

## SCJP 6.0 認證教戰手冊第二版\_題庫

### 版權宣告

作者希望能達到知識共享，  
因此允許此題庫檔複製與散佈。  
但不可用於任何型式的商業用途，  
否則依法追究。

題庫來源：SCJP 6.0 認證教戰手冊 第二版  
(Oracle Certified Professional Java Programmer)  
作者：黃彬華

## 第1題

Given:

- 35. String #name = "Jane Doe";
- 36. int \$age = 24;
- 37. Double \_height = 123.5;
- 38. double ~temp = 37.5;

Which two statements are true? (Choose two.)

- A. Line 35 will not compile.
- B. Line 36 will not compile.
- C. Line 37 will not compile.
- D. Line 38 will not compile.

答案：AD

## 第2題

Given:

- 1. public class TestString1{
- 2. public static void main(String[] args){
- 3. String str = "420";
- 4. str += 42;
- 5. System.out.print(str);
- 6. }
- 7. }

What is the output?

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

答案：D

## 第3題

Given:

- 1. public class Test{
- 2. public static void main(String[] args){
- 3. int x = 5;
- 4. boolean b1 = true;
- 5. boolean b2 = false;
- 6.
- 7. if((x==4) && !b2)
- 8. System.out.print("1 ");
- 9. System.out.print("2 ");
- 10. if((b2=true) && b1)
- 11. System.out.print("3 ");
- 12. }

13. }

What is the result?

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

答案：D

#### 第4題

Given:

```
22. public void go(){
23.     String o = "";
24.     z:
25.     for(int x=0; x<3; x++){
26.         for(int y=0; y<2; y++){
27.             if(x == 1) break;
28.             if(x==2 && y==1) break z;
29.             o = o + x + y;
30.         }
31.     }
32.     System.out.println(o);
33. }
```

What is the result when the go() method is invoked?

- A. 00
- B. 0001
- C. 000120
- D. 00012021
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：C

#### 第5題

Given:

```
10. int x = 0;
11. int y = 10;
12. do{
13.     y--;
14.     ++x;
15. }while(x < 5);
16. System.out.print(x + "," + y);
```

What is the result?

- A. 5,6
- B. 5,5
- C. 6,5
- D. 6,6

答案：B

#### 第6題

Given:

```
1. public class Breaker{
2.     static String o = "";
3.     public static void main(String[] args){
4.         z:
5.         o = o + 2;
6.         for(int x=3; x<8; x++){
7.             if(x == 4) break;
8.             if(x == 6) break z;
9.             o = o + x;
10.        }
11.        System.out.println(o);
12.    }
13. }
```

What is the result?

- A. 23
- B. 234
- C. 235
- D. 2345
- E. 2357
- F. 23457
- G. Compilation fails.

答案：G

#### 第7題

Given:

```
1. public class Breaker2{
2.     static String o = "";
3.     public static void main(String[] args){
4.         z:
5.         for(int x=2; x<7; x++){
6.             if(x == 3) continue;
7.             if(x == 5) break z;
8.             o = o + x;
9.         }
10.        System.out.println(o);
11.    }
12. }
```

What is the result?

- A. 2
- B. 24
- C. 234
- D. 246
- E. 2346
- F. Compilation fails.

答案：B

#### 第8題

Given:

```
1. public class Spock{
2.     public static void main(String[] args){
3.         Long tail = 2000L;
4.         Long distance = 1999L;
5.         Long story = 1000L;
6.         if((tail>distance) ^ ((story*2)==tail))
7.             System.out.print("1");
8.         if((distance+1 != tail) ^ ((story*2)==distance))
9.             System.out.print("2");
10.    }
11. }
```

What is the result?

- A. 1
- B. 2
- C. 12
- D. Compilation fails.
- E. No output is produced.
- F. An exception is thrown at runtime.

答案：E

#### 第9題

Given:

```
11. String[] elements = {"for", "tea", "too"};
12. String first = (elements.length>0) ? elements[0] : null;
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The variable first is set to null.
- D. The variable first is set to elements[0].

答案：D

## 第10題

Given:

```
1.  import java.util.*;
2.  public class Quest{
3.      public static void main(String[] args){
4.          String[] colors =
5.              {"blue","red","green","yellow","orange"};
6.          Arrays.sort(colors);
7.          int s2 = Arrays.binarySearch(colors, "orange");
8.          int s3 = Arrays.binarySearch(colors, "violet");
9.          System.out.print(s2 + "" + s3);
10.     }
11. }
```

What is the result?

- A. 2-1
- B. 2-4
- C. 2-5
- D. 3-1
- E. 3-4
- F. 3-5
- G. Compilation fails.
- H. An exception is thrown at runtime.

答案：C

## 第11題

Given:

```
1.  class Alligator{
2.      public static void main(String[] args){
3.          int[]x[] = {{1,2},{3,4,5},{6,7,8,9}};
4.          int[][]y = x;
5.          System.out.print(y[2][1]);
6.      }
7.  }
```

What is the result?

- A. 2
- B. 3
- C. 4
- D. 6
- E. 7
- F. Compilation fails.

答案：E

## 第12題

Drag and Drop (拖曳題)

Add methods to the Beta class to make it compile correctly.

```

class Alpha{
    public void bar(int... x){}
    public void bar(int x){}
}
public class Beta extends Alpha{
    Place here
    Place here
    Place here
}

```

## Methods

private void bar(int x){}

public void bar(int x){}

public int bar(String x){return 1;}

public Alpha bar(int x){}

public void bar(int x, int y){}

public int bar(int x){return x;}

答案：

```

class Alpha{
    public void bar(int... x){}
    public void bar(int x){}
}
public class Beta extends Alpha{
    public void bar(int x){}
    public int bar(String x){return 1;}
    public void bar(int x, int y){}
}

```

## 第13題

Given:

```

1. public class Barn{
2.     public static void main(String[] args){
3.         new Barn().go("hi", 1);
4.         new Barn().go("hi", "world", 2);
5.     }
6.     public void go(String... y, int x){
7.         System.out.print(y[y.length-1] + " ");
8.     }
9. }

```

What is the result?

- A. hi hi
- B. hi world
- C. world world
- D. Compilation fails.
- E. An exception is thrown at runtime.

答案：D

## 第14題

Given:

```
11. class Person{
12.     String name = "No name";
13.     public Person(String nm){ name = nm;}
14. }
15.
16. class Employee extends Person{
17.     String empID = "0000";
18.     public Employee(String id){empID = id;}
19. }
20.
21. class EmployeeTest{
22.     public static void main(String[] args){
23.         Employee e = new Employee("4321");
24.         System.out.println(e.empID);
25.     }
26. }
```

What is the result?

- A. 4321
- B. 0000
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 18.

答案：D

### 第15題

Given:

```
11. class Mud{
12.     //insert code here
13.     System.out.println("hi");
14. }
15. }
```

And the following five fragments:

```
public static void main(String...a){
```

```
public static void main(String.* a){
```

```
public static void main(String... a){
```

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

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

How many of the code fragments, inserted independently at line 12, compile?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5



答案：D

### 第16題

Given:

```
5.  class Atom{
6.      Atom(){System.out.print("atom ");}
7.  }
8.  class Rock extends Atom{
9.      Rock(String type){System.out.print(type);}
10. }
11. public class Mountain extends Rock{
12.     Mountain(){
13.         super("granite ");
14.         new Rock("granite ");
15.     }
16.     public static void main(String[] a){new Mountain();}
17. }
```

What is the result?

- A. Compilation fails.
- B. atom granite
- C. granite granite
- D. atom granite granite
- E. An exception is thrown at runtime.
- F. atom granite atom granite

答案：F

### 第17題

Given:

```
1.  public class Blip{
2.      protected int blipvert(int x){return 0;}
3.  }
4.  class Vert extends Blip{
5.      //insert code here
6.  }
```

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;}

答案：ACEFG

## 第18題

Given:

```
1.  class Super{
2.      private int a;
3.      protected Super(int a){this.a = a;}
4.  }
...
11. class Sub extends Super{
12.     public Sub(int a){super(a);}
13.     public Sub(){this.a = 5;}
14. }
```

Which two, independently, will allow Sub to compile? (Choose two.)

- A. Change line 2 to:  
public int a;
- B. Change line 2 to:  
protected int a;
- C. Change line 13 to:  
public Sub(){this(5);}
- D. Change line 13 to:  
public Sub(){super(5);}
- E. Change line 13 to:  
public Sub(){super(a);}

答案：CD

## 第19題

Which Man class properly represents the relationship "Man has a best friend who is a Dog"?

- A. class Man extends Dog{ }
- B. class Man implements Dog{ }
- C. class Man{private BestFriend dog;}
- D. class Man{private Dog bestFriend;}
- E. class Man{private Dog<bestFriend>;}
- F. class Man{private BestFriend<dog>;}

答案：D

## 第20題

A team of programmers is reviewing a proposed API for a new utility class. After some discussion, they realize that they can reduce the number of methods in the API without losing any functionality. If they implement the new design, which two OO principles will they be promoting?

- A. Looser coupling
- B. Tighter coupling
- C. Lower cohesion

- D. Higher cohesion
- E. Weaker encapsulation
- F. Stronger encapsulation

答案：AD

#### 第21題

Given:

```
1. class Batman{
2.     int squares = 81;
3.     public static void main(String[] args){
4.         new Batman().go();
5.     }
6.     void go(){
7.         incr(++squares);
8.         System.out.println(squares);
9.     }
10.    void incr(int squares){squares += 10;}
11. }
```

What is the result?

- A. 81
- B. 82
- C. 91
- D. 92
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：B

#### 第22題

Given:

```
1. class Pass{
2.     public static void main(String[] args){
3.         int x = 5;
4.         Pass p = new Pass();
5.         p.doStuff(x);
6.         System.out.print(" main x = " + x);
7.     }
8.     void doStuff(int x){
9.         System.out.print(" doStuff x = " + x++);
10.    }
11. }
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. doStuff x = 6 main x = 6
- D. doStuff x = 5 main x = 5

E. doStuff x = 5 main x = 6

F. doStuff x = 6 main x = 5

答案：D

### 第23題

A company has a business application that provides its users with many different reports: receivables reports, payables reports, revenue projects, and so on. The company has just purchased some new, state-of-the-art, wireless printers, and a programmer has been assigned the task of enhancing all of the reports to use not only the company's old printers, but the new wireless printers as well.

When the programmer starts looking into the application, the programmer discovers that because of the design of the application, it is necessary to make changes to each report to support the new printers.

Which two design concepts most likely explain the situation? (Choose two.)

- A. Inheritance
- B. Low cohesion
- C. Tight coupling
- D. High cohesion
- E. Loose coupling
- F. Object immutability

答案：BC

### 第24題

A company that makes Computer Assisted Design(CAD) software has, within its application some utility classes that are used to perform 3D rendering tasks. The company's chief scientist has just improved the performance of one of the utility classes' key rendering algorithms, and has assigned a programmer to replace the old algorithm with the new algorithm. When the programmer begins researching the utility classes, she is happy to discover that the algorithm to be replaced exists in only one class. The programmer reviews that class's API, and replaces the old algorithm with the new algorithm, being careful that her changes adhere strictly to the class's API. Once testing has begun, the programmer discovers that other classes that use the class she changed are no longer working properly.

What design flaw is most likely the cause of there new bugs?

- A. Inheritance
- B. Tight coupling
- C. Low cohesion
- D. High cohesion
- E. Loose coupling
- F. Object immutability

答案：B

## 第25題

Given:

```
1.  class ClassA{
2.      public int numberOfInstances;
3.      protected ClassA(int numberOfInstances){
4.          this.numberOfInstances = numberOfInstances;
5.      }
6.  }
7.  class ExtendedA extends ClassA{
8.      private ExtendedA(int numberOfInstances){
9.          super(numberOfInstances);
10.     }
11.     public static void main(String[] args){
12.         ExtendedA ext = new ExtendedA(420);
13.         System.out.print(ext.numberOfInstances);
14.     }
15. }
```

What is the result?

- A. 420 is the output
- B. An exception is thrown at runtime.
- C. All constructors must be declared public.
- D. Constructors CANNOT use the private modifier.
- E. Constructors CANNOT use the protected modifier.

答案：A

## 第26題

Given:

```
10. interface Jumper{public void jump();}
...
20. class Animal{ }
...
30. class Dog extends Animal{
31.     Tail tail;
32. }
...
40. class Beagle extends Dog implements Jumper{
41.     public void jump(){ }
42. }
...
50. class Cat implements Jumper{
51.     public void jump(){ }
52. }
```

Which three are true? (Choose three.)

- A. Cat is-a Animal
- B. Cat is-a Jumper
- C. Dog is-a Animal
- D. Dog is-a Jumper

- E. Cat has-a Animal
- F. Beagle has-a Tail
- G. Beagle has-a Jumper

答案：BCF

#### 第27題

Given:

```
10. class One{
11.     void foo(){
12.     }
13. class Two extends One{
14.     //insert method here
15. }
```

Which three methods, inserted individually at line 14, will correctly complete class Two? (Choose three.)

- A. int foo(){/\* more code here \*/}
- B. void foo(){/\* more code here \*/}
- C. public void foo(){/\* more code here \*/}
- D. private void foo(){/\* more code here \*/}
- E. protected void foo(){/\* more code here \*/}

答案：BCE

#### 第28題

Given:

```
1. class X{
2.     X(){System.out.print(1);}
3.     X(int x){
4.         this();
5.         System.out.print(2);
6.     }
7. }
8. public class Y extends X{
9.     Y(){
10.         super(6);
11.         System.out.print(3);
12.     }
13.     Y(int y){
14.         this();
15.         System.out.println(4);
16.     }
17.     public static void main(String[] a){new Y(5);}
18. }
```

What is the result?

- A. 13
- B. 134
- C. 1234

- D. 2134
- E. 2143
- F. 4321

答案：C

#### 第29題

Given:

```
1. public class A{
2.     public void doit(){
3.     }
4.     public String doit(){
5.         return "a";
6.     }
7.     public double doit(int x){
8.         return 1.0;
9.     }
10. }
```

What is the result?

- A. An exception is thrown at runtime.
- B. Compilation fails because of an error in line 7.
- C. Compilation fails because of an error in line 4.
- D. Compilation succeeds and no runtime errors with class A occur.

答案：C

#### 第30題

Given:

```
1. public class SimpleCalc{
2.     public int value;
3.     public void calculate(){value += 7;}
4. }
```

And:

```
1. public class MultiCalc extends SimpleCalc{
2.     public void calculate(){value -= 3;}
3.     public void calculate(int multiplier){
4.         calculate();
5.         super.calculate();
6.         value *= multiplier;
7.     }
8.     public static void main(String[] args){
9.         MultiCalc calculator = new MultiCalc();
10.        calculator.calculate(2);
11.        System.out.println("Value is: " + calculator.value);
12.    }
13. }
```

What is the result?

- A. Value is: 8
- B. Compilation fails.
- C. Value is: 12
- D. Value is: -12
- E. The code runs with no output.
- F. An exception is thrown at runtime.

答案：A

### 第31題

Given:

```
1. public class Base{
2.     public static final String FOO = "foo";
3.     public static void main(String[] args){
4.         Base b = new Base();
5.         Sub s = new Sub();
6.         System.out.print(Base.FOO);
7.         System.out.print(Sub.FOO);
8.         System.out.print(b.FOO);
9.         System.out.print(s.FOO);
10.        System.out.print(((Base)s).FOO);
11.    }
12. }
13. class Sub extends Base{public static final String FOO = "bar";}
```

What is the result?

- A. foofoofoofoofoo
- B. foobarfoobarbar
- C. foobarfoofoofoo
- D. foobarfoobarfoo
- E. barbarbarbarbar
- F. foofoofoobarbar
- G. foofoofoobarfoo

答案：D

### 第32題

Given:

```
1. class Mammal{ }
2.
3. class Raccoon extends Mammal{
4.     Mammal m = new Mammal();
5. }
6.
7. class BabyRaccoon extends Mammal{ }
```

Which four statements are true? (Choose four.)

- A. Raccoon is-a Mammal.



- B. Raccoon has-a Mammal.
- C. BabyRaccoon is-a Mammal.
- D. BabyRaccoon is-a Raccoon.
- E. BabyRaccoon has-a Mammal.
- F. BabyRaccoon is-a BabyRaccoon.

答案：ABCF

### 第33題

Given:

```
2. public class Hi{
3.     void m1(){
4.         protected void m2(){
5.     }
6.     class Lois extends Hi{
7.         //insert code here
8.     }
```

Which four code fragments, inserted independently at line 7, will compile? (Choose four.)

- A. public void m1(){}
- B. protected void m1(){}
- C. private void m1(){}
- D. void m2(){}
- E. public void m2(){}
- F. protected void m2(){}
- G. private void m2(){}

答案：ABEF

### 第34題

Which four statements are true? (Choose four.)

- A. Has-a relationships should never be encapsulated.
- B. Has-a relationships should be implemented using inheritance.
- C. Has-a relationships can be implemented using instance variables.
- D. Is-a relationships can be implemented using the extends keyword.
- E. Is-a relationships can be implemented using the implements keyword.
- F. The relationship between Movie and Actress is an example of an is-a relationship.
- G. An array or a collection can be used to implement a one-to-many has-a relationship.

答案：CDEG

### 第35題

Given:

```
10. public class Hello{
11.     String title;
```

```
12.         int value;
13.         public Hello(){
14.             title += " World";
15.         }
16.         public Hello(int value){
17.             this.value = value;
18.             title = "Hello";
19.             Hello();
20.         }
21.     }
and:
30.     Hello c = new Hello(5);
31.     System.out.print(c.title);
```

What is the result?

- A. Hello
- B. Hello World
- C. Compilation fails.
- D. Hello World 5
- E. The code runs with no output.
- F. An exception is thrown at runtime.

答案：C

### 第36題

Given:

```
public class Doubler{
    public static int doubleMe(Holder h){
        return h.getAmount() * 2;
    }
}
```

and:

```
public class Holder {
    int amount = 10;
    public void doubleAmount(){amount = Doubler.doubleMe(this);}
    public int getAmount(){return amount;}
    //more code here
}
```

Place the code fragments in position to reduce the coupling between Doubler and Holder.

```
public class Doubler{
    public static int doubleMe( Place here h){
        return Place here * 2;
    }
}
```

```
public class Holder {
    int amount = 10;
    public void doubleAmount(){amount = Doubler.doubleMe( Place here );}
```

```

public int getAmount(){return amount;}
//more code here
}

```

## Code Fragments

```

void Holder int Doubler
h.getAmount() h this amount

```

答案：

```

public class Doubler{
    public static int doubleMe(int h){
        return h * 2;
    }
}

public class Holder{
    int amount = 10;
    public void doubleAmount(){amount = Doubler.doubleMe(amount);}
    public int getAmount(){return amount;}
    //more code here
}

```

## 第37題

Given:

```

21. abstract class C1{
22.     public C1(){System.out.print(1);}
23. }
24. class C2 extends C1{
25.     public C2(){System.out.print(2);}
26. }
27. class C3 extends C2{
28.     public C3(){System.out.print(3);}
29. }
30. public class Ctest{
31.     public static void main(String[] a){new C3();}
32. }

```

What is the result?

- A. 3
- B. 23
- C. 32
- D. 123
- E. 321
- F. Compilation fails.
- G. An exception is thrown at runtime.

答案：D

## 第38題

Given:

```
1.  class One{
2.      public One foo(){return this;}
3.  }
4.  class Two extends One{
5.      public One foo(){return this;}
6.  }
7.  class Three extends Two{
8.      //insert method here
9.  }
```

Which two methods, inserted individually, correctly complete the Three class? (Choose two.)

