



```
1. 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 two classes use the Shape class correctly? (Choose two.)

- ☐ A public class Circle implements Shape {
 private int radius;
}
- ☒ B public abstract class Circle extends Shape {
 private int radius;
}
- ☐ C public class Circle extends Shape {
 private int radius;
 public void draw();
}
- ☐ D public abstract class Circle implements Shape {
 private int radius;
 public void draw();
}
- ☒ E public class Circle extends Shape {
 private int radius;
 public void draw() { /* code here */ }
}
- ☐ F public abstract class Circle implements Shape {
 private int radius;
 public void draw() { /* code here */ }
}

✗ 2. Which statement is true about the classes and interfaces in the exhibit?

```
01. public interface A {  
02. public void doSomething(String thing);  
03. }  
01. public class AImpl implements A {  
02. public void doSomething(String msg) {}  
03. }  
01. public class B {  
02. public A doit(){  
03. //more code here  
04. }  
05. public String execute(){  
06 //more code here  
07 }  
08. }  
01. public class C extends B {  
02. public AImpl doit(){  
03. //more code here  
04. }  
05.  
06. public Object execute() {  
07. //more code here  
08. }  
09. }
```

- ☐ (A) Compilation will succeed for all classes and interfaces.
- ☒ (B) Compilation of class C will fail because of an error in line 2.
- ☐ (C) Compilation of class C will fail because of an error in line 6.
- ☐ (D) Compilation of class AImpl will fail because of an error in line 2.



3. Given:

```
public static void parse(String str) {  
try {  
float f = Float.parseFloat(str);  
} catch (NumberFormatException nfe) {  
f = 0;  
} finally {  
System.out.println(f);  
}  
}  
public static void main(String[] args) {  
parse("invalid");  
}
```

What is the result?

- ☐ (A) 0.0
- ☒ (B) Compilation fails.
- ☐ (C) A ParseException is thrown by the parse method at runtime.
- ☐ (D) A NumberFormatException is thrown by the parse method at runtime.

✗ 4. Given:
01. public class Blip {
02. protected int blipvert(int x) { return 0; }
03. }
04. class Vert extends Blip {
05. // insert code here
06. }
Which five methods, inserted independently at line 5, will compile? (Choose five.)

- ☒ A public int blipvert(int x) { return 0; }
- ☐ B private int blipvert(int x) { return 0; }
- ☒ C private int blipvert(long x) { return 0; }
- ☒ D protected long blipvert(int x) { return 0; }
- ☒ E protected int blipvert(long x) { return 0; }
- ☒ F protected long blipvert(long x) { return 0; }
- ☐ G protected long blipvert(int x, int y) { return 0; }

✓ 5.

```
public class TestString1 {  
    public static void main(String[] args) {  
        String str = "420";  
        str += 42;  
        System.out.print(str);  
    }  
}
```


What is the output?

- ☐ A 42
- ☐ B 420
- ☐ C 462
- ☒ D 42042
- ☐ E Compilation fails.
- ☐ F An exception is thrown at runtime.



6. Given:
23. `Object [] myObjects = {`
24. `new Integer(12),`
25. `new String("foo"),`
26. `new Integer(5),`
27. `new Boolean(true)`
28. `};`
29. `Arrays.sort(myObjects);`
30. `for(int i=0; i<myObjects.length; i++) {`
31. `System.out.print(myObjects[i].toString());`
32. `System.out.print(" ");`
33. `}`

What is the result?

- ☐ (A) Compilation fails due to an error in line 23.
- ☐ (B) Compilation fails due to an error in line 29.
- ☒ (C) A `ClassCastException` occurs in line 29.
- ☐ (D) A `ClassCastException` occurs in line 31.
- ☐ (E) The value of all four objects prints in natural order.



7. Which statement is true?

- ☐ (A) A class's `finalize()` method CANNOT be invoked explicitly.
- ☐ (B) `super.finalize()` is called implicitly by any overriding `finalize()` method.
- ☒ (C) The `finalize()` method for a given object is called no more than once by the garbage collector.
- ☐ (D) The order in which `finalize()` is called on two objects is based on the order in which the two objects became finalizable.



```
8. import java.util.*;
public class Mapit {
    public static void main(String[] args) {
        Set<Integer> set = new HashSet<Integer>();
        Integer i1 = 45;
        Integer i2 = 46;
        set.add(i1);
        set.add(i1);
        set.add(i2); System.out.print(set.size() + " ");
        set.remove(i1); System.out.print(set.size() + " ");
        i2 = 47;
        set.remove(i2); System.out.print(set.size() + " ");
    }
}
```

What is the result?

- ☐ A 2 1 0
- ☒ B 2 1 1
- ☐ C 3 2 1
- ☐ D 3 2 2
- ☐ E Compilation fails.
- ☐ F An exception is thrown at runtime.



