QUESTION 1
Given:

```
import java.io.IOException;
public class Y {
public static void main(String[] args) {
try {
doSomething();
}
catch (RuntimeException e) {
System.out.println(e);
}
}
static void doSomething() {
if (Math.random() > 0.5) throw new IOException();
throw new RuntimeException();
}
}
```

Which two actions, used independently, will permit this class to compile?

A. Adding throws IOException to the main() method signature
B. Adding throws IOException to the doSoomething() method signature
C. Adding throws IOException to the main() method signature and to the dosomething() method
D. Adding throws IOException to the dosomething() method signature and changing the catch argument to IOException
E. Adding throws IOException to the main() method signature and changing the catch argument to IOException

Answer: CD

QUESTION 2
Given:

```
class X {
String str = "default";
X(String s) { str = s;}
void print () { System.out.println(str); }
public static void main(String[] args) {
new X("hello").print();
}
```

}
What is the result?

A. hello
B. default
C. Compilation fails
D. The program prints nothing
E. An exception is thrown at run time

Answer: A

QUESTION 3
Given:
public class SampleClass {
public static void main(String[] args) {
AnotherSampleClass asc = new AnotherSampleClass();
SampleClass sc = new SampleClass();
// TODO code application logic here
}
}
class AnotherSampleClass extends SampleClass {
}
Which statement, when inserted into line "// TODO code application logic here ", is valid change?

A. asc = sc;
B. sc = asc;
C. asc = (object) sc;
D. asc= sc.clone ()

Answer: B

QUESTION 4
Given the code fragment:
System.out.println("Result: " + 2 + 3 + 5);
System.out.println("Result: " + 2 + 3 * 5);
What is the result?

A. Result: 10
Result: 30
B. Result: 10

Result: 25

C. Result: 235
Result: 215

D. Result: 215
Result: 215

E. Compilation fails

Answer: C

QUESTION 5
Which code fragment is illegal?

A. class Base1{
abstract class Abs1{ }}

B. abstract class Abs1{
void doit () { }
}

C. class Basel {
abstract class Abs1extends Basel {

D. abstract int var1= 89;

Answer: D

QUESTION 6
Given the code fragment:
int a = 0;
a++;
System.out.println(a++);
System.out.println(a);
What is the result?

A. 1
2

B. 0
1

C. 1
1

D. 2
2

Answer: A

QUESTION 7

Given:

```
public class x{
public static void main (string [] args){
String theString = "Hello World";
System.out.println(theString.charAt(11));
}
}
```

What is the result?

A. There is no output
B. d is output
C. A StringIndexOutOfBoundsException is thrown at runtime
D. An ArrayIndexOutOfBoundsException is thrown at runtime
E. A NullPointException is thrown at runtime
F. A StringArrayIndexOutOfBoundsException is thrown at runtime

Answer: C

QUESTION 8

Given a java source file:

```
class x {
x () {}
private void one () {}
}
public class Y extends x {
Y () {}
private void two () {one();}
public static void main (string [] args) {
new Y().two ();
}
}
```

What changes will make this code compile?

A. adding the public modifier to the declaration ofclass x
B. adding the protected modifier to the x()constructor
C. changing the private modifier on the declarationof the one() method to protected
D. removing the Y () constructor
E. removing the private modifier from the two () method

Answer: C

QUESTION 9
Given:
#1
```
package handy.dandy;
public class KeyStroke {
public void typeExclamation() {
System.out.println("!")
}
}
```
#2
```
package handy; /* Line 1 */
public class Greet { /* Line 2 */
public static void main(String[] args) { /* Line 3 */
String greeting = "Hello"; /* Line 4 */
System.out.print(greeting); /* Line 5 */
Keystroke stroke = new Keystroke; /* Line 6 */
stroke.typeExclamation(); /* Line 7 */
} /* Line 8 */
} /* Line 9 */
```
What three modifications, made independently, made to class greet, enable the code to compile and run?

A. Line 6 replaced with handy.dandy.keystroke stroke = new KeyStroke ( );
B. Line 6 replaced with handy.*.KeyStroke = new KeyStroke ( );
C. Line 6 replaced withhandy.dandy.KeyStroke Stroke = new handy.dandy.KeyStroke();
D. import handy.*;addedbeforeline 1
E. import handy.dandy.*;added after line 1
F. import handy.dandy,KeyStroke;added after line 1
G. import handy.dandy.KeyStroke.typeException(); added before line 1

Answer: CEF

QUESTION 10
Given:
```
String message1 = "Wham bam!";
String message2 = new String("Wham bam!");
if (message1 == message2)
```

System.out.println("They match");
if (message1.equals(message2))
System.out.println("They really match");
What is the result?

A. They match
They really match
B. They really match
C. They match
D. Nothing Prints
E. They really match
They really match

Answer: B

QUESTION 11
Given:
public class Speak { /* Line 1 */
public static void main(String[] args) { /* Line 2 */
Speak speakIT = new Tell(); /* Line 3 */
Tell tellIt = new Tell(); /* Line 4 */
speakIT.tellItLikeItIs(); /* Line 5 */
(Truth)speakIt.tellItLikeItIs(); /* Line 6 */
((Truth)speakIt).tellItLikeItIs(); /* Line 7 */
tellIt.tellItLikeItIs(); /* Line 8 */
(Truth)tellIt.tellItLikeItIs(); /* Line 9 */
((Truth)tellIt).tellItLikeItIs(); /* Line 10 */
}
}
class Tell extends Speak implements Truth {
public void tellItLikeItIs() {
System.out.println("Right on!");
}
}
interface Truth { public void tellItLikeItIs()};
Which three lines will compile and output "right on!"?

A. Line 5
B. Line 6
C. Line 7

D. Line 8
E. Line 9
F. Line 10

Answer: CDF

QUESTION 12
Given the code fragment:
String h1 = "Bob";
String h2 = new String ("Bob");
What is the best way to test that the values of h1 and h2 are the same?

A. if (h1 == h2)
B. if (h1.equals(h2))
C. if (h1 = = h2)
D. if (h1.same(h2))

Answer: B

QUESTION 13
Which two are valid declarations of a two-dimensional array?

A. int[][] array2D;
B. int[2][2] array2D;
C. int array2D[];
D. int[] array2D[];
E. int[][] array2D[];

Answer: AD

QUESTION 14
Given the code fragment:
System.out.println ("Result:" +3+5);
System.out.println ("result:" + (3+5));
What is the result?

A. Result: 8
Result: 8
B. Result: 35
Result: 8
C. Result: 8
Result: 35

D. Result: 35
Result: 35

Answer: B

QUESTION 15
Given:

```
public class Main {
public static void main(String[] args) throws Exception {
doSomething();
}
private static void doSomething() throws Exception {
System.out.println("Before if clause");
if (Math.random() > 0.5) {
throw new Exception();
}
System.out.println ("After if clause");
}
}
```

Which two are possible outputs?