- A. `public void foo(){}`
- B. `public int foo(){return 3;}`
- C. `public Two foo(){return this;}`
- D. `public One foo(){return this;}`
- E. `public Object foo(){return this;}`

答案：CD

### 第39題

Given:

```
11. public class ItemTest{
12.     private final int id;
13.     public ItemTest(int id){this.id = id;}
14.     public void updateId(int newId){id = newId;}
15.
16.     public static void main(String[] args){
17.         ItemTest fa = new ItemTest(42);
18.         fa.updateId(69);
19.         System.out.println(fa.id);
20.     }
21. }
```

Which statement is true?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The attribute `id` in the `ItemTest` object remains unchanged.
- D. The attribute `id` in the `ItemTest` object is modified to the new value.
- E. A new `ItemTest` object is created with the preferred value in the `id` attribute.

答案：A

### 第40題

Given:

```
1.  class Foo{
2.      private int x;
3.      public Foo(int x){this.x = x;}
4.      public void setX(int x){this.x = x;}
```

```
5.         public int getX(){return x;}
6.     }
7.
8.     public class Gamma{
9.         static Foo fooBar(Foo foo){
10.             foo = new Foo(100);
11.             return foo;
12.         }
13.         public static void main(String[] args){
14.             Foo foo = new Foo(300);
15.             System.out.print(foo.getX() + "-");
16.
17.             Foo fooFoo = fooBar(foo);
18.             System.out.print(foo.getX() + "-");
19.             System.out.print(fooFoo.getX() + "-");
20.
21.             foo = fooBar(fooFoo);
22.             System.out.print(foo.getX() + "-");
23.             System.out.print(fooFoo.getX());
24.         }
25.     }
```

What is the output?

- A. 300-100-100-100-100
- B. 300-300-100-100-100
- C. 300-300-300-100-100
- D. 300-300-300-300-100

答案：B

#### 第41題

Given:

```
1.     public class KungFu{
2.         public static void main(String[] args){
3.             Integer x = 400;
4.             Integer y = x;
5.             x++;
6.             StringBuilder sb1 = new StringBuilder("123");
7.             StringBuilder sb2 = sb1;
8.             sb1.append("5");
9.             System.out.println((x == y) + " " + (sb1 == sb2));
10.        }
11.    }
```

What is the result?

- A. true true
- B. false true
- C. true false
- D. false false
- E. Compilation fails.

F. An exception is thrown at runtime.

答案：B

#### 第42題

```
1. class A{
2.     public String doit(int x, int y){
3.         return "a";
4.     }
5.
6.     public String doit(int... vals){
7.         return "b";
8.     }
9. }
```

Given:

```
25. A a = new A();
26. System.out.println(a.doit(4, 5));
```

What is the result?

- A. Line 26 prints "a" to System.out.
- B. Line 26 prints "b" to System.out.
- C. An exception is thrown at runtime.
- D. Compilation of class A will fail due to an error in line 6.

答案：A

#### 第43題

Given:

```
1. class Plant{
2.     private String name;
3.     public Plant(String name){this.name = name;}
4.     public String getName(){return name;}
5. }
6. public class Tree extends Plant{
7.     public void growFruit(){ }
8.     public void dropLeaves(){ }
9. }
```

What statement is true?

- A. The code will compile without changes.
- B. The code will compile if `public Tree(){Plant();}` is added to the Tree class.
- C. The code will compile if `public Plant(){Tree();}` is added to the Plant class.
- D. The code will compile if `public Plant(){this("fern");}` is added to the Plant class.
- E. The code will compile if `public Plant(){Plant("fern");}` is added to the Plant class.

答案：D

#### 第44題

Given:

```

1.  class Employee{
2.      String name; double baseSalary;
3.      public Employee(String name, double baseSalary){
4.          this.name = name;
5.          this.baseSalary = baseSalary;
6.      }
7.  }
8.  public class SalesPerson extends Employee{
9.      double commission;
10.     public SalesPerson(String name,
11.        double baseSalary, double commission){
12.        //insert code here
13.    }
14. }

```

Which two code fragments, inserted independently at line 12, will compile? (Choose two.)

- A. `super(name, baseSalary);`
- B. `this.commission = commission;`
- C. `super();`  
`this.commission = commission;`
- D. `this.commission = commission;`  
`super();`
- E. `super(name, baseSalary);`  
`this.commission = commission;`
- F. `this.commission = commission;`  
`super(name, baseSalary);`
- G. `super(name, baseSalary, commission);`

答案：AE

#### 第45題

Given that:

Gadget has-a Sprocket and

Gadget has-a Spring and

Gadget is-a Widget and

Widget has-a Sprocket

Which two code fragments represent these relationships? (Choose two.)

- A. `class Widget{Sprocket s;}`  
`class Gadget extends Widget{Spring s;}`
- B. `class Widget{}`  
`class Gadget extends Widget{Spring s1; Sprocket s2;}`
- C. `class Widget{Sprocket s1; Spring s2;}`  
`class Gadget extends Widget{}`
- D. `class Gadget{Spring s;}`

- ```
class Widget extends Gadget{Sprocket s;}
E. class Gadget{}
class Widget extends Gadget{Sprocket s1; Spring s2;}
F. class Gadget{Spring s1; Sprocket s2;}
class Widget extends Gadget{ }
```

答案：AC

#### 第46題

Given:

```
10. public class Pizza{
11.     ArrayList toppings;
12.
13.     public final void addTopping(String topping){
14.         toppings.add(topping);
15.     }
16.
17.     public void removeTopping(String topping){
18.         toppings.remove(topping);
19.     }
20. }
```

And:

```
30. class PepperoniPizza extends Pizza{
31.     public void addTopping(String topping){
32.         System.out.println("Cannot add Toppings");
33.     }
34.
35.     public void removeTopping(String topping){
36.         System.out.println("Cannot remove pepperoni");
37.     }
38. }
```

And:

```
50. Pizza pizza = new PepperoniPizza();
51. pizza.addTopping("Mushrooms");
52. pizza.removeTopping("Pepperoni");
```

What is the result?

- A. Compilation fails.
- B. Cannot add Toppings
- C. The code runs with no output.
- D. A NullPointerException is thrown in Line 14.

答案：A

#### 第47題

Place the Types in one of the Type columns, and the Relationships in the Relationship column, to define



appropriate has-a and is-a relationships:

| Type       | Relationship | Type             | Relationship | Types     |
|------------|--------------|------------------|--------------|-----------|
| Place here | Place here   | Animal           | is-a         | Dog       |
| Forest     | Place here   | Place here       | has-a        | Side      |
| Rectangle  | Place here   | Place here       |              | Tail      |
| Place here | Place here   | Programming Book |              | Square    |
|            |              |                  |              | Tree      |
|            |              |                  |              | Book      |
|            |              |                  |              | Java Book |
|            |              |                  |              | Pen       |

答案：

| Type      | Relationship | Type             |
|-----------|--------------|------------------|
| Dog       | is-a         | Animal           |
| Forest    | has-a        | Tree             |
| Rectangle | has-a        | Side             |
| Java Book | is-a         | Programming Book |

#### 第48題

Given:

```

1.  public class Venus{
2.      public static void main(String[] args){
3.          int[] x = {1, 2, 3};
4.          int y[] = {4, 5, 6};
5.          new Venus().go(x, y);
6.      }
7.      void go(int[]... z){
8.          for(int[] a : z)
9.              System.out.print(a[0]);
10.     }
11. }
```

What is the result?

- A. 1
- B. 12
- C. 14
- D. 123
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：C

#### 第49題

Place code fragments into position so the output is: The quantity is 420

```

Place here update(int quantity, int adjust){
    Place here
}

public void callUpdate(){
    int quant = 100;
    Place here
    System.out.println("The quantity is " + quant);
}

```

**Code Fragments**

```

public int  quantity = quantity + adjust; update(quant, 320);
public void quant = update(quant, 320);
quantity = quantity + adjust;
return quantity;

```

答案：

```

public int update(int quantity, int adjust){
    quantity = quantity + adjust;
    return quantity;
}

public void callUpdate(){
    int quant = 100;
    quant = update(quant, 320);
    System.out.println("The quantity is " + quant);
}

```

**第50題**

Given:

1. public abstract class Shape{
2. private int x;
3. private int y;
4. public abstract void draw();
5. public void setAnchor(int x, int y){
6. this.x = x;
7. this.y = y;
8. }
9. }

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 */}  
    }
```

答案：BE

#### 第51題

Given:

- ```
1.    public interface A{  
2.        public void doSomething(String thing);  
3.    }  
  
1.    public class AImpl implements A{  
2.        public void doSomething(String msg){}  
3.    }  
  
1.    public class B{  
2.        public A doit(){  
3.            //more code here  
4.        }  
5.  
6.        public String execute(){  
7.            //more code here  
8.        }  
9.    }  
  
1.    public class C extends B{  
2.        public AImpl doit(){  
3.            //more code here  
4.        }  
5.  
6.        public Object execute(){
```

```

7.          //more code here
8.          }
9.      }

```

Which statement is true about the classes and interfaces?

- 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.

答案：C

### 第52題

Place the code fragments in position to complete the Displayable interface.

```

interface Reloadable{
    public void reload();
}

class Edit{
    public void edit(){/* Edit Here */}
}

interface Displayable
    Place here Place here{
    Place here
}

```

**Code Fragments**

extends
public void display();
Reloadable
implements
public void display(){/\* Display \*/}
Edit

答案：

```

interface Displayable
    extends Reloadable{
    public void display();
}

```

### 第53題

Insert six modifiers into the code such that it meets all of these requirements:

- It must be possible to create instances of Alpha and Beta from outside the packages in which they are defined.
- When an object of type Alpha (or any potential subclass of Alpha) has been created, the instance variable alpha may never be changed.
- The value of the instance variable alpha must always be "A" for objects of type Alpha.

| Code                                                                                                                                                                                                                                                               | Modifiers                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <pre>package alpha; Place here class Alpha{     Place here String alpha;     Place here Alpha(){this("A");}     Place here Alpha(String a){alpha = a;} } package beta; Place here class Beta extends alpha.Alpha{     Place here Beta(String a){super(a);} }</pre> | <pre>private protected public</pre> |

答案：

```
package alpha;
public class Alpha{
    private String alpha;
    public Alpha(){this("A");}
    protected Alpha(String a){alpha = a;}
}
package beta;
public class Beta extends alpha.Alpha{
    public Beta(String a){super(a);}
}
```

#### 第54題

Given:

1. package test;
- 2.
3. class Target{
4. public String name = "hello";
5. }

What can directly access and change the value of the variable name?

- A. any class
- B. only the Target class
- C. any class in the test package
- D. any class that extends Target

答案：C

#### 第55題

Given:

11. abstract class Vehicle{public int speed(){return 0;}}

```
12. class Car extends Vehicle{public int speed(){return 60;}}
13. class RaceCar extends Car{public int speed(){return 150;}}
...
21. RaceCar racer = new RaceCar();
22. Car car = new RaceCar();
23. Vehicle vehicle = new RaceCar();
24. System.out.println(racer.speed() + ", " + car.speed()
25. + ", " + vehicle.speed());
```

What is the result?

- A. 0, 0, 0
- B. 150, 60, 0
- C. Compilation fails.
- D. 150, 150, 150
- E. An exception is thrown at runtime.

答案：D

#### 第56題

Given:

```
5. class Building{ }
6. public class Barn extends Building{
7.     public static void main(String[] args){
8.         Building build1 = new Building();
9.         Barn barn1 = new Barn();
10.        Barn barn2 = (Barn)build1;
11.        Object obj1 = (Object)build1;
12.        String str1 = (String)build1;
13.        Building build2 = (Building)barn1;
14.    }
15. }
```

Which is true?

- A. if line 10 is removed, the compilation succeeds.
- B. if line 11 is removed, the compilation succeeds.
- C. if line 12 is removed, the compilation succeeds.
- D. if line 13 is removed, the compilation succeeds.
- E. More than one line must be removed for compilation to succeed.

答案：C

#### 第57題

Given:

```
21. class Money{
22.     private String country = "Canada";
23.     public String getCO(){return country;}
24. }
25. class Yen extends Money{
26.     public String getCO(){return super.country;}
```

```
27.     }
28.     public class Euro extends Money{
29.         public String getC(){return super.getC();}
30.         public static void main(String[] args){
31.             System.out.print(new Yen().getC() + " " + new Euro().getC());
32.         }
33.     }
```

What is the result?

- A. Canada
- B. null Canada
- C. Canada null
- D. Canada Canada
- E. Compilation fails due to an error on line 26.
- F. Compilation fails due to an error on line 29.

答案：E

#### 第58題

Given:

```
10.     interface Foo{ }
11.     class Alpha implements Foo{ }
12.     class Beta extends Alpha{ }
13.     class Delta extends Beta{
14.         public static void main(String[] args){
15.             Beta x = new Beta();
16.             //insert code here
17.         }
18.     }
```

Which code, inserted at line 16, will cause a java.lang.ClassCastException?

- A. Alpha a = x;
- B. Foo f = (Delta)x;
- C. Foo f = (Alpha)x;
- D. Beta b = (Beta)(Alpha)x;

答案：B

#### 第59題

Given the following directory structure:

```
bigProject
|--source
|  |--Utils.java
|
|--classes
|
```

And the following command line invocation:

```
javac -d classes source/Utils.java
```

Assume the current directory is bigProject, what is the result?

- A. If the compile is successful, Utils.class is added to the source directory.
- B. The compiler returns an invalid flag error.
- C. If the compile is successful, Utils.class is added to the classes directory.
- D. If the compile is successful, Utils.class is added to the bigProject directory.

答案：C

#### 第60題

Given:

1. package com.company.application;
- 2.
3. public class MainClass{
4. public static void main(String[] args){ }
5. }

And MainClass exists in the /apps/com/company/application directory. Assume the CLASSPATH environment variable is set to "." (current directory).

Which two java commands entered at the command line will run MainClass? (Choose two.)

- A. java MainClass if run from the /apps directory
- B. java com.company.application.MainClass if run from the /apps directory
- C. java -classpath /apps com.company.application.MainClass if run from any directory
- D. java-classpath . MainClass if run from the /apps/com/company/application directory
- E. java -classpath /apps/com/company/application:. MainClass if run from the /apps directory
- F. java com.company.application.MainClass if run from the /apps/com/company/application directory

答案：BC

#### 第61題

Given two files, GrizzlyBear.java and Salmon.java:

1. package animals.mammals;
  - 2.
  3. public class GrizzlyBear extends Bear{
  4. void hunt() {
  5. Salmon s = findSalmon();
  6. s.consume();
  7. }
  8. }
- 
1. package animals.fish;
  - 2.
  3. public class Salmon extends Fish {
  4. public void consume() { /\* do stuff \*/ }
  5. }

If both classes are in the correct directories for their packages, and the Mammal class correctly defines the findSalmon() method, which change allows this code to compile?

- A. add import animals.mammals.\*; at line 2 in Salmon.java
- B. add import animals.fish.\*; at line 2 in GrizzlyBear.java



- C. add import animals.fish.Salmon.\*; at line 2 in GrizzlyBear.java
- D. add import animals.mammals.GrizzlyBear\*; at line 2 in Salmon.java

答案：B

### 第62題

Given:

```
31. class Foo{
32.     public int a = 3;
33.     public void addFive(){ a += 5; System.out.print("f "); }
34. }
35. class Bar extends Foo{
36.     public int a = 8;
37.     public void addFive(){this.a += 5; System.out.print("b ");}
38. }
```

Invoked with:

```
Foo f = new Bar();
f.addFive();
System.out.println(f.a);
```

What is the result?

- A. b 3
- B. b 8
- C. b 13
- D. f 3
- E. f 8
- F. f 13
- G. Compilation fails,
- H. An exception is thrown at runtime.

答案：A

### 第63題

Given:

```
11. class ClassA{}
12. class ClassB extends ClassA{}
13. class ClassC extends ClassA{}
```

and:

```
21. ClassA p0 = new ClassA();
22. ClassB p1 = new ClassB();
23. ClassC p2 = new ClassC();
24. ClassA p3 = new ClassB();
25. ClassA p4 = new ClassC();
```

Which three are valid? (Choose three.)

- A. p0 = p1;
- B. p1 = p2,
- C. p2 = p4;

D. p2 = (ClassC)p1;

E. p1 = (ClassB)p3;

F. p2 = (ClassC)p4;

答案：AEF

#### 第64題

Given:

```
class A {
    String name = "A";
    String getName() {
        return name;
    }
    String greeting(){
        return "class A";
    }
}
class B extends A {
    String name = "B";
    String greeting() {
        return "class B";
    }
}
public class Client {
    public static void main( String[] args ) {
        A a = new A();
        A b = new B();
        System.out.println(a.greeting() + " has name " + a.getName());
        System.out.println(b.greeting() + " has name " + b.getName());
    }
}
```

Place the names "A" and "B" in the following output Names

```
class  has name 
class  has name 
```

Names

答案：

```
class  has name 
class  has name 
```

#### 第65題

Replace two of the Modifiers that appear in the Single class to make the code compile.

Note: Three modifiers will not be used and four modifiers in the code will remain unchanged.

**Code**

```
public class Single {
      Single instance;
      Single getInstance() {
        if (instance == null) instance = create();
    }
}
```

**Modifiers**

|                                                                                                                                                                  |                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <pre>         return instance;     }     private Single() { }     protected Single create() { return new Single(); } } class SingleSub extends Single { } </pre> | <div>abstract</div> <div>static</div> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|

答案：

|     |                                              |
|-----|----------------------------------------------|
| 1.  | class Single{                                |
| 2.  | private static Single instance;              |
| 3.  | public static Single getInstance(){          |
| 4.  | if(instance == null) instance = create();    |
| 5.  | return instance;                             |
| 6.  | }                                            |
| 7.  | protected Single(){}                         |
| 8.  | static Single create(){return new Single();} |
| 9.  | }                                            |
| 10. | class SingleSub extends Single{              |
| 11. | }                                            |

#### 第66題

Given:

5. class Thingy{ Meter m = new Meter(); }
6. class Component { void go() { System.out.print("c"); }}
7. class Meter extends Component { void go() { System.out.print("m"); }}
- 8.
9. class DeluxeThingy extends Thingy {
10. public static void main(String[] args) {
11. DeluxeThingy dt = new DeluxeThingy();
12. dt.m.go();
13. Thingy t = new DeluxeThingy();
14. t.m.go();
15. }
16. }

Which two are true? (Choose two.)

- A. The output is mm.
- B. The output is mc.
- C. Component is-a Meter.
- D. Component has-a Meter.
- E. DeluxeThingy is-a Component.
- F. DeluxeThingy has-a Component.

答案：AF

#### 第67題

Given:

10. abstract public class Employee {

```
11.    protected abstract double getSalesAmount();
12.    public double getCommision() {
13.        return getSalesAmount() * 0.15;
14.    }
15. }
16. class Sales extends Employee {
17.    //insert method here
18. }
```

Which two methods, inserted independently at line 17, correctly complete the Sales class? (Choose two.)

- A. double getSalesAmount() { return 1230.45; }
- B. public double getSalesAmount() { return 1230.45; }
- C. private double getSalesAmount() { return 1230.45; }
- D. protected double getSalesAmount() { return 1230.45; }

答案：BD

#### 第68題

Given the following six method names:

addListener

addMouseListener

setMouseListener

deleteMouseListener

removeMouseListener

registerMouseListener

How many of these method names follow JavaBean Listener naming rules?

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

答案：B

#### 第69題

Given

