

Question **1**

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Question text

Which of the following modifiers cannot be applied to a top level class?

Question 1 Answer



a.  
public



b.  
private



c.  
final



d.  
abstract

Question **2**

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Question text

```
1. public class TestPoly {  
2.     public static void main(String [] args ){  
3.         Parent p = new Child();  
4.     }  
5. }  
6.  
7. class Parent {  
8.     public Parent() {  
9.         super();
```

```
10. System.out.println("instantiate a parent");
11. }
12. }
13.
14. class Child extends Parent {
15.     public Child() {
16.         System.out.println("instantiate a child");
17.     }
18. }
```

What is the result?

Question 2Answer



a.  
instantiate a parent  
instantiate a child



b.  
instantiate a child



c.  
instantiate a parent



d.  
instantiate a child  
instantiate a parent

Question **3**

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Question text

Given the following:

```
class Vehicle { }
```

```
class FourWheeler extends Vehicle { }
class Car extends FourWheeler { }
public class TestVehicle
{
    public static void main(String[] args)
    {
        Vehicle v = new Vehicle();
        FourWheeler f = new FourWheeler();
        Car c = new Car();
        xxxxxxxx
    }
}
```

Which of the following statement is legal, which can be substituted for xxxxxxxx?

Question 3Answer

☐

a.  
c = v;

☐

b.  
f = v;

☒

c.  
c = f;

☐

d.  
v = c;

Question **4**

Complete  
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Question text

Given the following,

```
1. class MySuper {
2.     public MySuper(int i) {
3.         System.out.println("super " + i);
4.     }
5. }
6.
7. public class MySub extends MySuper {
8.     public MySub() {
9.         super(2);
10.        System.out.println("sub");
11.    }
12.
13.    public static void main(String [] args) {
14.        MySuper sup = new MySub();
15.    }
16. }
```

What is the result?

Question 4Answer



a.  
sub  
super 2



b.  
Compilation fails at line 9.



c.  
super 2  
sub



d.

Compilation fails at line 14.

Question **5**

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Question text

Say that class Rodent has a child class Rat and another child class Mouse. Class Mouse has a child class PocketMouse. Examine the following

Rodent rod;

Rat rat = new Rat();

Mouse mos = new Mouse();

PocketMouse pkt = new PocketMouse();

Which of the following array declarations is correct for an array that is expected to hold up to 10 objects of types Rat, Mouse, and PocketMouse?

Question 5Answer



a.

Rodent[] array = new Rat[10];



b.

Rat[] array = new Rat[10];



c.

Rodent[] array = new Rodent[10];



d.

Rodent[10] array;

Question **6**

Complete

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Question text

What restriction is there on using the super reference in a constructor?

Question 6Answer



a.

It must be used in the first statement of the constructor.



b.

Only one child class can use it.



c.

It must be used in the last statement of the constructor.



d.

It can only be used in the parent's constructor.

Question **7**

Complete

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Question text

Which statement is true?

Question 7Answer



a.

If neither `super()` nor `this()` is declared as the first statement in the body of a constructor, then `this()` will implicitly be inserted as the first statement.



b.

If `super()` is the first statement in the body of a constructor, then `this()` can be declared as the second statement.



c.

If both a subclass and its superclass do not have any declared constructors, the implicit default constructor of the subclass will call `super()` when run.



d.

A `super()` or `this()` call must always be provided explicitly as the first statement in the body of a constructor.

Question **8**

Complete

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Question text

A class Animal has a subclass Mammal. Which of the following is true:

Question 8Answer



a.

Because of single inheritance, Animal can have only one subclass.



b.

Because of single inheritance, Mammal can have no siblings.



c.

Because of single inheritance, Mammal can have no subclasses.



d.

Because of single inheritance, Mammal can have no other parent than Animal.

Question **9**

Complete

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Question text

Which one of the following statement is false?

Question 9Answer



a.

All members of the superclass are inherited by the subclass.



b.

A final class cannot be abstract.



c.

A top level class in which all the members are declared private, can be declared public.



d.

The subclass of a non-abstract class can be declared abstract.