A. Before if clause
Exception in thread "main" java.lang.Exception
AtMain.doSomething (Main.java:8)
At Main.main (Main.java:3)
B. Before if clause
Exceptionin thread "main" java.lang.Exception
At Main.doSomething (Main.java:8)
At Main.main (Main.java:3)
After if clause
C. Exception in thread "main" java.lang.Exception
At Main.doSomething (Main.java:8)
At Main.main (Main.java:3)
D. Before if clause
After if clause

Answer: AD

QUESTION 16
A method doSomething () that has no exception handling code is modified to trail a

method that throws a checked exception. Which two modifications, made independently, will allow the program to compile?

A. Catch the exception in the method doSomething().
B. Declare the exception to be thrown in the doSomething() method signature.
C. Cast the exception to a RunTimeException in the doSomething() method.
D. Catch the exception in the method that calls doSomething().

Answer: AB

QUESTION 17

Given the code fragment:

```
String color = "Red";
switch(color) {
case "Red":
System.out.println("Found Red");
case "Blue":
System.out.println("Found Blue");
break;
case "White":
System.out.println("Found White");
break;
default:
System.out.println("Found Default");
}
```

What is the result?

A. Found Red
B. Found Red
Found Blue
C. Found Red
Found Blue
Found White
D. Found Red
Found Blue
Found White
Found Default

Answer: B

QUESTION 18
Which two may precede the word "class" in a class declaration?

A. local
B. public
C. static
D. volatile
E. synchronized

Answer: BC

QUESTION 19
Which three are bad practices?

A. Checking for ArrayindexoutofBoundsException when iterating through an array to determinewhen all elements have been visited
B. Checking for Error and. If necessary, restartingthe program to ensure that users are unaware problems
C. Checking for FileNotFoundException to inform a user that a filename entered is not valid
D. Checking for ArrayIndexoutofBoundsExcepcion and ensuring that the program can recover if one occur
E. Checking for an IOException and ensuring that the program can recover if one occurs

Answer: ABD

QUESTION 20
Given:

```
public class Bark {
// Insert code here – Line 5
public abstract void bark(); // Line 6
} // Line 7
// Line 8
// Insert code here – Line 9
public void bark() {
System.out.println("woof");
}
}
```

What code should be inserted?

A. 5.class Dog {
9. public class Poodle extends Dog {
B. 5.abstract Dog {
9. public class poodle extends Dog {
C. 5.abstractclassDog {
9. public class Poodle extends Dog {
D. 5.abstract Dog {
9.public class Poodle implements Dog {
E. 5. abstractDog {
9. public class Poodle implements Dog {
F. 5.abstract class Dog {
9.public class Poodle implements Dog {

Answer: C

QUESTION 21
Given:
class X {}
class Y {Y () {}}
class Z {z(int i) {} }
Which class has a default constructor?

A. X only
B. Y only
C. Z only
D. X and Y
E. Y and Z
F. X and Z
G. X, Y and Z

Answer: A

QUESTION 22
Given:
Public static void main (String [] args) {
int a, b, c = 0;
int a, b, c;
int g, int h, int i, = 0;
int d, e, F;

int k, l, m; = 0;
Which two declarations will compile?

A. int a, b, c = 0;
B. int a, b, c;
C. int g, int h, int i = 0;
D. int d, e, F;
E. int k, l, m = 0;

Answer: AD

QUESTION 23
Given the code fragment:

```
int j=0, k =0;
for (int i=0; i < x; i++) {
do {
k=0;
while (k < z) {
k++;
System.out.print(k + " ");
}
System.out.println(" ");
j++;
} while (j< y);
System.out.println("—-");
}
```

What values of x, y, z will produce the following result?

```
1 2 3 4
1 2 3 4
1 2 3 4
——
1 2 3 4
——
```

A. X = 4, Y = 3, Z = 2
B. X = 3, Y = 2, Z = 3
C. X = 2, Y = 3, Z = 3
D. X = 4, Y = 2, Z= 3
E. X = 2, Y = 3, Z = 4

Answer: E

QUESTION 24
Which statement initializes a stringBuilder to a capacity of 128?

A. StringBuildersb = new String("128");
B. StringBuildersb = StringBuilder.setCapacity(128);
C. StringBuildersb = StringBuilder.getInstance(128);
D. StringBuildersb = new StringBuilder(128);

Answer: D

QUESTION 25
Given:

```
public class DoCompare4 {
public static void main(String[] args) {
String[] table = {"aa", "bb", "cc"};
int ii =0;
do
while (ii < table.length)
System.out.println(ii++);
while (ii < table.length);
}
}
```

What is the result?

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

Answer: B

QUESTION 26
A method is declared to take three arguments. A program calls this method and passes only two arguments. What is the result?

A. Compilation fails.
B. The third argument is given the value null.
C. The third argument is given the value void.
D. The third argument is given the value zero.
E. The third argument is given the appropriate false value for its declared type.
F. An exception occurs when the method attempts to access the third argument.

Answer: A

QUESTION 27
Given the fragment:
int [] array = {1, 2, 3, 4, 5};
System.arraycopy (array, 2, array, 1, 2);
System.out.print (array [1]);
System.out.print (array[4]);
What is the result?

A. 14
B. 15
C. 24
D. 25
E. 34
F. 35

Answer: F

QUESTION 28
Given the following code fragment:
if (value >= 0) {
if (value != 0)
System.out.print("the ");
else
System.out.print("quick ");
if (value < 10)
System.out.print("brown ");

```
if (value > 30)
System.out.print("fox ");
else if (value < 50)
System.out.print("jumps ");
else if (value < 10)
System.out.print("over ");
else
System.out.print("the ");
if (value > 10)
System.out.print("lazy ");
} else {
System.out.print("dog ");
}
System.out.print("… ");
}
```

What is the result if the integer value is 33?

A. The fox jump lazy…
B. The fox lazy…
C. Quick fox over lazy …
D. Quick fox the ….

Answer: B

QUESTION 29
Which three are advantages of the Java exception mechanism?

A. Improves the program structure because the error handling code is separated from the normal program function
B. Provides a set of standard exceptions that covers all the possible errors
C. Improves the program structure because the programmer can choose where to handle exceptions
D. Improves the program structure because exceptions must be handled in the method in which they occurred
E. allows the creation of new exceptions that are tailored to the particular program being

Answer: ACE

QUESTION 30
Given the code fragment:

Boolean b1 = true;
Boolean b2 = false;
int 1 = 0;
while (foo) {}
Which one is valid as a replacement for foo?