```
11. public interface Status {
12.     /* insert code here */ int MY_VALUE = 10;
13. }
```

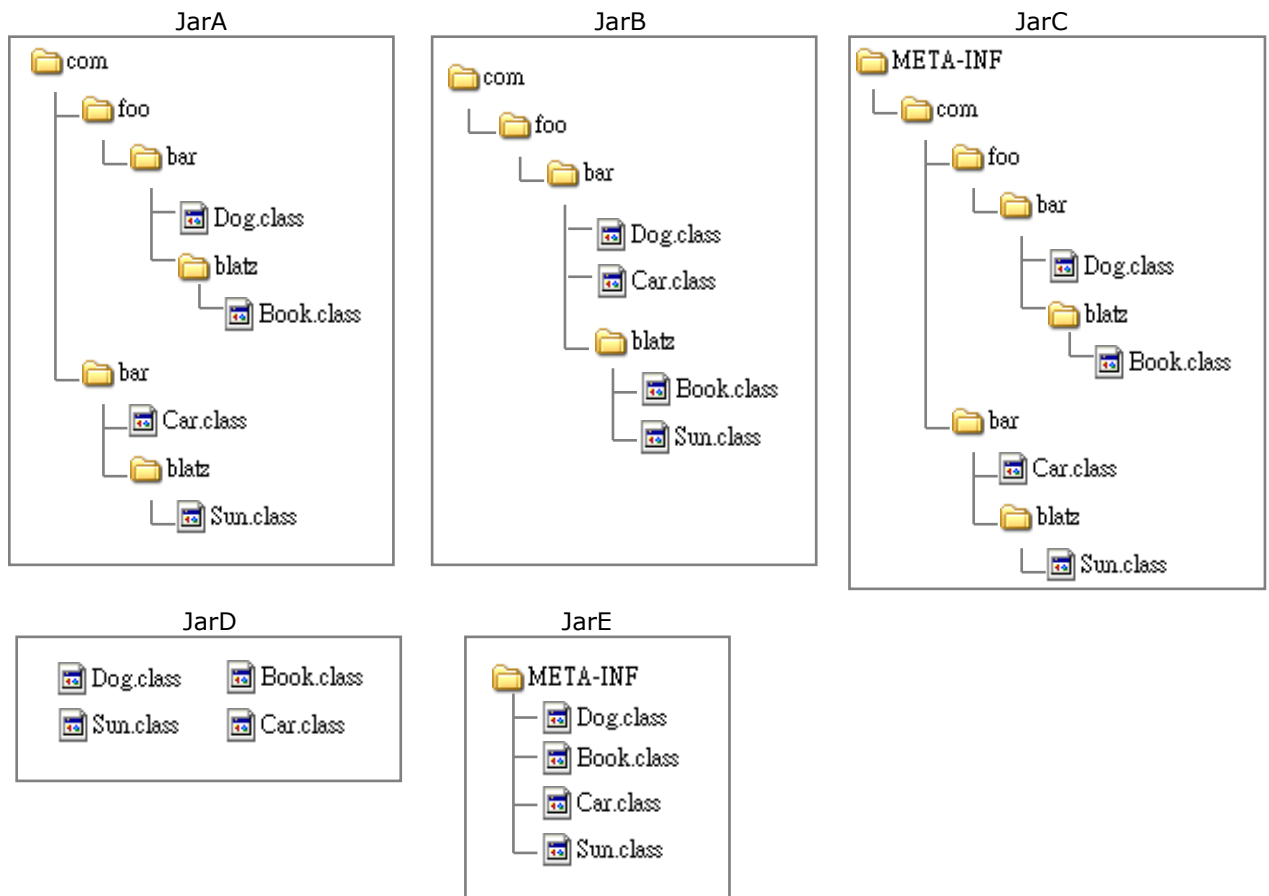
Which three are valid on line 12? (Choose three.)

- A. final
- B. static
- C. native
- D. public

- E. private
- F. abstract
- G. protected

答案：ABD

## 第70題



Given the fully-qualified class names:

com.foo.bar.Dog

com.foo.bar.blatz.Book

com.bar.Car

com.bar.blatz.Sun

Which graph represents the correct directory structure for a JAR file from which those classes can be used by the compiler and JVM?

- A. Jar A
- B. Jar B
- C. Jar C
- D. Jar D
- E. Jar E

答案：A

## 第71題

Given:

1. interface A{public void aMethod();}
2. interface B { public void bMethod(); }

```
3. interface C extends A, B { public void cMethod(); }
4. class D implements B {
5.     public void bMethod(){}
6. }
7. class E extends D implements C {
8.     public void aMethod(){}
9.     public void bMethod(){}
10.    public void cMethod(){}
11. }
```

What is the result?

- A. Compilation fails because of an error in line 3.
- B. Compilation fails because of an error in line 7.
- C. Compilation fails because of an error in line 9.
- D. If you define `D e = new E()`, then `e.bMethod()` invokes the version of `bMethod()` defined in Line 5.
- E. If you define `D e = (D)(new E())`, then `e.bMethod()` invokes the version of `bMethod()` defined in Line 5.
- F. If you define `D e = (D)(new E())`, then `e.bMethod()` invokes the version of `bMethod()` defined in Line 9.

答案：F

#### 第72題

Given:

```
1. package geometry;
2. public class Hypotenuse {
3.     public InnerTriangle it = new InnerTriangle();
4.     class InnerTriangle {
5.         public int base;
6.         public int height;
7.     }
8. }
```

Which statement is true about the class of an object that can reference the variable `base`?

- A. It can be any class.
- B. No class has access to `base`.
- C. The class must belong to the `geometry` package.
- D. The class must be a subclass of the class `Hypotenuse`.

答案：C

#### 第73題

Given:

```
10. interface Data { public void load(); }
11. abstract class Info { public abstract void load(); }
```

Which class correctly uses the `Data` interface and `Info` class?

- A. `public class Employee extends Info implements Data {  
 public void load() { /* do something */ }  
}`
- B. `public class Employee implements Info extends Data {  
 public void load() { /* do something */ }  
}`

- ```

    }
C. public class Employee extends Info implements Data
    public void load(){ /* do something */ }
    public void Info.load(){ /* do something */ }
    }
D. public class Employee implements Info extends Data {
    public void Data.load(){ /* do something */ }
    public void load(){ /* do something */ }
    }
E. public class Employee implements Info extends Data {
    public void load(){ /* do something */ }
    public void Info.load(){ /* do something */ }
    }
F. public class Employee extends Info implements Data{
    public void Data.load(){ /* do something */ }
    public void Info.load(){ /* do something */ }
    }

```

答案：A

#### 第74題

Which two classes correctly implement both the `java.lang.Runnable` and the `java.lang.Cloneable` interfaces?

(Choose two.)

- ```

A. public class Session
    implements Runnable, cloneable {
    public void run();
    public Object clone();
    }
B. public class Session
    extends Runnable, Cloneable {
    public void run(){/* do something */}
    public Object clone(){/* make a copy */}
    }
C. public class Session
    implements Runnable, Cloneable {
    public void run(){/* do something */}
    public Object clone() {/* make a copy */}
    }
D. public abstract class Session
    implements Runnable, Cloneable {
    public void run(){/* do something */}
    public Object clone(){/* make a copy */}
    }
E. public class Session
    implements Runnable, implements Cloneable {
    public void run(){/* do something */}
    public Object clone() {/* make a copy */}
    }

```

答案：CD

#### 第75題

Given:



11. `public interface A{ public void m1(); }`
13. `class B implements A{ }`
14. `class C implements A{ public void m1(){}}`
15. `class D implements A{ public void m1(int x){}}`
16. `abstract class E implements A { }`
17. `abstract class F implements A { public void m1(){} }`
18. `abstract class G implements A { public void m1(int x){} }`

What is the result?

- A. Compilation succeeds.
- B. Exactly one class does NOT compile.
- C. Exactly two classes do NOT compile.
- D. Exactly four classes do NOT compile.
- E. Exactly three classes do NOT compile.

答案：C

#### 第76題

Given:

1. `class TestA{`
2. `public void start(){System.out.println("TestA");}`
3. `}`
4. `public class TestB extends TestA{`
5. `public void start(){System.out.println("TestB");}`
6. `public static void main(String[] args){`
7. `((TestA)new TestB()).start();`
8. `}`
9. `}`

What is the result?

- A. TestA
- B. TestB
- C. Compilation fails.
- D. An exception is thrown at runtime.

答案：B

#### 第77題

Given:

11. `public static void main(String[] args) {`
12. `Object obj = new int[] {1, 2, 3};`
13. `int[] someArray = (int[])obj;`
14. `for (int i: someArray) System.out.print(i + " ");`
15. `}`

What is the result?

- A. 1 2 3
- B. Compilation fails because of an error in line 12.
- C. Compilation fails because of an error in line 13.

- D. Compilation fails because of an error in line 14.
- E. A ClassCastException is thrown at runtime.

答案：A

#### 第78題

A developer is creating a class Book, that needs to access class Paper. The Paper class is deployed in a JAR named myLib.jar. Which three, taken independently, will allow the developer to use the Paper class while compiling the Book class? (Choose Three.)

- A. The JAR file is located at \$JAVA\_HOME/jre/classes/myLib.jar.
- B. The JAR file is located at \$JAVA\_HOME/jre/lib/ext/myLib.jar.
- C. The JAR file is located at /foo/myLib.jar and a classpath environment variable is set that includes /foo/myLib.jar/Paper.class.
- D. The JAR file is located at /foo/myLib.jar and a classpath environment variable is set that includes /foo/myLib.jar.
- E. The JAR file is located at /foo/myLib.jar and the Book class is compiled using `javac -cp /foo/myLib.jar/Paper Book.java`
- F. The JAR file is located at /foo/myLib.jar and the Book class is compiled using `javac -d /foo/myLib.jar Book.java`
- G. The JAR file is located at foo/myLib.jar and the Book class is compiled using `javac -classpath /foo/myLib.jar Book.java`

答案：BDG

#### 第79題

Given classes defined in two different files:

1. package packageA;
2. public class Message{
3.     String getText(){return "text";}
4. }

And:

1. package packageB;
2. public class XMLMessage extends packageA.Message{
3.     String getText(){return "<msg>text</msg>";}
4.     public static void main(String[] args) {
5.         System.out.println(new XMLMessage().getText());
6.     }
7. }

What is the result of executing XMLMessage.main?

- A. text
- B. Compilation fails.
- C. <msg>text</msg>
- D. An exception is thrown at runtime.

答案：C

### 第80題

Given:

```
3. interface Fish{}
4. class Perch implements Fish{}
5. class Walleye extends Perch{}
6. class Bluegill{}
7. public class Fisherman {
8.     public static void main(String[] args) {
9.         Fish f = new Walleye();
10.        Walleye w = new Walleye();
11.        Bluegill b = new Bluegill();
12.        if(f instanceof Perch) System.out.print("f-p ");
13.        if(w instanceof Fish) System.out.print("w-f ");
14.        if(b instanceof Fish) System.out.print("b-f ");
15.    }
16. }
```

What is the result?

- A. w-f
- B. f-p w-f
- C. w-f b-f
- D. f-p w-f b-f
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：B

### 第81題

Given:

```
1. interface DoStuff2{
2.     float getRange(int low, int high);}
3.
4. interface DoMore {
5.     float getAvg(int a, int b, int c);}
6.
7. abstract class DoAbstract implements DoStuff2, DoMore{}
8.
9. class DoStuff implements DoStuff2{
10.    public float getRange(int x, int y){return 3.14f;}}
11.
12. interface DoAll extends DoMore{
13.    float getAvg(int a, int b, int c, int d);}
```

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.
- F. Compilation fails. Only lines 7 and 13 contain errors.
- G. Compilation fails. Lines 7, 12, and 13 contain errors.

答案：A

#### 第82題

Given:

```
11. public interface A111{
12.     String s = "yo";
13.     public void method1();
14. }
17. interface B{}
20. interface C extends A111, B{
21.     public void method1();
22.     public void method1(int x);
23. }
```

What is the result?

- A. Compilation succeeds.
- B. Compilation fails due to multiple errors.
- C. Compilation fails due to an error only on line 20.
- D. Compilation fails due to an error only on line 21.
- E. Compilation fails due to an error only on line 22.
- F. Compilation fails due to an error only on line 12.

答案：A

#### 第83題

Given:

```
10. interface Foo{
11.     int bar();
12. }
13.
14. public class Beta {
15.
16.     class A implements Foo{
17.         public int bar(){return 1;}
18.     }
19.
20.     public int fubar(Foo foo){return foo.bar();}
21.
22.     public void testFoo(){
23.
24.         class A implements Foo{
25.             public int bar() {return 2;}
26.         }
27.
```

```
28.      System.out.println(fubar(new A()));
29.    }
30.
31.    public static void main(String[] argv){
32.        new Beta().testFoo();
33.    }
34. }
```

Which three statements are true? (Choose three.)

- A. Compilation fails.
- B. The code compiles and the output is 2.
- C. If lines 16, 17 and 18 were removed, compilation would fail.
- D. If lines 24, 25 and 26 were removed, compilation would fail.
- E. If lines 16, 17 and 18 were removed, the code would compile and the output would be 2.
- F. If lines 24, 25 and 26 were removed, the code would compile and the output would be 1.

答案：BEF

#### 第84題

Given:

```
11. class Alpha{
12.     public void foo(){System.out.print("Afoo ");}
13. }
14. public class Beta extends Alpha{
15.     public void foo(){System.out.print("Bfoo ");}
16.     public static void main(String[] args){
17.         Alpha a = new Beta();
18.         Beta b = (Beta)a;
19.         a.foo();
20.         b.foo();
21.     }
22. }
```

What is the result?

- A. Afoo Afoo
- B. Afoo Bfoo
- C. Bfoo Afoo
- D. Bfoo Bfoo
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：D

#### 第85題

Given:

```
11. class Animal{public String noise(){return "peep";}}
12. class Dog extends Animal{
```

```
13.    public String noise(){return "bark";}
14.    }
15.    class Cat extends Animal{
16.        public String noise(){return "meow";}
17.    }
...
30.    Animal animal = new Dog();
31.    Cat cat = (Cat)animal;
32.    System.out.println(cat.noise());
```

What is the result?

- A. peep
- B. bark
- C. meow
- D. Compilation fails.
- E. An exception is thrown at runtime.

答案：E

#### 第86題

Given:

```
10.    abstract class A{
11.        abstract void a1();
12.        void a2(){
13.        }
14.    class B extends A{
15.        void a1(){
16.        void a2(){
17.        }
18.    class C extends B{void c1(){}}
```

and:

A x = new B(); C y = new C(); A z = new C();

What are four valid examples of polymorphic method calls? (Choose four.)

- A. x.a2();
- B. z.a2();
- C. z.c1();
- D. z.a1();
- E. y.c1();
- F. x.a1();

答案：ABDF

#### 第87題

A team of programmers is involved in reviewing a proposed design for a new utility class. After some discussion, they realize that the current design allows other classes to access methods in the utility class that should be accessible only to methods within the utility class itself. What design issue has the team

discovered?

- A. Tight coupling
- B. Low cohesion
- C. High cohesion
- D. Loose coupling
- E. Weak encapsulation
- F. Strong encapsulation

答案：E

#### 第88題

Which Three statements are true? (Choose Three.)

- A. A final method in class X can be abstract if and only if X is abstract.
- B. A protected method in class X can be overridden by any subclass of X.
- C. A private static method can be called only within other static methods in class X.
- D. A non-static public final method in class X can be overridden in any subclass of X.
- E. A public static method in class X can be called by a subclass of X without explicitly referencing the class X.
- F. A method with the same signature as a private final method in class X can be implemented in a subclass of X.
- G. A protected method in class X can be overridden by a subclass of X only if the subclass is in the same package as X.

答案：BEF

#### 第89題

Given:

```
1. public class Car{
2.     private int wheelCount;
3.     private String vin;
4.     public Car(String vin){
5.         this.vin = vin;
6.         this.wheelCount = 4;
7.     }
8.     public String drive(){
9.         return "zoom-zoom";
10.    }
11.    public String getInfo(){
12.        return "VIN: " + vin + "wheels: " + wheelCount;
13.    }
14. }
```

And:

```
1. public class MeGo extends Car{
2.     public MeGo(String vin){
```

```
3.         this.wheelCount = 3;
4.     }
5. }
```

What two must the programmer do to correct the compilation errors? (Choose two.)

- A. insert a call to this() in the Car constructor
- B. insert a call to this() in the MeGo constructor
- C. insert a call to super() in the MeGo constructor
- D. insert a call to super(vin) in the MeGo constructor
- E. change the wheelCount variable in Car to protected
- F. change line 3 in the MeGo class to super.wheelCount = 3;

答案：DE

### 第90題

Given:

```
11. interface DeclareStuff{
12.     public static final int EASY = 3;
13.     void doStuff(int t);}
14. public class TestDeclare implements DeclareStuff{
15.     public static void main(String[] args){
16.         int x = 5;
17.         new TestDeclare().doStuff(++x);
18.     }
19.     void doStuff(int s){
20.         s += EASY + ++s;
21.         System.out.println("s " + s);
22.     }
23. }
```

What is the result?

- A. s 14
- B. s 16
- C. s 10
- D. Compilation fails.
- E. An exception is thrown at runtime.

答案：D

### 第91題

A class games.cards.Poker is correctly defined in the jar file Poker.jar. A user wants to execute the main method of Poker on a UNIX system using the command:

```
java games.cards.Poker
```

What allows the user to do this?

- H. put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java
- I. put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java/\*.jar
- J. Put Poker.jar in directory /stuff/java, and set the CLASSPATH to include /stuff/java/Poker.jar



- K. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include /stuff/java
- L. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include /stuff/java/\*.jar
- M. put Poker.jar in directory /stuff/java/games/cards, and set the CLASSPATH to include  
/stuff/java/Poker.jar

答案：C

#### 第92題

Given a correctly compiled class whose source code is:

```
1. package com.sun.sjcp;  
2. public class Commander {  
3.     public static void main(String[] args) {  
4.         // more code here  
5.     }  
6. }
```

Assume that the class file is located in /foo/com/sun/sjcp/, the current directory is /foo/, and that the classpath contains "." (current directory).

Which command line correctly runs Commander?

- A. java Commander
- B. java com.sun.sjcp.Commander
- C. java com/sun/sjcp/Commander
- D. java -cp com.sun.sjcp Commander
- E. java -cp com/sun/sjcp Commander

答案：B

#### 第93題

Given:

```
10. class Nav{  
11.     public enum Direction { NORTH, SOUTH, EAST, WEST }  
12. }  
13. public class Sprite{  
14.     //insert code here  
15. }
```

Which code, inserted at line 14, allows the Sprite class to compile?

- A. Direction d = NORTH;
- B. Nav.Direction d = NORTH;
- C. Direction d = Direction.NORTH;
- D. Nav.Direction d = Nav.Direction.NORTH;

答案：D

#### 第94題

Given:

```
11. public class Rainbow {
```

```
12.    public enum MyColor {
13.        RED(0xff0000), GREEN(0x00ff00), BLUE(0x0000ff);
14.        private final int rgb;
15.        MyColor(int rgb){this.rgb = rgb;}
16.        public int getRGB(){return rgb;}
17.    }
18.    public static void main(String[] args){
19.        //insert code here
20.    }
21. }
```

Which code fragment inserted at line 19, allows the Rainbow class to compile?

- A. MyColor skyColor = BLUE;
- B. MyColor treeColor = MyColor.GREEN;
- C. if(RED.getRGB() < BLUE.getRGB()){ }
- D. Compilation fails due to other error(s) in the code.
- E. MyColor purple = new MyColor(0xff00ff);
- F. MyColor purple = MyColor.BLUE + MyColor.RED;

答案：B

#### 第95題

Given:

```
1.  interface TestA{String toString();}
2.  public class Test{
3.      public static void main(String[] args){
4.          System.out.println(new TestA(){
5.              public String toString(){return "test";}
6.          });
7.      }
8.  }
```

What is the result?

- A. test
- B. null
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 1.
- E. Compilation fails because of an error in line 4.
- F. Compilation fails because of an error in line 5.

答案：A

#### 第96題

Given a class Repetition:

```
1.  package utils;
2.
3.  public class Repetition {
4.      public static String twice(String s){return s + s;}
5.  }
```

and given another class Demo:

```
1. // insert code here
2.
3. public class Demo {
4.     public static void main(String[] args){
5.         System.out.println(twice("pizza"));
6.     }
7. }
```

Which code should be inserted at line 1 of Demo.java to compile and run Demo to print "pizzapizza"?

- A. import utils.\*;
- B. static import utils.\*;
- C. import utils.Repetition.\*;
- D. static import utils.Repetition.\*;
- E. import utils.Repetition.twice();
- F. import static utils.Repetition.twice;
- G. static import utils.Repetition.twice;

答案：F

#### 第97題

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.

答案：C

#### 第98題

Given:

```
15. public class Yippee{
16.     public static void main(String[] args){
17.         for(int x = 1; x < args.length; x++){
18.             System.out.print(args[x] + " ");
19.         }
20.     }
21. }
```

and two separate command line invocations:

```
java Yippee
```

```
java Yippee 1 2 3 4
```

What is the result?

- A. No output is produced.

1 2 3

- B. No output is produced.  
2 3 4
- C. No output is produced.  
1 2 3 4
- D. An exception is thrown at runtime.  
1 2 3
- E. An exception is thrown at runtime.  
2 3 4
- F. An exception is thrown at runtime.  
1 2 3 4

答案：B

### 第99題

Given:

```
3. interface Animal{void makeNoise();}
4. class Horse implements Animal{
5.     Long weight = 1200L;
6.     public void makeNoise(){System.out.println("whinny");}
7. }
8. public class Icelandic extends Horse{
9.     public void makeNoise(){System.out.println("vinny");}
10.    public static void main(String[] args) {
11.        Icelandic i1 = new Icelandic();
12.        Icelandic i2 = new Icelandic();
13.        Icelandic i3 = new Icelandic();
14.        i3 = i1; i1 = i2; i2 = null; i3 = i1;
15.    }
16. }
```

When line 14 is reached, how many objects are eligible for the garbage collector?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 6

答案：C

### 第100題

Given:

```
10. public class SuperCalc{
11.     protected static int multiply(int a, int b){return a * b;}
12. }
```

and:

```
20. public class SubCalc extends SuperCalc{
21.     public static int multiply(int a, int b){
22.         int c = super.multiply(a, b);
23.         return c;
24.     }
25. }
```

and:

```
30. SubCalc sc = new SubCalc();
31. System.out.println(sc.multiply(3, 4));
32. System.out.println(SubCalc.multiply(2, 2));
```

What is the result?

- A. 12
- 4
- B. The code runs with no output.
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 21.
- E. Compilation fails because of an error in line 22.
- F. Compilation fails because of an error in line 31.

答案：E

#### 第101題

Given:

```
10. package com.sun.scjp;
11. public class Geodetics {
12.     public static final double DIAMETER = 12756.32; //kilometers
13. }
```

Which two correctly access the DIAMETER member of the Geodetics class? (Choose two.)

- A. 

```
import com.sun.scjp.Geodetics;

public class TerraCarta{
    public double halfway()
    {return Geodetics.DIAMETER/2.0;}}
```
- B. 

```
import static com.sun.scjp.Geodetics;

public class TerraCarta{
    public double halfway(){return DIAMETER/2.0;}}
```
- C. 

```
import static com.sun.scjp.Geodetics.*;

public class TerraCarta{
    public double halfway(){return DIAMETER/2.0;}}
```
- D. 

```
package com.sun.scjp;

public class TerraCarta{
    public double halfway(){return DIAMETER/2.0;}}
```

答案：AC

## 第102題

Given:

```
10. interface Foo{int bar();}
11. public class Sprite{
12.     public int fubar(Foo foo){return foo.bar();}
13.     public void testFoo(){
14.         fubar(
15.             //insert code here
16.         );
17.     }
18. }
```

Which code, inserted at line 15, allows the class Sprite to compile?

- A. Foo{public int bar(){return 1;}}
- B. new Foo{public int bar(){return 1;}}
- C. new Foo(){public int bar(){return 1;}}
- D. new class Foo{public int bar(){return 1;}}

答案：C

## 第103題

Given:

```
11. public enum Title{
12.     MR("Mr."), MRS("Mrs."), MS("Ms.");
13.     private final String title;
14.     private Title(String t){title = t;}
15.     public String format(String last, String first){
16.         return title + " " + first + " " + last;
17.     }
18. }
19. public static void main(String[] args){
20.     System.out.println(Title.MR.format("Doe", "John"));
21. }
```

What is the result?

- A. Mr. John Doe
- B. An exception is thrown at runtime.
- C. Compilation fails because of an error in line 12.
- D. Compilation fails because of an error in line 15.
- E. Compilation fails because of an error in line 20.

答案：A

## 第104題

Given:

```
10. class Line{
11.     public static class Point{}
12. }
13.
```

```
14. class Triangle{  
15.     //insert code here  
16. }
```

Which code, inserted at line 15, creates an instance of the Point class defined in Line?

- A. Point p = new Point();
- B. Line.Point p = new Line.Point();
- C. The Point class cannot be instantiated at line 15.
- D. Line l = new Line(); l.Point p = new l.Point();

答案：B

### 第105題

Given:

```
1. public class A {  
2.  
3.     private int counter = 0;  
4.  
5.     public static int getInstanceCount(){  
6.         return counter;  
7.     }  
8.  
9.     public A(){  
10.         counter++;  
11.     }  
12.  
13. }
```

And given this code from Class B:

```
25. A a1 = new A();  
26. A a2 = new A();  
27. A a3 = new A();  
28. System.out.println(A.getInstanceCount());
```

What is the result?

- A. Compilation of class A fails.
- B. Line 28 prints the value 3 to System.out.
- C. Line 28 prints the value 1 to System.out.
- D. A runtime error occurs when line 25 executes.
- E. Compilation fails because of an error on line 28.

答案：A

### 第106題

Given classes defined in two different files:

```
1. package util;  
2. public class BitUtils{  
3.     public static void process(byte[] b){/* more code here */}  
4. }  
1. package app;
```

```
2. public class SomeApp{
3.     public static void main(String[] args){
4.         byte[] bytes = new byte[256];
5.         //insert code here
6.     }
7. }
```

What is required at line 5 in class SomeApp to use the process method of BitUtils?

- A. process(bytes);
- B. BitUtils.process(bytes);
- C. util.BitUtils.process(bytes);
- D. SomeApp cannot use methods in BitUtils.
- E. import util.BitUtils.\*; process(bytes);

答案：C

### 第107題

Given:

```
10. class Inner{
11.     private int x;
12.     public void setX(int x){this.x = x;}
13.     public int getX(){return x;}
14. }
15.
16. class Outer{
17.     private Inner y;
18.     public void setY(Inner y){this.y = y;}
19.     public Inner getY(){return y;}
20. }
21.
22. public class Gamma{
23.     public static void main(String[] args){
24.         Outer o = new Outer();
25.         Inner i = new Inner();
26.         int n = 10;
27.         i.setX(n);
28.         o.setY(i);
29.         //insert code here
30.         System.out.println(o.getY().getX());
31.     }
32. }
```

Which three code fragments, added individually at line 29, produce the output 100? (Choose three.)

- A. n = 100;
- B. i.setX(100);
- C. o.getY().setX(100);
- D. i = new Inner(); i.setX(100);
- E. o.setY(i); i = new Inner(); i.setX(100);
- F. i = new Inner(); i.setX(100); o.setY(i);



答案：BCF

### 第108題

Given:

```
11. class Snoochy {
12.     Boochy booch;
13.     public Snoochy(){booch = new Boochy(this);}
14. }
15.
16. class Boochy{
17.     Snoochy snooch;
18.     public Boochy(Snoochy s){snooch = s;}
19. }
```

And the statements.

```
21. public static void main(String[] args){
22.     Snoochy snoog = new Snoochy();
23.     snoog = null;
24.     //more code here
25. }
```

Which statement is true about the objects referenced by snoog, snooch, and booch immediately after line 23 executes?

- A. None of these objects are eligible for garbage collection.
- B. Only the object referenced by booch is eligible for garbage collection.
- C. Only the object referenced by snoog is eligible for garbage collection.
- D. Only the object referenced by snooch is eligible for garbage collection.
- E. The objects referenced by snooch and booch are eligible for garbage collection.

答案：E

### 第109題

Given:

```
5. class Payload{
6.     private int weight;
7.     public Payload (int w){weight = w;}
8.     public void setWeight(int w){weight = w;}
9.     public String toString(){return Integer.toString(weight);}
10. }
11. public class TestPayload{
12.     static void changePayload(Payload p){/* insert code */}
13.     public static void main(String[] args){
14.         Payload p = new Payload(200);
15.         p.setWeight(1024);
16.         changePayload(p);
17.         System.out.println("p is " + p);
18.     }}
```

Which code fragment, inserted at the end of line 12, produces the output p is 420?

- A. p.setWeight(420);

- B. p.changePayload(420);
- C. p = new Payload(420);
- D. Payload.setWeight(420);
- E. p = Payload.setWeight(420);

答案：A

#### 第110題

Given:

```
11. public static void test(String str){
12.     int check = 4;
13.     if(check == str.length()){
14.         System.out.print(str.charAt(check - 1) + ", ");
15.     }else{
16.         System.out.print(str.charAt(0) + ", ");
17.     }
18. }
```

and the invocation:

```
21. test("four");
22. test("tee");
23. test("to");
```

What is the result?

- A. r, t, t,
- B. r, e, o,
- C. Compilation fails.
- D. An exception is thrown at runtime.

答案：C

#### 第111題

Given:

```
15. public class Pass2{
16.     public static void main(String[] args){
17.         int x = 6;
18.         Pass2 p = new Pass2();
19.         p.doStuff(x);
20.         System.out.print(" main x = " + x);
21.     }
22.
23.     void doStuff(int x){
24.         System.out.print(" doStuff x = " + x++);
25.     }
26. }
```

And the command-line invocations:

```
javac Pass2.java
```

```
java Pass2 5
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. doStuff x = 6 main x = 6
- D. doStuff x = 6 main x = 7
- E. doStuff x = 7 main x = 6
- F. doStuff x = 7 main x = 7

答案：C

#### 第112題

Given:

```
12. public class Test{
13.     public enum Dogs{collie, harrier};
14.     public static void main(String[] args){
15.         Dogs myDog = Dogs.collie;
16.         switch(myDog){
17.             case collie:
18.                 System.out.print("collie ");
19.             case harrier:
20.                 System.out.print("harrier ");
21.         }
22.     }
23. }
```

What is the result?

- A. collie
- B. harrier
- C. Compilation fails.
- D. collie harrier
- E. An exception is thrown at runtime.

答案：D

#### 第113題

Given:

```
10. public class Foo{
11.     static int[] a;
12.     static{ a[0] = 2;}
13.     public static void main( String[] args){ }
14. }
```

Which exception or error will be thrown when a programmer attempts to run this code?

- A. java.lang.StackOverflowError
- B. java.lang.IllegalStateException
- C. java.lang.ExceptionInInitializerError
- D. java.lang.ArrayIndexOutOfBoundsException

答案：C

## 第114題

Given:

```
10. class Line{
11.     public class Point{public int x, y;}
12.     public Point getPoint(){return new Point();}
13. }
14. class Triangle{
15.     public Triangle(){
16.         //insert code here
17.     }
18. }
```

Which code, inserted at line 16, correctly retrieves a local instance of a Point object?

- A. Point p = Line.getPoint();
- B. Line.Point p = Line.getPoint();
- C. Point p = (new Line()).getPoint();
- D. Line.Point p = (new Line()).getPoint();

答案：D

## 第115題

Given:

```
11. public static void main(String[] args){
12.     for(int i = 0; i <= 10; i++){
13.         if(i > 6) break;
14.     }
15.     System.out.println(i);
16. }
```

What is the result?

- A. 6
- B. 7
- C. 10
- D. 11
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：E

## 第116題

Given:

```
11. public class Commander{
12.     public static void main(String[] args){
13.         String myProp = /* insert code here */
14.         System.out.println(myProp);
15.     }
16. }
```

and the command line:

```
java -Dprop.custom=gobstopper Commander
```

Which two, placed on line 13, will produce the output gobstopper? (Choose two.)

- A. `System.load("prop.custom");`
- B. `System.getenv("prop.custom");`
- C. `System.property("prop.custom");`
- D. `System.getProperty("prop.custom");`
- E. `System.getProperties().getProperty("prop.custom");`

答案：DE

#### 第117題

Given:

```
11. class Converter{
12.     public static void main(String[] args){
13.         Integer i = args[0];
14.         int j = 12;
15.         System.out.println("It is " + (j==i) + " that j==i.");
16.     }
17. }
```

What is the result when the programmer attempts to compile the code and run it with the command

```
java Converter 12?
```

- A. It is true that `j==i`.
- B. It is false that `j==i`.
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 13.

答案：D

#### 第118題

Given

```
10. class Foo{
11.     static void alpha(){/* more code here */}
12.     void beta(){/* more code here */}
13. }
```

Which two statements are true? (Choose two.)

- A. `Foo.beta()` is a valid invocation of `beta()`.
- B. `Foo.alpha()` is a valid invocation of `alpha()`.
- C. Method `beta()` can directly call method `alpha()`.
- D. Method `alpha()` can directly call method `beta()`.

答案：BC

#### 第119題

Given:

```
11. public static void main(String[] args){
12.     String str = "null";
13.     if (str == null) {
14.         System.out.println("null");
15.     }else (str.length() == 0) {
16.         System.out.println("zero");
17.     }else{
18.         System.out.println("some");
19.     }
20. }
```

What is the result?

- A. null
- B. zero
- C. some
- D. Compilation fails.
- E. An exception is thrown at runtime.

答案：D

#### 第120題

Given:

```
1. public class GC{
2.     private Object o;
3.     private void doSomethingElse(Object obj){o = obj;}
4.     public void doSomething(){
5.         Object o = new Object();
6.         doSomethingElse(o);
7.         o = new Object();
8.         doSomethingElse(null);
9.         o = null;
10.    }
11. }
```

When the doSomething method is called, after which line does the Object created in line 5 become available for garbage collection?

- A. Line 5
- B. Line 6
- C. Line 7
- D. Line 8
- E. Line 9
- F. Line 10

答案：D

#### 第121題

Given:

```
11. public class Test{
12.     public enum Dogs {collie, harrier, shepherd}
13.     public static void main(String[] args){
14.         Dogs myDog = Dogs.shepherd;
15.         switch(myDog){
16.             case collie:
17.                 System.out.print("collie ");
18.             case default:
19.                 System.out.print("retriever ");
20.             case harrier:
21.                 System.out.print("harrier ");
22.         }
23.     }
24. }
```

What is the result?

- A. harrier
- B. shepherd
- C. retriever
- D. Compilation fails
- E. retriever harrier
- F. An exception is thrown at runtime,

答案：D

#### 第122題

Given:

```
11. public void genNumbers(){
12.     ArrayList numbers = new ArrayList();
13.     for(int i=0; i<10; i++){
14.         int value = i * ((int)Math.random());
15.         Integer intObj = new Integer(value);
16.         numbers.add(intObj);
17.     }
18.     System.out.println(numbers);
19. }
```

Which line of code marks the earliest point that an object referenced by intObj becomes a candidate for garbage collection?

- A. Line 16
- B. Line 17
- C. Line 18
- D. Line 19
- E. The object is NOT a candidate for garbage collection.

答案：D

#### 第123題

Given:

```
11. public static void parse(String str){
12.     try{
13.         float f = Float.parseFloat(str);
14.     }catch(NumberFormatException nfe){
15.         f = 0;
16.     }finally{
17.         System.out.println(f);
18.     }
19. }
20. public static void main(String[] args) {
21.     parse("invalid");
22. }
```

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.

答案：B

#### 第124題

Given:

```
11. static void test() throws RuntimeException{
12.     try{
13.         System.out.print("test ");
14.         throw new RuntimeException();
15.     }
16.     catch(Exception ex){ System.out.print("exception ");}
17. }
18. public static void main(String[] args){
19.     try{test();}
20.     catch(RuntimeException ex){System.out.print("runtime ");}
21.     System.out.print("end ");
22. }
```

What is the result?

- A. test end
- B. Compilation fails.
- C. test runtime end
- D. test exception end
- E. A Throwable is thrown by main at runtime.

答案：D

#### 第125題

Given:

```
33. try{
34.     //some code here
35. }catch(NullPointerException el){
```



```
36.    System.out.print("a");
37.  }catch(Exception e2){
38.    System.out.print("b");
39.  }finally{
40.    System.out.print("c");
41.  }
```

If some sort of exception is thrown at line 34, which output is possible?

- A. a
- B. b
- C. c
- D. ac
- E. abc

答案：D

#### 第126題

Given:

```
31. //some code here
32. try{
33.    //some code here
34. }catch(Some Exception se) {
35.    //some code here
36. }finally{
37.    //some code here
38. }
```

Under which three circumstances will the code on line 37 be executed? (Choose three.)

- A. The instance gets garbage collected.
- B. The code on line 33 throws an exception.
- C. The code on line 35 throws an exception.
- D. The code on line 31 throws an exception.
- E. The code on line 33 executes successfully

答案：BCE

#### 第127題

Given:

```
1. public class Donkey2{
2.     public static void main(String[] args){
3.         boolean assertsOn = true;
4.         assert(assertsOn): assertsOn = true;
5.         if(assertsOn){
6.             System.out.println("assert is on");
7.         }
8.     }
9. }
```

If class Donkey2 is invoked twice, the first time without assertions enabled, and the second time with assertions enabled, what are the results?

- A. no output
- B. no output assert is on
- C. assert is on
- D. no output  
An Assertion Error is thrown.
- E. assert is on  
An AssertionError is thrown.

答案：C

### 第128題

Given:

```
1. public class A{
2.     public void method1(){
3.         try{
4.             B b = new B();
5.             b.method2();
6.             //more code here
7.         }catch(TestException te){
8.             throw new RuntimeException(te);
9.         }
10.    }
11. }

1. public class B{
2.     public void method2() throws TestException{
3.         //more code here
4.     }
5. }

1. public class TestException extends Exception{
2. }
```

And given:

```
31. public void method(){
32.     A a = new A();
33.     a.method1();
34. }
```

Which statement is true if a TestException is thrown on line 3 of class B?

- A. Line 33 must be called within a try block.
- B. The exception thrown by method1 in class A is not required to be caught.
- C. The method declared on line 31 must be declared to throw a RuntimeException.
- D. On line 5 of class A, the call to method2 of class B does not need to be placed in a try/catch block.

答案：B

### 第129題

Given:

```
11. Float pi = new Float(3.14f);
12. if(pi > 3){
13.     System.out.print("pi is bigger than 3. ");
14. }
15. else{
16.     System.out.print("pi is not bigger than 3. ");
17. }
18. finally{
19.     System.out.println("Have a nice day ");
20. }
```

What is the result?

