

**1z0-808**

Number: 1z0-808  
Passing Score: 800  
Time Limit: 150 min  
File Version: 1

**1z0-808**

**Java SE 8 Programmer I**

**Sections**

1. A
2. B

## Exam A

### QUESTION 1

Given the code fragment:

```
if (aVar++ < 10) {  
    System.out.println(aVar + " Hello World!");  
} else {  
    System.out.println(aVar + " Hello Universe!");  
}
```

What is the result if the integer aVar is 9?

- A. 10 Hello World!
- B. Hello Universe!
- C. Hello World!
- D. Compilation fails.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

Given the code fragment:

```
public static void main(String[] args) {  
    String date = LocalDate  
        .parse("2014-05-04")  
        .format(DateTimeFormatter.ISO_DATE_TIME);  
    System.out.println(date);  
}
```

What is the result?

- A. May 04, 2014T00:00:00.000
- B. 2014-05-04T00:00: 00. 000
- C. 5/4/14T00:00:00.000
- D. An exception is thrown at runtime.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

Given the code fragment:

```
public static void main(String[] args) {  
    short s1 = 200;  
    Integer s2 = 400;  
    Long s3 = (long) s1 + s2;           //line n1  
    String s4 = (String) (s3 * s2);    //line n2  
    System.out.println("Sum is " + s4);  
}
```

What is the result?

- A. Sum is 600
- B. Compilation fails at line n1.
- C. Compilation fails at line n2.
- D. A ClassCastException is thrown at line n1.
- E. A ClassCastException is thrown at line n2.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 4

What is the name of the Java concept that uses access modifiers to protect variables and hide them within a class?

- A. Encapsulation
- B. Inheritance
- C. Abstraction
- D. Instantiation
- E. Polymorphism

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Using the private modifier is the main way that an object encapsulates itself and hide data from the outside world.

Reference: [http://www.tutorialspoint.com/java/java\\_access\\_modifiers.htm](http://www.tutorialspoint.com/java/java_access_modifiers.htm)

#### QUESTION 5

Given the code fragment:

```
abstract class Planet {  
    protected void revolve() {           //line n1  
    }  
  
    abstract void rotate();              //line n2  
}  
  
class Earth extends Planet {  
    void revolve() {                     //line n3  
    }  
  
    protected void rotate() {           //line n4  
    }  
}
```

Which two modifications, made independently, enable the code to compile?

- A. Make the method at line n1 public.
- B. Make the method at line n2 public.
- C. Make the method at line n3 public.
- D. Make the method at line n3 protected.
- E. Make the method at line n4 public.

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## QUESTION 6

Given:

```

class Vehicle {
    String type = "4W";
    int maxSpeed = 100;

    Vehicle(String type, int maxSpeed) {
        this.type = type;
        this.maxSpeed = maxSpeed;
    }
}

class Car extends Vehicle {
    String trans;

    Car(String trans) {           //line n1
        this.trans = trans;
    }

    Car(String type, int maxSpeed, String trans) {
        super(type, maxSpeed);
        this.trans = trans;      //line n2
    }
}

```

And given the code fragment:

```

7. Car c1 = new Car("Auto");
8. Car c2 = new Car("4W", 150, "Manual");
9. System.out.println(c1.type + " " + c1.maxSpeed + " " + c1.trans);
10. System.out.println(c2.type + " " + c2.maxSpeed + " " + c2.trans);

```

What is the result?

- A. 4W 100 Auto  
4W 150 Manual
- B. Null 0 Auto  
4W 150 Manual
- C. Compilation fails only at line n1
- D. Compilation fails only at line n2
- E. Compilation fails at both line n1 and line n2

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### QUESTION 7

Given the code fragment:

```

public static void main(String[] args) {
    StringBuilder sb = new StringBuilder(5);
    String s = "";

    if (sb.equals(s)) {
        System.out.println("Match 1");
    } else if (sb.toString().equals(s.toString())) {
        System.out.println("Match 2");
    } else {
        System.out.println("No Match");
    }
}

```

What is the result?