A. b1.compareTo(b2)
B. i = 1
C. i == 2? -1:0
D. "foo".equals("bar")

Answer: D

QUESTION 31
Given:

```
public class SuperTest {
public static void main(String[] args) {
statement1
statement2
statement3
}
}

class Shape {
public Shape() {
System.out.println("Shape: constructor");
}
public void foo() {
System.out.println("Shape: foo");
}
}
class Square extends Shape {
public Square() {
super();
}
public Square(String label) {
System.out.println("Square: constructor");
}
public void foo() {
super.foo();
```

}
public void foo(String label) {
System.out.println("Square: foo");
}
}
What should statement1, statement2, and statement3, be respectively, in order to produce the result?
Shape: constructor
Square: foo
Shape: foo

A. Square square = new Square ("bar");
square.foo ("bar");
square.foo();
B. Square square = new Square ("bar");
square.foo ("bar");
square.foo ("bar");
C. Square square = new Square ();
square.foo ();
square.foo(bar);
D. Square square = new Square ();
square.foo ();
square.foo("bar");
E. Square square = new Square ();
square.foo ();
square.foo ();
F. Square square = new Square();
square.foo("bar");
square.foo();

Answer: F

QUESTION 32
Give:
Public Class Test {
}
Which two packages are automatically imported into the java source file by the java compiler?

A. Java.lang
B. Java.awt
C. Javax.net
D. Java.*
E. The package with no name

Answer: AE

QUESTION 33
Given:

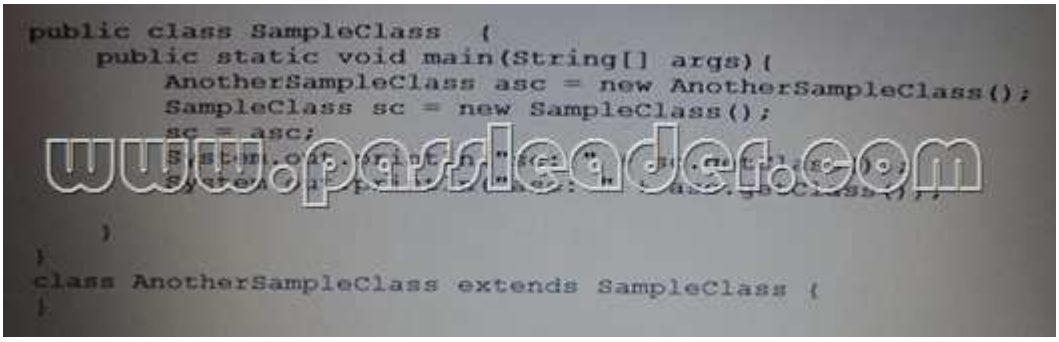
```
public class X implements Z {
public String toString() { return "I am X"; }
public static void main(String[] args) {
Y myY = new Y();
X myX = myY;
Z myZ = myX;
System.out.println(myZ);
}
}
class Y extends X {
public String toString() { return "I am Y"; }
}
interface Z {}
```

What is the reference type of myZ and what is the type of the object it references?

A. Reference type is Z; object type is Z.
B. Reference type is Y; object type is Y.
C. Reference type is Z; object type is Y.
D. Reference type is X; object type is Z.

Answer: C

QUESTION 34
Given:



What is the result?

A. sc: class.Object
asc: class.AnotherSampleClass

B. sc: class.SampleClass
asc: class.AnotherSampleClass

C. sc: class.AnotherSampleClass
asc: class.SampleClass

D. sc: class.AnotherSampleClass
asc: class.AnotherSampleClass

Answer: D

QUESTION 35

Given the code fragment:

```
public static void main(String[] args) {
String [] table = {"aa", "bb", "cc"};
int ii = 0;
for (String ss:table) {
while (ii < table.length) {
System.out.println (ii);
ii++;
break;
}
}
}
```

How many times is 2 printed?

A. zero
B. once
C. twice

D. thrice
E. it is not printed because compilation fails

Answer: B

QUESTION 36
Given:

```
public class SampleClass {
public static void main(String[] args) {
SampleClass sc, scA, scB;
sc = new SampleClass();
scA = new SampleClassA();
scB = new SampleClassB();
System.out.println("Hash is : " +
sc.getHash() + ", " + scA.getHash() + ", " + scB.getHash());
}
public int getHash() {
return 111111;
}
}
class SampleClassA extends SampleClass {
public long getHash() {
return 44444444;
}
}
class SampleClassB extends SampleClass {
public long getHash() {
return 999999999;
}
}
```

What is the result?

A. Compilation fails
B. An exception is thrown at runtime
C. There is no result because this is not correct way to determine the hash code
D. Hash is: 111111, 44444444, 999999999

Answer: A

QUESTION 37
Which two will compile, and can be run successfully using the command:
Java fred1 hello walls

A. class Fred1{
public static void main (String args) {
System.out.println(args[1]);
}
}
B. class Fred1{
public static void main (String [] args) {
System.out.println(args[2]);
}
}
C. class Fred1 {
public static void main (String [] args) {
System.out.println (args);
}
}
D. class Fred1 {
public static void main (String [] args){
System.out.println (args [1]);
}
}

Answer: CD

QUESTION 38
Given:
public abstract class Wow {
private int wow;
public wow (int wow) {
this.wow = wow;
}
public void wow () {}
private void wowza () {}
}
What is true about the class Wow?

A. It compiles without error.
B. It does not compile because an abstract class cannot have private methods.
C. It does not compile because an abstract class cannot have instance variables.
D. It does not compile because an abstract class must have at least one abstract method.
E. It does not compile because an abstract class must have a constructor with no arguments.

Answer: C

QUESTION 39
Given:

```
class X {
static void m(int i) {
}
public static void main (String [] args) {
int j = 12;
m (j);
System.out.println(j);
}
}
```

What is the result?

A. 7
B. 12
C. 19
D. Compilation fails
E. An exception is thrown at run time

Answer: B

QUESTION 40
Which two statements are true?

A. An abstract class can implement an interface.
B. An abstract class can be extended by an interface.
C. An interface CANNOT be extended by another interface.
D. An interface can be extended by an abstract class.
E. An abstract class can be extended by a concrete class.
F. An abstract class CANNOT be extended by an abstract class.

Answer: AE

QUESTION 41
Given:

```
class Overloading {
int x(double d) {
System.out.println("one");
return 0;
}
String x(double d) {
System.out.println("two");
return null;
}
double x(double d) {
System.out.println("three");
return 0.0;
}
public static void main(String[] args) {
new Overloading().x(4.0)
}
}
```

What is the result?

A. One
B. Two
C. Three
D. Compilation fails

Answer: D

QUESTION 42
The catch clause argument is always of type_____.

A. Exception
B. Exception but NOT including RuntimeException
C. Throwable
D. RuntimeException
E. CheckedException
F. Error

Answer: C

QUESTION 43
Given:
public class x{
public static void main (string [] args){
String theString = "Hello World";
System.out.println(theString.charAt(11));
}
}
What is the result?

A. There is no output
B. d is output
C. AStringIndexOutOfBoundsException is thrown at runtime
D. AnArrayIndexOutOfBoundsException is thrown at runtime
E. A NullPointException is thrown at runtime
F. A StringArrayIndexOutOfBoundsException is thrown at runtime

Answer: C

QUESTION 44
Given the code fragment:
int [] [] array2D = {{0, 1, 2}, {3, 4, 5, 6}};
system.out.print (array2D[0].length+ "");
system.out.print(array2D[1].getClass(). isArray() + "");
system.out.println (array2D[0][1]);
What is the result?