- A. Compilation fails.
- B. pi is bigger than 3.
- C. An exception occurs at runtime.
- D. pi is bigger than 3. Have a nice day.
- E. pi is not bigger than 3. Have a nice day.

答案：A

#### 第130題

Given:

```
11. static void test(){
12.     try{
13.         String x = null;
14.         System.out.print(x.toString() + " ");
15.     }
16.     finally{System.out.print("finally ");}
17. }
18. public static void main(String[] args){
19.     try{test();}
20.     catch(Exception ex){System.out.print("exception ");}
21. }
```

What is the result?

- A. null
- B. finally
- C. null finally
- D. Compilation fails.
- E. finally exception

答案：E

#### 第131題

Given:

```
11. static void test() throws Error{
12.     if(true) throw new AssertionError();
13.     System.out.print("test ");
14. }
```

```
15. public static void main(String[] args){
16.     try{test();}
17.     catch(Exception ex){System.out.print("exception ");}
18.     System.out.print("end ");
19. }
```

What is the result?

- A. end
- B. Compilation fails.
- C. exception end
- D. exception test end
- E. A Throwable is thrown by main.
- F. An Exception is thrown by main.

答案：E

### 第132題

Given:

```
1. class TestException extends Exception{}
2. class A{
3.     public String sayHello(String name) throws TestException{
4.         if(name == null) throw new TestException();
5.         return "Hello " + name;
6.     }
7. }
8. public class TestA{
9.     public static void main(String[] args){
10.         new A().sayHello("Aiko");
11.     }
12. }
```

Which statement is true?

- A. Compilation succeeds.
- B. class A does not compile.
- C. The method declared on line 9 cannot be modified to throw TestException.
- D. TestA compiles if line 10 is enclosed in try/catch block that catches TestException.

答案：D

### 第133題

Given:

```
10. public class ClassA{
11.     public void methodA(){
12.         ClassB classB = new ClassB();
13.         classB.getValue();
14.     }
15. }
```

And:

```
20. class ClassB{
```

```
21.    public ClassC classC;
22.
23.    public String getValue(){
24.        return classC.getValue();
25.    }
26. }
And:
30. class ClassC{
31.     public String value;
32.
33.     public String getValue(){
34.         value = "ClassB";
35.         return value;
36.     }
37. }
```

And given:

```
ClassA a = new ClassA();
a.methodA();
```

What is the result?

- A. Compilation fails.
- B. ClassC is displayed.
- C. The code runs with no output.
- D. An exception is thrown at runtime.

答案：D

#### 第134題

Given:

```
5.    class A{
6.        void foo() throws Exception{throw new Exception();}
7.    }
8.    class SubB2 extends A{
9.        void foo(){System.out.println("B ");}
10.   }
11.   class Tester{
12.       public static void main(String[] args){
13.           A a = new SubB2();
14.           a.foo();
15.       }
16.   }
```

What is the result?

- A. B
- B. B, followed by an Exception.
- C. Compilation fails due to an error on line 9.
- D. Compilation fails due to an error on line 14.
- E. An Exception is thrown with no other output.

答案：D

## 第135題

Given:

```
84. try{
85.     ResourceConnection con = resourceFactory.getConnection();
86.     Results r = con.query("GET INFO FROM CUSTOMER");
87.     info = r.getData();
88.     con.close();
89. }catch(ResourceException re){
90.     errorLog.write(re.getMessage());
91. }
92. return info;
```

Which statement is true if a ResourceException is thrown on line 86?

- A. Line 92 will not execute.
- B. The connection will not be retrieved in line 85.
- C. The resource connection will not be closed on line 88.
- D. The enclosing method will throw an exception to its caller.

答案：C

## 第136題

Given:

```
11. public static void main(String[] args){
12.     try{
13.         args = null;
14.         args[0] = "test";
15.         System.out.println(args[0]);
16.     }catch(Exception ex) {
17.         System.out.println("Exception");
18.     }catch(NullPointerException npe){
19.         System.out.println("NullPointerException");
20.     }
21. }
```

What is the result?

- A. test
- B. Exception
- C. Compilation fails.
- D. NullPointerException

答案：C

## 第137題

Given:

```
11. class X{public void foo(){System.out.print("X ");}}
12.
13. public class SubB extends X{
14.     public void foo() throws RuntimeException{
```

```
15.     super.foo();
16.     if(true) throw new RuntimeException();
17.     System.out.print("B ");
18. }
19. public static void main(String[] args){
20.     new SubB().foo();
21. }
22. }
```

What is the result?

- A. X, followed by an Exception.
- B. No output, and an Exception is thrown.
- C. Compilation fails due to an error on line 14.
- D. Compilation fails due to an error on line 16.
- E. Compilation fails due to an error on line 17.
- F. X, followed by an Exception, followed by B.

答案：A

#### 第138題

Which two code fragments are most likely to cause a StackOverflowError? (Choose two.)

- A. 

```
int[] x = { 1, 2, 3, 4, 5};
for(int y=0; y<6; y++)
    System.out.println(x[y]);
```
- B. 

```
static int[] x = { 7, 6, 54};
static{x[1] = 8; x[4] = 3;}
```
- C. 

```
for(int y=10; y<10; y++)
    doStuff(y);
```
- D. 

```
void doOne(int x){doTwo(x);}
void doTwo(int y){doThree(y);}
void doThree(int z){doTwo(z);}
```
- E. 

```
for(int x=0; x<1000000000; x++)
    doStuff(x);
```
- F. 

```
void counter(int i){counter(++i);}
```

答案：DF

#### 第139題

Given a method that must ensure that its parameter is not null:

```
11. public void someMethod(Object value){
12.     //check for null value
...
20.     System.out.println(value.getClass());
21. }
```

What, inserted at line 12, is the appropriate way to handle a null value?

- A. `assert value == null;`
- B. `assert value != null : "value is null";`
- C. `if (value == null){`  
    `throw new AssertionError("value is null");`  
    `}`
- D. `if (value == null){`  
    `throw new IllegalArgumentException("value is null");`  
    `}`

答案：D

#### 第140題

Given:

```
1. public class A{
2.     public void method1(){
3.         B b = new B();
4.         b.method2();
5.         //more code here
6.     }
7. }
```

```
1. public class B{
2.     public void method2(){
3.         C c = new C();
4.         c.method3();
5.         //more code here
6.     }
7. }
```

```
1. public class C{
2.     public void method3(){
3.         //more code here
4.     }
5. }
```

And given:

```
25. try{
26.     A a = new A();
27.     a.method1();
28. }catch(Exception e){
29.     System.out.print("an error occurred");
30. }
```

Which two statements are true if a `NullPointerException` is thrown on line 3 of class C? (Choose two.)

- A. The application will crash.
- B. The code on line 29 will be executed.
- C. The code on line 5 of class A will execute.
- D. The code on line 5 of class B will execute.
- E. The exception will be propagated back to line 27.



答案：BE

第141題

Given:

```
11. class A{
12.     public void process(){System.out.print("A, ");}
13. class B extends A{
14.     public void process() throws IOException{
15.         super.process();
16.         System.out.print("B, ");
17.         throw new IOException();
18.     }
19. public static void main(String[] args){
20.     try{new B().process();}
21.     catch(IOException e){System.out.println("Exception");}
22. }
```

What is the result?

- A. Exception
- B. A, B, Exception
- C. Compilation fails because of an error in line 20.
- D. Compilation fails because of an error in line 14.
- E. A NullPointerException is thrown at runtime.

答案：D

第142題

Assuming that the `serializeBanana()` and the `deserializeBanana()` methods will correctly use Java serialization and given:

```
13. import java.io.*;
14. class Food implements Serializable{int good = 3;}
15. class Fruit extends Food{int juice = 5;}
16. public class Banana extends Fruit{
17.     int yellow = 4;
18.     public static void main(String[] args) {
19.         Banana b = new Banana(); Banana b2 = new Banana();
20.         b.serializeBanana(b); //assume correct serialization
21.         b2 = b.deserializeBanana(); //assume correct
22.         System.out.println("restore " + b2.yellow + b2.juice + b2.good);
24.     }
25.     //more Banana methods go here
50. }
```

What is the result?

- A. restore 400
- B. restore 403
- C. restore 453
- D. Compilation fails.

E. An exception is thrown at runtime.

答案：C

#### 第143題

Given:

```
System.out.printf("Pi is approximately %f and E is approximately %b", Math.PI, Math.E);
```

Place the values where they would appear in the output.

|                                                                |                                       |                                    |                                      |  |
|----------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------|--|
| Pi is approximately <input type="text" value="Place here"/>    |                                       |                                    |                                      |  |
| and E is approximately <input type="text" value="Place here"/> |                                       |                                    |                                      |  |
| <b>Values</b>                                                  |                                       |                                    |                                      |  |
| <input type="text" value="3"/>                                 | <input type="text" value="3.141593"/> | <input type="text" value="true"/>  | <input type="text" value="Math.PI"/> |  |
| <input type="text" value="2"/>                                 | <input type="text" value="2.718282"/> | <input type="text" value="false"/> | <input type="text" value="Math.E"/>  |  |

答案：

|                                                           |
|-----------------------------------------------------------|
| Pi is approximately <input type="text" value="3.141593"/> |
| and E is approximately <input type="text" value="true"/>  |

#### 第144題

Which capability exists only in java.io.BufferedWriter?

- A. Closing an open stream.
- B. Flushing an open stream.
- C. Writing to an open stream.
- D. Writing a line separator to an open stream.

答案：D

#### 第145題

Given that the current directory is empty, and that the user has read and write permissions, and the following:

```
11. import java.io.*;
12. public class DOS{
13.     public static void main(String[] args){
14.         File dir = new File("dir");
15.         dir.mkdir();
16.         File f1 = new File(dir, "f1.txt");
17.         try{
18.             f1.createNewFile();
19.         }catch(IOException e){;}
20.         File newDir = new File("newDir");
21.         dir.renameTo(newDir);
22.     }
23. }
```

Which statement is true?

- A. Compilation fails.
- B. The file system has a new empty directory named dir.
- C. The file system has a new empty directory named newDir.
- D. The file system has a directory named dir, containing a file f1.txt.
- E. The file system has a directory named newDir, containing a file f1.txt.

答案：E

#### 第146題

Given:

```
1. import java.io.*;
2. public class Foo implements Serializable{
3.     public int x, y;
4.     public Foo(int x, int y){this.x = x; this.y = y;}
5.
6.     private void writeObject(ObjectOutputStream s)
7.         throws IOException{
8.         s.writeInt(x); s.writeInt(y);
9.     }
10.
11.     private void readObject(ObjectInputStream s)
12.         throws IOException, ClassNotFoundException{
13.
14.         //insert code here
15.
16.     }
17. }
```

Which code, inserted at line 14, will allow this class to correctly serialize and deserialize?

- A. s.defaultReadObject();
- B. this = s.defaultReadObject();
- C. y = s.readInt(); x = s.readInt();
- D. x = s.readInt(); y = s.readInt();

答案：D

#### 第147題

Given:

```
1. public class LineUp{
2.     public static void main(String[] args){
3.         double d = 12.345;
4.         //insert code here
5.     }
6. }
```

Which code fragment, inserted at line 4, produces the output | 12.345|?

- A. System.out.printf("|%7dl \n", d);
- B. System.out.printf("|%7fl \n", d);

- C. `System.out.printf("%3.7d\n", d);`
- D. `System.out.printf("%3.7f\n", d);`
- E. `System.out.printf("%7.3d\n", d);`
- F. `System.out.printf("%7.3f\n", d);`

答案：F

#### 第148題

Given:

```

12. import java.io.*;
13. public class Forest implements Serializable{
14.     private Tree tree = new Tree();
15.     public static void main(String[] args){
16.         Forest f = new Forest();
17.         try{
18.             FileOutputStream fs = new FileOutputStream("Forest.ser");
19.             ObjectOutputStream os = new ObjectOutputStream(fs);
20.             os.writeObject(f); os.close();
21.         }catch(Exception ex){ex.printStackTrace();}
22.     }
23.
24. 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.

答案：B

#### 第149題

Place the Fragments into the program, so that the program will get lines from a text file. display them, and then close all the resources.

| Program                                                                                                                                                                                                                                                                                                                                                                      | Code Fragments                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> import java.io.*;  class ReadFile{     public static void main(String[] args){         try{             File ? = new File("MyText.txt");             ? = new ? (x1);             ? x4 = new ? (x2);             String x3 = null;             while((x3 = ? . ? () ) != null){                 System.out.println(x3);             } ? . ? ();         }     } }</pre> | <div>BufferedReader</div> <div>StreamReader</div> <div>FileReader</div> <div>readLine</div> <div>readLn</div> <div>read</div> <div>closeFile</div> <div>close</div> <div>x1</div> <div>x2</div> <div>x3</div> <div>x4</div> |

```

        }catch(Exception ex){
            ex.printStackTrace();
        }
    }
}

```

答案：

```

import java.io.*;

class ReadFile{
    public static void main(String[] args){
        try{
            File x1 = new File("MyText.txt");
            FileReader x2 = new FileReader(x1);
            BufferedReader x4 = new BufferedReader(x2);
            String x3 = null;
            while((x3 = x4.readLine()) != null){
                System.out.println(x3);
            } x4.close();
        }catch(Exception ex){
            ex.printStackTrace();
        }
    }
}

```

### 第150題

Given:

```

5.  import java.io.*;
6.  public class Talk{
7.      public static void main(String[] args){
8.          Console c = new Console();
9.          String pw;
10.         System.out.print("password: ");
11.         pw = c.readLine();
12.         System.out.println("got" + pw);
13.     }
14. }

```

If the user types the password aiko when prompted, what is the result?

- A. password:  
got
- B. password:  
got aiko
- C. password: aiko  
got aiko
- D. An exception is thrown at runtime.
- E. Compilation fails due to an error on line 8.

答案：E

## 第151題

Given that the current directory is empty, and that the user has read and write privileges to the current directory, and the following:

```
1. import java.io.*;
2. public class Maker{
3.     public static void main(String[] args){
4.         File dir = new File("dir");
5.         File f = new File(dir, "f");
6.     }
7. }
```

Which statement is true?

- A. Compilation fails.
- B. Nothing is added to the file system.
- C. Only a new file is created on the file system.
- D. Only a new directory is created on the file system.
- E. Both a new file and a new directory are created on the file system.

答案：B

## 第152題

Which three statements concerning the use of the java.io.Serializable interface are true? (Choose three.)

- A. Objects from classes that use aggregation cannot be serialized.
- B. An object serialized on one JVM can be successfully deserialized on a different JVM.
- C. The values in fields with the volatile modifier will NOT survive serialization and deserialization.
- D. The values in fields with the transient modifier will NOT survive serialization and deserialization.
- E. It is legal to serialize an object of a type that has a supertype that does NOT implement java.io.Serializable.

答案：BDE

## 第153題

Chain these constructors to create objects to read from a file named "in" and to write to a file named "out".

```
reader = [Place here] [Place here] "in" );
writer = [Place here] [Place here] [Place here] "out" );
```

## Constructors

```
new FileReader(    new PrintReader(    new BufferedReader(
new BufferedWriter(    new FileWriter(    new PrintWriter(
```

答案：

```
reader = new BufferedReader( new FileReader( "in" ));
writer = new PrintWriter( new BufferedWriter( new FileWriter( "out" )));
```

## 第154題

Given that `c` is a reference to a valid `java.io.Console` object, which two code fragments read a line of text from the console? (Choose two.)

- A. `String s = c.readLine();`
- B. `char[] c = c.readLine();`
- C. `String s = c.readConsole();`
- D. `char[] c = c.readConsole();`
- E. `String s = c.readLine("%s", "name ");`
- F. `char[] c = c.readLine("%s", "name ");`

答案：AE

## 第155題

The `doesFileExist` method takes an array of directory names representing a path from the root filesystem and a file name. The method returns `true` if the file exists, `false` if it does not.

Place the code fragments in position to complete this method.

```
public static boolean doesFileExist(String[] directories, String filename){
    Place here
    for(String dir : directories){
        Place here
    }
    Place here
    Place here
}
```

## Code Fragments

|                                                                                                            |                                                                                                                |                                                                                                                |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <span style="border: 1px solid black; padding: 2px;"><code>path = path.getSubdirectory(dir);</code></span> | <span style="border: 1px solid black; padding: 2px;"><code>return !file.isNew();</code></span>                 | <span style="border: 1px solid black; padding: 2px;"><code>return(file != null);</code></span>                 |
| <span style="border: 1px solid black; padding: 2px;"><code>String path = "";</code></span>                 | <span style="border: 1px solid black; padding: 2px;"><code>path = path.getFile(filename);</code></span>        | <span style="border: 1px solid black; padding: 2px;"><code>File path = new File("");</code></span>             |
| <span style="border: 1px solid black; padding: 2px;"><code>return file.exists();</code></span>             | <span style="border: 1px solid black; padding: 2px;"><code>return path.isFile();</code></span>                 | <span style="border: 1px solid black; padding: 2px;"><code>File file = new File(path, filename);</code></span> |
| <span style="border: 1px solid black; padding: 2px;"><code>path = new File(path, dir);</code></span>       | <span style="border: 1px solid black; padding: 2px;"><code>File path = new File(File.separator);</code></span> | <span style="border: 1px solid black; padding: 2px;"><code>path = path + File.separator + dir;</code></span>   |

答案：

```
public static boolean doesFileExist(String[] directories, String filename){
    String path = "";
    for(String dir : directories){
        path = path + File.separator + dir;
    }
    File file = new File(path, filename);
    return file.exists();
}
```

## 第156題

Place the code fragments into position to use a `BufferedReader` to read in an entire text file.

