1   Consider the following code:

```
public abstract class Shape {
private int x;
private int y;

public abstract void draw();

public void setAnchor(int x, int y) {
this.x = x;
this.y = y;
}
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

Answer: ☐ a. public class Circle extends Shape {
private int radius;
public void draw();
}

☐ b. public abstract class Circle extends Shape {
private int radius;
}

☑ c. public class Circle extends Shape {
private int radius;
public void setRadius(int radius) { this.radius = radius; }
public int getRadius() { return radius; }
public void draw() {/* code here */}
}

☐ d. public class Circle implements Shape {
private int radius;
}

☑ e. public class Circle extends Shape {
public int radius;

```
private void draw() {/* code here */}
}
```

---

2   Consider the following code:

```
class UT1 {
  static byte m1() {
    final char c = 'u0001';
    return c;
  }

  static byte m3(final char c) {return c;}

  public static void main(String[] args) {
    char c = 'u0003';
    System.out.print(""+m1()+m3(c));
  }
}
```

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

Answer: ○   a. None of the listed options

○   b. Prints: 4

○   c. Prints: 13

○   d. Run-time error

◉   e. Compile-time error

---

3   Consider the following partial code:

```
class Bean {
interface I {
void beanInterface();
}
```

```
class BeanI extends Bean implements I { }
}

public class BeanImpl {
public static void main(String args[]) {
Bean bean = new Bean();
Bean.BeanI beanI = bean. new BeanI();
beanI.beanInterface();
}
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

Answer: ○ a. The inner interface I should be removed and kept outside the Bean class

○ b. The inner class should be removed and kept outside the Bean class

◉ c. Add the following method to Bean class
public void beanInterface() { }

○ d. The outer class Bean should be declared as abstract

○ e. The inner class BeanI should be declared as abstract

---

4   Which of the following options is true about multiple 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

5   Consider the following program:

```java
import java.io.*;

public class CrypticCatch {
public static void main(String[] args) throws Exception {
try {
try {
try {
throw new FileNotFoundException();
} catch(Exception e3) {
throw e3;
}
} catch(IOException e2) {
throw e2;
}
} catch(FileNotFoundException e1) {
System.out.println("File not found exception caught");
}
System.out.println("Exception handled successfully");
}
}
```

What will be the output of the above program?

Answer: ◯ a. Exception handled successfully

     ◯ b. Compile time error. Since exceptions should be caught in reversed hierarchy order

     ◉ c. File not found exception caught
       Exception handled successfully

     ◯ d. Runtime error

     ◯ e. File not found exception caught

---

6   Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

Answer: ○ a. ObjectSerializable interface

○ b. Readable interface

○ c. Writable interface

● d. Serializable interface

○ e. Cloneable interface

7 Consider the following code snippet:

```
import java.io.*;

public class IOCode2 {
public static void main(String args[]) throws FileNotFoundException {
// Insert Code here
System.out.println("Welcome to File Programming");
}
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

Answer: ○ a. System.setOut(new PrintStream("C:/Data"));

● b. System.out.redirectOutput(new PrintStream("C:/Data"));

○ c. System.redirectOutput(new PrintStream("C:/Data"));

○ d. System.setOut(new FileWriter("C:/Data"));

○ e. System.out.setOut(new PrintStream("C:/Data"));

8   Consider the following code snippet:

```java
import java.util.*;
class Student {
String studentName;
Student() { }
Student(String studentName) {
this.studentName = studentName;
}

public String toString() {
return this.studentName;
}
}

public class TestCol7 {
public static void main(String args[]){
TreeSet students = new TreeSet();
students.add(new Student("Raju"));
students.add(new Student("Krishna"));
students.add(new Student("Vijay"));

System.out.println(students);
}
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

Answer: ○ a. The Student class should implement Comparable interface.

◉ b. The Student class should implement Serializable

interface

○ c. The Student class should implement Cloneable interface

○ d. The Student class should implement Externalizable interface

○ e. The Student class should implement Comparator interface.