A. 3false1
B. 2true3
C. 2false3
D. 3true1
E. 3false3
F. 2true1
G. 2false1

Answer: D

QUESTION 45
View the exhibit:
public class Student {
public String name = "";

```
public int age = 0;
public String major = "Undeclared";
public boolean fulltime = true;
public void display() {
System.out.println("Name: " + name + " Major: " + major);
}
public boolean isFullTime() {
return fulltime;
}
}
```

Given:

```
Public class TestStudent {
Public static void main(String[] args) {
Student bob = new Student ();
Student jian = new Student();
bob.name = "Bob";
bob.age = 19;
jian = bob; jian.name = "Jian";
System.out.println("Bob's Name: " + bob.name);
}
}
```

What is the result when this program is executed?

A. Bob's Name: Bob
B. Bob's Name: Jian
C. Nothing prints
D. Bob's name

Answer: B

QUESTION 46

Given the code fragment:

```
String valid = "true";
if (valid) System.out.println ("valid");
else system.out.println ("not valid");
```

What is the result?

A. Valid
B. not valid
C. Compilation fails
D. An IllegalArgumentException is thrown at run time

Answer: C

QUESTION 47
Given:

```
public class ScopeTest {
int z;
public static void main(String[] args){
ScopeTest myScope = new ScopeTest();
int z = 6;
System.out.println(z);
myScope.doStuff();
System.out.println(z);
System.out.println(myScope.z);
}
void doStuff() {
int z = 5;
doStuff2();
System.out.println(z);
}
void doStuff2() {
z=4;
}
}
```

What is the result?

A. 6 5 6 4
B. 6 5 5 4
C. 6 5 6 6
D. 6 5 6 5

Answer: A

QUESTION 48
Which two are valid instantiations and initializations of a multi dimensional array?

A. int [] [] array 2D ={ { 0, 1, 2, 4} {5, 6}};
B. int [] [] array2D = new int [2] [2];
array2D[0] [0] = 1;
array2D[0] [1] =2;
array2D[1] [0] =3;
array2D[1] [1] =4;
C. int [] [] []array3D = {{0, 1}, {2, 3}, {4, 5}};
D. int [] [] [] array3D = new int [2] [2] [2];
array3D [0] [0] = array;
array3D [0] [1] = array;
array3D [1] [0] = array;
array3D [0] [1] = array;
E. int [] [] array2D = {0, 1};

Answer: BD

QUESTION 49
An unchecked exception occurs in a method dosomething(). Should other code be added in the dosomething() method for it to compile and execute?

A. The Exception must be caught
B. The Exception must be declared to be thrown.
C. The Exception must be caught or declared to be thrown.
D. No other code needs to be added.

Answer: C

QUESTION 50
Given the code fragment:
int b = 4;
b — ;
System.out.println (– b);
System.out.println(b);
What is the result?

A. 2 2
B. 1 2
C. 3 2
D. 3 3

Answer: A

QUESTION 51
Given the code fragment:
interface SampleClosable {
public void close () throws java.io.IOException;
}
Which three implementations are valid?

A. public class Test implements SampleCloseable {
Public void close () throws java.io.IOException {
/ /do something
}
}
B. public class Test implements SampleCloseable {
Public void close () throws Exception {
/ / do something
}
}
C. public class Test implements SampleCloseable {
public void close() throws java.io.FileNotFoundException { / / do something
}
}
D. public classTest extends SampleCloseable {
Public voidclose ()throws java.IO.IOException{
/ / do something
}
}
E. public class Test implements SampleCloseable {
public void close() / / do something
}
}

Answer: ACE

QUESTION 52
Given the following code:
public class Simple { /* Line 1 */
public float price; /* Line 2 */
public static void main (String[] args) { /* Line 3 */
Simple price = new Simple (); /* Line 4 */

price = 4; /* Line 5 */
} /* Line 6 */
} /* Line 7 */
What will make this code compile and run?

A. Change line 2 to the following:
Publicint price
B. Change line 4 to the following:
int price = new simple ();
C. Change line 4 to the following:
Floatprice = new simple ();
D. Change line 5 to the following:
Price = 4f;
E. Change line 5 to the following:
price.price = 4;
F. Change line 5 to the following:
Price= (float) 4:
G. Change line 5 to the following:
Price= (Simple) 4;
H. The code compiles and runs properly; no changes are necessary

Answer: E

QUESTION 53
Given:
public class DoWhile {
public static void main (String [] args) {
int ii = 2;
do {
System.out.println (ii);
} while (–ii);
}
}
What is the result?

A. 2
1
B. 2
1
0

C. null
D. an infinite loop
E. compilation fails

Answer: E

QUESTION 54
You are writing a method that is declared not to return a value. Which two are permitted in the method body?

A. omission of the return statement
B. return null;
C. return void;
D. return;

Answer: AD

QUESTION 55
Identify two benefits of using ArrayList over array in software development.

A. reduces memory footprint
B. implements the Collection API
C. is multi.thread safe
D. dynamically resizes based on the number of elements in the list

Answer: AD

QUESTION 56
Which three are valid types for switch?

A. int
B. float
C. double
D. integer
E. String
F. Float

Answer: ADE

QUESTION 57
Give:
public class MyFive {

```
static void main(String[] args) {
short ii;
short jj = 0;
for (ii = kk;ii > 6; ii -= 1) { // line x //
jj++;
}
System.out.println("jj = " + jj);
}
}
```

What value should replace KK in line x to cause jj = 5 to be output?

A. -1
B. 1
C. 5
D. 8
E. 11

Answer: E

QUESTION 58

Given the following code fragment:

```
if (value >= 0) {
if (value != 0)
System.out.print("the ");
else
System.out.print("quick ");
if (value < 10)
System.out.print("brown ");
if (value > 30)
System.out.print("fox ");
else if (value < 50)
System.out.print("jumps ");
else if (value < 10)
System.out.print("over ");
else
System.out.print("the ");
if (value > 10)
System.out.print("lazy ");
} else {
```

```
System.out.print("dog ");
}
System.out.print("… ");
}
```

What is the result if the integer value is 33?

A. The fox jump lazy…
B. The fox lazy…
C. Quick fox over lazy …
D. Quick fox the ….

Answer: B

QUESTION 59

Given the code fragment:

```
Int [] [] array = {{0}, {0, 1}, {0, 2, 4}, {0, 3, 6, 9}, {0, 4, 8, 12, 16}};
Systemout.printIn(array [4] [1]);
System.out.printIn (array) [1][4]);
int [] [] array = {{0}, {0, 1}, {0, 2, 4}, {0, 3, 6, 9}, {0, 4, 8, 12, 16}};
System.out.println(array [4][1]);
System.out.println(array) [1][4]);
```

What is the result?