```
class PrintFile{
    public static void main(String[] args){
        BufferedReader buffReader = null;
        //More code here to initialize buffReader
        try{
            String temp;
            while( [Place here] [Place here] ){
                System.out.println(temp);
            }
        }catch [Place here]
            e.printStackTrace();
        }
    }
}
```

## Code Fragments

```
(temp = buffReader.readLine())    && buffReader.hasNext()
(temp = buffReader.nextLine())    (IOException e){
    != null    (FileNotFoundException e){
```

答案：

```
class PrintFile{
    public static void main(String[] args){
        BufferedReader buffReader = null;
        //More code here to initialize buffReader
        try{
            String temp;
            while( (temp = buffReader.readLine()) != null ){
                System.out.println(temp);
            }
        }catch (IOException e){
            e.printStackTrace();
        }
    }
}
```

## 第157題

Given that `c` is a reference to a valid `java.io.Console` object, and:

11. `String pw = c.readPassword("%s", "pw: ");`
12. `System.out.println("got " + pw);`
13. `String name = c.readLine("%s", "name: ");`
14. `System.out.println(" got", name);`

If the user types `fido` when prompted for a password, and then responds `bob` when prompted for a name, what is the result?

A. `pw:`



- ```
got fido
name: bob
got bob
```
- B. pw: fido
- ```
got fido
name: bob
got bob
```
- C. pw:
- ```
got fido
name: bob got bob
```
- D. pw: fido
- ```
got lido
name: bob got bob
```
- E. Compilation fails.
- F. An exception is thrown at runtime.

答案：E

#### 第158題

Given a valid DateFormat object named df, and

- ```
16. Date d = new Date(0L);
17. String ds = "December 15, 2004";
18. //insert code here
```

What updates d's value with the date represented by ds?

- A. 18. d = df.parse(ds);
- B. 18. d = df.getDate(ds);
- C. 18. try{
- ```
19.     d = df.parse(ds);
20. }catch(ParseException e){}
```
- D. 18. try{
- ```
19.     d = df.getDate(ds);
20. }catch(ParseException e){}
```

答案：C

#### 第159題

Given:

- ```
11. double input = 314159.26;
12. NumberFormat nf = NumberFormat.getInstance(Locale.ITALIAN);
13. String b;
14. //insert code here
```

Which code, inserted at line 14, sets the value of b to 314.159,26?

- A. `b = nf.parse(input);`
- B. `b = nf.format(input);`
- C. `b = nf.equals(input);`
- D. `b = nf.parseObject(input);`

答案：B

#### 第160題

Given:

- 22. `StringBuilder sb1 = new StringBuilder("123");`
- 23. `String s1 = "123";`
- 24. `//insert code here`
- 25. `System.out.println(sb1 + " " + s1);`

Which code fragment, inserted at line 24, outputs "123abc 123abc"?

- A. `sb1.append("abc"); s1.append("abc");`
- B. `sb1.append("abc"); s1.concat("abc");`
- C. `sb1.concat("abc"); s1.append("abc");`
- D. `sb1.concat("abc"); s1.concat("abc");`
- E. `sb1.append("abc"); s1 = s1.concat("abc");`
- F. `sb1.concat("abc"); s1 = s1.concat("abc");`
- G. `sb1.append("abc"); s1 = s1 + s1.concat("abc");`
- H. `sb1.concat("abc"); s1 = s1 + s1.concat("abc");`

答案：E

#### 第161題

Given:

- 1. `public class Boxer1{`
- 2. `Integer i;`
- 3. `int x;`
- 4. `public Boxer1(int y){`
- 5. `x = i + y;`
- 6. `System.out.println(x);`
- 7. `}`
- 8. `public static void main(String[] args){`
- 9. `new Boxer1(new Integer(4));`
- 10. `}`
- 11. `}`

What is the result?

- A. The value "4" is printed at the command line.
- B. Compilation fails because of an error in line 5.
- C. Compilation fails because of an error in line 9.
- D. A `NullPointerException` occurs at runtime.
- E. A `NumberFormatException` occurs at runtime.
- F. An `IllegalStateException` occurs at runtime.

答案：D

### 第162題

Given:

```
11. public static void main(String[] args){
12.     Integer i = new Integer(1) + new Integer(2);
13.     switch(i){
14.         case 3: System.out.println("three"); break;
15.         default: System.out.println("other"); break;
16.     }
17. }
```

What is the result?

- A. three
- B. other
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error on line 12.
- E. Compilation fails because of an error on line 13.
- F. Compilation fails because of an error on line 15.

答案：A

### 第163題

Given:

```
1. public class TestString3{
2.     public static void main(String[] args){
3.         //insert code here
5.         System.out.println(s);
6.     }
7. }
```

Which two code fragments, inserted independently at line 3, generate the output 4247? (choose two.)

- A. `String s = "123456789";`  
`s = (s - "123").replace(1, 3, "24") - "89";`
- B. `StringBuffer s = new StringBuffer("123456789");`  
`s.delete(0, 3).replace(1, 3, "24").delete(4, 6);`
- C. `StringBuffer s = new StringBuffer("123456789");`  
`s.substring(3, 6).delete(1, 3).insert(1, "24");`
- D. `StringBuilder s = new StringBuilder("123456789");`  
`s.substring(3, 6).delete(1, 2).insert(1, "24");`
- E. `StringBuilder s = new StringBuilder("123456789");`  
`s.delete(0, 3).delete(1, 3).delete(2, 5).insert(1, "24");`

答案：BE

### 第164題

Given:

1. d is a valid, non-null Date object
2. df is a valid, non-null DateFormat object set to the current locale

What outputs the current locale's country name and the appropriate version of d's date?

- A. `Locale loc = Locale.getLocale();`  
`System.out.println(loc.getDisplayCountry()`  
`+ " " + df.format(d));`
- B. `Locale loc = Locale.getDefault();`  
`System.out.println(loc.getDisplayCountry()`  
`+ " " + df.format(d));`
- C. `Locale loc = Locale.getLocale();`  
`System.out.println(loc.getDisplayCountry()`  
`+ " " + df.setDateFormat(d));`
- D. `Locale loc = Locale.getDefault();`  
`System.out.println(loc.getDisplayCountry()`  
`+ " " + df.setDateFormat(d));`

答案：B

#### 第165題

Given:

5. `import java.util.Date;`
6. `import java.text.DateFormat;`
21. `DateFormat df;`
22. `Date date = new Date();`
23. `//insert code here`
24. `String s = df.format(date);`

Which code fragment, inserted at line 23, allows the code to compile?

- A. `df = new DateFormat();`
- B. `df = Date.getFormat();`
- C. `df = date.getFormat();`
- D. `df = DateFormat.getFormat();`
- E. `df = DateFormat.getInstance();`

答案：E

#### 第166題

Given:

1. `public class BuildStuff{`
2. `public static void main(String[] args){`
3. `Boolean test = new Boolean(true);`
4. `Integer x = 343;`
5. `Integer y = new BuildStuff().go(test, x);`
6. `System.out.println(y);`

```
7.    }
8.    int go(Boolean b, int i){
9.        if(b) return (i/7);
10.       return (i/49);
11.    }
12. }
```

What is the result?

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

答案：B

#### 第167題

Given:

```
11. String test = "Test A. Test B. Test C.";
12. //insert code here
13. String[] result = test.split(regex);
```

Which regular expression, inserted at line 12, correctly splits test into "Test A",

"Test B", and "Test C"?

- A. String regex = "";
- B. String regex = " ";
- C. String regex = ".\*";
- D. String regex = "\\s";
- E. String regex = "\\s\*";
- F. String regex = "\\w[\\.] +";

答案：E

#### 第168題

Given:

```
11. public void testIfA(){
12.     if(testIfB("True")){
13.         System.out.println("True");
14.     }else{
15.         System.out.println("Not true");
16.     }
17. }
18. public Boolean testIfB(String str){
19.     return Boolean.valueOf(str);
20. }
```

What is the result when method testIfA is invoked?

- A. True

- B. Not true
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error at line 12.
- E. Compilation fails because of an error at line 19.

答案：A

#### 第169題

Given:

- 12. `NumberFormat nf = NumberFormat.getInstance();`
- 13. `nf.setMaximumFractionDigits(4);`
- 14. `nf.setMinimumFractionDigits(2);`
- 15. `String a = nf.format(3.1415926);`
- 16. `String b = nf.format(2);`

Which two statements are true about the result if the default locale is `Locale.US`? (Choose two.)

- A. The value of `b` is 2.
- B. The value of `a` is 3.14.
- C. The value of `b` is 2.00.
- D. The value of `a` is 3.141.
- E. The value of `a` is 3.1415.
- F. The value of `a` is 3.1416.
- G. The value of `b` is 2.0000.

答案：CF

#### 第170題

Given:

- 12. `String csv = "Sue,5,true,3";`
- 13. `Scanner scanner = new Scanner(csv);`
- 14. `scanner.useDelimiter(",");`
- 15. `int age = scanner.nextInt();`

What is the result?

- A. Compilation fails.
- B. After line 15, the value of `age` is 5.
- C. After line 15, the value of `age` is 3.
- D. An exception is thrown at runtime.

答案：D

#### 第171題

Given:

- 11. `String test = "a1b2c3";`
- 12. `String[] tokens = test.split("\\d");`
- 13. `for(String s : tokens) System.out.print(s + " ");`

What is the result?

- A. a b c
- B. 1 2 3
- C. a1b2c3
- D. a1 b2 c3
- E. Compilation fails.
- F. The code runs with no output.
- G. An exception is thrown at runtime.

答案：A

#### 第172題

Given:

```
33. Date d = new Date(0);
34. String ds = "December 15, 2004";
35. //insert code here
36. try{
37.     d = df.parse(ds);
38. }
39. catch(ParseException e){
40.     System.out.println("Unable to parse " + ds);
41. }
42. //insert code here too
```

What creates the appropriate DateFormat object and adds a day to the Date object?

- A. 35. DateFormat df = DateFormat.getDateFormat();  
42. d.setTime((60 \* 60 \* 24) + d.getTime());
- B. 35. DateFormat df = DateFormat.getDateInstance();  
42. d.setTime((1000 \* 60 \* 60 \* 24) + d.getTime());
- C. 35. DateFormat df = DateFormat.getDateFormat();  
42. d.setLocalTime((1000 \* 60 \* 60 \* 24) + d.getLocalTime());
- D. 35. DateFormat df = DateFormat.getDateInstance();  
42. d.setLocalTime((60 \* 60 \* 24) + d.getLocalTime());

答案：B

#### 第173題

Given:

```
11. public class Yikes{
12.
13.     public static void go(Long n){System.out.print("Long ");}
14.     public static void go(Short n){System.out.print("Short ");}
15.     public static void go(int n){System.out.print("int ");}
16.     public static void main(String[] args){
17.         short y = 6;
18.         long z = 7;
19.         go(y);
20.         go(z);
```

```
21.    }  
22. }
```

What is the result?

- A. int Long
- B. Short Long
- C. Compilation fails.
- D. An exception is thrown at runtime.

答案：A

#### 第174題

Given:

```
12. Date date = new Date();  
13. df.setLocale(Locale.ITALY);  
14. String s = df.format(date);
```

The variable df is an object of type DateFormat that has been initialized in line 11.

What is the result if this code is run on December 14, 2000?

- A. The value of s is 14-dic-2000.
- B. The value of s is Dec 14, 2000.
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 13.

答案：D

#### 第175題

Which two scenarios are NOT safe to replace a StringBuffer object with a StringBuilder object? (Choose two.)

- A. When using versions of Java technology earlier than 5.0.
- B. When sharing a StringBuffer among multiple threads.
- C. When using the java.io class StringBufferInputStream.
- D. When you plan to reuse the StringBuffer to build more than one string.
- E. Initiation of separate design processes to the separation of users

答案：AB

#### 第176題

Place the code fragments into position to produce the output: true true false

##### Code

```
Scanner scanner = new Scanner("One,5,true,3,true,6,7,false");  
scanner.useDelimiter(",");  
while(  ){  
    if(  ){  
        System.out.print(  + " ");
```



```

    }else Place here;
}

```

## Code Fragments

```

scanner.hasNextBoolean() scanner.nextBoolean()
scanner.next() scanner.hasNext()

```

答案：

## Code

```

Scanner scanner = new Scanner("One,5,true,3,true,6,7,false");
scanner.useDelimiter(",");
while( scanner.hasNext() ){
    if( scanner.hasNextBoolean() ){
        System.out.print( scanner.nextBoolean() + " ");
    }else scanner.next();
}

```

## 第177題

Given:

11. 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.
- E. An exception is thrown at runtime.

答案：D

## 第178題

Given:

1. public class Target{
2. private int i = 0;
3. public int addOne(){
4. return ++i;
5. }
6. }

And:

1. public class Client{
2. public static void main(String[] args){
3. System.out.println(new Target().addOne());
4. }
5. }

Which change can you make to Target without affecting Client?

- A. Line 4 of class Target can be changed to return i++;
- B. Line 2 of class Target can be changed to private int i = 1;
- C. Line 3 of class Target can be changed to private int addOne(){
- D. Line 2 of class Target can be changed to private Integer i = 0;

答案：D

## 第179題

Place the Relations on their corresponding Implementation Structures. Note Not all Implementation Structures will be used.

| Implementation Structures                      | Relations                                                    |
|------------------------------------------------|--------------------------------------------------------------|
| <div>class A{<br/>List&lt;B&gt; b;<br/>}</div> | <div>Car is a Vehicle<br/>and<br/>Car is a Collectable</div> |
| <div>class A{<br/>}</div>                      | <div>Car has a<br/>SteeringWheel</div>                       |
| <div>class A{<br/>B b;<br/>}</div>             | <div>Car has Wheels</div>                                    |
| <div>class A<br/>extends B{}</div>             | <div>Mini is a Car</div>                                     |
| <div>class A<br/>extends B, C{}</div>          | <div>Car is an Object</div>                                  |
| <div>class A{<br/>B c; C c;<br/>}</div>        |                                                              |
| <div>class A<br/>implements B,<br/>C{}</div>   |                                                              |

答案：有 2 個找不到對應的關聯

|                                                |                                        |                                              |                                                              |
|------------------------------------------------|----------------------------------------|----------------------------------------------|--------------------------------------------------------------|
| <div>class A{<br/>List&lt;B&gt; b;<br/>}</div> | <div>Car has Wheels</div>              | <div>class A<br/>extends B, C{}</div>        | <div>Car is a Vehicle<br/>and<br/>Car is a Collectable</div> |
| <div>class A{<br/>}</div>                      | <div>Car is an Object</div>            | <div>class A{<br/>B c; C c;<br/>}</div>      |                                                              |
| <div>class A{<br/>B b;<br/>}</div>             | <div>Car has a<br/>SteeringWheel</div> | <div>class A<br/>implements B,<br/>C{}</div> |                                                              |
| <div>class A<br/>extends B{}</div>             | <div>Mini is a Car</div>               |                                              |                                                              |

## 第180題

Place the correct description of the compiler output on the code fragments to be inserted at lines 4 and 5. The same compiler output may be used more than once.

```

1. import java.util.*;
2. public class X{
3.     public static void main(String[] args){
4.         //insert code here
5.         // insert code here
6.     }
7.     public static void foo(List<Object> list){
8.     } }

```

**Code**

```
ArrayList<String> x1 = new ArrayList<String>();
foo(x1);
```

```
ArrayList<Object> x2 = new ArrayList<String>();
foo(x2);
```

```
ArrayList<Object> x3 = new ArrayList<Object>();
foo(x3);
```

```
ArrayList x4 = new ArrayList();
foo(x4);
```

**Compiler Output**

Compilation succeeds.

Compilation fails due to an error in the first statement.

Compilation of the first statement succeeds, but compilation fails due to an error in the second statement.

答案：

**Code**

```
ArrayList<String> x1 = new ArrayList<String>();
foo(x1);
```

Compilation of the first statement succeeds, but compilation fails due to an error in the second statement.

```
ArrayList<Object> x2 = new ArrayList<String>();
foo(x2);
```

Compilation fails due to an error in the first statement.

```
ArrayList<Object> x3 = new ArrayList<Object>();
foo(x3);
```

Compilation succeeds.

```
ArrayList x4 = new ArrayList();
foo(x4);
```

Compilation succeeds.

## 第181題

Place code into the class so that it compiles and generates the output answer = 42. Note: Code options may be used more than once.

**Class**

```
public class Place here {
    private Place here object;
    public Place here (Place here object){
        this.object = object;
    }
    public Place here getObject(){
        return object;
    }
    public static void main(String[] args){
        Gen<String> str = new Gen<String>("answer");
        Gen<Integer> intg = new Gen<Integer>(42);
```

**Code Options**

Gen<T>

Gen<?>

Gen

?

T

|                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|--|
| <pre>                 System.out.println(str.getObject() + "=" +                     intg.getObject());             }         }     } </pre> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|--|

答案：

```

public class Gen<T>{
    private T object;
    public Gen ( T object){
        this.object = object;
    }
    public T getObject(){
        return object;
    }
    public static void main(String[] args){
        Gen<String> str = new Gen<String>("answer");
        Gen<Integer> intg = new Gen<Integer>(42);
        System.out.println(str.getObject() + "=" +
            intg.getObject());
    }
}

```

### 第182題

Given the class definitions:

```

class Animal{}
class Dog extends Animal{}

```

and the code:

```

public void go(){
    ArrayList<Dog> aList = new ArrayList<Dog>();
    takeList(aList);
}

//insert definition of the takeList() method here

```

Place the correct Compilation Result on each takeList() method definition to indicate whether or not the go() method would compile given that definition.

|                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <b>takeList() Method Definition</b> |                                                          |
| <input type="checkbox"/>            | public void takeList(ArrayList list){}                   |
| <input type="checkbox"/>            | public void takeList(ArrayList<Animal> list){}           |
| <input type="checkbox"/>            | public void takeList(ArrayList<? extends Animal> list){} |
| <input type="checkbox"/>            | public void takeList(ArrayList<?> list){}                |
| <input type="checkbox"/>            | public void takeList(ArrayList<Object> list){}           |
| <b>Compilation Result</b>           |                                                          |
| <input type="checkbox"/>            | Compilation succeeds.                                    |
| <input type="checkbox"/>            | Compilation fails.                                       |

答案：

#### takeList() Method Definition

|                                                          |                       |
|----------------------------------------------------------|-----------------------|
| public void takeList(ArrayList list){}                   | Compilation succeeds. |
| public void takeList(ArrayList<Animal> list){}           | Compilation fails.    |
| public void takeList(ArrayList<? extends Animal> list){} | Compilation succeeds. |
| public void takeList(ArrayList<?> list){}                | Compilation succeeds. |
| public void takeList(ArrayList<Object> list){}           | Compilation fails.    |

#### 第183題

Place the code in the appropriate places such that this program will always output [1, 2].

