- B. public interface Shape { }
- public class Employee extends Shape { }
- C. public interface Color { }
- public class Employee extends Color { }
- D. public class Species { }
- public class Animal (private Species species;)
- E. interface Component { }
- Class Container implements Component (
- Private Component[] children;
-)

Answer: D, E

QUESTION12

Which statement is true?

- A. An anonymous inner class may be declared as final.
- B. An anonymous inner class can be declared as private.
- C. An anonymous inner class can implement multiple interfaces.
- D. An anonymous inner class can access final variables in any enclosing scope.
- E. Construction of an instance of a static inner class requires an instance of the enclosing outer class.

Answer: D

QUESTION 13

Given:

- 1. package foo;
- 2.
- 3. public class Outer (
- 4. public static class Inner (
- 5.)
- 6.)

Which statement is true?

- A. An instance of the Inner class can be constructed with "new Outer.Inner ()"
- B. An instance of the inner class cannot be constructed outside of package foo.
- C. An instance of the inner class can only be constructed from within the outer

class.

D. From within the package bar, an instance of the inner class can be constructed with "new inner()"

Answer: A

QUESTION 14

Exhibit:

```
1. public class enclosingone (  
2. public class insideone {}  
3. )  
4. public class inertest(  
5. public static void main (string[] args)(  
6. enclosingone eo= new enclosingone ();  
7. //insert code here  
8. )  
9. )
```

Which statement at line 7 constructs an instance of the inner class?

- A. InsideOne ei= eo.new InsideOn();
- B. Eo.InsideOne ei = eo.new InsideOne();
- C. InsideOne ei = EnclosingOne.new InsideOne();
- D. EnclosingOne.InsideOne ei = eo.new InsideOne();

Answer: D

QUESTION 15

Exhibit:

```
1. interface foo {  
2. int k = 0;  
3. ]  
4.  
5. public class test implements Foo (  
6. public static void main(String args[]) (  
7. int i;  
8. Test test = new test ();  
9. i= test.k;  
10.i= Test.k;  
11.i= Foo.k;  
12.)  
13.)  
14.
```

What is the result?

- A. Compilation succeeds.
- B. An error at line 2 causes compilation to fail.

- C. An error at line 9 causes compilation to fail.
- D. An error at line 10 causes compilation to fail.
- E. An error at line 11 causes compilation to fail.

Answer: A

QUESTION 16

Given:

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

Which statement at PointX on line 1 allows this code to compile and run?

- A. Import java.io.PrintWriter;
- B. Include java.io.PrintWriter;
- C. Import java.io.OutputStreamWriter;
- D. Include java.io.OutputStreamWriter;
- E. No statement is needed.

Answer: A

QUESTION 17

Which two statements are reserved words in Java? (Choose Two)

- A. Run
- B. Import
- C. Default
- D. Implement

Answer: B, C

QUESTION 18

Which three are valid declarations of a float? (Choose Three)

- A. Float foo = -1;
- B. Float foo = 1.0;
- C. Float foo = 42e1;
- D. Float foo = 2.02f;
- E. Float foo = 3.03d;
- F. Float foo = 0x0123;

Answer: A, D, F

QUESTION 19

Given:

```
8. int index = 1;  
9. boolean[] test = new Boolean[3];  
10. boolean foo= test [index];
```

What is the result?

- A. Foo has the value of 0.
- B. Foo has the value of null.
- C. Foo has the value of true.
- D. Foo has the value of false.
- E. An exception is thrown.
- F. The code will not compile.

Answer: D

QUESTION 20

Given:

```
1. public class test(  
2. public static void main(string[]args){  
3. string foo = args [1];  
4. string foo = args [2];  
5. string foo = args [3];  
6. }  
7. }
```

And command line invocation:

Java Test red green blue

What is the result?

- A. Baz has the value of ""
- B. Baz has the value of null
- C. Baz has the value of "red"
- D. Baz has the value of "blue"
- E. Bax has the value of "green"
- F. The code does not compile.
- G. The program throws an exception.

Answer: G

QUESTION 21

Given:

```
8. int index = 1;  
9. int [] foo = new int [3];
```

```
10.int bar = foo [index];  
11.int baz = bar + index;  
What is the result?
```

- A. Baz has the value of 0
- B. Baz has the value of 1
- C. Baz has the value of 2
- D. An exception is thrown.
- E. The code will not compile.

Answer: B

QUESTION 22

Given:

```
1. public class foo {  
2. public static void main (String[]args) {  
3. String s;  
4. system.out.println ("s=" + s);  
5. }  
6. }
```

What is the result?

- A. The code compiles and "s=" is printed.
- B. The code compiles and "s=null" is printed.
- C. The code does not compile because string s is not initialized.
- D. The code does not compile because string s cannot be referenced.
- E. The code compiles, but a NullPointerException is thrown when toString is called.

Answer: C

QUESTION 23

Which will declare a method that forces a subclass to implement it?

- A. Public double methoda();
- B. Static void methoda (double d1) {}
- C. Public native double methoda();
- D. Abstract public void methoda();
- E. Protected void methoda (double d1){}

Answer: D

QUESTION 24

You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access modifier that will accomplish this objective?

- A. Public
- B. Private
- C. Protected
- D. Transient
- E. No access modifier is qualified

Answer: C

QUESTION 25

Given:

```
2. abstract class abstractIt {  
3. abstract float getFloat ();  
4. )  
5. public class AbstractTest extends AbstractIt {  
6. private float f1= 1.0f;  
7. private float getFloat () {return f1;}  
8. }
```

What is the result?

- A. Compilation is successful.
- B. An error on line 6 causes a runtime failure.
- C. An error at line 6 causes compilation to fail.
- D. An error at line 2 causes compilation to fail.

Answer: C

QUESTION 26

Exhibit:

```
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. Compilation will fail.
- B. Compilation will succeed and the program will print "0"
- C. Compilation will succeed and the program will print "1"

D. Compilation will succeed and the program will print "2"

Answer: A

QUESTION 27

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 line 6, will cause a compiler error?

- A. Public float getNum() {return 4.0f; }
- B. Public void getNum () { }
- C. Public void getNum (double d) { }
- D. Public double getNum (float d) {retrun 4.0f; }

Answer: B

QUESTION 28

Which declaration prevents creating a subclass of an outer class?

- A. Static class FooBar{}
- B. Private class FooBar{}
- C. Abstract public class FooBar{}
- D. Final public class FooBar{}
- E. Final abstract class FooBar{}

Answer: D

QUESTION 29

Given:

```
1. byte [] arry1, array2[];  
2. byte array3 [][];  
3. byte[][] array4;
```

If each array has been initialized, which statement will cause a compiler error?

- A. Array2 = array1;
- B. Array2 = array3;
- C. Array2 = array4;
- D. Both A and B
- E. Both A and C
- F. Both B and C

Answer: F

QUESTION 30

Exhibit:

```
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. Compilation will fail.
- B. Compilation will succeed and the program will print "0"
- C. Compilation will succeed and the program will print "1"
- D. Compilation will succeed and the program will print "2"

Answer: A

QUESTION 31

Given:

```
1. public class returnIt (  
2. returnType methodA(byte x, double y) (  
3. return (short) x/y * 2;  
4. )  
5. )
```

What is the valid returnType for methodA in line 2?