---

9   Consider the following code:

```
1. public class DagRag {
2. public static void main(String [] args) {
3.
4. int [][] x = new int[2][4];
5.
6. for(int y = 0; y < 2; y++) {
7. for(int z = 0; z < 4; z++) {
8. x[y][z] = z;
9. }
10. }
11.
12. dg: for(int g = 0; g < 2; g++) {
13. rg: for(int h = 0; h < 4; h++) {
14. System.out.println(x[g][h]);
15.
16. }
17. System.out.println("The end.");
18.
19. }
20.
21. }
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

0
1
2
3
The end.

Answer: ○ a. if(g==3) break rg;
             if(h==0) break dg;

○ b. if(h==3) break rg;
      if(g==0) break dg;

○ c. if(h > 3) break dg;
       if(g > 0) break rg;

○ d. if(h > 3) break dg;
       if(g > 0) break dg;

---

10   Which of the following is the immediate super interface of CallableStatement?

Answer: ○ a. ResultSet

○ b. Statement

○ c. PreparedStatement

○ d. CallableStatement

○ e. Connection

---

11   Which of the following types of driver provides maximum decoupling between
       database and Java application?

Answer: ○ a. Type I driver

○ b. Type III driver

○ c. Type II driver

◉ d. Type IV driver

---

12   Consider the following code:

```
public class Code13 {
public static void main(String... args) {
for(String s:args)
System.out.print(s + ", ");
System.out.println(args.length);
}
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

Answer: ◉   a. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list

○   b. variable arguments cannot be used with enhanced for-loop

○   c. Runtime Error: NoSuchMethodError

○   d. Compilation Error: var-args cannot be used as arguments for main() method

---

13   Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

Answer: ☑   a. @Retention

	b. @Deprecated
	c. @Override
	d. @SuppressWarnings
☑	e. @Target

---

14   Consider the following code snippet:

```
1. class Garbage { }
2. class GC1 {
3. public static void main(String a[]) {
4. Garbage s = new Garbage();
5. {
6. s = new Garbage();
7. }
8. s = new Garbage();
9. }
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

Answer: ○   a. None of the object is eligible for Garbage Collection

○   b. lines: 8

◉   c. lines: 4, 6

○   d. lines: 6, 8

○   e. lines: 4, 6, 8

---

15   Consider the following scenario:

Real Chocos Private Limited deals in manufacturing variety of chocolates.
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

Answer: ○ a. Class: Fruit Chocolates
Objects: Rum Chocolates

○ b. Class: Real Chocos Private Limited
Objects: Chocolate

◉ c. Class: Chocolate
Objects: Fruit Chocolates, Rum Chocolates, Milk
Chocolates

○ d. Class: Choclate
Objects: Milk Chocolates

---

16   What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

Answer: ☐ a. Methods to encrypt the file with password

☑ b. Methods to set or query file permissions

☐ c. Methods to attach the file to an email

☑ d. Methods to retrieve disk usage information

☐ e. No new methods are introduced in JDK 1.6

---

17   Consider the following code snippet:

```
class Animal {
String name;
public boolean equals(Object o) {
Animal a = (Animal) o;
// Code Here
}
}

class TestAnimal {
public static void main(String args[]) {
Animal a = new Animal();
a.name = "Dog";
Animal b = new Animal();
b.name = "dog";

System.out.println(a.equals(b));
}
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

Answer: ○ a. return this.name.equals(a.name);

○ b. return super.equals(a);

○ c. return this.name == a.name;

⊙ d. return this.name.equalsIgnoreCase(a.name);

○ e. return this.name.hashCode() == a.name.hashCode();

18	Which of the following options are true? (Choose 2)

Answer: ☐ a. In a try-catch-finally structure, finally block and catch block can be placed in any order

☐ b. On using nested try-catch blocks, only the outer most try-catch block can have the finally block

☑ c. The finally block can have another try-catch-finally block nested inside

☑ d. The catch block can have another try-catch-finally block

---

19   Consider the following program:

```
public class ThreadJoin extends Thread{
public static void main(String[] args) {
Thread t1 = new Thread("T1");
Thread t2 = new Thread("T2");
try {
t1.join();
t2.join();
} catch (InterruptedException e) {
System.out.println("Main Thread interrupted.");
}
}

public void run(){
System.out.println("Run executed");
}
}
```

What will be the output of the above program?

Answer: ○ a. Compile-time error

○ b. Run-time error

◉ c. Prints "Main Thread interrupted."

