1

Consider the following program:

```
public class ExceptionType {
public static void main(String args[]) {
String s = null;
try {
System.out.println(s.length());
}
catch(Exception e) {
System.out.println("Exception 1");
}
finally {
try {
generateException();
}
catch(Exception e) {
System.out.println("Exception 2");
}
}
}

static void generateException() throws IllegalArgumentException {
throw new IllegalArgumentException();
}
}
```

Which of the following statements are true regarding the above given program? (Choose 3)

Answer:

☑ a. The output "Exception 2" is because of the exception thrown programmatically

□ b. The output "Exception 1" is because of the Exception thrown programmatically

☑ c. The output "Exception 1" is because of the Exception thrown by JVM

☑ d. The Exception thrown by generateException() method is an Unchecked Exception

□ e. The output "Exception 2" is because of the Exception thrown by JVM

2 Consider the following code:

```
public class Except {
private void method1() throws Exception {
throw new RuntimeException();
}

public void method2() {
try {
method1();
} catch (RuntimeException e) {
System.out.println("Caught Exception");
} catch (Exception e) {
System.out.println("Caught Runtime Exception");
}
}

public static void main(String args[]) {
Except e = new Except();
e.method2();
}
}
```

Which of the following gives the correct output for the above code?

Answer: ○ a. No output

○ b. Compile time error

○ c. Prints: Caught Runtime Exception

● d. Prints: Caught Exception

3 Which of the following statements are true about String Arrays? (Choose 2)

Answer: ☐ a. Array index can be a long value

☐ b. Array index can be a negative value

☑ c. String[][] s = new String[5][];

☑ d. String[][] s;

☐ e. Array decaration: String[6] strarray;

4 Consider the following scenario:

The GenericFruit class defines the following method to return a float value:

```
public float calories( float serving ) {
  // code goes here
}
```

A junior programmer writing the Apple class, which extends GenericFruit, proposes to define the following overriding method:

```
public double calories( double serving ) {
  // code goes here
}
```

Which of the following statement is True regarding the above scenario?

Answer: ○ a. It will not compile because of the different return type.

○ b. It will not compile because of the different input type in the parameter list.

○ c. The double version overrides the float version.

● d. It will compile but will not override the GenericFruit method because of the different parameter list.

5 Consider the following program:

```
public class TestStart implements Runnable {
boolean stoper = true;
public void run() {
System.out.println ("Run method Executed");
}

public static void main (String[] argv) {
TestStart objInt = new TestStart();
Thread threadX = new Thread(objInt);
threadX.start();
threadX.start();
}
}
```

What will be the output of the above program?

Answer:

○ a. Compiles and executes successfully Prints "Run method executed"

● b. Compiles and on execution Prints "Run method executed" then throws Runtime exception

○ c. Compilation Error

○ d. Compiles and on execution Prints "Run method executed"

6 Consider the following program:

```
class A extends Thread {
private int i;
public void run() {i = 1;}
public static void main(String[] args) {
A a = new A();
a.start();
System.out.print(a.i);
}
}
```

What will be the output of the above program?

Answer: ● a. Prints 0

○ b. Prints: 01

○ c. Prints: 10

○ d. Prints 1

○ e. Compile-time error

7 Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
}

public static void main(String args[]) {
new Code10().codeMethod();
}
}
```

Which of the following will be the output for the above code?

Answer: ○ a. Runtime error: NullPointerException

○ b. Prints: false

● c. Compilation error: cannot find the symbol

○ d. Prints: true

○ e. Compilation error: v is not initialised inside the constructor

8

Consider the following code:

In the following code methodA has an inner class