- A. Int
- B. Byte
- C. Long
- D. Short
- E. Float

F. Double

Answer: F

QUESTION 32

Given the ActionEvent, which method allows you to identify the affected component?

- A. GetClass.
- B. GetTarget.
- C. GetSource.
- D. GetComponent.
- E. GetTargetComponent.

Answer: C

QUESTION 33

Which is a method of the MouseMotionListener interface?

- A. Public void mouseMoved(MouseEvent)
- B. Public boolean mouseMoved(MouseEvent)
- C. Public void mouseMoved(MouseMotionEvent)
- D. Public boolean MouseMoved(MouseMotionEvent)
- E. Public boolean mouseMoved(MouseMotionEvent)

Answer: A

QUESTION 34

Exhibit:

1. import java.awt*;
- 2.
3. public class X extends Frame (
4. public static void main(string []args) (
5. X x = new X ();
6. X.pack();
7. x.setVisible(true);
8.)
- 9.
10. public X () (
11. setlayout (new GridLayout (2,2));
- 12.
13. Panel p1 = new panel();
14. Add(p1);
15. Button b1= new Button ("One");
16. P1.add(b1);
- 17.
18. Panel p2 = new panel();


```
19. Add(p2);
20. Button b2= new Button ("Two");
21. P2.add(b2);
22.
23. Button b3= new Button ("Three");
24. add(b3);
25.
26. Button b4= new Button ("Four");
27. add(b4);
28. )
29. )
```

Which two statements are true? (Choose Two)

- A. All the buttons change height if the frame height is resized.
- B. All the buttons change width if the Frame width is resized.
- C. The size of the button labeled "One" is constant even if the Frame is resized.
- D. Both width and height of the button labeled "Three" might change if the Frame is resized.

Answer: C, D

QUESTION 35

You are assigned the task of building a panel containing a TextArea at the top, a label directly below it, and a button directly below the label. If the three components are added directly to the panel. Which layout manager can the panel use to ensure that the TextArea absorbs all of the free vertical space when the panel is resized?

- A. GridLayout.
- B. CardLayout.
- C. FlowLayout.
- D. BorderLayout.
- E. GridBagLayout.

Answer: E

QUESTION 36

Which gets the name of the parent directory file "file.txt"?

- A. String name= File.getParentName("file.txt");
 - B. String name= (new File("file.txt")).getParent();
 - C. String name = (new File("file.txt")).getParentName();
 - D. String name= (new File("file.txt")).getParentFile();
 - E. Directory dir=(new File ("file.txt")).getParentDir();
- String name= dir.getName();

Answer: B

QUESTION 37

Which can be used to encode charS for output?

- A. Java.io.OutputStream.
- B. Java.io.OutputStreamWriter.
- C. Java.io.EncodeOutputStream.
- D. Java.io.EncodeWriter.
- E. Java.io.BufferedOutputStream.

Answer: B

QUESTION 38

The file "file.txt" exists on the file system and contains ASCII text.

Given:

```
38. try {  
39. File f = new File("file.txt");  
40. OutputStream out = new FileOutputStream(f, true);  
41. }  
42. catch (IOException) {}
```

What is the result?

- A. The code does not compile.
- B. The code runs and no change is made to the file.
- C. The code runs and sets the length of the file to 0.
- D. An exception is thrown because the file is not closed.
- E. The code runs and deletes the file from the file system.

Answer: A

QUESTION 39

Which constructs a DataOutputStream?

- A. New dataOutputStream("out.txt");
- B. New dataOutputStream(new file("out.txt"));
- C. New dataOutputStream(new writer("out.txt"));
- D. New dataOutputStream(new FileWriter("out.txt"));
- E. New dataOutputStream(new OutputStream("out.txt"));
- F. New dataOutputStream(new FileOutputStream("out.txt"));

Answer: F

QUESTION 40

What writes the text "<end>" to the end of the file "file.txt"?

- A. OutputStream out= new FileOutputStream ("file.txt");

```
Out.writeBytes("<end>/n");  
B. OutputStream os= new FileOutputStream("file.txt", true);  
DataOutputStream out = new DataOutputStream(os);  
out.writeBytes("<end>/n");  
C. OutputStream os= new FileOutputStream("file.txt");  
DataOutputStream out = new DataOutputStream(os);  
out.writeBytes("<end>/n");  
D. OutputStream os= new OutputStream("file.txt", true);  
DataOutputStream out = new DataOutputStream(os);  
out.writeBytes("<end>/n");
```

Answer: B

QUESTION 41

Given:

```
1. public class X (  
2. public object m () {  
3. object o = new float (3.14F);  
4. object [] oa = new object [1];  
5. oa[0]= o;  
6. o = null;  
7. return oa[0];  
8. }  
9. }
```

When is the float object created in line 3, eligible for garbage collection?

- A. Just after line 5
- B. Just after line 6
- C. Just after line 7 (that is, as the method returns)
- D. Never in this method.

Answer: D

QUESTION 42

Given:

```
3. string foo = "ABCDE";  
4. foo.substring(3);  
5. foo.concat("XYZ");  
6.
```

Type the value of foo at line 6.

Answer: ABCDE

QUESTION 43

Which method is an appropriate way to determine the cosine of 42 degrees?

F. Double d = Math.cos(42);

- G. Double d = Math.cosine(42);
- H. Double d = Math.cos(Math.toRadians(42));
- I. Double d = Math.cos(Math.toDegrees(42));
- J. Double d = Math.cosine(Math.toRadians(42));

Answer: C

QUESTION 44

You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?

- Java.util.Map.
- Java.util.Set.
- Java.util.List.
- Java.util.StoredSet.
- Java.util.StoredMap.
- Java.util.Collection.

Answer: D

QUESTION 45

Which statement is true for the class java.util.HashSet?

- A. The elements in the collection are ordered.
- B. The collection is guaranteed to be immutable.
- C. The elements in the collection are guaranteed to be unique.
- D. The elements in the collection are accessed using a unique key.
- E. The elements in the collections are guaranteed to be synchronized.