○ d. Program ends without printing anything

○ e. Prints "Run executed" twice

20   Which of the following are true about ResultSet? (Choose 2)

Answer: ☑   a. Not all ResultSets are updatable

☑   b. It is possible to delete records through ResultSet

☐   c. The ResultSet object contains null, if there are no records in
the table

☐   d. Atleast one record should be there in the ResultSet on
opening a query (or) table

☐   e. All ResultSet, are Scrollable

21   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(iam);

☑ **b. System.out.println(iArgs);**

☐ c. System.out.println(iOther);

☐ **d. System.out.println(s);**

---

22   Consider the following code:

```
public class Key1 {
public boolean testAns( String ans, int n ) {
boolean rslt;

if (ans.equalsIgnoreCase("YES") & n > 5)
rslt = true;

return rslt;
}

public static void main(String args[]) {
System.out.println(new Key1().testAns("no", 5));
}
}
```

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

Answer: ◉ **a. Compile-time error**

○ b. NO

○ c. false

○ d. true

○ e. Runtime Error

| 23 | 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

○   b. Indefinite Loop

○   c. 0 1 2 3 4 0 1 2 3 4

○   d. 1 2 3 4 5

○   e. 0 1 2 3 4 5

| 24 | 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: ○ <mark>a. The code compiles but runs only 1 non ending, non daemon thread</mark>

⦿ b. Compilation error "ut2.run() is never reached"

○ c. Runtime Error "IllegalThreadStateException"

○ d. The code compiles and runs 3 non ending non daemon threads

---

25   An Annotation Type _____.

Answer: ○ a. defines the structure of an Object

○ <mark>b. defines the structure of an Annotation</mark>

○ c. defines the structure of an Application

○ d. defines the structure of an interface

⦿ e. is a meta-tag used to pass message between the code and JVM.

---

26   Consider the following code:

```
class A { }
class B extends A { }
public class Code2 {
public void method(A a) {
System.out.println("A");
```

```
}
public void method(B b) {
System.out.println("B");
}
public static void main(String args[]) {
new Code2().method(new Object());
}
}
```
Which of the following will be the output for the above code?

Answer: ○ a. Prints: B

○ b. Throws ClassCastException at runtime

○ c. Compilation Error 'Cannot find the symbol'

● d. Prints: A

---

27   Consider the following program:

```
1. class CheckedException extends RuntimeException { }
2. class UncheckedException extends Exception { }
3. public class Check {
4. public static void main(String args[]) {
5. generateException1();
6. generateException2();
7. }
8.
9. private static void generateException1() {
10. throw new CheckedException();
11. }
12.
13. private static void generateException2() {
14. throw new UncheckedException();
15. }
16. }
```

Which of the following is true regarding the above given program?

Answer: ⦿ a. No compilation error but throws RuntimeException on running the code

⦿ b. Compilation error at line 5

⦿ c. Compilation error at line 10

⦿ d. Compilation error at line 14

⦿ e. Compilation error at line 6

---

28   Consider the following partial code:

```
public class CreditCard {
private String cardID;
private Integer limit;
public String ownerName;

public void setCardInformation(String cardID, String ownerName, Integer limit) {
this.cardID = cardID;
this.ownerName = ownerName;
this.limit = limit;
}
}
```

Which of the following statement is True regarding the above given code?

Answer: ⦿ a. The class is fully encapsulated

⦿ b. The cardID and limit variables break polymorphism

⦿ c. The ownerName variable breaks encapsulation

⦿ d. The code demonstrates polymorphism

⦿ e. The setCardInformation method breaks encapsulation

29   Which of the following are correct regarding HashCode?(Choose 2)

Answer: ☑   a. hashCode() value cannot be a zero-value

☐   b. the numeric key is unique

☑   c. it is a 32 bit numeric digest key

☐   d. It improves performance

☐   e. hashCode() is defined in String class

30   Consider the following program:

```
class UserDefinedException extends Error { }

public class TasteIt {
public static void main(String args[]) {
try {
try {
throw new Error();
}
catch(UserDefinedException u1) {
throw u1;
}
catch(Exception e1) {
System.out.println("This is the required output");
}
finally {
throw new UserDefinedException();
}
}
catch(UserDefinedException u2) {
System.out.println("This is not the output");
}
catch(Error e2) {
System.out.println("This is the output");
}
```

```
        }
    }
```

What will be the output for the above program?

Answer: ○ a. Runtime Error

○ b. This is the required output

○ c. Compile-time error

◉ d. This is not the output

○ e. This is the output

---

31   Consider the following Statements:

Statement A:The threads are scheduled using fixed priority scheduling.

Statement B:Thread priority can be set after it is created using the public int setPriority() method declared in the Thread class.

Which of the following statements is correct?