Question **10**

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Question text

Given the following code:

```
class B {
```

```
    int m = 7;
```

```
}
```

```
class D extends B {
```

```
    int m = 9;
```

```
}
```

```
public class TestBaseDerived {
```

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

```
        B b = new B();
```

```
        D d = new D();
```

```
        B bd = new D();
```

```
        System.out.printf("%d %d %d", b.m, d.m, bd.m);
```

```
    }
```

```
}
```

What will be the output on executing the above code?

Question 10Answer



a.

7 9 7





b.  
9 7 9



c.  
7 9 9



d.  
9 9 7

### Question 11

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#### Question text

Given the following code:

```
class B { int m = 7; }  
class D extends B { int m = 9; }  
public class TestBaseDerived {  
    public static void main(String[] args) {  
        B b = new B();  
        D d = new D();  
        B bd = new D();  
        System.out.printf("%d %d %d", b.m, d.m, bd.m);  
    }  
}
```

What will be the output on executing the above code ?

#### Question 11 Answer



a.  
9 7 9



b.  
7 9 9



c.  
9 9 7



d.  
7 9 7

## Question 12

Complete

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### Question text

Analyse the following 2 classes and select the correct statement.

```
class A {  
    private int x = 0;  
    static int y = 1;  
    protected int q = 2;  
}  
  
class B extends A {  
    void method() {  
        System.out.println(x);  
  
        System.out.println    ;  
        System.out.println(q);  
    }  
}
```

### Question 12Answer



a.  
The code fails to compile because the variable x is not available to class B.



b.

The code compiles correctly, and the following is displayed:012



c.

The code fails to compile because you can't subclass a class with static variables.



d.

The code fails to compile because you can't subclass a class with protected variables.

Question **13**

Complete

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Question text

Given a method in a class, what access modifier do you use to restrict access to that method to only the other members of the same class?

Question 13Answer



a.

private



b.

protected



c.

static



d.

volatile

Question **14**

Complete

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Question text

Say that class Rodent has a child class Rat and another child class Mouse. Class Mouse has a child class PocketMouse. Examine the following

Rodent rod;

```
Rat rat = new Rat();
```

```
Mouse mos = new Mouse();
```

```
PocketMouse pkt = new PocketMouse();
```

Which one of the following will cause a compiler error?

Question 14Answer

☐

a.

```
rod = rat;
```

☒

b.

```
pkt = rat;
```

☐

c.

```
pkt = null;
```

☐

d.

```
rod = mos;
```

Question **15**

Complete

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Question text

Which statement is true?

Question 15Answer

☐

a.

Inheritance defines a has-a relationship between a superclass and its subclasses.

☒

b.

Every Java object has a public method named equals.

☐

c.

A final class can be extended by any number of classes



- d.  
Every Java object has a public method named length.

Question **16**

Complete

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Question text

Which of the following statements are incorrect?

Question 16Answer



- a.  
private members of class can be inherited by a sub class, and become protected members in sub class.
- ☐ b.  
private members of class can only be accessed by other members of the class.
- ☐ c.  
public members of class can be accessed by any code in the program.
- ☐ d.  
protected members of a class can be inherited by a sub class, and become private members of the sub class.

Question **17**

Complete

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Question text

Which one of the following statement is false?

Question 17Answer



- a.  
All members of the superclass are inherited by the subclass.



b.

The subclass of a non-abstract class can be declared abstract.

☐

c.

A final class cannot be abstract.

☒

d.

A top level class in which all the members are declared private, can be declared public.

Question **18**

Complete

Marked out of 1.00

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Question text

The concept of inheritance provides the idea of

Question 18Answer

☐

a.

Taking more than one form

☒

b.

all of these

☐

c.

data hiding

☐

d.

reusability

Question **19**

Complete

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☐

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Question text

Can an object of a child type be assigned to a variable of the parent type? For example,  
Card crd;

```
BirthDay bd = new BirthDay("Lucinda", 42);  
crd = bd; // is this correct?
```

Question 19Answer

☐

a.

No-but a object of parent type can be assigned to a variable of child type.

☐

b.

Yes-any object can be assigned to any reference variable.

☐

c.

No-there must always be an exact match between the variable and the object types.

☒

d.

Yes-an object can be assigned to a reference variable of the parent type.