```
 1. public class Base {
 2.   private static final int ID = 3;
 3.   public String name;
 4.   public void methodA( int nn ){
 5.     final int serialN = 11;
 6.     class inner {
 7.       void showResult(){
 8.         System.out.println( "Rslt= " + XX );
 9.       }
10.     } // end class inner
11.     new inner().showResult();
12.   } // end methodA
13. )
```

Which of the following variables would the statement in line 8 be able to use in place of XX? (Choose 3)

Answer: ☑ a. The String variable 'name' declared in line 3

□ b. Invoking methodA() defined in line 4

□ c. The int variable 'nn' declared in line 4

☑ d. The int variable 'serialN' declared in line 5

☑ e. The int variable 'ID' declared in line 2

9 Consider the following scenario:

A Java application needs to stream a video from a movie file.

Which of the following options gives the correct combination of stream classes that can be used to implement the above requirement?

Answer:
○ a. InputStreamReader and FileInputStream
○ b. FileInputStream and FilterInputStream
○ c. LineInputStream and BufferedInputStream
○ d. FileReader and BufferedReader
● e. FileInputStream and BufferedInputStream

10 Which of the following options are true about abstract implementations in Collections?(choose 3)

Answer:
☑ a. It provides static factory class
□ b. All major implementations like Hashtable, Vectors are supported
☑ c. They provide hooks for custom implementations
☑ d. All major interfaces are supported
□ e. Map is not supported

11 Consider the following code:

```
class AT1 {
public static void main (String[] args) {
byte[] a = new byte[1]; long[] b = new long[1];
float[] c = new float[1]; Object[] d = new Object[1];
System.out.print(a[0]+","+b[0]+","+c[0]+","+d[0]);
}
}
```

Which of the following will be the output of the above code?

Answer:
○ a. Prints: 0,0,0,null

○ b. None of the listed options

○ c. Run-time error

● d. Prints: 0,0,0.0,null

○ e. Compile-time error

12 Consider the following code snippet:

```
interface i1 {
int i = 0;
}

interface i2 {
int i = 0;
}

class inter implements i1, i2 {
public static void main(String[] a) {
System.out.println(i);
}
}
```

Which of the following options will be the output of the above code snippet?

Answer:
○ a. Runtime Error

● b. Prints: 0

○ c. No output

○ d. Compilation Error

13

The following class definitions are in separate files. Note that the Widget and BigWidget classes are in different packages:

```
1. package conglomo;
2. public class Widget extends Object{
3. private int myWidth;
4. XXXXXX void setWidth( int n ) {
5. myWidth = n;
6. }
7. }

// the following is in a separate file and in separate package
8. package conglomo.widgets;
9. import conglomo.Widget ;
10. public class BigWidget extends Widget {
11. BigWidget() {
12. setWidth( 204 );
13. }
14. }
```

Which of the following modifiers, used in line 4 instead of XXXXXX, would allow the BigWidget class to access the setWidth method (as in line 12)? (Choose 2)

Answer: ☐ a. final

☐ b. default (blank), that is, the method declaration would read void setWidth(int n)

☑ c. protected

☐ d. private

☑ e. public

14 Which of the following statements are true regarding toString() method?(Choose 3)

Answer: ☑ a. Declared in the Object class

☑ b. It is polymorphic

□ c. Essential for inheriting a class

□ d. Defined in the Object class

☑ e. Gives the String representation of an Object

5 It is possible to create a table using JDBC API. State True or False.

Answer: ● True ○ False

16 Consider the following code snippet:

```
import java.util.*;

public class TestCol8{
public static void main(String argv[]){
TestCol8 junk = new TestCol8();
junk.sampleMap();
}

public void sampleMap(){
TreeMap tm = new TreeMap();
tm.put("a","Hello");
tm.put("b","Java");
tm.put("c","World");
Iterator it = tm.keySet().iterator();
while(it.hasNext()){
System.out.print(it.next());
}
}
}
```

What will be the output of the above code snippet?

Answer:

○ a. abc

○ b. Runtime error

○ c. HWJ

● d. HelloJavaWorld

○ e. Compile error

17 Consider the following program:

```
public class Exp4 {
static String s = "smile!..";
public static void main(String[] args) {
new Exp4().s1();
System.out.println(s);
}

void s1() {
try {
s2();
}
catch (Exception e) {
s += "morning";
}
}
void s2() throws Exception {
s3();
s += "evening";
s3();
s += "good";
}

void s3() throws Exception {
throw new Exception();
}
}
```

What will be the output of the above program?

Answer:

○ a. smile!..morningevening

● b. smile!..morning

○ c. smile!..

○ d. smile!..eveningmorning

○ e. smile!..morningeveninggood

18 Consider the following code snippet:

```
import java.io.*;

class Test {
int a = 10;
}

class Test2 extends Test implements Serializable {
int b;

public String toString() {
return "a = " + a + ", " + "b = " + b;
}
}

public class IOCode5 {
public static void main(String args[]) throws FileNotFoundException,
IOException, ClassNotFoundException {
ObjectOutputStream out = new ObjectOutputStream(new
FileOutputStream("C:/ObjectData"));
Test2 t1 = new Test2();
t1.a = 20;
t1.b = 30;
out.writeObject(t1);
out.close();

ObjectInputStream in = new ObjectInputStream(new
FileInputStream("C:/ObjectData"));
Test2 t2 = (Test2) in.readObject(); // Line 1
System.out.println(t2);
}
}
```

What will be the output of the above code snippet?

Answer: ● a. a = 10, b = 30

○ b. a = 0, b = 30

○ c. a = 20, b = 30

○ d. a = 10, b = 0

○ e. throws TransientException at the commented line (// Line 1)

19 Which of the following are main packages for Annotations?(Choose 2)

Answer: □ a. java.io

□ b. java.util

☑ c. java.lang

☑ d. java.lang.annotation

□ e. java.sql

20 Consider the following code:

```
public class LabeledBreak2 {
public static void main(String args[]) {
loop:
for(int j=0; j<2; j++) {
for(int i=0; i<10; i++) {
if(i == 5) break loop;
System.out.print(i + " ");
}
}
}
}
```

Which of the following will be the output for the above code?

Answer: ○ a. 0 1 2 3 4 0 1 2 3 4

○ b. 0 1 2 3 4 5

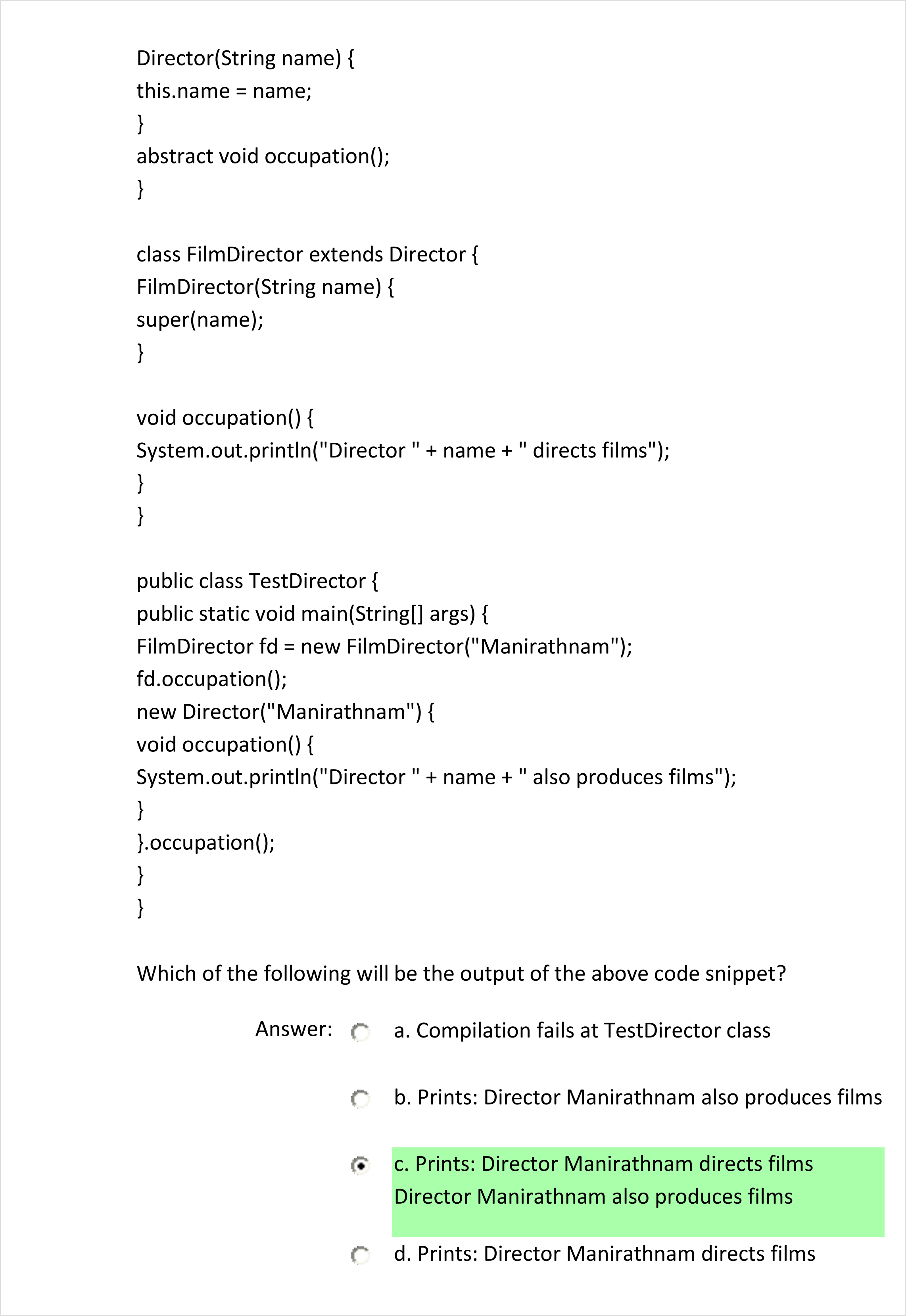
● c. 0 1 2 3 4

○ d. 1 2 3 4 5

○ e. Indefinite Loop

21 Consider the following code snippet:

```
abstract class Director {
protected String name;
```



```
Director(String name) {
this.name = name;
}
abstract void occupation();
}

class FilmDirector extends Director {
FilmDirector(String name) {
super(name);
}

void occupation() {
System.out.println("Director " + name + " directs films");
}
}

public class TestDirector {
public static void main(String[] args) {
FilmDirector fd = new FilmDirector("Manirathnam");
fd.occupation();
new Director("Manirathnam") {
void occupation() {
System.out.println("Director " + name + " also produces films");
}
}.occupation();
}
}
```

Which of the following will be the output of the above code snippet?

Answer:

○ a. Compilation fails at TestDirector class

○ b. Prints: Director Manirathnam also produces films

● c. Prints: Director Manirathnam directs films
Director Manirathnam also produces films

○ d. Prints: Director Manirathnam directs films

○ e. Runtime Error

22 Delimiters themselves be considered as tokens. State True or False.

Answer: ● True ○ False

23 Consider the following scenario:

A company decides that it only wants to use the most popular names for its products. You have to give the number of employees against each unique first name.

Which of the following four core interfaces is best-suited for implementing the above scenario?

Answer:
● a. Map
○ b. Set
○ c. Queue
○ d. List

24 Which of the following modifier cannot be applied to the declaration of a field (member of a class)?

Answer:
○ a. protected
○ b. private
○ c. final

○ d. public

● e. abstract

25 Which of the following class in java.sql package maps the SQL data types to Java datatypes?

Answer:

○ a. JDBCTypes

○ b. JDBCSQLTypes

○ c. No explicit data type mapping. Automatically mapped on Query Call.

● d. Types

○ e. SQLTypes

26 Which of the following codes will compile and run properly?

Answer:

○ a.
```
public class Test1 {
public static void main() {
System.out.println("Test1");
}
}
```

● b.
```
public class Test2 {
static public void main(String[] in) {
System.out.println("Test2");
}
}
```

○ c.
```
public class Test3 {
public static void main(String args) {
System.out.println("Test3");
}
```

}

○ d. public class Test4 {