```
import java.util.*;
public class MyInt Place here Place here {
    public static void main(String[] args){
        ArrayList<MyInt> list = new ArrayList<MyInt>();
        list.add(new MyInt(2));
        list.add(new MyInt(1));
        Collections.sort(list);
        System.out.println(list);
    }
    private int i;
    public MyInt(int i){this.i = i;}
    public String toString(){return Integer.toString(i);}
    Place here int Place here {
        MyInt i2 = (MyInt)o;
        return Place here ;
    }
}
```

#### Code

implements extends sortable Object Comparable  
protected public i - i2.i i i2.i - i  
compare(MyInt o, MyInt i2) compare(Object o, Object i2)  
sort(Object o) sort(MyInt o)  
compareTo(MyInt o) compareTo(Object o)

答案：

```
import java.util.*;
public class MyInt implements Comparable {
    public static void main(String[] args){
        ArrayList<MyInt> list = new ArrayList<MyInt>();
        list.add(new MyInt(2));
        list.add(new MyInt(1));
        Collections.sort(list);
        System.out.println(list);
    }
}
```

```

    }
    private int i;
    public MyInt(int i){this.i = i;}
    public String toString(){return Integer.toString(i);}
    public int compareTo(Object o) {
        MyInt i2 = (MyInt)o;
        return i - i2.i;
    }
}

```

## 第184題

Place each Collection Type on the statement to which it applies.

| Statements                                                                                              | Collection Types             |
|---------------------------------------------------------------------------------------------------------|------------------------------|
| allows access to elements by their integer index                                                        | <code>java.util.Map</code>   |
| defines the method <code>V get(Object key)</code>                                                       | <code>java.util.Set</code>   |
| is designed for holding elements prior to processing                                                    | <code>java.util.List</code>  |
| contains no pair of elements <code>e1</code> and <code>e2</code> , such that <code>e1.equals(e2)</code> | <code>java.util.Queue</code> |

答案：

| Statements                                                                                              | Collection Types             |
|---------------------------------------------------------------------------------------------------------|------------------------------|
| allows access to elements by their integer index                                                        | <code>java.util.List</code>  |
| defines the method <code>V get(Object key)</code>                                                       | <code>java.util.Map</code>   |
| is designed for holding elements prior to processing                                                    | <code>java.util.Queue</code> |
| contains no pair of elements <code>e1</code> and <code>e2</code> , such that <code>e1.equals(e2)</code> | <code>java.util.Set</code>   |

## 第185題

Given:

```

1. public class Person{
2.     private String name;
3.     public Person(String name){this.name = name;}
4.     public boolean equals(Person p){
5.         return p.name.equals(this.name);
6.     }
7. }

```

Which statement is true?

A. The equals method does NOT properly override the `Object.equals` method.

- B. Compilation fails because the private attribute p.name cannot be accessed in line 5.
- C. To work correctly with hash-based data structures, this class must also implement the hashCode method.
- D. When adding Person objects to a java.util.Set collection, the equals method in line 4 will prevent duplicates.

答案：A

#### 第186題

Which two statements are true about the hashCode method? (Choose two.)

- A. The hashCode method for a given class can be used to test for object equality and object inequality for that class.
- B. The hashCode method is used by the java.util.SortedSet collection class to order the elements within that set.
- C. The hashCode method for a given class can be used to test for object inequality, but NOT object equality, for that class.
- D. The only important characteristic of the values returned by a hashCode method is that the distribution of values must follow a Gaussian distribution.
- E. The hashCode method is used by the java.util.HashSet collection class to group the elements within that set into hash buckets for swift retrieval.

答案：CE

#### 第187題

Given:

```
1. public class Score implements Comparable<Score>{  
2.     private int wins, losses;  
3.     public Score(int w, int l){ wins = w; losses = l;}  
4.     public int getWins(){return wins;}  
5.     public int getLosses(){return losses;}  
6.     public String toString(){  
7.         return "<" + wins + "," + losses + ">";  
8.     }  
9.     //insert code here  
10. }
```

Which method will complete this class?

- A. public int compareTo(Object o){/\* more code here \*/}
- B. public int compareTo(Score other){/\* more code here \*/}
- C. public int compare(Score s1, Score s2){/\* more code here \*/}
- D. public int compare(Object o1, Object o2){/\* more code here \*/}

答案：B

#### 第188題

Given a pre-generics implementation of a method:



```
11. public static int sum(List list){
12.     int sum = 0;
13.     for(Iterator iter = list.iterator(); iter.hasNext();){
14.         int i = ((Integer)iter.next()).intValue();
15.         sum += i;
16.     }
17.     return sum;
18. }
```

What three changes allow the class to be used with generics and avoid an unchecked warning? (Choose three.)

- A. Remove line 14.
- B. Replace line 14 with "int i = iter.next();".
- C. Replace line 13 with "for(int i : intList){".
- D. Replace line 13 with "for(Iterator iter : intList){".
- E. Replace the method declaration with "sum(List<int> intList)".
- F. Replace the method declaration with "sum(List<Integer> intList)".

答案：ACF

#### 第189題

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.

答案：C

#### 第190題

Given:

```
1. import java.util.*;
2. public class WrappedString{
3.     private String s;
4.     public WrappedString(String s){this.s = s;}
```

```
5.    public static void main(String[] args){
6.        HashSet<Object> hs = new HashSet<Object>();
7.        WrappedString ws1 = new WrappedString("aardvark");
8.        WrappedString ws2 = new WrappedString("aardvark");
9.        String s1 = new String("aardvark");
10.       String s2 = new String("aardvark");
11.       hs.add(ws1); hs.add(ws2); hs.add(s1); hs.add(s2);
12.       System.out.println(hs.size()); }}
```

What is the result?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. Compilation fails.
- G. An exception is thrown at runtime.

答案：D

#### 第191題

Given:

```
11. //insert code here
12. private N min, max;
13. public N getMin() { return min; }
14. public N getMax() { return max; }
15. public void add(N added) {
16.     if(min == null || added.doubleValue() < min.doubleValue())
17.         min = added;
18.     if(max == null || added.doubleValue() > max.doubleValue())
19.         max = added;
20. }
21. }
```

Which two, inserted at line 11, will allow the code to compile? (Choose two.)

- A. `public class MinMax<?>{`
- B. `public class MinMax<? extends Number>{`
- C. `public class MinMax<N extends Object>{`
- D. `public class MinMax<N extends Number>{`
- E. `public class MinMax<? extends Object>{`
- F. `public class MinMax<N extends Integer>{`

答案：DF

#### 第192題

Given:

```
3. import java.util.*;
4. public class G1{
```

```
5.     public void takeList(List<? extends String> list){
6.         //insert code here
7.     }
8. }
```

Which three code fragments, inserted independently at line 6, will compile? (Choose three.)

- A. list.add("foo");
- B. Object o = list;
- C. String s = list.get(0);
- D. list = new ArrayList<String>();
- E. list = new ArrayList<Object>();

答案：BCD

#### 第193題

Given that the elements of a PriorityQueue are ordered according to natural ordering, and:

```
2.     import java.util.*;
3.     public class GetInLine{
4.         public static void main(String[] args){
5.             PriorityQueue<String> pq = new PriorityQueue<String>();
6.             pq.add("banana");
7.             pq.add("pear");
8.             pq.add("apple");
9.             System.out.println(pq.poll() + " " + pq.peek());
10.        }
11.    }
```

What is the result?

- A. apple pear
- B. banana pear
- C. apple apple
- D. apple banana
- E. banana banana

答案：D

#### 第194題

Given:

```
enum Example{ONE, TWO, THREE}
```

Which statement is true?

- A. The expressions (ONE == ONE) and ONE.equals(ONE) are both guaranteed to be true.
- B. The expression (ONE < TWO) is guaranteed to be true and ONE.compareTo(TWO) is guaranteed to be less than one.
- C. The Example values cannot be used in a raw java.util.HashMap; instead, the programmer must use a java.util.EnumMap.
- D. The Example values can be used in a java.util.SortedSet, but the set will NOT be sorted because

enumerated types do NOT implement java.lang.Comparable.

答案：A

### 第195題

Given:

```
3.  import java.util.*;
4.  public class Mapit{
5.      public static void main(String[] args){
6.          Set<Integer> set = new HashSet<Integer>();
7.          Integer i1 = 45;
8.          Integer i2 = 46;
9.          set.add(i1);
10.         set.add(i1);
11.         set.add(i2); System.out.print(set.size() + " ");
12.         set.remove(i1); System.out.print(set.size() + " ");
13.         i2 = 47;
14.         set.remove(i2); System.out.print(set.size() + " ");
15.     }
16. }
```

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.

答案：B

### 第196題

Given:

```
34. HashMap props = new HashMap();
35. props.put("key45", "some value");
36. props.put("key12", "some other value");
37. props.put("key39", "yet another value");
38. Set s = props.keySet();
39. //insert code here
```

What inserted at line 39, will sort the keys in the props HashMap?

- A. Arrays.sort(s);
- B. s = new TreeSet(s);
- C. Collections.sort(s);
- D. s = new SortedSet(s);

答案：B

### 第197題

Given:

```
11. public static Collection get(){
12.     Collection sorted = new LinkedList();
13.     sorted.add("B"); sorted.add("C"); sorted.add("A");
14.     return sorted;
15. }
16. public static void main(String[] args){
17.     for(Object obj : get()){
18.         System.out.print(obj + ", ");
19.     }
20. }
```

What is the result?

- A. A, B, C,
- B. B, C, A,
- C. Compilation fails.
- D. The code runs with no output
- E. An exception is thrown at runtime.

答案：B

#### 第198題

Given:

```
11. public static Iterator reverse(List list){
12.     Collections.reverse(list);
13.     return list.iterator();
14. }
15. public static void main(String[] args){
16.     List list= new ArrayList();
17.     list.add("1"); list.add("2"); list.add("3");
18.     for(Object obj : reverse(list))
19.         System.out.print(obj + ", ");
20. }
```

What is the result?

- A. 3, 2, 1,
- B. 1, 2, 3,
- C. Compilation fails.
- D. The code runs with no output.
- E. An exception is thrown at runtime.

答案：C

#### 第199題

Given:

```
10. interface A{void x();}
11. class B implements A{public void x(){ } public void y(){}}
12. class C extends B{public void x(){}}
```

And:

```
20. java.util.List<A> list = new java.util.ArrayList<A>();
21. list.add(new B());
22. list.add(new C());
23. for(A a : list){
24.     a.x();
25.     a.y();
26. }
```

What is the result?

- A. The code runs with no output.
- B. An exception is thrown at runtime.
- C. Compilation fails because of an error in line 20.
- D. Compilation fails because of an error in line 21.
- E. Compilation fails because of an error in line 23.
- F. Compilation fails because of an error in line 25.

答案：F

#### 第200題

Given:

```
11. public class Person{
12.     private String name;
13.     public Person(String name){
14.         this.name = name;
15.     }
16.     public boolean equals(Object o){
17.         if(!(o instanceof Person)) return false;
18.         Person p = (Person)o;
19.         return p.name.equals(this.name);
20.     }
21. }
```

Which statement is true?

- A. Compilation fails because the hashCode method is not overridden.
- B. A HashSet could contain multiple Person objects with the same name.
- C. All Person objects will have the same hash code because the hashCode method is not overridden.
- D. If a HashSet contains more than one Person object with name="Fred", then removing another Person, also with name="Fred", will remove them all.

答案：B

#### 第201題

Given:

```
1. import java.util.*;
2. class A{}
3. class B extends A{}
4. public class Test{
5.     public static void main(String[] args){
6.         List<A> listA = new LinkedList<A>();
```

```

7.      List<B> listB = new LinkedList<B>();
8.      List<Object> listO = new LinkedList<Object>();
9.      //insert code here
10.     }
11.     public static void m1(List<? extends A> list){}
12.     public static void m2(List<A> list){}
13.     }

```

Place a result onto each method call to indicate what would happen if the method call were inserted at line 9.

Note: Results can be used more than once.

| Method Calls             | Result                             |
|--------------------------|------------------------------------|
| m1(listA);    m2(listA); | Does not compile.                  |
| m1(listB);    m2(listB); | Compiles and runs without error.   |
| m1(listO);    m2(listO); | An exception is thrown at runtime. |

答案：

|            |                                  |
|------------|----------------------------------|
| m1(listA); | Compiles and runs without error. |
| m1(listB); | Compiles and runs without error. |
| m1(listO); | Does not compile.                |
| m2(listA); | Compiles and runs without error. |
| m2(listB); | Does not compile.                |
| m2(listO); | Does not compile.                |

## 第202題

Given:

```

NumberNames nn = new NumberNames();
nn.put("one", 1);
System.out.println(nn.getNames());

```

Place the code into position to create a class that maps from Strings to integer values. The result of execution must be [one]. Some options may be used more than once.

|                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> public class NumberNames{     private HashMap&lt;Place here, Place here&gt; map =         new HashMap&lt;Place here, Place here Place here&gt;;     public void put(String name, int value){         map.put(Place here, Place here);     }     public Place here getNames(){         return map.keySet();     } } </pre> | <p>Code</p> <div> Set&lt;int&gt;    Set&lt;Integer&gt;    HashSet Set&lt;Integer, String&gt;    Set&lt;int, String&gt;    Set&lt;String, Integer&gt; Set&lt;String, int&gt;    Set&lt;String&gt;    NumberNames </div> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

```
String Integer int >
<0 name value map
```

答案：

```
public class NumberNames{
    private HashMap<String, Integer> map =
        new HashMap<String, Integer>();
    public void put(String name, int value){
        map.put(name, value);
    }
    public Set<String> getNames(){
        return map.keySet();
    }
}
```

### 第203題

Given:

```
5. import java.util.*;
6. public class SortOf{
7.     public static void main(String[] args){
8.         ArrayList<Integer> a = new ArrayList<Integer>();
9.         a.add(1); a.add(5); a.add(3);
10.        Collections.sort(a);
11.        a.add(2);
12.        Collections.reverse(a);
13.        System.out.println(a);
14.    }
15. }
```

What is the result?

- A. [1, 2, 3, 5]
- B. [2, 1, 3, 5]
- C. [2, 5, 3, 1]
- D. [5, 3, 2, 1]
- E. [1, 3, 5, 2]
- F. Compilation fails.
- G. An exception is thrown at runtime.

答案：C

### 第204題

Given:

```
11. public class Person{
12.     private name;
13.     public Person(String name){
14.         this.name = name;
```



```
15.    }
16.    public int hashCode(){
17.        return 420;
18.    }
19. }
```

Which statement is true?

- A. The time to find the value from HashMap with a Person key depends on the size of the map.
- B. Deleting a Person key from a HashMap will delete all map entries for all keys of type Person.
- C. Inserting a second Person object into a HashSet will cause the first Person object to be removed as a duplicate.
- D. The time to determine whether a Person object is contained in a HashSet is constant and does NOT depend on the size of the map.

答案：A

### 第205題

Given:

```
12. import java.util.*;
13. public class Explorer2{
14.     public static void main(String[] args){
15.         TreeSet<Integer> s = new TreeSet<Integer>();
16.         TreeSet<Integer> subs = new TreeSet<Integer>();
17.         for(int i=606; i<613; i++){
18.             if(i%2 == 0) s.add(i);
19.             subs = (TreeSet)s.subSet(608, true, 611, true);
20.             s.add(629);
21.             System.out.println(s + " " + subs);
22.         }
23. }
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. [608, 610, 612, 629] [608, 610]
- D. [608, 610, 612, 629] [608, 610, 629]
- E. [606, 608, 610, 612, 629] [608, 610]
- F. [606, 608, 610, 612, 629] [608, 610, 629]

答案：E

### 第206題

Given:

```
1. public class Drink implements Comparable{
2.     public String name;
3.     public int compareTo(Object o){
4.         return 0;
5.     }
6. }
```

and:

```
20. Drink one = new Drink();
21. Drink two = new Drink();
22. one.name = "Coffee";
23. two.name = "Tea";
24. TreeSet set = new TreeSet();
25. set.add(one);
26. set.add(two);
```

A programmer iterates over the TreeSet and prints the name of each Drink object.

What is the result?

- A. Tea
- B. Coffee
- C. Coffee Tea
- D. Compilation fails.
- E. The code runs with no output.
- F. An exception is thrown at runtime.

答案：B

#### 第207題

A programmer must create a generic class MinMax and the type parameter of MinMax must implement Comparable. Which implementation of MinMax will compile?

- A. 

```
class MinMax<E extends Comparable<E>>{
    E min = null;
    E max = null;
    public MinMax(){ }
    public void put(E value){/* store min or max */}
```
- B. 

```
class MinMax<E implements Comparable<E>>{
    E min = null;
    E max = null;
    public MinMax(){ }
    public void put(E value){/* store min or max */}
```
- C. 

```
class MinMax<E extends Comparable<E>>{
    <E> E min = null;
    <E> E max = null;
    public MinMax(){ }
    public <E> void put(E value){/* store min or max */}
```
- D. 

```
class MinMax<E implements Comparable<E>>{
    <E> E min = null;
    <E> E max = null;
    public MinMax(){ }
```

```
public <E> void put(E value){/* store min or max */}
```

答案：A

#### 第208題

Given:

```
1. import java.util.*;
2. public class Example{
3.     public static void main(String[] args){
4.         //insert code here
5.         set.add(new Integer(2));
6.         set.add(new Integer(1));
7.         System.out.println(set);
8.     }
9. }
```

Which code, inserted at line 4, guarantees that this program will output [1, 2]?

- A. Set set = new TreeSet();
- B. Set set = new HashSet();
- C. Set set = new SortedSet();
- D. List set = new SortedList();
- E. Set set = new LinkedHashSet();

答案：A

#### 第209題

Given:

```
1. import java.util.*;
2. public class TestSet{
3.     enum Example{ONE, TWO, THREE}
4.     public static void main(String[] args){
5.         Collection coll = new ArrayList();
6.         coll.add(Example.THREE);
7.         coll.add(Example.THREE);
8.         coll.add(Example.THREE);
9.         coll.add(Example.TWO);
10.        coll.add(Example.TWO);
11.        coll.add(Example.ONE);
12.        Set set = new HashSet(coll);
13.    }
14. }
```

Which statement is true about the set variable on line 12?

- A. The set variable contains all six elements from the coll collection, and the order is guaranteed to be preserved.
- B. The set variable contains only three elements from the coll collection, and the order is guaranteed to be preserved.
- C. The set variable contains all six elements from the coll collection, but the order is NOT guaranteed to be preserved.

- D. The set variable contains only three elements from the coll collection, but the order is NOT guaranteed to be preserved.

答案：D

#### 第210題

Given:

```
11. public class Person{
12.     private String name, comment;
13.     private int age;
14.     public Person(String n, int a, String c){
15.         name = n; age = a; comment = c;
16.     }
17.     public boolean equals(Object o){
18.         if (!(o instanceof Person)) return false;
19.         Person p = (Person)o;
20.         return age == p.age && name.equals(p.name);
21.     }
22. }
```

What is the appropriate definition of the hashCode method in class Person?

- A. return super.hashCode();
- B. return name.hashCode() + age \* 7;
- C. return name.hashCode() + comment.hashCode() / 2;
- D. return name.hashCode() + comment.hashCode() / 2 - age \* 3;

答案：B

#### 第211題

Given:

```
11. public class Key{
12.     private long id1;
13.     private long id2;
14.
15.     //class Key methods
16. }
```

A programmer is developing a class Key, that will be used as a key in a standard java.util.HashMap.

Which two methods should be overridden to assure that Key works correctly as a key? (Choose two.)

- A. public int hashCode()
- B. public void hashCode()
- C. public int compareTo(Object o)
- D. public boolean equals(Object o)
- E. public boolean compareTo(Key k)

答案：AD

#### 第212題

Given:

```
3. import java.util.*;
4. public class Hancock{
5.     //insert code here
6.     list.add("foo");
7. }
8. }
```

Which two code fragments, inserted independently at line 5, will compile without warnings? (Choose two.)

- A. `public void addStrings(List list){`
- B. `public void addStrings(List<String> list){`
- C. `public void addStrings(List<? super String> list){`
- D. `public void addStrings(List<? extends String> list){`

答案：BC

### 第213題

Given a class whose instances, when found in a collection of objects, are sorted by using the `compareTo()` method, which two statements are true? (choose two.)

- A. The class implements `java.lang.Comparable`.
- B. The class implements `java.util.Comparator`.
- C. The interface used to implement sorting allows this class to define only one sort sequence.
- D. The interface used to implement sorting allows this class to define many different sort sequences.

答案：AC

### 第214題

Given:

```
12. import java.util.*;
13. public class Explorer3{
14.     public static void main(String[] args){
15.         TreeSet<Integer> s = new TreeSet<Integer>();
16.         TreeSet<Integer> subs = new TreeSet<Integer>();
17.         for(int i=606; i<613; i++){
18.             if(i%2 == 0) s.add(i);
19.             subs = (TreeSet)s.subSet(608, true, 611, true);
20.             subs.add(629);
21.             System.out.println(s + " " + subs);
22.         }
23.     }
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. `[608, 610, 612, 629] [608, 610]`
- D. `[608, 610, 612, 629] [608, 610, 629]`
- E. `[606, 608, 610, 612, 629] [608, 610]`

F. [606, 608, 610, 612, 629] [608, 610, 629]

答案：B

### 第215題

Given:

```
1. import java.util.*;
2.
3. public class LetterASort{
4.     public static void main(String[] args){
5.         ArrayList<String> strings = new ArrayList<String>();
6.         strings.add("aAaA");
7.         strings.add("AaA");
8.         strings.add("aAa");
9.         strings.add("AAaa");
10.        Collections.sort(strings);
11.        for(String s : strings){System.out.print(s + " ");}
12.    }
13. }
```

What is the result?

- A. Compilation fails.
- B. aAaA aAa AAaa AaA
- C. AAaa AaA aAa aAaA
- D. AaA AAaa aAaA aAa
- E. aAa AaA aAaA AAaa
- F. An exception is thrown at runtime.

答案：C

### 第216題

Given:

```
1. import java.util.*;
2. public class TestGenericConversion{
3.     public static void main(String[] args){
4.         List list = new LinkedList();
5.         list.add("one");
6.         list.add("two");
7.         System.out.print(((String)list.get(0)).length());
8.     }
9. }
```

Refactor this class to use generics without changing the code's behavior.