Question **20**

Complete

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Flag question

Question text

Which of the following modifiers can be applied to a constructor?

Question 20Answer

☒

a.

protected

☐

b.

transient

☐

c.

synchronized

☐

d.

static

Question **21**

Complete

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Question text

Consider the following class heirarchies

```
class A { }
```

```
class B extends A { }
```

```
class C extends B { }
```

And the following method declaration

```
public B doSomething    {  
    // some valid code fragments  
    return xx;  
}
```

Objects of which class ( from the heirarchy shown above ) can be safely substituted in place of xx in the method doSomething ?

Question 21Answer



a.  
Object of class A



b.  
An array object of class B



c.  
An array object of class C



d.  
Object of class C

Question **22**

Complete

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### Question text

Which statement is true?

Question 22 Answer



a.

If `super()` is the first statement in the body of a constructor, then `this()` can be declared as the second statement.



b.

If both a subclass and its superclass do not have any declared constructors, the implicit default constructor of the subclass will call `super()` when run.



c.

A `super()` or `this()` call must always be provided explicitly as the first statement in the body of a constructor.



d.

If neither `super()` nor `this()` is declared as the first statement in the body of a constructor, then `this()` will implicitly be inserted as the first statement.

Question **23**

Complete

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### Question text

Which statement is true about the use of modifiers?

Question 23 Answer



a.

Subclasses of a class must reside in the same package as the class they extend.



b.

You cannot specify accessibility of local variables. They are only accessible within the block in which they are declared.



c.  
Local variables can be declared static.

☐

d.  
If no accessibility modifier (public, protected, and private) is specified for a member declaration, the member is only accessible for classes in the same package and subclasses of its class in any package.

Question **24**

Complete

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Question text

Which of the following is correct syntax for defining a new class Jolt based on the superclass SoftDrink?

Question 24Answer

☐

a.  
class Jolt implements SoftDrink { //additional definitions go here }

☐

b.  
class Jolt isa SoftDrink { //additional definitions go here }

☒

c.  
class Jolt extends SoftDrink { //additional definitions go here }

☐

d.  
class Jolt defines SoftDrink { //additional definitions go here }

Question **25**

Complete

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Question text

```
class A { A(int i) {} }    // 1
```

```
class B extends A { }    // 2
```

Which one of the following statements is correct?

Question 25Answer

☐

a.  
Compiles successfully without any errors.

☐

b.  
Compile-time error at 1.

☒

c.  
Compile-time error at 2.

☐

d.  
compiler attempts to create a default constructor for class A.

Question **26**

Complete

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☐

Flag question

Question text

What type of inheritance does Java have?

Question 26Answer

☐

a.  
double inheritance

☒

b.  
single inheritance

☐

c.  
class inheritance

☐

d.  
multiple inheritance

Question **27**

Complete

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### Question text

Given the following code, which is the simplest print statement that can be inserted into the print() method?

// Filename: MyClass.java

```
public class MyClass extends MySuperclass {  
    public static void main(String[] args) {  
        MyClass object = new MyClass();  
        object.print();  
    }  
  
    public void print() {  
        // INSERT CODE HERE THAT WILL PRINT  
        // THE "Hello, world!" STRING FROM THE Message  
        // CLASS.  
    }  
}
```

```
class MySuperclass {  
    Message msg = new Message();  
}
```

```
class Message {  
    // The message that should be printed:  
    String text = "Hello, world!";  
}
```

Question 27Answer



a.

`System.out.println(object.msg.text);`



b.

`System.out.println(super.msg.text);`



c.

`System.out.println(msg.text);`



d.

`System.out.println(Message.text);`

Question **28**

Complete

Marked out of 1.00



Flag question

Question text

Given the following code, which of these constructors can be added to MySub class without causing a compile-time error?

```
class MySuper {  
    int number;  
    MySuper(int i) { number = i; }  
}  
  
class MySub extends MySuper {  
    int count;  
    MySub(int cnt, int num) {  
        super(num);  
        count=cnt;  
    }  
    // INSERT ADDITIONAL CONSTRUCTOR HERE  
}
```

Question 28Answer



a.

MySub() {}



b.

MySub(int cnt) { super(cnt); this(cnt, 0); }



c.

MySub(int cnt) { count = cnt; super(cnt); }



d.