Answer: C

QUESTION 46

Given:

- 1. public class IfTest (
- 2. public static void main(string[]args) {
- 3. int x = 3;
- 4. int y = 1;
- 5. if (x = y)
- 6. system.out.println("Not equal");
- 7. else
- 8. system.out.println("Equal");
- 9. }
- 10.)

What is the result?

- A. The output is "Equal"

- B. The output in "Not Equal"
- C. An error at line 5 causes compilation to fail.
- D. The program executes but does not print a message.

Answer: C

QUESTION 47

Exhibit:

```
1. public class test (  
2. public static void main(string args[]) {  
3. int i= 0;  
4. while (i) {  
5. if (i==4) {  
6. break;  
7. }  
8. ++i;  
9. }  
10.  
11. }  
  
12. }
```

What is the value of i at line 10?

- A. 0
- B. 3
- C. 4
- D. 5
- E. The code will not compile.

Answer: E

QUESTION 48

Given:

```
3. int i= 1, j= 10 ;  
4. do (  
5. if (i++> --j) continue;  
6. ) while (i<5);
```

After execution, what are the values for I and j?

- 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 49

Given:

1. switch (i) {
2. default:
3. System.out.println("Hello");
4. }

What are the two acceptable types for the variable i? (Choose Two)

- A. Char
- B. Byte
- C. Float
- D. Double
- E. Object

Answer: A, B

QUESTION 50

Given:

1. public class foo {
2. public static void main (string[]args)
3. try {return;}
4. finally {system.out.println("Finally");}
5. }
6. }

What is the result?

- A. The program runs and prints nothing.
- B. The program runs and prints "Finally"
- C. The code compiles, but an exception is thrown at runtime.
- D. The code will not compile because the catch block is missing.

Answer: B

QUESTION 51

Exhibit:

2. import java.io.IOException;
3. public class ExceptionTest(
4. public static void main (String[]args)
5. try (
6. methodA();
7.) catch (IOException e) (
8. system.out.println("Caught IOException");
9.) catch (Exception e) (
10. system.out.println("Caught Exception");
11.)

12.)
13. public void methodA () {
14. throw new IOException ();
15.)
16.)

What is the result?

- A. The code will not compile.
- B. The output is caught exception.
- C. The output is caught IOException.
- D. The program executes normally without printing a message.

Answer: A

QUESTION 52

Exhibit:

```
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 24?

Answer: 13423

QUESTION 53

Given:

```
1. public class Foo implements Runnable (  
2. public void run (Thread t) {  
3. system.out.println("Running.");  
4. }  
5. public static void main (String[] args) {  
6. new thread (new Foo()).start();  
7. )  
8. )
```

What is the result?

- A. An exception is thrown.
- B. The program exists without printing anything.
- C. An error at line 1 causes compilation to fail.
- D. An error at line 2 causes the compilation to fail.
- E. "Running" is printed and the program exits.

Answer: D

QUESTION 54

Which statement is true?

- A. If only one thread is blocked in the wait method of an object, and another thread executes the modify on that same object, then the first thread immediately resumes execution.
- B. If a thread is blocked in the wait method of an object, and another thread executes the notify method on the same object, it is still possible that the first thread might never resume execution.
- C. If a thread is blocked in the wait method of an object, and another thread executes the notify method on the same object, then the first thread definitely resumes execution as a direct and sole consequence of the notify call.
- D. If two threads are blocked in the wait method of one object, and another thread executes the notify method on the same object, then the first thread that executed the wait call first definitely resumes execution as a direct and sole consequence of the notify call.

Answer: B

QUESTION 55

Which two CANNOT directly cause a thread to stop executing? (Choose Two)

- A. Calling the yield method.
- B. Calling the wait method on an object.
- C. Calling the notify method on an object.
- D. Calling the notifyAll method on an object.

E. Calling the start method on another Thread object.

Answer: C, D

QUESTION 56

Which two can be used to create a new Thread? (Choose Two)

- A. Extend java.lang.Thread and override the run method.
- B. Extend java.lang.Runnable and override the start method.
- C. Implement java.lang.thread and implement the run method.
- D. Implement java.lang.Runnable and implement the run method.
- E. Implement java.lang.Thread and implement the start method.

Answer: A, D

QUESTION 57

Given:

- 1. public class SyncTest (
- 2. private int x;
- 3. private int y;
- 4. private synchronized void setX (int i) (x=1;)
- 5. private synchronized void setY (int i) (y=1;)
- 6. public void setXY(int i)(set X(i); setY(i);)
- 7. public synchronized Boolean check() (return x !=y;)
- 8.)

Under which conditions 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 only return true if SyncTest is changed to allow x and y to be set separately.

Answer: B

QUESTION 58

Exhibit:

- 23. class A implements runnable (
- 24. int i;
- 25. public void run () (
- 26. try (
- 27. thread.sleep(5000);
- 28. i= 10;
- 29.) catch(InterruptedException e) {}
- 30.)
- 31.)

```
32.  
33. public class Test {  
34. public static void main (string args[]) {  
35. try (  
36. A a = new A ();  
37. Thread t = new Thread (a);  
38. t.start();  
39.  
40. int j= a.i;  
41.  
42. ) catch (Exception e) {}  
43. )  
44. )
```

Which statement at line 17 will ensure that j=10 at line 19?

H. a.wait();
I. t.wait();
J. t.join();
K. t.yield();
L. t.notify();
M. a.notify();
N. t.interrupt();

Answer: C

QUESTION 59

Exhibit:

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

What is the result?

- A. An error at line 11 causes compilation to fail.
- B. Errors at lines 7 and 8 cause compilation to fail.
- C. 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")
- 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 twice (for example, "x=1, y=1" followed by "x=1, y=1")
- E. 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 twice (for example, "x=1, y=1" followed by "x=2s, y=2")

Answer: E

QUESTION 60

Which two CANNOT directly cause a thread to stop executing? (Choose Two)

- A. Existing from a synchronized block.
- B. Calling the wait method on an object.
- C. Calling notify method on an object.
- D. Calling read method on an InputStream object.
- E. Calling the SetPriority method on a Thread object.

Answer: A, C

QUESTION 61

Exhibit

```
1. public class SyncTest{
2. public static void main(String[] args) {
3. final StringBuffer s1= new StringBuffer();
4. final StringBuffer s2= new StringBuffer();
5. new Thread () {
6. public void run() {
7. synchronized(s1) {
8. s2.append("A");
9. synchronized(s2) {
10. s2.append("B");
11. System.out.print(s1);
12. System.out.print(s2);
13. }
14. }
15. }
16. }.start();
17. new Thread() {
18. public void run() {
19. synchronized(s2) {
20. s2.append("C");
```