Answer: ○ a. Statement A is true and Statement B is false

○ b. Both Statement A and B are true

◉ c. Statement A is false and Statement B is true

○ d. Both Statement A and B are false

---

32   Which of the following options are true for StringBuffer class?(choose 3)

Answer: ☑ a. StringBuffer implements Charsequence interface

☑ b. StringBuffer is threadsafe

☑ c. Buffer space in StringBuffer can be shared

☐ d. StringBuffer is extended from String class

☐ e. 'capacity' property indicates the maximum number of characters that a StringBuffer can have

---

33 Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☑ a. protected

☑ b. final

☑ c. private

☐ d. synchronized

☐ e. public

---

34 Consider the following code:

```java
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. Compilation error: v is not initialised inside the constructor

○ c. Compilation error: cannot find the symbol

○ d. Prints: false

◉ e. Prints: true

---

35   Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

Answer: ☑ a. SortedSet

☑ b. TreeSet

☐ c. ArrayList

☐ d. List

☐ e. Set

---

36   The purpose of Weak Reference Type object is _____.

Answer: ⦿ a. to keep objects alive only while they are in use (reachable) by clients

○ b. to delete objects from a container if the clients are no longer referencing them and memory is tight

○ c. to keep objects alive provided there is enough memory

○ d. to allow clean up after finalization but before the space is reclaimed

---

37   Consider the following code snippet:

```java
import java.util.*;

public class TestCol4 {
public static void main(String[] args) {
Set h = new HashSet();
h.add("One");
h.add("Two");
h.add("Three");
h.add("Four");
h.add("One");
h.add("Four");

List l = new ArrayList();

l.add("One");
l.add("Two");
l.add("Three");

h.retainAll(l);

System.out.println("Size:" + l.size() + h.size());
}
}
```

What will be the output of the above code snippet?

Answer: ○ **a. Size: 33**

○ b. Compilation error

○ c. Size: 63

○ d. Size: 36

○ e. Size: 66

---

38   Which are all platform independent among the following? (Choose 3)

Answer: ☑ **a. JAR Files**

☐ b. Java Development Kit (JDK)

☑ **c. Java Source Files**

☐ d. Java Virtual Machine (JVM)

☑ **e. Java Class Files**

---

39   Consider the following program:

```
public class TThread implements Runnable {
public void run() {
try {
Thread.sleep(100000);
} catch (Exception objE) {
System.out.println ("Exception Handler");
}
System.out.println ("Run method ends here");
}

public static void main (String[] argv) {
Thread thread = new Thread(new TThread ());
```

```
        thread.start();

        thread.interrupt();
        System.out.println ("Main method ends here");
        }
        }
```

What will be the output of the above program?

Answer: ○ a. Main method ends here
          Run method ends here
          Exception Handler

○ b. Exception Handler
     Run method ends here
     Main method ends here

○ c. Main method ends here
     Exception Handler
     Run method ends here

○ d. Run method ends here
     Exception Handler
     Main method ends here

⦿ e. None of the listed options

---

40   Consider the following code:

```
1. class Test {
2. public static void main(String args[]) {
3. double d = 12.3;
4. Dec dec = new Dec();
5. dec.dec(d);
6. System.out.println(d);
7. }
8. }
9. class Dec{
10. public void dec(double d) { d = d - 2.0d; }
11. }
```

Which of the following gives the correct value printed at line 6?

Answer: ○ a. Prints: 10.3

○ b. Prints: -2.0

◉ c. Prints: 12.3

○ d. Prints: 0.0

---

41 Consider the following code snippet:

```
public class TestString9 {
public static void main(String st[]){
String s1 = "java";
String s2 = "java";
String s3 = "JAVA";
s2.toUpperCase();
s3.toUpperCase();
boolean b1 = s1==s2;
boolean b2 = s1==s3;
System.out.print(b1);
System.out.print(" "+b2);
}
}
```

What will be the output of the above code snippet?

Answer: ○ a. Runtime error

○ b. true false

○ c. true true

◉ d. false false

○ e. false true

---

42 Consider the following code:

class Planet { }

class Earth extends Planet { }

```java
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. Compilation fails
- ○ b. The code runs with no output
- ⦿ c. Welcome!
- ○ d. An exception is thrown at runtime
- ○ e. Planet!

---

43 Which of the following is the best-performing implementation of Set interface?

Answer:
- ○ a. HashSet
- ○ b. LinkedHashSet
- ⦿ c. TreeSet
- ○ d. Hashtable
- ○ e. SortedSet

---

44 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(B b) { b.getValue(); }
- ☑ b. public void add(C c) { c.getValue(); }
- ☐ c. public void add(A a) { a.getValue(); }
- ☑ d. public void add(C c1, C c2) { c1.getValue(); }
- ☐ e. public void add(A a, B b) { a.getValue(); }

ooo