```
static int main(String args[]) {
System.out.println("Test4");
}
}
```

○ e. public class Test5 {

```
static void main(String[] data) {
System.out.println("Test5");
}
}
```

27 Consider the following code:

```
public class WrapIt {
public static void main(String[] args) {
new WrapIt().testC('a');
}

public void testC(char ch) {
Integer ss = new Integer(ch);
Character cc = new Character(ch);
if(ss.equals(cc)) System.out.print("equals ");
if(ss.intValue()==cc.charValue()) {
System.out.println("EQ");
}
}
}
```

Which of the following gives the valid output for the above code?

Answer: ○ a. Prints: equals

○ b. Compile-time error: Integer wrapper cannot accept char type

● c. Prints: EQ

}

○ d. Compile-time error: Wrapper types cannot be compared using equals

○ e. Prints: equals EQ

28 Which of the following statements are valid 3 dimensional character array creations?(Choose 2)

Answer: □ a. char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e', 'f'}};

☑ b. char[][][] charArray = {{{'a', 'b'}, {'c', 'd'}, {'e', 'f'}}};

□ c. char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e'}};

☑ d. char[][][] charArray = new char[2][2][];

□ e. char[2][2][] charArray = {'a', 'b'};

29 Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
}//End of bicycle class
}//End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1? (Choose 2)

Answer: ☑ a. System.out.println(iArgs);

□ b. System.out.println(iam);

□ c. System.out.println(iOther);

☑ d. System.out.println(s);

30 Consider s1 and s2 are sets.

Which of the following options gives the exact meaning of the method call s1.retainAll(s2)?

Answer: ○ a. transforms s1 into the union of s1 and s2

● b. transforms s1 into the intersection of s1 and s2.

○ c. transforms s1 into the (asymmetric) set difference of s1 and s2

○ d. copies elements from s2 to s1

○ e. returns true if s2 is a subset of s1

31 Which of the following annotations are defined in java.lang package? (Choose 3)

Answer: ☑ a. @SuppressWarnings

□ b. @Target

□ c. @Retention

☑ d. @Override

☑ e. @Deprecated

32 Consider the following code:

```
class Test {
   Test(int i) {
       System.out.println("Test(" + i +")");
    }
 }

 public class Question{
     static Test  t1 = new Test(1);
     Test   t2 = new Test(2);
     static Test  t3 = new Test(3);
     public static void main(String[] args){
        Question Q = new Question();
     }
 }
```

Which of the following options gives the correct order of initialization?

Answer:

○ a. Test(3)
Test(2)
Test(1)

○ b. Test(2)
Test(1)
Test(3)

○ c. Test(1)
Test(2)
Test(3)

● d. Test(1)
Test(3)
Test(2)

33 Which of the following methods is used to check whether ResultSet object contains records?

Answer:
○ a. first()
○ b. hasRecords()
● c. next()
○ d. last()
○ e. previous()

34 Which of the following options are true about Associations?(choose 2)

Answer:
☐ a. In Associations, cardinality refers to the number of related objects
☐ b. Association refers to binding of related data and behaviours into a single entity
☑ c. Associations are bi-directional
☐ d. Association refers to a class reuses the properties and methods of another class
☑ e. Association refers to an object composed of set of other objects

35 Consider the following code snippet:

```
class TestString4 {
public static void main(String args[]) {
String s1 = "Its Great";
String s2 = "Its Tricky";