```
21. synchronized(s1) {  
22. s1.append("D");  
23. System.out.print(s2);  
24. System.out.print(s1);  
25. }  
26. }  
27. }  
28. }.start();  
29. }  
30. }
```

Which two statements are true? (Choose Two)

- A. The program prints "ABBCAD"
- B. The program prints "CDDACB"
- C. The program prints "ADCBADBC"
- D. The output is a non-deterministic point because of a possible deadlock condition.
- E. The output is dependent on the threading model of the system the program is running on.

Answer: D, B

QUESTION 62

Which method in the Thread class is used to create and launch a new thread of execution?

- A. Run();
- B. Start();
- B. Execute();
- C. Run(Runnable r);
- D. Start(Runnable r);
- E. Execute(Thread t);

Answer: B

QUESTION 63

Given:

```
5. String foo = "base";  
6. foo.substring(0,3);  
7. foo.concat("ket")  
8.
```

Type the value of foo at line 8.

Answer: BASE

QUESTION 64

Which code determines the int value foo closest to, but not greater than, a double value

bar?

- A. Int foo = (int) Math.max(bar);
- B. Int foo = (int) Math.min(bar);
- C. Int foo = (int) Math.abs(bar);
- D. Int foo = (int) Math.ceil(bar);
- E. Int foo = (int) Math.floor(bar);
- F. Int foo = (int) Math.round(bar);

Answer: E

QUESTION 65

Which statement is true?

- A. A flow layout can be used to position a component that should resize horizontally when the container is resized.
- B. A grid layout can be used to position a component tat should maintain a constant size even when the container is resized.
- C. A border layout can be used to position component that should maintain a constant size even when the container is resized.
- D. The grid bag layout can be used to give a grid-like layout which differs from the normal grid in that individual rows and columns can have unique sizes.
- E. If two components are placed in the same column of a grid bag layout, and one component resizes horizontally, then the other component must resize horizontally.

Answer: D

QUESTION 66

Given an ActionEvent, which method allows you to identify the affected Component?

- A. Public class getClass()
- B. Public Object getSource()
- C. Public Component getSource()
- D. Public Component getTarget()
- E. Public Component GetComponent()
- F. Public Component getTargetComponent()

Answer: B

QUESTION 67

Exhibit:

1. import java.awt.*;
- 2.
3. public class Test extends Frame {
4. public Test() {

```
5. add(new Label("Hello") );
6. add(new TextField("Hello") );
7. add(new Button("Hello") );
8. pack();
9. show();
10. }
11.
12. public static void main(String args[]) {
13. new Test ();
14. }
15. )
```

What is the result?

- A. The code will not compile.
- B. A Window will appear containing only a Button.
- C. An IllegalArgumentException is thrown at line 6.
- D. A Window button will appear but will not contain the Label, TextField, or Button.
- E. A Window will appear containing a Label at the top, a TextField below the Label, and a Button below the TextField.
- F. A Window will appear containing a Label on the left, a TextField to the right of the Label, and a button to the right of the TextField.

Answer: B

QUESTION 68

Exhibit:

```
1. class A {
2. public int getNumber(int a) {
3. return a + 1;
4. }
5. }
6.
7. class B extends A {
8. public int getNumber (int a) {
9. return a + 2
10. }
11.
12. public static void main (String args[]) {
13. A a = new B();
14. System.out.println(a.getNumber(0));
15. }
16. }
```

What is the result?

- A. Compilation succeeds and 1 is printed.

- B. Compilation succeeds and 2 is printed.
- C. An error at line 8 causes compilation to fail.
- D. An error at line 13 causes compilation to fail.
- E. An error at line 14 causes compilation to fail.

Answer: B

QUESTION 69

Given:

```
9. class BaseClass{  
10. private float x= 1.0f;  
11. protected void setVar (float f) {x = f;}  
12. }  
13. class SubClass extends BaseClass {  
14. private float x = 2.0f;  
15. //insert code here  
16. }
```

Which two are valid examples of method overriding? (Choose Two)

- A. Void setVar(float f) {x = f;}
- B. Public void setVar(int f) {x = f;}
- C. Public void setVar(float f) {x = f;}
- D. Public double setVar(float f) {x = f;}
- E. Public final void setVar(float f) {x = f;}
- F. Protected float setVar() {x=3.0f; return 3.0f; }

Answer: C, E

QUESTION 70

Which statement about static inner classes is true?

- A. An anonymous class can be declared as static.
- B. A static inner class cannot be a static member of the outer class.
- C. A static inner class does not require an instance of the enclosing class.
- D. Instance members of a static inner class can be referenced using the class name of the static inner class.

Answer: C

QUESTION 71

Exhibit:

```
1. class A {  
2. public byte getNumber () {  
3. return 1;  
4. }  
5. }
```

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

What is the result?

- A. Compilation succeeds and 1 is printed.
- B. Compilation succeeds and 2 is printed.
- C. An error at line 8 causes compilation to fail.
- D. An error at line 14 causes compilation to fail.
- E. Compilation succeeds but an exception is thrown at line 14.

Answer: C

QUESTION 72

Given:

AnInterface is an interface.

AnAdapter0 is a non-abstract, non-final class with a zero argument constructor.

AnAdapter1 is a non-abstract, non-final class without a zero argument constructor, but with a constructor that takes one int argument.

Which two construct an anonymous inner class? (Choose Two)

- F. AnAdapter1 aa=new AnAdapter1(){}
- G. AnAdapter0 aa=new AnAdapter0(){}
- H. AnAdapter0 aa=new AnAdapter0(5){}
- I. AnAdapter1 aa=new AnAdapter1(5){}
- J. AnInterface a1=new AnInterface(5){}

Answer: B, D

QUESTION 73

Which two statements are true? (Choose Two)

- A. An inner class may be declared as static.
- B. An anonymous inner class can be declared as public.
- C. An anonymous inner class can be declared as private.
- D. An anonymous inner class can extend an abstract class.
- E. An anonymous inner class can be declared as protected.

Answer: A, D

QUESTION 74

Exhibit:

```
14. public class Mycircle {  
15.     public double radius;  
16.     public double diameter;  
17.  
18.     public void setRadius(double radius)  
19.     {  
20.         this.radius = radius;  
21.         this.diameter= radius * 2;  
22.     }  
23.     public double getRadius() {  
24.         return radius  
25.     }  
26. }
```

Which statement is true?

- A. The Mycircle class is fully encapsulated.
- B. The diameter of a given MyCircle is guaranteed to be twice its radius.
- C. Lines 6 and 7 should be in a synchronized block to ensure encapsulation.
- D. The radius of a MyCircle object can be set without affecting its diameter.

Answer: B

QUESTION 75

You want to limit access to a method of a public class to members of the same class.
Which access modifier accomplishes this objective?

- A. Public
- B. Private
- C. Protected
- D. Transient
- E. No access modifier is required

Answer: B

QUESTION 76

Exhibit:

ClassOne.java

```
1. package com.abc.pkg1;  
2. public class ClassOne {  
3.     private char var = 'a';  
4.     char getVar() {return var;}  
5. }
```

ClassTest.java

```
1. package com.abc.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 will fail.
- B. Compilation succeeds and no exceptions are thrown.
- C. Compilation succeeds but an exception is thrown at line 5 in ClassTest.java.
- D. Compilation succeeds but an exception is thrown at line 6 in ClassTest.java.