```
1. import java.util.*;
2. public class TestGenericConversion{
3.     public static void main(String[] args){
4.         Place here
5.         list.add("one");
6.         list.add("two");
7.         Place here
```

```
8.    }
9.    }
```

**Code**

```
List list = new LinkedList(); System.out.print(list.get(0).length());
List<String> list = new LinkedList<String>(); System.out.print(list.get<String>(0).length());
List<String> list = new LinkedList(); System.out.print(<String>list.get(0).length());
List list = new LinkedList<String>(); System.out.print((List<String>)list.get(0).length());
```

答案：

```
1. import java.util.*;
2. public class TestGenericConversion{
3.     public static void main(String[] args){
4.         List<String> list = new LinkedList<String>();
5.         list.add("one");
6.         list.add("two");
7.         System.out.print(list.get(0).length());
8.     }
9. }
```

## 第217題

Place the code into the GenericB class definition to make the class compile successfully.

```
import java.util.*;

public class GenericB<Place>{
    public Place foo;
    public void setFoo(Place foo){
        this.foo = foo;
    }
    public Place getFoo(){
        return foo;
    }
    public static void main(String[] args){
        GenericB<Cat> bar = new GenericB<Cat>();
        bar.setFoo(new Cat());
        Cat c = bar.getFoo();
    }
}

interface Pet{}

class Cat implements Pet{}
```

**Code**

```
? extends Pet
T extends Pet
? implements Pet
T implements Pet
Pet extends T
?
T
<?>
<Pet>
```

答案：

```
import java.util.*;

public class GenericB<T extends Pet>{
    public T foo;
```

```

public void setFoo(T foo){
    this.foo = foo;
}
public T getFoo(){
    return foo;
}
public static void main(String[] args){
    GenericB<Cat> bar = new GenericB<Cat>();
    bar.setFoo(new Cat());
    Cat c = bar.getFoo();
}
}
interface Pet{}
class Cat implements Pet{}

```

## 第218題

Place the code elements in position so that the Flags2 class will compile and make appropriate use of the wait/notify mechanism. Note You may reuse code elements.

```

class Flags2{
    private boolean isReady = false;
    public Place here void produce(){
        isReady = true;
        Place here ;
    }
    public Place here void consume(){
        while(!isReady){
            try{
                Place here ;
            }catch(Exception ex){}
        }
        isReady = Place here ;
    }
}

```

## Code Elements

synchronized   true   false   wait()  
 volatile   synchronized()   notifyAll()   synchronize

答案：

```

class Flags2{
    private boolean isReady = false;
    public synchronized void produce(){
        isReady = true;
        notifyAll();
    }
}

```



```
    }  
    public synchronized void consume(){  
        while(!isReady){  
            try{  
                wait();  
            }catch(Exception ex){}  
        }  
        isReady = false;  
    }  
}
```

## 第219題

Given:

1. public class Threads2 implements Runnable{
- 2.
3. public void run(){
4. System.out.println("run.");
5. throw new RuntimeException("Problem");
6. }
7. public static void main(String[] args){
8. Thread t = new Thread(new Threads2());
9. t.start();
10. System.out.println("End of method.");
11. }
12. }

Which two can be results? (Choose two.)

- A. java.lang.RuntimeException: Problem
- B. run.  
java.lang.RuntimeException: Problem
- C. End of method.  
java.lang.RuntimeException: Problem
- D. End of method.  
run.  
java.lang.RuntimeException: Problem
- E. run.  
java.lang.RuntimeException: Problem  
End of method.

答案：DE

## 第220題

Which factor or factors

- A. It is possible for more than two threads to deadlock at once.
- B. The JVM implementation guarantees that multiple threads cannot enter into a deadlocked state.
- C. Deadlocked threads release once their sleep() method's sleep duration has expired.

- D. Deadlocking can occur only when the wait(), notify() and notifyAll() methods are used incorrectly.
- E. It is possible for a single-threaded application to deadlock if synchronized blocks are used incorrectly.
- F. If a piece of code is capable of deadlocking, you cannot eliminate the possibility of deadlocking by inserting invocations of Thread.yield().

答案：AF

#### 第221題

Given:

```
7. void waitForSignal(){
8.     Object obj = new Object();
9.     synchronized(Thread.currentThread()){
10.         obj.wait();
11.         obj.notify();
12.     }
13. }
```

Which statement is true?

- A. This code can throw an InterruptedException.
- B. This code can throw an IllegalMonitorStateException.
- C. This code can throw a TimeoutException after ten minutes.
- D. Reversing the order of obj.wait() and obj.notify() might cause this method to complete normally.
- E. A call to notify() or notifyAll() from another thread might cause this method to complete normally.
- F. This code does NOT compile unless "obj.wait()" is replaced with "((Thread) obj).wait()".

答案：B

#### 第222題

Given:

```
10. public class Starter extends Thread{
11.     private int x = 2;
12.     public static void main(String[] args) throws Exception{
13.         new Starter().makeItSo();
14.     }
15.     public Starter(){
16.         x = 5;
17.         start();
18.     }
19.     public void makeItSo() throws Exception{
20.         join();
21.         x = x - 1;
22.         System.out.println(x);
23.     }
24.     public void run(){x *= 2;}
25. }
```

What is the output if the main() method is run?

- A. 4
- B. 5

- C. 8
- D. 9
- E. Compilation fails.
- F. An exception is thrown at runtime.
- G. It is impossible to determine for certain.

答案：D

#### 第223題

Given:

```
11. class PingPong2{
12.     synchronized void hit(long n){
13.         for(int i=1; i<3; i++)
14.             System.out.print(n + "-" + i + " ");
15.     }
16. }
17. public class Tester implements Runnable{
18.     static PingPong2 pp2 = new PingPong2();
19.     public static void main(String[] args){
20.         new Thread(new Tester()).start();
21.         new Thread(new Tester()).start();
22.     }
23.     public void run(){pp2.hit(Thread.currentThread().getId());}
24. }
```

Which statement is true?

- A. The output could be 5-1 6-1 6-2 5-2
- B. The output could be 6-1 6-2 5-1 5-2
- C. The output could be 6-1 5-2 6-2 5-1
- D. The output could be 6-1 6-2 5-1 7-1

答案：B

#### 第224題

Given:

```
1. public class Threads4{
2.     public static void main(String[] args){
3.         new Threads4().go();
4.     }
5.     public void go(){
6.         Runnable r = new Runnable(){
7.             public void run(){
8.                 System.out.print("foo");
9.             }
10.        };
11.        Thread t = new Thread(r);
12.        t.start();
13.        t.start();
14.    }
```

15. }

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The code executes normally and prints "foo";
- D. The code executes normally, but nothing is printed.

答案：B

### 第225題

Given:

```

10. Runnable r = new Runnable(){
11.     public void run(){
12.         try{
13.             Thread.sleep(1000);
14.         }catch(InterruptedException e){
15.             System.out.println("interrupted");
16.         }
17.         System.out.println("ran");
18.     }
19. };
20. Thread t = new Thread(r);
21. t.start();
22. System.out.println("started");
23. t.sleep(2000);
24. System.out.println("interrupting");
25. t.interrupt();
26. System.out.println("ended");

```

Assume that sleep(n) executes in exactly n milliseconds. and all other code executes in an insignificant amount of time.

Place the fragments in the output area to show the result of running this code.

| Output     | Fragments            |
|------------|----------------------|
| Place here | interrupted          |
| Place here | ran                  |
| Place here | started              |
| Place here | interrupting         |
| Place here | ended                |
|            | InterruptedException |
|            | (no more output)     |

答案：

| Output           |
|------------------|
| (no more output) |
| started          |
| ran              |

interrupting

ended

## 第226題

Which two statements are true? (Choose two.)

- A. It is possible to synchronize static methods.
- B. When a thread has yielded as a result of `yield()`, it releases its locks.
- C. When a thread is sleeping as a result of `sleep()`, it releases its locks.
- D. The `Object.wait()` method can be invoked only from a synchronized context.
- E. The `Thread.sleep()` method can be invoked only from a synchronized context.
- F. When the thread scheduler receives a `notify()` request, and notifies a thread, that thread immediately releases its lock.

答案：AD

## 第227題

Given:

```

1.  public class TestOne implements Runnable{
2.      public static void main (String[] args)throws Exception{
3.          Thread t = new Thread(new TestOne());
4.          t.start();
5.          System.out.print("Started");
6.          t.join();
7.          System.out.print("Complete");
8.      }
9.      public void run(){
10.         for(int i=0; i<4; i++){
11.             System.out.print(i);
12.         }
13.     }
14. }
```

What can be a result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The code executes and prints "StartedComplete".
- D. The code executes and prints "StartedComplete0123".
- E. The code executes and prints "Started0123Complete".

答案：E

## 第228題

Which three will compile and run without exception? (Choose three.)

- A. `private synchronized Object o;`
- B. `void go(){`

- ```
synchronized{/* code here */}
```
- C. `public synchronized void go(){/* code here */}`
- D. `private synchronized(this) void go(){/* code here */}`
- E. `void go(){`  
`synchronized(Object.class){/* code here */}`
- F. `void go(){`  
`Object o = new Object();`  
`synchronized(o){/* code here */}`

答案：CEF

### 第229題

Given:

```
1. public class TestFive{
2.     private int x;
3.     public void foo(){
4.         int current = x;
5.         x = current + 1;
6.     }
7.     public void go(){
8.         for(int i=0; i<5; i++){
9.             new Thread(){
10.                public void run(){
11.                    foo();
12.                    System.out.print(x + ", ");
13.                }.start();
14.            }
15.        }
16.    }
```

Which two changes, taken together, would guarantee the output: 1, 2, 3, 4, 5, ? (Choose two.)

- A. move the line 12 print statement into the foo() method
- B. change line 7 to `public synchronized void go(){`
- C. change the variable declaration on line 2 to `private volatile int x;`
- D. wrap the code inside the foo() method with a `synchronized(this)` block
- E. wrap the for loop code inside the go() method with a `synchronized block synchronized(this){//for loop code here}`

答案：AD

### 第230題

Given that t1 is a reference to a live thread, which is true?

- A. The `Thread.sleep()` method can take t1 as an argument.
- B. The `Object.notify()` method can take t1 as an argument.
- C. The `Thread.yield()` method can take t1 as an argument.
- D. The `Thread.setPriority()` method can take t1 as an argument.
- E. The `Object.notify()` method arbitrarily chooses which thread to notify.

答案：E

### 第231題

Given:

```
11. Runnable r = new Runnable(){
12.     public void run(){
13.         System.out.print("Cat");
14.     }
15. };
16. Thread t = new Thread(r){
17.     public void run(){
18.         System.out.print("Dog");
19.     }
20. };
21. t.start();
```

What is the result?

- A. Cat
- B. Dog
- C. Compilation fails.
- D. The code runs with no output.
- E. An exception is thrown at runtime.

答案：B

### 第232題

Given:

```
1. public class Threads5{
2.     public static void main(String[] args){
3.         new Thread(new Runnable(){
4.             public void run(){
5.                 System.out.print("bar");
6.             }).start();
7.     }
8. }
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The code executes normally and prints "bar".
- D. The code executes normally, but nothing prints.

答案：C

### 第233題

Given:

```
1. public class Threads1{
2.     int x = 0;
```

```
3.     public class Runner implements Runnable{
4.         public void run(){
5.             int current = 0;
6.             for(int i=0; i<4; i++){
7.                 current = x;
8.                 System.out.print(current + ", ");
9.                 x = current + 2;
10.            }
11.        }
12.    }
13.
14.    public static void main(String[] args){
15.        new Threadsl().go();
16.    }
17.
18.    public void go(){
19.        Runnable r1 = new Runner();
20.        new Thread(r1).start();
21.        new Thread(r1).start();
22.    }
23. }
```

Which two are possible results? (Choose two.)

- A. 0, 2, 4, 4, 6, 8, 10, 6,
- B. 0, 2, 4, 6, 8, 10, 2, 4,
- C. 0, 2, 4, 6, 8, 10, 12, 14,
- D. 0, 0, 2, 2, 4, 4, 6, 6, 8, 8, 10, 10, 12, 12, 14, 14,
- E. 0, 2, 4, 6, 8, 10, 12, 14, 0, 2, 4, 6, 8, 10, 12, 14,

答案：AC

#### 第234題

Given:

foo and bar are public references available to many other threads, foo refers to a Thread and bar is an Object.

The thread foo is currently executing bar.wait().

From another thread, what provides the most reliable way to ensure that foo will stop executing wait()?

- A. foo.notify();
- B. bar.notify();
- C. foo.notifyAll();
- D. Thread.notify();
- E. bar.notifyAll();
- F. Object.notify();

答案：E

#### 第235題

Given:



```

11. public class PingPong implements Runnable{
12.     synchronized void hit(long n){
13.         for(int i=1; i<3; i++)
14.             System.out.print(n + "-" + i + " ");
15.     }
16.     public static void main(String[] args){
17.         new Thread(new PingPong()).start();
18.         new Thread(new PingPong()).start();
19.     }
20.     public void run(){
21.         hit(Thread.currentThread().getId( ));
22.     }
23. }

```

Which two statements are true? (Choose two.)

- A. The output could be 8-1 7-2 8-2 7-1
- B. The output could be 7-1 7-2 8-1 6-1
- C. The output could be 8-1 7-1 7-2 8-2
- D. The output could be 8-1 8-2 7-1 7-2

答案：CD

#### 第236題

Given:

```

1.  class Computation extends Thread{
2.
3.     private int num;
4.     private boolean isComplete;
5.     private int result;
6.
7.     public Computation(int num){this.num = num;}
8.
9.     public synchronized void run(){
10.         result = num * 2;
11.         isComplete = true;
12.         notify();
13.     }
14.
15.     public synchronized int getResult(){
16.         while(!isComplete){
17.             try{
18.                 wait();
19.             }catch(InterruptedException e){}
20.         }
21.         return result;
22.     }
23.
24.     public static void main(String[] args){
25.         Computation[] computations = new Computation[4];
26.         for(int i=0; i<computations.length; i++){
27.             computations[i] = new Computation(i);
28.             computations[i].start();

```

```

29.     }
30.     for(Computation c : computations)
31.         System.out.print(c.getResult() + " ");
32.     }
33. }

```

What is the result?

- A. The code will deadlock.
- B. The code may run with no output.
- C. An exception is thrown at runtime.
- D. The code may run with output "0 6".
- E. The code may run with output "2 0 6 4".
- F. The code may run with output "0 2 4 6".

答案：F

### 第237題

Place the code elements into the class so that the code compiles and prints "Run. Run. doIt. " in exactly that order. Note that there may be more than one correct solution.

```

class TestTwo extends Thread{
    public static void main(String[] a) throws Exception{
        TestTwo t = new TestTwo();
        t.start();
        Place here
        Place here
        Place here
    }
    public void run(){
        System.out.print("Run. ");
    }
    public void doIt(){
        System.out.print("doIt. ");
    }
}

```

**Code Elements**

t.start();
t.join();
t.pause(10);
run();
t.run();
t.doIt();
doIt();

答案：

```

class TestTwo extends Thread{
    public static void main(String[] a) throws Exception{
        TestTwo t = new TestTwo();
        t.start();
        t.run();
        t.join();
        t.doIt();
    }
}

```

```
public void run(){
    System.out.print("Run. ");
}
public void doIt(){
    System.out.print("doIt. ");
}
}
```

## 第238題

Which two code fragments will execute the method doStuff() in a separate thread? (Choose two.)

- A. 

```
new Thread(){
    public void run(){doStuff();}
};
```
- B. 

```
new Thread(){
    public void start(){doStuff();}
};
```
- C. 

```
new Thread(){
    public void start(){doStuff();}
}.run();
```
- D. 

```
new Thread(){
    public void run(){doStuff();}
}.start();
```
- E. 

```
new Thread(new Runnable(){
    public void run(){doStuff();}
}).run();
```
- F. 

```
new Thread(new Runnable(){
    public void run(){doStuff();}
}).start();
```

答案：DF

## 第239題

Given:

1. 

```
public class TestOne{
```
2. 

```
    public static void main(String[] args) throws Exception{
```
3. 

```
        Thread.sleep(3000);
```
4. 

```
        System.out.println("sleep");
```
5. 

```
    }
```
6. 

```
}
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The code executes normally and prints "sleep".

D. The code executes normally, but nothing is printed.

答案：C

#### 第240題

Place a Class on each method that is declared in the class.

| Method Name | Class            |
|-------------|------------------|
| run()       | java.lang.Object |
| wait()      | java.lang.Thread |
| notify()    |                  |
| sleep()     |                  |
| start()     |                  |
| join()      |                  |

答案：

|          |                  |
|----------|------------------|
| run()    | java.lang.Thread |
| wait()   | java.lang.Object |
| notify() | java.lang.Object |
| sleep()  | java.lang.Thread |
| start()  | java.lang.Thread |
| join()   | java.lang.Thread |

#### 第241題

Given:

```

1.  public class Threads3 implements Runnable{
2.      public void run(){
3.          System.out.print("running");
4.      }
5.      public static void main(String[] args){
6.          Thread t = new Thread(new Threads3());
7.          t.run();
8.          t.run();
9.          t.start();
10.     }
11. }
```

What is the result?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. The code executes and prints "running".
- D. The code executes and prints "runningrunning".
- E. The code executes and prints "runningrunningrunning".

答案：E

## 第242題

Given:

```
public class NamedCounter{
    private final String name;
    private int count;
    public NamedCounter(String name){this.name = name;}
    public String getName(){return name;}
    public void increment(){count++;}
    public int getCount(){return count;}
    public void reset(){count = 0;}}
```

Which three changes should be made to adapt this class to be used safely by multiple threads? (Choose three.)

- A. declare reset() using the synchronized keyword
- B. declare getName() using the synchronized keyword
- C. declare getCount() using the synchronized keyword
- D. declare the constructor using the synchronized keyword
- E. declare increment() using the synchronized keyword

答案：ACE

## 第243題

Given that Triangle implements Runnable, and:

```
31. void go() throws Exception{
32.     Thread t = new Thread(new Triangle());
33.     t.start();
34.     for(int x=1; x<100000; x++){
35.         //insert code here
36.         if(x%100 == 0) System.out.print("g");
37.     }}
38. public void run(){
39.     try{
40.         for(int x=1; x<100000; x++){
41.             //insert the same code here
42.             if(x%100 == 0) System.out.print("t");
43.         }
44.     }catch(Exception e){}
45. }
```

Which two statements, inserted independently at both lines 35 and 41, tend to allow both threads to temporarily pause and allow the other thread to execute? (Choose two.)

- A. Thread.wait();
- B. Thread.join();
- C. Thread.yield();
- D. Thread.sleep(1);
- E. Thread.notify();

答案：CD

## 第244題

Given:

```
1. public class TestSeven extends Thread{
2.     private static int x;
3.     public synchronized void doThings(){
4.         int current = x;
5.         current++;
6.         x = current;
7.     }
8.     public void run(){
9.         doThings();
10.    }
11. }
```

Which statement is true?

- A. Compilation fails.
- B. An exception is thrown at runtime.
- C. Synchronizing the run() method would make the class thread-safe.
- D. The data in variable "x" are protected from concurrent access problems.
- E. Declaring the doThings() method as static would make the class thread-safe.
- F. Wrapping the statements within doThings() in a synchronized(new Object()){ } block would make the class thread-safe.

答案：E