System.out.print(s1.concat(s2).length() + " ");
System.out.print(s1.concat(s2.substring(1, s1.length())).length());
}
}
```

What will be the output of the following code snippet?

Answer:

○ a. 18 20

○ b. 17 19

○ c. 20 18

○ d. 17 17

● e. 19 17

36 Consider the following code:

```
class Planet { }

class Earth extends Planet { }

public class WelcomePlanet {
  public static void welcomePlanet(Planet planet) {
    if (planet instanceof Earth) {
      System.out.println("Welcome!");
    } else if (planet instanceof Planet) {
      System.out.println("Planet!");
    } else {
      System.exit(0);
    }
  }

  public static void main(String args[]) {
    WelcomePlanet wp = new WelcomePlanet();
    Planet planet = new Earth();
    welcomePlanet(planet);
  }
}
```

Which of the following will be the output of the above program?

Answer:

○ a. An exception is thrown at runtime

○ b. The code runs with no output

● c. Welcome!

○ d. Planet!

○ e. Compilation fails

37 What methods does the java.lang.Runtime class provide related to memory management?(Choose 3)

Answer:

☑ a. to invoke Garbage collector

□ b. to create new memory locations

☑ c. to query the total memory and free memory

□ d. to dump the objects to storage device

☑ e. to run finalize methods explicitly

38 Which of the following statement is true?

Answer:

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

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

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

○ d. To call the wait() method, a thread must own the lock of the current thread.

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

39 Which of the following statements are true? (Choose 2)

Answer: □ a. All exceptions are thrown by JVM

□ b. All RuntimeException are thrown by JVM

☑ c. JVM cannot throw user-defined exceptions

□ d. All exceptions are thrown programmatically from the code or API

☑ e. JVM thrown exceptions can be thrown programmatically

40 Consider the following code:

```
public class UnwiseThreads implements Runnable {
public void run() {
   while(true) { }
    }

   public static void main(String args[]) {
      UnwiseThreads ut1 = new UnwiseThreads();
        UnwiseThreads ut2 = new UnwiseThreads();
        UnwiseThreads ut3 = new UnwiseThreads();
        ut1.run();
        ut2.run();
ut3.run();
    }
}
```

Which of the following is correct for the above given program?

Answer: ○ a. The code compiles and runs 3 non ending non daemon threads

● b. The code compiles but runs only 1 non ending, non daemon thread

○ c. Runtime Error "IllegalThreadStateException"

○ d. Compilation error "ut2.run() is never reached"

41 Which of the following options is true about multi-level inheritance?

Answer: ○ a. Inheriting from two super classes

● b. Inheriting from a class which is already in an inheritance hierarchy

○ c. Inheriting from more than one super class

○ d. Inheriting from a single class

42 Anonymous class can have their own members.
State True or False.

Answer: ● True ○ False

43 Consider the following partial code:

```
interface A { public int getValue(); }

class B implements A {
public int getValue() { return 1; }
}
```

```
class C extends B {
// insert code here
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

Answer:
☑ a. public void add(A a) { a.getValue(); }
☑ b. public void add(B b) { b.getValue(); }
□ c. public void add(C c1, C c2) { c1.getValue(); }
□ d. public void add(C c) { c.getValue(); }
☑ e. public void add(A a, B b) { a.getValue(); }

44 From JDK 1.6, which of the following interfaces is also implemented by java.util.TreeMap class?

Answer:
● a. NavigableMap
○ b. NavigableSet
○ c. NavigableList
○ d. Deque

45 Consider the following code snippet:

```
class Node {
Node node;
}

class NodeChain {
public static void main(String a[]) {
```

```
Node node1 = new Node(); // Line 1
node1.node = node1;
// Code here
}
}
```

Which of the following code snippets when replaced at the comment line (// Code Here) in the above code will make the object created at Line 1, eligible for garbage collection? (Choose 2)

Answer:

□ a. node1.node = null;

□ b. node1 = node1.node;

□ c. node1.node = new Node();

☑ d. node1 = null;

☑ e. node1 = new Node();