Answer: B

QUESTION 77

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 exception at runtime.

Answer: A

QUESTION 78

Which two statements are true regarding the creation of a default constructor? (Choose Two)

- A. The default constructor initializes method variables.
- B. The compiler always creates a default constructor for every class.
- C. The default constructor invokes the no-parameter constructor of the superclass.
- D. The default constructor initializes the instance variables declared in the class.
- E. When a class has only constructors with parameters, the compiler does not create

a default constructor.

Answer: D, E

QUESTION 79

Exhibit:

```
1. class super {  
2. public int getLength() {return 4;}  
3. }  
4.  
5. public class Sub extends Super {  
6. public long getLength() {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.getLength()+ "," + sub.getLength() );  
13. }  
14. }
```

What is the output?

- A. 4, 4
- B. 4, 5
- C. 5, 4
- D. 5, 5
- E. The code will not compile.

Answer: E

QUESTION 80

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 three changes (made independently) allow the code to compile? (Choose Three)

- 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 methodB.

- E. Remove the abstract qualifier from the declaration of methodA.
- F. Remove methodB in its entirety and change class o interface in line 1.

Answer: B, D, F

QUESTION 81

Which determines if "prefs" is a directory and exists on the file system?

- A. Boolean exists=Directory.exists ("prefs");
 - B. Boolean exists=(new File("prefs")).isDir();
 - C. Boolean exists=(new Directory("prefs")).exists();
 - D. Boolean exists=(new File("prefs")).isDirectory();
 - E. Boolean exists=true;
- ```
Try {
Directory d = new Directory("prefs");
}
catch (FileNotFoundException e) {
exists = false;
}
```

Answer: D

---

**QUESTION 82**

Which two create an InputStream and open file the "file.txt" for reading? (Choose Two)

- A. InputStream in=new FileReader("file.txt");
- B. InputStream in=new FileInputStream("file.txt");
- C. InputStream in=new InputStreamFileReader ("file.txt", "read");
- D. FileInputStream in=new FileReader(new File("file.txt"));
- E. FileInputStream in=new FileInputStream(new File("file.txt"));

Answer: B, E

---

**QUESTION 83**

Which two construct an OutputStream that appends to the file "file.txt"? (Choose Two)

- A. OutputStream out=new FileOutputStream("file.txt");
- B. OutputStream out=new FileOutputStream("file.txt", "append");
- C. FileOutputStream out=new FileOutputStream("file.txt", true);
- D. FileOutputStream out=new FileOutputStream(new file("file.txt"));
- E. OutputStream out=new FileOutputStream(new File("file.txt")true);

Answer: C, E

---

**QUESTION 84**

Which constructs a BufferedInputStream?

- A. New BufferedInputStream("in.txt");
- B. New BufferedInputStream(new File("in.txt"));
- C. New BufferedInputStream(new Writer("in.txt"));
- D. New BufferedInputStream(new Writer("in.txt"));
- E. New BufferedInputStream(new InputStream("in.txt"));
- F. New BufferedInputStream(new FileInputStream("in.txt"));

Answer: F

---

**QUESTION 85**

Which is a valid identifier?

- A. false
- B. default
- C. \_object
- D. a-class

Answer: C

---

**QUESTION 86**

Exhibit:

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. }

The file MyNewVector.java is shown in the exhibit.

What is the result?

- A. Compilation will succeed.
- B. Compilation will fail at line 5.

- C. Compilation will fail at line 6.
- D. Compilation will fail at line 14.
- E. Compilation will fail at line 17.

Answer: B

---

**QUESTION 87**

Given:

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

And the output:

Baz = 2

Which command line invocation will produce the output?

- A. Java Test 2222
- B. Java Test 1 2 3 4
- C. Java Test 4 2 4 2
- D. Java Test 4 3 2 1

Answer: C

---

**QUESTION 88**

Given:

```
8. int index = 1;
9. String [] test = new String[3];
10. String foo = test[index];
```

What is the result?

- E. Foo has the value ""
- B. Foo has the value null
- C. An exception is thrown
- D. The code will not compile

Answer: B

---

**QUESTION 89**

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. Private int k = 4;
- E. Abstract int k = 4;
- F. Volatile int k = 4;
- G. Transient int k = 4;
- H. Protected int k = 4;

Answer: A, B, C

---

**QUESTION 90**

Given:

1. public class foo {
2. static String s;
3. public static void main (String[]args) {
4. system.out.println ("s=" + s);
5. }
6. }

What is the result?

- A. The code compiles and "s=" is printed.
- B. The code compiles and "s=null" is printed.
- C. The code does not compile because string s is not initialized.
- D. The code does not compile because string s cannot be referenced.
- E. The code compiles, but a NullPointerException is thrown when toString is called.

Answer: B

---

**QUESTION 91**

Which two valid declarations of a char? (Choose Two)

- A. Char ch = "a";
- B. Char ch = '\ ';
- C. Char ch = 'cafe';
- D. Char ch = "cafe";
- E. Char ch = "\ucafe";
- F. Char ch = "\u10100";
- G. Char ch = (char) true;

Answer: B, E

---

**QUESTION 92**

Given:

```
1. String foo = "blue";
2. Boolean[] bar = new Boolean [1];
3. if (bar[0]) {
4. foo = "green";
5. }
```

What is the result?

- A. Foo has the value of ""
- B. Foo has the value of null.
- C. Foo has the value of "blue"
- D. Foo has the value of "green"
- E. An exception is thrown.
- F. The code will not compile.

Answer: F

---

### **QUESTION 93**

Exhibit:

```
1. public class X {
2. public static void main (String[]args) {
3. String s1 = new String ("true");
4. Boolean b1 = new Boolean (true);
5. if (s2.equals(b1)) {
6. System.out.println("Equal");
7. }
8. }
9. }
```

What is the result?

- A. The program runs and prints nothing.
- B. The program runs and prints "Equal"
- C. An error at line 5 causes compilation to fail.
- D. The program runs but aborts with an exception.