```
9. class Employee{
    @Override
    public void finalize(){
        System.out.println("Finallize method got called");
    }
}
class Test{
    @Override
    public void finalize(){
        System.out.println("Finallize method got called");
    }
    public static void main(String[] args){
        Employee emp=new Employee();
        String str=new String("Abc");
        System.gc();
    }
}
```

Select One correct option

- ☐ A Finalize method of Employee executed
- ☐ B Finalize method of Test executed
- ☐ C No classes Finalize method got called
- ☒ D Finalize method cannot be overridden in Test class. Because Test is not sub class of Employee

✓ 10. `interface DoStuff2 {
float getRange(int low, int high);
}
interface DoMore {
float getAvg(int a, int b, int c);
}
abstract class DoAbstract implements DoStuff2, DoMore {
}
06. class DoStuff implements DoStuff2 {
07. public float getRange(int x, int y) {
08. return 3.14f;
09. }
10. }
11.
12. interface DoAll extends DoMore {
13. float getAvg(int a, int b, int c, int d);
14. }`

What is the result?

- ☒ A The file will compile without error.
- ☐ B Compilation fails. Only line 7 contains an error.
- ☐ C Compilation fails. Only line 12 contains an error.
- ☐ D Compilation fails. Only line 13 contains an error.
- ☐ E Compilation fails. Only lines 7 and 12 contain errors.

✓ 11. **What is the output of this program?**

```
class Test {  
int a;  
public int b;  
private int c;  
}  
class ACESSTest {  
public static void main(String args[])  
{  
Test ob = new Test();  
ob.a = 10;  
ob.b = 20;  
ob.c = 30;  
System.out.println(" Output :a, b, and c" + ob.a + " " + ob.b + " " + ob.c);  
}  
}
```

- ☒ A Compilation error
- ☐ B Run time error
- ☐ C Output : a, b and c 10 20 30
- ☐ D None of the mentioned

✓ 12. `public class BuildStuff {
public static void main(String[] args) {
Boolean test = new Boolean(true);
Integer x = 343;
Integer y = new BuildStuff().go(test, x);
System.out.println(y);
}
int go(Boolean b, int i) {
if(b) return (i/7);
return (i/49);
}
}`

What is the result?

- ☐ A 7
- ☒ B 49
- ☐ C 343
- ☐ D Compilation fails.
- ☐ E An exception is thrown at runtime.

✓ 13. Given:
`import java.io.*;
public class Forest implements Serializable {

public static void main(String [] args) {
Tree t = new Tree();
try {
FileOutputStream fs = new FileOutputStream("Forest.ser");
ObjectOutputStream os = new ObjectOutputStream(fs);
os.writeObject(t);
os.close();
} catch (Exception ex) {
ex.printStackTrace();
}
}
}
class Tree {`

What is the result?

- ☐ A Compilation fails.
- ☒ B An exception is thrown at runtime.
- ☐ C An instance of Forest is serialized.
- ☐ D An instance of Forest and an instance of Tree are both serialized.

✓ 14.

```
class Test{
public static void main(String[] args){
String test = "This is a test";
12. String[] tokens = test.split("\\s");
13. System.out.println(tokens.length);
}
}
```

What is the result?

- ☐ A 0
- ☐ B 1
- ☐ C 4
- ☒ D Compilation fails.

✗ 15. Analyze the following code:

```
class Test {
public static void main(String[] args) {
try {
String s = "5.6";
Integer.parseInt(s); // Cause a NumberFormatException

int i = 0;
int y = 2 / i;
}
catch (Exception ex) {
System.out.println("NumberFormatException");
}
catch (RuntimeException ex) {
System.out.println("RuntimeException");
}
}
}
```

- ☐ A The program displays NumberFormatException.
- ☒ B The program displays RuntimeException.
- ☐ C The program displays NumberFormatException followed by RuntimeException.
- ☐ D The program has a compilation error.

✗ 16. Given:
20. public class CreditCard {
21.
22. private String cardID;
23. private Integer limit;
24. public String ownerName;
25.
26. public void setCardInformation(String cardID,
27. String ownerName,
28. Integer limit) {
29. this.cardID = cardID;
30. this.ownerName = ownerName;
31. this.limit = limit;
32. }
33. }

Select one correct option from following

- ☐ A The class is fully encapsulated.
- ☐ B The code demonstrates polymorphism.
- ☒ C The ownerName variable breaks encapsulation.
- ☐ D The cardID and limit variables break polymorphism.
- ☐ E The setCardInformation method breaks encapsulation.

✓ 17. Given:
11. public interface Status {
12. /* insert code here */ int MY_VALUE = 10;
13. }
Which three are valid on line 12? (Choose three.)

- ☒ A final
- ☒ B static
- ☐ C native
- ☒ D public
- ☐ E private
- ☐ F abstract
- ☐ G protected