**Question 1**

Which of the following is a true statement?

|  |  |
| --- | --- |
| a. | An anonymous class can extend only the Object class. |
| b. | An anonymous class cannot implement an interface. |
| c. | An anonymous class declaration cannot have an implements clause. |
| d. | An anonymous class declaration can name more than one interface in the implements clause. |
| e. | The class instance creation expression for an anonymous class must never include arguments. |
| f. | None of the above |

**Question 2**

Which of the following are true statements?

|  |  |
| --- | --- |
| a. | An anonymous class is implicitly abstract. |
| b. | An anonymous class is implicitly final. |
| c. | An anonymous class is implicitly static. |
| d. | A static reference variable can reference an instance of an anonymous class. |
| e. | An anonymous class declaration must have at least one explicit constructor declaration. |
| f. | An anonymous class declaration can have more than one explicit constructor declaration. |

**Question 3**

abstract class A {

private int x = 4, y = 2;

public int x() {return x;}

public void x(int x) {this.x = x;}

public int y() {return y;}

public void y(int y) {this.y = y;}

public abstract int math();

}

class B {

static A a1 = new A(2,1) {

public A(int i1, int i2) {x(i1);y(i2);};

public int math() {return x()+y();}

};

public static void main(String[] args) {

System.out.print(a1.math());

}}

What is the result of attempting to compile and run the program?

|  |  |
| --- | --- |
| a. | Prints: 8 |
| b. | Prints: 3122 |
| c. | Compile-time error |
| d. | Run-time error |
| e. | None of the above |

**Question 4**

class A {

private static int f1 = 1;

private int f2 = 2;

void m1(int p1, final int p2) {

int l1 = 5;

final int l2 = 6;

Object x = new Object() {

int a = f1; // 1

int b = f2; // 2

int c = p1; // 3

int d = p2; // 4

int e = l1; // 5

int f = l2; // 6

};}}

Compile-time errors are generated at which lines?

|  |  |
| --- | --- |
| a. | 1 |
| b. | 2 |
| c. | 3 |
| d. | 4 |
| e. | 5 |
| f. | 6 |

**Question 5**

abstract class A {

private int x = 1, y = 1;

public A(int x, int y) {this.x = x; this.y = y;}

public abstract int math();

}

class B {

static A a1 = new A(2,1) {public int math() {return x + y;}};

static A a2 = new A(2,1) {public int math() {return x - y;}};

static A a3 = new A(2,1) {public int math() {return x \* y;}};

static A a4 = new A(2,1) {public int math() {return x / y;}};

public static void main(String[] args) {

System.out.print("" + a1.math() + a2.math() +

a3.math() + a4.math());

}}

What is the result of attempting to compile and run the program?

|  |  |
| --- | --- |
| a. | Prints: 3122 |
| b. | Prints: 2011 |
| c. | Compile-time error |
| d. | Run-time error |
| e. | None of the above |

**Question 6**

abstract class A {

private int x = 4, y = 2;

public int x() {return x;}

public void x(int x) {this.x = x;}

public int y() {return y;}

public void y(int y) {this.y = y;}

public abstract int math();

}

class B {

static A a1 = new A() {public int math() {return x()+y();}}

static A a2 = new A() {public int math() {return x()-y();}}

static A a3 = new A() {public int math() {return x()\*y();}}

static A a4 = new A() {public int math() {return x()/y();}}

public static void main(String[] args) {

System.out.print("" + a1.math() + a2.math() +

a3.math() + a4.math());

}}

What is the result of attempting to compile and run the program?

|  |  |
| --- | --- |
| a. | Prints: 18 |
| b. | Prints: 6282 |
| c. | Compile-time error |
| d. | Run-time error |
| e. | None of the above |

**Question 7**

class A {String m1() {return "A.m1";}}

interface B {String m2();}

class C {

static class D extends A implements B {

public String m1() {return "D.m1";}

public String m2() {return "D.m2";}

}

static A a1 = new A() implements B {

public String m1() {return "m1";}

public String m2() {return "m2";}

};

public static void main(String[] args) {

System.out.print(a1.m1() + "," + new C.D().m2());

}}

What is the result of attempting to compile and run the program?

|  |  |
| --- | --- |
| a. | Prints: m1,D.m2 |
| b. | Prints: A.m1,D.m2 |
| c. | Compile-time error |
| d. | Run-time error |
| e. | None of the above |

**Question 8**

abstract class A {

private int x = 4, y = 2;

public A(int i1, int i2) {x=i1;y=i2;}

public int x() {return x;}

public void x(int x) {this.x = x;}

public int y() {return y;}

public void y(int y) {this.y = y;}

public abstract int math();

}

class B {

static A a1 = new A(2,1) {public int math() {return x()+y();}};

static A a2 = new A(2,1) {public int math() {return x()-y();}};

static A a3 = new A(2,1) {public int math() {return x()\*y();}};

static A a4 = new A(2,1) {public int math() {return x()/y();}};

public static void main(String[] args) {

System.out.print("" + a1.math() + a2.math() +

a3.math() + a4.math());

}}

What is the result of attempting to compile and run the program?

|  |  |
| --- | --- |
| a. | Prints: 8 |
| b. | Prints: 3122 |
| c. | Compile-time error |
| d. | Run-time error |
| e. | None of the above |