Answer: A

---

### **QUESTION 94**

Given:

```
1. public class Foo {
2. public static void main (String []args) {
3. int i = 1;
4. int j = i++;
5. if ((i>++j) && (i++ ==j)) {
6. i +=j;
7. }
8. }
```



9. }

What is the final value of i?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

Answer: B

---

**QUESTION 95**

Exhibit:

1. public class X {
2. public static void main (String[]args) {
3. string s = new string ("Hello");
4. modify(s);
5. System.out.println(s);
6. }
- 7.
8. public static void modify (String s) {
9. s += "world!";
10. }
11. }

What is the result?

- A. The program runs and prints "Hello"
- B. An error causes compilation to fail.
- C. The program runs and prints "Hello world!"
- D. The program runs but aborts with an exception.

Answer: A

---

**QUESTION 96**

Which two are equivalent? (Choose Two)

- A.  $16 > 4$
- B.  $16/2$
- C.  $16 * 4$
- D.  $16 >> 2$
- E.  $16/2^2$
- F.  $16 >>> 2$

Answer: D, E

---

**QUESTION 97**

Exhibit:

```
1. public class X {
2. public static void main (String[] args) {
3. int [] a = new int [1]
4. modify(a);
5. System.out.println(a[0]);
6. }
7.
8. public static void modify (int[] a) {
9. a[0] ++;
10. }
11. }
```

What is the result?

- A. The program runs and prints "0"
- B. The program runs and prints "1"
- C. The program runs but aborts with an exception.
- D. An error "possible undefined variable" at line 4 causes compilation to fail.
- E. An error "possible undefined variable" at line 9 causes compilation to fail.

Answer: B

---

**QUESTION 98**

Given:

```
25. public class Foo {
26. public static void main (String [] args) {
27. StringBuffer a = new StringBuffer ("A");
28. StringBuffer b = new StringBuffer ("B");
29. operate (a,b);
30. system.out.println{a + "," +b};
31.)
32. static void operate (StringBuffer x, StringBuffer y) {
33. y.append {x};
34. y = x;
35.)
36. }
```

What is the result?

- A. The code compiles and prints "A,B".
- B. The code compiles and prints "A, BA".
- C. The code compiles and prints "AB, B".
- D. The code compiles and prints "AB, AB".
- E. The code compiles and prints "BA, BA".
- F. The code does not compile because "+" cannot be overloaded for stringBuffer.

Answer: B

---

**QUESTION 99**

Given:

```
8. public class X {
9. public static void main (String[] args) {
10. byte b = 127;
11. byte c = 126;
12. byte d = b + c;
13. }
14. }
```

Which statement is true?

- A. Compilation succeeds and d takes the value 253.
- B. Line 5 contains an error that prevents compilation.
- C. Line 5 throws an exception indicating "Out of range"
- D. Line 3 and 4 contain error that prevent compilation.
- E. The compilation succeeds and d takes the value of 1.

Answer: B

---

**QUESTION 100**

Given:

```
1. public class WhileFoo {
2. public static void main (String []args) {
3. int x= 1, y = 6;
4. while (y--) {x--;}
5. system.out.println("x=" + x "y =" + y);
6. }
7. }
```

What is the result?

- A. The output is x = 6 y = 0
- B. The output is x = 7 y = 0
- C. The output is x = 6 y = -1
- D. The output is x = 7 y = -1
- E. Compilation will fail.

Answer: E

---

**QUESTION 101**

Which statement is true?

- A. The Error class is a runtimeException.
- B. No exceptions are subclasses of Error.

- C. Any statement that may throw an Error must be enclosed in a try block.
- D. Any statement that may throw an Exception must be enclosed in a try block.
- E. Any statement that may thro a runtimeException must be enclosed in a try block.

Answer: D

---

**QUESTION 102**

Exhibit:

```
1. int I=1, j=0
2.
3. switch(i) {
4. case 2:
5. j+=6;
6.
7. case 4:
8. j+=1;
9.
10. default:
11. j +=2;
12.
13. case 0:
14. j +=4;
15. }
16.
```

What is the value of j at line 16?

- A. 0
- B. 1
- C. 2
- D. 4
- E. 6

Answer: AE

---

**QUESTION 103**

Given:

```
1. switch (i) {
2. default:
3. System.out.println("Hello");
4. }
```

What is the acceptable type for the variable i?

- A. Byte
- B. Long
- C. Float
- D. Double

- E. Object
- F. A and B
- G. C and D
- A.

Answer: A  
B.

---

**QUESTION** NO: 104

You need to store elements in a collection that guarantees that no duplicates are stored.  
Which two interfaces provide that capability? (Choose Two)

- A. Java.util.Map
- B. Java.util.Set
- C. Java.util.List
- D. Java.util.StoredSet
- E. Java.util.StoredMap
- F. Java.util.Collection

Answer: B, D  
C.

---

**QUESTION** NO: 105

D. Which statement is true for the class java.util.ArrayList?

- A. The elements in the collection are ordered.
- B. The collection is guaranteed to be immutable.
- C. The elements in the collection are guaranteed to be unique.
- D. The elements in the collection are accessed using a unique key.
- E. The elements in the collections are guaranteed to be synchronized.

Answer: A

---

**QUESTION** 106

Exhibit:

1. public class X implements Runnable(  
2. private int x;  
3. private int y;  
4.  
5. public static void main(String[]args)  
6. X that = new X();  
7. (new Thread(that)).start();  
8. (new Thread(that)).start();  
9. )  
10.  
11. public void run() (

```
12. for (;;) (
13. x++;
14. y++;
15. System.out.println("x=" + x + ", y = " + y);
16.)
17.)
18.)
```

What is the result?

- A. Errors at lines 7 and 8 cause compilation to fail.
- 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 twice (for example, "x=1, y=1" followed by "x=1, y=1").
- 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 for once (for example, "x=1, y=1" followed by "x=2, y=2").

Answer: D

---

#### **QUESTION 107**

Given:

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

Under which conditions 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 only return true if SyncTest is changed to allow x and y to be set separately.

Answer: A

---

#### **QUESTION 108**

Which is a method of the MouseMotionListener interface?

- A. Public void mouseDragged(MouseEvent)
- B. Public boolean mouseDragged(MouseEvent)

- C. Public void mouseDragged(MouseEvent)
- D. Public boolean MouseDragged(MouseEvent)
- E. Public boolean mouseDragged(MouseEvent)

Answer: A

---

**QUESTION 109**

Given:

1. String foo = "base";
2. foo.substring(0,3);
3. foo.concat("ket");
4. foo += "ball";
- 5.

Type the value of foo at line 8.

Answer: BASEBALLE.

---

**QUESTION 110**

Given:

1. public class Test {
2. public static void leftshift(int i, int j) {
3. i<<=j;
4. }
5. public static void main(String args[]) {
6. int i = 4, j = 2;
7. leftshift(i, j);
8. System.out.println(i);
9. }
10. }

What is the result?