MySub(int cnt) { this(cnt, cnt); }

Question **29**

Complete

Marked out of 1.00



Flag question

Question text

Given the following,

1. class B extends A {

2.     int getID() {

3.         return id;

4.     }

5. }

6. class C {

7.     public int name;

8. }

9. class A {

10.    C c = new C();

11.    public int id;

12. }

Which one is correct about instances of the classes listed above?

Question 29Answer



a.  
A is-a B

☐

b.  
C is-a A

☐

c.  
B has-a A

☒

d.  
B has-a C

Question **30**

Complete

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Question text

Say that there are three classes: Computer, AppleComputer, and IBMComputer. What are the likely relationships between these classes?

Question 30 Answer

☐

a.  
Computer is a superclass, AppleComputer is a subclasses of Computer, and IBMComputer is a subclas of AppleComputer

☐

b.  
IBMComputer is the superclass, AppleComputer and Computer are subclasses of IBMComputer.

☒

c.  
Computer is the superclass, AppleComputer and IBMComputer are subclasses of Computer.

☐

d.  
Computer, AppleComputer and IBMComputer are sibling classes.

Question **31**

Complete

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### Question text

Assuming Card is the base class of Valentine, Holiday and Birthday, in order for the following code to be correct, what must be the type of the reference variable card?

```
_____ card;  
card = new Valentine( "Joe", 14 );  
card.greeting();  
card = new Holiday( "Bob" );  
card.greeting();  
card = new Birthday( "Emily", 12 );  
card.greeting();
```

### Question 31 Answer



a.  
Valentine



b.  
Card



c.  
Birthday



d.  
Holiday

### Question 32

Complete

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### Question text

What restriction is there on using the super reference in a constructor?

### Question 32 Answer





a.  
It must be used in the first statement of the constructor.

☐

b.  
It can only be used in the parent's constructor.

☐

c.  
Only one child class can use it.

☐

d.  
It must be used in the last statement of the constructor.

Question **33**

Complete

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Flag question

Question text

Given the following:

```
1. public class MyClass {  
2.     public static void main(String[] args) {  
3.         Derived d = new Derived("hello");  
4.     }  
5. }  
6.  
7. class Base {  
8.     Base() { this("a", "b"); }  
9.  
10.    Base(String x, String y) { System.out.println(x + y); }  
11. }  
12.  
13. class Derived extends Base {  
14.     Derived(String s) { System.out.println(s); }  
15. }
```

What is the output?

Question 33 Answer

☐

a.  
It will print hello followed by ab.

☒

b.  
It will print ab followed by hello.

☐

c.  
It will print ab

☐

d.  
It will print hello.

Question **34**

Complete

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☐

Flag question

Question text

Given the following:

1. class Animal {
2.   String name = "No name";
3.   public Animal(String nm) { name = nm; }
4. }
- 5.
6. class DomesticAnimal extends Animal {
7.   String animalFamily = "nofamily";
8.   public DomesticAnimal(String family) { animalFamily = family; }
9. }
- 10.
11. public class AnimalTest {
12.   public static void main(String[] args) {

```
13.   DomesticAnimal da = new DomesticAnimal("cat");
14.   System.out.println(da.animalFamily);
15. }
16. }
```

What is the result ?

Question 34Answer



a.  
Compilation fails due to an error in line 8.



b.  
nofamily



c.  
cat



d.  
An exception is thrown at runtime.

Question **35**

Complete

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Question text

Given the following code, which is the simplest print statement that can be inserted into the print() method?

// Filename: MyClass.java

```
public class MyClass extends MySuperclass {
    public static void main(String[] args) {
        MyClass object = new MyClass();
        object.print();
    }
    public void print() {
        // INSERT CODE HERE THAT WILL PRINT
    }
}
```

```
// THE "Hello, world!" STRING FROM THE Message
// CLASS.
}
}
class MySuperclass {
    Message msg = new Message();
}
class Message {
    // The message that should be printed:
    String text = "Hello, world!";
}
```

Question 35Answer



a.  
System.out.println(msg.text);



b.  
System.out.println(Message.text);



c.  
System.out.println(object.msg.text);



d.  
System.out.println(super.msg.text);