A. 4 Null
B. Null 4
C. An IllegalArgumentException is thrown at run time
D. 4 An ArrayIndexOutOfBoundException is thrown at run time

Answer: D

QUESTION 60

Given:

```
public class DoCompare1 {
public static void main(String[] args) {
String[] table = {"aa", "bb", "cc"};
for (String ss: table) {
int ii = 0;
while (ii < table.length) {
System.out.println(ss + ", " + ii);
ii++;
}
```

}
How many times is 2 printed as a part of the output?

A. Zero
B. Once
C. Twice
D. Thrice
E. Compilation fails.

Answer: D

QUESTION 61
Given:
public class MyFor3 {
public static void main(String [] args) {
int [] xx = null;
System.out.println(xx);
}
}
What is the result?

A. null
B. compilation fails
C. Java.lang.NullPointerException
D. 0

Answer: A

QUESTION 62
Given:
public class Main {
public static void main (String[] args) {
doSomething();
}
private static void doSomething() {
doSomeThingElse();
}
private static void doSomeThingElse() {
throw new Exception();
}

}
Which approach ensures that the class can be compiled and run?

A. Put the throw new Exception() statement in the try block of try ?catch
B. Put the doSomethingElse() method in the try block of a try ?catch
C. Put the doSomething() method in the try block of a try ?catch
D. Put the doSomething() method and the doSomethingElse() method in the try block of a try ?catch

Answer: A

QUESTION 63
Given:
public class ScopeTest1 {
public static void main(String[] args) {
doStuff(); // line x1
int x1 = x2; // line x2
int x2 = j; // line x3
}
static void doStuff() {
System.out.println(j); // line x4
}
static int j;
}
Which line causes a compilation error?

A. line x1
B. line x2
C. line x3
D. line x4

Answer: B

QUESTION 64
Given:
class Overloading {
void x (int i) {
System.out.println("one");
}
void x (String s) {
System.out.println("two");

```
}
void x (double d) {
System.out.println("three");
}
public static void main(String[] args) {
new Overloading().x (4.0);
}
}
```

What is the result?

A. One
B. Two
C. Three
D. Compilation fails

Answer: C

QUESTION 65
Which declaration initializes a boolean variable?

A. boolean h = 1;
B. boolean k = 0;
C. boolean m = null;
D. boolean j = (1 < 5) ;

Answer: D

QUESTION 66
Given:

```
public class Basic {
private static int letter;
public static int getLetter();
public static void Main(String[] args) {
System.out.println(getLetter());
}
}
```

Why will the code not compile?

A. A static field cannot be private.
B. The getLetter method has no body.
C. There is no setletter method.

D. The letter field is uninitialized.
E. It contains a method named Main instead of ma

Answer: B

QUESTION 67
Given:

```
public class Circle {
double radius;
public double area:
public Circle (double r) { radius = r;}
public double getRadius() {return radius;}
public void setRadius(double r) { radius = r;}
public double getArea() { return /* ??? */;}
}
class App {
public static void main(String[] args) {
Circle c1 = new Circle(17.4);
c1.area = Math.PI * c1.getRadius() * c1.getRadius();
}
}
```

This class is poorly encapsulated. You need to change the circle class to compute and return the area instead. What three modifications are necessary to ensure that the class is being properly encapsulated?

A. Change the access modifier of the setradius () method to private
B. Change the getArea () method:

```
public double getArea () { return area; }
```

C. When the radius is set in the Circle constructor and the setRadius () method, recomputed the area and store it into the area field
D. Change the getRadius () method:

```
public double getRadius () {
area = Math.PI * radius * radius;
return radius;
}
```

Answer: ABC

QUESTION 68
Given a code fragment:

```
StringBuilder sb = new StringBuilder ();
String h1 = "HelloWorld";
sb.append("Hello").append ("world");
if (h1 == sb.toString()) {
System.out.println("They match");
}
if (h1.equals(sb.toString())) {
System.out.println("They really match");
}
```

What is the result?

A. They match
They really match
B. They really match
C. They match
D. Nothing is printed to the screen

Answer: D

QUESTION 69

Which two are possible outputs?

```
public class Two {
public static void main(String[] args) {
try {
doStuff();
system.out.println("1");
}
catch {
system.out.println("2");
}}
public static void do Stuff() {
if (Math.random() > 0.5) throw new RunTimeException(); doMoreStuff();
System.out.println("3 ");
}
public static void doMoreStuff() {
System.out.println("4");
}
}
```

A. 2

B. 4

3

1

C. 1

D. 1

2

Answer: AB

QUESTION 70

Given:

```
public class MyFor {
public static void main(String[] args) {
for (int ii = 0; ii < 4; ii++) {
System.out.println("ii = "+ ii);
ii = ii +1;
}
}
}
```

What is the result?

A. ii = 0

ii = 2

B. ii = 0

ii = 1

ii = 2

ii = 3

C. ii =

D. Compilation fails.

Answer: A

QUESTION 71

Given the code fragment:

```
int [][] array2d = new int[2][3];
System.out.println("Loading the data.");
for ( int x = 0; x < array2d.length; x++) {
for ( int y = 0; y < array2d[0].length; y++) {
System.out.println(" x = " + x);
```

```
System.out.println(" y = " + y);
// insert load statement here.
}
}
System.out.println("Modify the data. ");
for ( int x = 0; x < array2d.length; x++) {
for ( int y = 0; y < array2d[0].length; y++) {
System.out.println(" x = " + x);
System.out.println(" y = " + y);
// insert modify statement here.
}
}
```

Which pair of load and modify statement should be inserted in the code?
The load statement should set the array's x row and y column value to the sum of x and y.
The modify statement should modify the array's x row and y column value by multiplying it by 2.

A. Load statement: array2d(x,y) = x + y;
Modify statement: array2d(x,y) = array2d(x,y) * 2
B. B. Load statement: array2d[x y] = x + y;
Modify statement: array2d[x y] = array2d[x y] * 2
C. Load statement: array2d[x,y] = x + y;
Modify statement: array2d[x,y] = array2d[x,y] * 2
D. Load statement: array2d[x][y] = x + y;
Modify statement: array2d[x][y] = array2d[x][y] * 2
E. Load statement: array2d[[x][y]] = x + y;
Modify statement: array2d[[x][y]] = array2d[[x][y]] * 2

Answer: D

QUESTION 72
Given:

```
public class DoBreak1 {
public static void main(String[] args) {
String[] table = {"aa", "bb", "cc", "dd"};
for (String ss: table) {
if ( "bb".equals(ss)) {
continue;
}
```

```
System.out.println(ss);
if ( "cc".equals(ss)) {
break;
}
}
}
}
```

What is the result?

A. aa
cc

B. aa
bb
cc

C. cc
dd

D. cc

E. Compilation fails.

Answer: A

QUESTION 73

Which three lines are illegal?

```
1. class StaticMethods {
2. static void one() {
3. two();
4. StaticMethods.two();
5. three();
6. StaticMethods.four();
7. }
8. static void two() { }
9. void three() {
10. one();
11. StaticMethods.two();
12. four();
13. StaticMethods.four();
14. }
15. void four() { }
16. }
```

A. line 3
B. line 4
C. line 5
D. line 6
E. line 10
F. line 11
G. line 12
H. line 13

Answer: CDH

QUESTION 74
Which is a valid abstract class?