- A. 2
- B. 4
- 127 -
- C. 8
- D. 16
- E. The code will not compile.

Answer: B

---

**QUESTION 111**

Given:

1. public class Foo {
2. private int val;
3. public foo(int v) (val = v;) }

```
4. public static void main (String [] args) {
5. Foo a = new Foo (10);
6. Foo b = new Foo (10);
7. Foo c = a;
8. int d = 10;
9. double e = 10.0;
10. }
11. }
```

Which three logical expression 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, B, F

---

**QUESTION 112**

Exhibit:

```
1. public class X {
2. private static int a;
3.
5. public static void main (String[] args) {
6. modify (a);
7. }
8.
9. public static void modify (int a) {
10. a++;
11. }
12. }
```

What is the result?

- A. The program runs and prints "0"
- B. The program runs and prints "1"
- C. The program runs but aborts with an exception.
- D. En error "possible undefined variable" at line 5 causes compilation to fail.
- F. En error "possible undefined variable" at line 10 causes compilation to fail.

Answer: A

---

**QUESTION 113**

Exhibit:

```
2. public class Test {
3. public static void replaceJ(string text) {
```



```
4. text.replace('j', 'l');
5. }
6.
7. public static void main(String args[]) {
8. string text = new String ("java")
9. replaceJ(text);
10. system.out.println(text);
11. }
12. }
```

What is the result?

- A. The program prints "lava"
- B. The program prints "java"
- C. An error at line 7 causes compilation to fail.
- D. Compilation succeeds but the program throws an exception.

Answer: B

---

**QUESTION 114**

Which two are equivalent? (Choose Two)

- A. 3/2
- B. 3<2
- C. 3\*4
- D. 3<<2
- E. 3\*2^2
- F. 3<<<2

Answer: C, D

---

**QUESTION 115**

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

---

**QUESTION 116**

Given:

- 1. public class Test {
- 2. public static void main (String []args) {
- 3. unsigned byte b = 0;

```
4. b--;
5.
6. }
7. }
```

What is the value of b at line 5?

- A. -1
- B. 255
- C. 127
- D. Compilation will fail.
- E. Compilation will succeed but the program will throw an exception at line 4.

Answer: D

---

**QUESTION 117**

Given:

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

What is the result?

- A. An exception is thrown.
- B. The code does not compile.
- C. "Hello World." Is printed to the terminal.
- D. The program exits without printing anything.

Answer: A

---

**QUESTION 118**

Given:

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

Which statement at PointX on line 1 allows this code to compile and run?

- A. Import java.io.\*;
- B. Include java.io.\*;
- C. Import java.io.PrintWriter;
- D. Include java.io.PrintWriter;

E. No statement is needed.

Answer: E

---

**QUESTION 119**

Which will declare a method that is available to all members of the same package and can be referenced without an instance of the class?

- A. Abstract public void methoda();
- B. Public abstract double methoda();
- C. Static void methoda(double d1){}
- D. Public native double methoda() {}
- E. Protected void methoda(double d1) {}

Answer: C

---

**QUESTION 120**

Which type of event indicates a key pressed on a java.awt.Component?

- A. KeyEvent
- B. KeyDownEvent
- C. KeyPressEvent
- D. KeyTypedEvent
- E. KeyPressedEvent

Answer: A

---

**QUESTION 121**

Exhibit:

1. import java.awt.\*;
- 2.
3. public class X extends Frame {
4. public static void main (String [] args) {
5. X x = new X();
6. x.pack();
7. x.setVisible(true);
8. }
- 9.
10. public X() {
11. setLayout (new BorderLayout());
12. Panel p = new Panel ();
13. add(p, BorderLayout.NORTH);
14. Button b = new Button ("North");
15. p.add(b);
16. Button b = new Button ("South");
17. add(b1, BorderLayout.SOUTH);

18. }  
19. }

Which two statements are true? (Choose Two)

- A. The buttons labeled "North" and "South" will have the same width.
- B. The buttons labeled "North" and "South" will have the same height.
- C. The height of the button labeled "North" can vary if the Frame is resized.
- D. The height of the button labeled "South" can vary if the Frame is resized.
- E. The width of the button labeled "North" is constant even if the Frame is resized.
- F. The width of the button labeled "South" is constant even if the Frame is resized.

Answer: B, E

---

**QUESTION 122**

How can you create a listener class that receives events when the mouse is moved?

- A. By extending MouseListener.
- B. By implementing MouseListener.
- C. By extending MouseMotionListener.
- D. By implementing MouseMotionListener.
- E. Either by extending MouseMotionListener or extending MouseListener.
- F. Either by implementing MouseMotion Listener or implementing MouseListener.

Answer: D

---

**QUESTION 123**

Which statement is true?

- A. A grid bag layout can position components such that they span multiple rows and/or columns.
- B. The "North" region of a border layout is the proper place to locate a menuBar component in a Frame.
- C. Components in a grid bag layout may either resize with their cell, or remain centered in that cell at their preferred size.
- D. A border layout can be used to position a component that should maintain a constant size even when the container is resized.

Answer: A F.

---

**QUESTION 124**

You want a class to have access to members of another class in the same package. Which is the most restrictive access modifier that will accomplish that will accomplish this objective?

- A. Public
- B. Private

- C. Protected
- D. Transient
- E. No access modifier is required.

Answer: E

---

**QUESTION 125**

Which two statements are true regarding the creation of a default constructor? (Choose Two)

- A. The default constructor initializes method variables.
- B. The default constructor invokes the no-parameter constructor of the superclass.
- C. The default constructor initializes the instance variables declared in the class.
- D. If a class lacks a no-parameter constructor,, but has other constructors, the compiler creates a default constructor.
- E. The compiler creates a default constructor only when there are no other constructors for the class.

Answer: C, E

---

**QUESTION 126**

Given:

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

You need to insert an inner class declaration at line2. Which two inner class declarations are valid? (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 127**

Which two declarations prevent the overriding of a method? (Choose Two)

- A. Final void methoda() {}
- B. Void final methoda() {}
- C. Static void methoda() {}
- D. Static final void methoda() {}
- E. Final abstract void methoda() {}

Answer: A, D

---

**QUESTION 128**

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(foo. i);
9. }
10. }

What is the result?

- A. Compilation will fail.
- B. Compilation will succeed and the program will print "3"
- C. Compilation will succeed but the program will throw a ClassCastException at line 6.
- D. Compilation will succeed but the program will throw a ClassCastException at line 7.

Answer: B

---

**QUESTION 129**

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 130**

Given:

```
1. public class ExceptionTest {
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 can be added to make the code compile?

- A. Throws Exception.
- B. Catch (Exception e).
- C. Throws RuntimeException.
- D. Catch (TestException e).
- E. No code is necessary.

Answer: B

---

**QUESTION 131**

Exhibit:

```
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 output from line 3?

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

Answer: F

---

**QUESTION 132**

Which four types of objects can be thrown using the throw statement? (Choose Four)

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

Answer: A, D, E, F

---

**QUESTION 133**

Given:

```
1. public class ForBar {
2. public static void main(String []args) {
3. int i = 0, j = 5;
4. tp: for (;;) {
5. i ++;
6. for(;;)
7. if(i > --j) break tp;
8. }
9. system.out.println("i = " + i + ", j = "+ j);
10. }
11. }
```

What is the result?

- A. The program runs and prints "i=1, j=0"
- B. The program runs and prints "i=1, j=4"
- C. The program runs and prints "i=3, j=4"
- D. The program runs and prints "i=3, j=0"
- E. An error at line 4 causes compilation to fail.
- F. An error at line 7 causes compilation to fail.

Answer: A

---

**QUESTION 134**

Which two can directly cause a thread to stop executing? (Choose Two)

- 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.



E. Calling the setPriority method on a thread object.

Answer: B, E

---

**QUESTION 135**

Given:

```
2. public class Foo implements Runnable (
3. public void run (Thread t) {
4. system.out.println("Running.");
5. }
6. public static void main (String[] args) {
7. new thread (new Foo()).start();
8.)
9.)
```

What is the result?

- A. An exception is thrown.
- B. The program exists without printing anything.
- C. An error at line 1 causes compilation to fail.
- D. An error at line 6 causes the compilation to fail.
- E. "Running" is printed and the program exits.

Answer: C

---

**QUESTION 136**

Which constructs a DataOutputStream?

- A. New dataInputStream("in.txt");
- B. New dataInputStream(new file("in.txt"));
- C. New dataInputStream(new writer("in.txt"));
- D. New dataInputStream(new FileWriter("in.txt"));
- E. New dataInputStream(new InputStream("in.txt"));
- F. New dataInputStream(new FileInputStream("in.txt"));

Answer: F

---

**QUESTION 137**

G. Which can be used to decode charS for output?

- A. Java.io.InputStream.
- B. Java.io.EncodedReader.
- C. Java.io.InputStreamReader.
- D. Java.io.OutputStreamWriter.
- E. Java.io.BufferedInputStream.

Answer: C

---

**QUESTION 138**

Given:

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

What is the result?

- A. An exception is thrown.
- B. The code will not compile.
- C. The program prints "null"
- D. The program prints "blue"
- E. The program prints "green"

Answer: D

---

**QUESTION 139**

Which code determines the int value foo closest to a double value bar?

- A. Int foo = (int) Math.max(bar);
- B. Int foo = (int) Math.min(bar);
- C. Int foo = (int) Math.abs(bar);
- D. Int foo = (int) Math.ceil(bar);
- E. Int foo = (int) Math.floor(bar);
- F. Int foo = (int) Math.round(bar);

Answer: F

---

**QUESTION 140**

Which two demonstrate encapsulation of data? (Choose Two)

- A. Member data have no access modifiers.
- B. Member data can be modified directly.
- C. The access modifier for methods is protected.
- D. The access modifier to member data is private.
- E. Methods provide for access and modification of data.

Answer: D, E

---

**QUESTION 141**

Exhibit:

```
1. class A {
2. public String toString () {
3. return "4";
4. }
5. }
6. class B extends A {
7. 8. public String toString () {
8. return super.toString() + "3";
9. }
10. }
11. public class Test {
12. public static void main(String[]args) {
13. System.out.println(new B());
14. }
15. }
```

What is the result?

- A. Compilation succeeds and 4 is printed.
- B. Compilation succeeds and 43 is printed.
- C. An error on line 9 causes compilation to fail.
- D. An error on line 14 causes compilation to fail.
- E. Compilation succeeds but an exception is thrown at line 9.

Answer: B

---

#### **QUESTION 142**

Which two statements are true? (Choose Two)

- A. An anonymous inner class can be declared inside of a method
- B. An anonymous inner class constructor can take arguments in some situation.
- C. An anonymous inner class that is a direct subclass that is a direct subclass of Object can implement multiple interfaces.
- D. Even if a class Super does not implement any interfaces, it is still possible to define an anonymous inner class that is an immediate subclass of Super that implements a single interface.
- E. Event if a class Super does not implement any interfaces, it is still possible to define an anonymous inner class that is an immediate subclass of Super that implements multiple interfaces.

Answer: A, B

---

#### **QUESTION 143**

Given:

```
1. public class MethodOver {
2. private int x, y;
3. private float z;
```

```
4. public void setVar(int a, int b, float c){
5. x = a;
6. y = b;
7. z = c;
8. }
9. }
```

Which two overload the setVar method? (Choose Two)

```
A. void setVar (int a, int b, float c){
x = a;
y = b;
z = c;
}
```

```
B. public void setVar(int a, float c, int b) {
setVar(a, b, c);
}
```

```
C. public void setVar(int a, float c, int b) {
this(a, b, c);
}
```

```
D. public void setVar(int a, float b){
x = a;
z = b;
}
```

```
E. public void setVar(int ax, int by, float cz) {
x = ax;
y = by;
z = cz;
}
```

Answer: B, D

---

**QUESTION 144**

Which statements about static inner classes are true? (Choose Two)

- A. A static inner class requires a static initializer.
- B. A static inner class requires an instance of the enclosing class.
- C. A static inner class has no reference to an instance of the enclosing class.
- D. A static inner class has access to the non-static members of the outer class.
- E. Static members of a static inner class can be referenced using the class name of the static inner class.

Answer: C, E

---

**QUESTION 145**

Given:

```
1. public class X {
```

```
2. public object m () {
3. object o = new float (3.14F);
4. object [] oa = new object [1];
5. oa[0]= o;
6. o = null;
7. oa[0] = null;
10. return o;
9. }
10. }
```

When is the float object created in line 3, eligible for garbage collection?

- A. Just after line 5.
- B. Just after line 6.
- C. Just after line 7.
- D. Just after line 8(that is, as the method returns).

Answer: C

---

**QUESTION 146**

Which two interfaces provide the capability to store objects using a key-value pair?  
(Choose Two)

- Java.util.Map.
- Java.util.Set.
- Java.util.List.
- Java.util.StoredSet.
- Java.util.StoredMap.
- Java.util.Collection.

Answer: A, E

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**QUESTION 147**

Which interface does java.util.Hashable implement?

- A. Java.util.Map.
- B. Java.util.List.
- C. Java.util.Hashable.
- D. Java.util.Collection.

Answer: A