A. public abstract class Car {
protected void accelerate();
}
B. public interface Car {
protected abstract void accelerate();
}
C. public abstract class Car {
protected final void accelerate();
}
D. public abstract class Car {
protected abstract void accelerate();
}
E. public abstract class Car {
protected abstract void accelerate() {
//more car can do
}}

Answer: D

QUESTION 75
View the exhibit:
public class Student {
public String name = "";
public int age = 0;
public String major = "Undeclared";
public boolean fulltime = true;

```
public void display() {
System.out.println("Name: " + name + " Major: " + major); }
public boolean isFullTime() {
return fulltime;
}
}
```

Given:

```
Public class TestStudent {
public static void main(String[] args) {
Student bob = new Student ();
bob.name = "Bob";
bob.age = 18;
bob.year = 1982;
}
}
```

What is the result?

A. year is set to 1982.
B. bob.year is set to 1982
C. A runtime error is generated.
D. A compile time error is generated.

Answer: D

QUESTION 76

Given the code fragment:

```
String name = "Spot";
int age = 4;
String str ="My dog " + name + " is " + age;
System.out.println(str);
```

And

```
StringBuilder sb = new StringBuilder();
```

Using StringBuilder, which code fragment is the best potion to build and print the following string: My dog Spot is 4?

A. sb.append("My dog " + name + " is " + age); System.out.println(sb);
B. sb.insert("My dog ").append(name + " is " + age); System.out.println(sb);
C. sb.insert("My dog ").insert(name).insert(" is ").insert(age); System.out.println(sb);
D. sb.append("My dog ").append(name).append(" is ").append(age); System.out.println(sb);

Answer: AD

QUESTION 77
Given:

```
public class Main {
public static void main(String[] args) {
try {
doSomething();
}
catch (SpecialException e) {
System.out.println(e);
}}
static void doSomething() {
int [] ages = new int[4];
ages[4] = 17;
doSomethingElse();
}
static void doSomethingElse() {
throw new SpecialException("Thrown at end of doSomething() method"); }
}
```

What is the output?

A. SpecialException: Thrown at end of doSomething() method
B. Error in thread "main" java.lang. ArrayIndexOutOfBoundseror
C. Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 4 at Main.doSomething(Main.java:12) at Main.main(Main.java:4)
D. SpecialException: Thrown at end of doSomething() method at Main.doSomethingElse(Main.java:16) at Main.doSomething(Main.java:13) at Main.main(Main.java:4)

Answer: C

QUESTION 78
View the exhibit:

```
public class Student {
public String name = "";
public int age = 0;
public String major = "Undeclared";
public boolean fulltime = true;
public void display() {
```

```
System.out.println("Name: " + name + " Major: " + major); }
public boolean isFullTime() {
return fulltime;
}
}
```

Which line of code initializes a student instance?

A. Student student1;
B. Student student1 = Student.new();
C. Student student1 = new Student();
D. Student student1 = Student();

Answer: C

QUESTION 79

What should keyword1 and keyword2 be respectively, in oreder to produce output 2345?

```
int [] array = {1,2,3,4,5};
for (int i: array) {
if ( i < 2) {
keyword1 ;
}
System.out.println(i);
if ( i == 3) {
keyword2 ;
}}
```

A. continue, break
B. break, break
C. break, continue
D. continue, continue

Answer: D

QUESTION 80

What is the result?

```
int i, j=0;
i = (3* 2 +4 +5 ) ;
j = (3 * ((2+4) + 5));
```

System.out.println("i:"+ i + "\nj":+j);

A. i: 16
j: 33
B. i: 15
j: 33
C. i: 33
j: 23
D. i: 15
j: 23

A. Option A
B. Option B
C. Option A
D. Option D

Answer: B

QUESTION 81
What is the result?
boolean log3 = (5.0 != 6.0) && (4 != 5);
boolean log4 = (4 != 4) || (4 == 4);
System.out.println("log3:"+ log3 + \nlog4" + log4);

A. log3:false
log4:true
B. log3:true
log4:true
C. log3:true
log4:false
D. log3:false
log4:false

Answer: B

QUESTION 82
Which statement will emoty the contents of a StringBuilder variable named sb?

A. sb.deleteAll();
B. sb.delete(0, sb.size());

C. sb.delete(0, sb.length());
D. sb.removeAll();

Answer: C

QUESTION 83
What is the result?
Class StaticField {
static int i = 7;
public static void main(String[] args) {
StaticFied obj = new StaticField();
obj.i++;
StaticField.i++;
obj.i++;
System.out.println(StaticField.i + " "+ obj.i);
}
}

A. 10 10
B. 8 9
C. 9 8
D. 7 10

Answer: A

QUESTION 84
Which two are valid array declaration?

A. Object array[];
B. Boolean array[3];
C. int[] array;
D. Float[2] array;

Answer: AC

QUESTION 85
Given:
class Overloading {
int x(double d) {
System.out.println("one");
return 0;

```
}
String x(double d) {
System.out.println("two");
return null;
}
double x(double d) {
System.out.println("three");
return 0.0;
}
public static void main(String[] args) {
new Overloading().x(4.0);
}
}
```

What is the result?

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

Answer: D

QUESTION 86

Given:

```
public class MainMethod {
void main() {
System.out.println("one");
}
static void main(String args) {
System.out.println("two");
}
public static void main(String[] args) {
System.out.println("three");
}
void mina(Object[] args) {
System.out.println("four");
}
}
```

What is printed out when the program is excuted?

A. one
B. two
C. three
D. four

Answer: C

QUESTION 87
Given:
public class ScopeTest {
int j, int k;
public static void main(String[] args) {
ew ScopeTest().doStuff(); }
void doStuff() {
nt x = 5;
oStuff2();
System.out.println("x");
}
void doStuff2() {
nt y = 7;
ystem.out.println("y");
or (int z = 0; z < 5; z++) {
ystem.out.println("z");
ystem.out.println("y");
}
Which two items are fields?

A. j
B. k
C. x
D. y
E. z

Answer: AB

QUESTION 88
A method is declared to take three arguments. A program calls this method and passes only two arguments. What is the results?

A. Compilation fails.
B. The third argument is given the value null.

C. The third argument is given the value void.
D. The third argument is given the value zero.
E. The third argument is given the appropriate falsy value for its declared type.
F. An exception occurs when the method attempts to access the third argument.

Answer: A

QUESTION 89
Which three are valid replacements for foo so that the program will compiled and run?

```
public class ForTest {
public static void main(String[] args) {
int[] arrar = {1,2,3};
for ( foo ) {
}
}
}
```

A. int i: array
B. int i = 0; i < 1; i++
C. ;;
D. ; i < 1; i++
E. ; i < 1;

Answer: ABC

QUESTION 90
Given:

```
public class SampleClass {
public static void main(String[] args) {
AnotherSampleClass asc = new AnotherSampleClass(); SampleClass sc = new
SampleClass();
sc = asc;
System.out.println("sc: " + sc.getClass());
System.out.println("asc: " + asc.getClass());
}}
class AnotherSampleClass extends SampleClass {
}
```

What is the result?

A. sc: class Object
asc: class AnotherSampleClass

B. sc: class SampleClass
asc: class AnotherSampleClass
C. sc: class AnotherSampleClass
asc: class SampleClass
D. sc: class AnotherSampleClass
asc: class AnotherSampleClass

Answer: D

QUESTION 91
Given the code fragment:
int b = 3;
if (!(b > 3)) {
System.out.println("square");
}{
System.out.println("circle");
}
System.out.println("…");
What is the result?

A. square…
B. circle…
C. squarecircle…
D. Compilation fails.

Answer: C

QUESTION 92
What is the proper way to defined a method that take two int values and returns their sum as an int value?

A. int sum(int first, int second) { first + second; }
B. int sum(int first, second) { return first + second; }
C. C. sum(int first, int second) { return first + second; }
D. D. int sum(int first, int second) { return first + second; }
E. void sum (int first, int second) { return first + second; }

Answer: D

QUESTION 93
Which two are Java Exception classes?

A. SercurityException
B. DuplicatePathException
C. IllegalArgumentException
D. TooManyArgumentsException

Answer: AC

QUESTION 94
Given the for loop construct:
for (expr1 ; expr2 ; expr3) {
statement;
}
Which two statements are true?

A. This is not the only valid for loop construct; there exits another form of for loop constructor.
B. The expression expr1 is optional. it initializes the loop and is evaluated once, as the loop begin.
C. When expr2 evaluates to false, the loop terminates. It is evaluated only after each iteration through the loop.
D. The expression expr3 must be present. It is evaluated after each iteration through the loop.

Answer: BC

QUESTION 95
What is the result?
public class StringReplace {
public static void main(String[] args) {
String message = "Hi everyone!";
System.out.println("message = " + message.replace("e", "X")); }
}

A. message = Hi everyone!
B. message = Hi XvXryonX!
C. A compile time error is produced.
D. A runtime error is produced.
E. message =
F. message = Hi Xveryone!

Answer: B

QUESTION 96
Which two statements are true for a two-dimensional array?

A. It is implemented as an array of the specified element type.
B. Using a row by column convention, each row of a two-dimensional array must be of the same size
C. At declaration time, the number of elements of the array in each dimension must be specified
D. All methods of the class Object may be invoked on the two-dimensional array.

Answer: AD

QUESTION 97
Which three statements are benefits of encapsulation?

A. allows a class implementation to change without changing t he clients
B. protects confidential data from leaking out of the objects
C. prevents code from causing exceptions
D. enables the class implementation to protect its invariants
E. permits classes to be combined into the same package
F. enables multiple instances of the same class to be created safely

Answer: ABD

QUESTION 98
Given the code fragment:
1. ArrayList<Integer> list = new ArrayList<>(1);
2. list.add(1001);
3. list.add(1002);
4. System.out.println(list.get(list.size()));
What is the result?

A. Compilation fails due to an error on line 1.
B. An exception is thrown at run time due to error on line 3
C. An exception is thrown at run time due to error on line 4
D. 1002

Answer: C

QUESTION 99
View the Exhibit.
public class Hat {

```
public int ID =0;
public String name = "hat";
public String size = "One Size Fit All";
public String color="";
public String getName() { return name; }
public void setName(String name) {
this.name = name;
}
}
```

Given:

```
public class TestHat {
public static void main(String[] args) {
Hat blackCowboyHat = new Hat();
}
}
```

Which statement sets the name of the Hat instance?

A. blackCowboyHat.setName = "Cowboy Hat";
B. setName("Cowboy Hat");
C. Hat.setName("Cowboy Hat");
D. blackCowboyHat.setName("Cowboy Hat");

Answer: D

QUESTION 100

Which code fragment cause a compilation error?

A. float flt = 100F;
B. float flt = (float) 1_11.00;
C. float flt = 100;
D. double y1 = 203.22;
float flt = y1;
E. int y2 = 100;
float flt = (float) y2;

Answer: D

QUESTION 101

Given the code fragment:

```
String[] colors = {"red", "blue", "green", "yellow", "maroon", "cyan"};
```

Which code fragment prints blue, cyan, ?

A. for (String c:colors) {
if (c.length() != 4) {
continue;
}
System.out.print(c + ", ");
}
B. for (String c:colors[]) {
if (c.length() <= 4) {
continue;
}
System.out.print(c + ", ");
}
C. for (String c: String[] colors) {
if (c.length() >= 3) {
continue;
}
System.out.print(c + ", ");
}
D. for (String c:colors) {
if (c.length() != 4) {
System.out.print(c + ", ");
continue;
}
}

Answer: A

QUESTION 102
Given:
class X {
static void m (int[] i) {
i[0] += 7;
}
public static void main (String[] args) {
int[] j = new int[1];
j[0] = 12;
m(j);
System.out.println(j[0]);
}

}
What is the result?

A. 7
B. 12
C. 19
D. Compilation fails.
E. An exception is thrown at runtime.

Answer: C

QUESTION 103
Given:
1. public class SampleClass {
2. public static void main (String[] args) {
3. AnotherSampleClass asc = new AnotherSampleClass();
4. SampleClass sc = new SampleClass();
5. // insert code here
6. }
7. }
8. class AnotherSampleClass extends SampleClass {
9. }
Which statement, when inserted into line 5, enables the code to compile?

A. asc = sc;
B. sc = asc;
C. asc = (Object) sc;
D. asc = sc.clone;

Answer: B

QUESTION 104
Which statement will empty the contents of a StringBuilder variable named sb?

A. sb.deleteAll;
B. sb.delete(0, sb.size());
C. sb.delete(0, sb.length());
D. sb.removeAll();

Answer: C

QUESTION 105
Given:
class MarksOutOfBoundsException extends IndexOutOfBoundsException { } public class GradingProcess {
void verify(int marks) throws IndexOutOfBoundsException { if (marks > 100) {
throw new MarksOutOfBoundsException();
}
if (marks > 50) {
System.out.print("Pass");
} else {
System.out.print("Fail");
}
}
public static void main(String[] args) {
int marks = Integer.parseInt(args[2]);
try {
new GradingProcess().verify(marks);
} catch (Exception e) {
System.out.print(e.getClass());
}
}
}
And the command line invocation:
java GradingProcess 89 50 104
What is the result?

A. Pass
B. Fail
C. class MarksOutOfBoundsException
D. class IndexOutOfBoundsException
E. class Excpetion

Answer: C

QUESTION 106
Given:
1. interface Pet { }
2. class Dog implements Pet { }

3. class Beagle extends Dog { }
Which three are valid?

A. Pet a = new Dog();
B. Pet b = new Pet();
C. Dog f = new Pet();
D. Dog d = new Beagle();
E. Pet e = new Beagle();
F. Beagle c = new Dog();

Answer: ADE

QUESTION 107
Given the code fragment:
StringBuilder sb = new StringBuilder();
sb.append("World");
Which fragment prints Hello World?

A. sb.insert(0, "Hello ");
System.out.println(sb);
B. sb.append(0, "Hello ");
System.out.println(sb);
C. sb.add(0, "Hello ");
System.out.println(sb);
D. sb.set(0, "Hello ");
System.out.println(sb);

Answer: A

QUESTION 108
Given:
package pkg1;
class Bb { }
public class Ee {
private Ee() { }
}
package pkg2;
final class Ww;
package pkg3;
public abstract class Dd { void m() { } }
And,

1. package pkg4;
2. import pkg1.*;
3. import pkg2.*;
4. import pkg3.*;
5. // insert a class definition here

Which two class definitions, when inserted independently at line 5, enable the code to compile?

A. class Cc extends Bb { }
B. class Cc extends Ww { }
C. class Cc extends Ee { }
D. class Cc extends Dd { }

Answer: AD

QUESTION 109

Given:

1. public class Simple {
2. public float price;
3. public static void main (String [] args) {
4. Simple price = new Simple();
5. price = 4;
6. }
7. }

Which will make this code compile and run?

A. Change line 5 to:
price = 4f;
B. Change line 5 to:
price.price = 4;
C. Change line 5 to:
price = (float) 4;
D. Change line 5 to:
price = (Simple) 4;
E. The code compiles and runs properly; no changes are necessary.

Answer: B

QUESTION 110

Given the code fragment:

class Student {

String name;
int age;
}
And,
1. public class Test {
2. public static void main (String[] args) {
3. Student s1 = new Student();
4. Student s2 = new Student();
5. Student s3 = new Student();
6. s1 = s3;
7. s3 = s2;
8. s2 = null;
9. }
10. }
Which statement is true?

A. After line 8, three objects are eligible for garbage collection.
B. After line 8, two objects are eligible for garbage collection.
C. After line 8, one object is eligible for garbage collection.
D. After line 8, none of the objects are eligible for garbage collection.

Answer: A

QUESTION 111
Given:
public class Test {
public static void main (String[] args) {
char[] arr = {97, '\t', 'e', '\n', 'i', '\t', 'o'};
for (char var: arr) {
System.out.print(var);
}
System.out.print("\nThe length is :" + arr.length);
}
}
What is the result?

A. a e
The length is : 2
B. a e
i o

The length is : 4

C. aeio

The length is : 4

D. a e

i o

The length is : 7

E. Compilation fails.

Answer: D

QUESTION 112

Given the class definitrions:

class Shape { }

class Square extends Shape { }

Given the variable declarations:

Shape shape1 = null;

Square square1 = null;

Which four compile?

A. shape1 = (Square) new Square();

B. shape1 = new Square();

C. square1 = (Square) new Shape();

D. square1 = new Shape();

E. square1 = new Square();

shape1 = square1;

F. shape1 = new Shape();

square1 = shape1;

Answer: ABCE

QUESTION 113

Given the code fragments:

9. class Student {

10. int rollnumber;

11. String name;

12. List courses = new ArrayList();

13. // insert code fragment here

14. public String toString() {

15. return rollnumber + " : " + name + " : " + courses;

16. }
17. }
And,

```
public class Test {
public static void main (String[] args) {
List cs = new ArrayList();
cs.add("Java");
cs.add("C");
Student s = new Student(123,"Fred",cs);
System.out.println(s);
}
}
```

Which code fragment, when inserted at line 13, enables class Test to print 123 : Fred : [Java, C] ?

A.
```
private Student(int i, String name, List cs) {
/* initialization code goes here */
}
```
B.
```
public void Student(int i, String name, List cs) {
/* initialization code goes here */
}
```
C.
```
Student(int i, String name, List cs) {
/* initialization code goes here */
}
```
D.
```
Student(int i, String name, ArrayList cs) {
/* initialization code goes here */
}
```

Answer: C

QUESTION 114
Given:

```
public class Test2 {
public static void main (String[] args) {
int ar1[] = {2, 4, 6, 8};
int ar2[] = {1, 3, 5, 7, 9};
ar2 = ar1;
for (int e2 : ar2) {
System.out.print(" " + e2);
```

}
}
}
What is the result?

A. 2 4 6 8
B. 2 4 6 8 9
C. 1 3 5 7
D. 1 3 5 7 9
E. Compilation fails
F. An exception is thrown at runtime

Answer: A

QUESTION 115
Given:
public class Test2 {
public static void doChange(int[] arr) {
for (int pos=0; pos < arr.length; pos++) {
arr[pos] = arr[pos] + 1;
}
}
public static void main (String[] args) {
int[] arr = {10, 20, 30};
doChange(arr);
for (int x : arr) {
System.out.print(x + ", ");
}
doChange(arr);
System.out.print(arr[0] + ", " + arr[1] + ", " + arr[2]); }
}
What is the result?

A. 11, 21, 31, 11, 21, 31
B. 11, 21, 31, 12, 22, 32
C. 12, 22, 32, 12, 22, 32
D. 10, 20, 30, 10, 20, 30

Answer: B

QUESTION 116
Which two are valid declarations of a two-dimensional array?

A. int [][] array2D;
B. int [2][2] array2D;
C. int array2D[];
D. int[] array2D[];
E. int[][] array2D[];

Answer: AD

QUESTION 117
Given:

```
public class Natural {
private int i;
void disp() {
while (i <= 5) {
for (int i = 1; i <= 5; ) {
System.out.print(i + " ");
i++;
}
i++;
}
}
public static void main (String args[]) {
new Natural().disp();
}
}
```

A. Prints 1 2 3 4 5 once
B. Prints 1 3 5 once
C. Prints 1 2 3 4 5 five times
D. Prints 1 2 3 4 5 six times
E. Compilation fails

Answer: D

QUESTION 118
Given:

```
public class CheckIt {
public static void main (String[] args) {
```

```
if (doCheck()) {
System.out.print("square ");
}
System.out.print("…");
}
public static int doCheck() {
return 0;
}
}
```

A. square …
B. …
C. Compilation fails.
D. An exception is through at runtime.

Answer: C

QUESTION 119
Given:

```
public class Test {
}
```

From which class does the Java compiler implicitly derive Test?

A. Object
B. Class
C. an anonymous class
D. Objects

Answer: A

QUESTION 120
Given:

```
class Test {
public static void main (String[] args) {
int day = 1;
switch (day) {
case "7":
System.out.print("Uranus");
case "6":
System.out.print("Saturn");
case "1":
```

```
System.out.print("Mercury");
case "2":
System.out.print("Venus");
case "3":
System.out.print("Earth");
case "4":
System.out.print("Mars");
case "5":
System.out.print("Jupiter");
}
}
}
```

Which two modifications, made independently, enable the code to compile and run?

A. adding a break statement after each print statement
B. adding a default section within the switch code-block
C. changing the string literals in each case label to integer
D. changing the type of the variable day to String
E. arranging the case labels in ascending order

Answer: CD