- A. Match 1
- B. Match 2
- C. No Match
- D. A NullPointerException is thrown at runtime.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## QUESTION 8

Given:

```

public static void main(String[] args) {
    String ta = "A ";
    ta = ta.concat("B ");
    String tb = "C ";
    ta = ta.concat(tb);
    ta.replace('C', 'D');
    ta = ta.concat(tb);
    System.out.println(ta);
}

```

What is the result?

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

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

ta.replace('C', 'D');

改为

ta= ta.replace('C', 'D');

则选E

### QUESTION 9

Given:

```
class CD {
    int r;
    CD(int r){
        this.r=r;
    }
}

class DVD extends CD {
    int c;
    DVD(int r, int c) {
        // line n1
    }
}
```

And given the code fragment:

```
DVD dvd = new DVD(10,20);
```

Which code fragment should you use at line n1 to instantiate the dvd object successfully?

- ☐ A) `super.r = r;`  
    `this.c = c;`
- ☐ B) `super(r);`  
    `this(c);`
- ☐ C) `super(r);`  
    `this.c = c;`
- ☐ D) `this.c = r;`  
    `super(c);`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 10

Given the code fragment:

```
int a[] = {1, 2, 3, 4, 5};
for(XXX) {
    System.out.print(a[e]);
}
```

Which option can replace xxx to enable the code to print 135?

- A. `int e = 0; e <= 4; e++`
- B. `int e = 0; e < 5; e += 2`
- C. `int e = 1; e <= 5; e += 1`
- D. `int e = 1; e < 5; e += 2`

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 11

Which statement best describes encapsulation?

- A. Encapsulation ensures that classes can be designed so that only certain fields and methods of an object are accessible from other objects.
- B. Encapsulation ensures that classes can be designed so that their methods are inheritable.
- C. Encapsulation ensures that classes can be designed with some fields and methods declared as abstract.
- D. Encapsulation ensures that classes can be designed so that if a method has an argument MyType x, any subclass of MyType can be passed to that method.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 12

Given the code fragment from three files:

SalesMan.java:

```
package sales;
public class SalesMan { }
```

Product.java:

```
package sales.products;
public class Product { }
```

Market.java:

```
1. package market;
2. // insert code here
3. public class USMarket {
4.     SalesMan sm;
5.     Product p;
6. }
```

Which code fragment, when inserted at line 2, enables the code to compile?



- ☐ A) `import sales.*;`
- ☐ B) `import java.sales.products.*;`
- ☐ C) `import sales;`  
`import sales.products;`
- ☐ D) `import sales.*;`  
`import products.*;`
- ☐ E) `import sales.*;`  
`import sales.products.*;`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 13

Given the following class:

```
public class CheckingAccount {
    public int amount;
    public CheckingAccount(int amount){
        this.amount = amount;
    }
    public int getAmount(){
        return amount;
    }
    public void changeAmount(int x){
        amount += x;
    }
}
```

And given the following main method, located in another class:

```
public static void main(String[] args) {
    CheckingAccount acct = new CheckingAccount((int)(Math.random()*1000));
    //line n1
    System.out.println(acct.getAmount());
}
```

Which three lines, when inserted independently at line n1, cause the program to print a 0 balance?

- A. `this.amount = 0;`
- B. `amount = 0;`
- C. `acct (0) ;`

- D. acct.amount = 0;
- E. acct.getAmount () = 0;
- F. acct.changeAmount(0);
- G. acct.changeAmount(-acct.amount);
- H. acct.changeAmount(-acct.getAmount());

**Correct Answer:** DGH

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 14

Given the code fragment:

```
String shirts[][] = new String[2][2];
shirts[0][0] = "red";
shirts[0][1] = "blue";
shirts[1][0] = "small";
shirts[1][1] = "medium";
```

Which code fragment prints red: blue: small: medium?

- ☐ A) 

```
for (int index = 1; index < 2; index++) {
    for (int idx = 1; idx < 2; idx++) {
        System.out.print(shirts[index][idx] + ":");
    }
}
```
- ☐ B) 

```
for (int index = 0; index < 2; ++index) {
    for (int idx = 0; idx < index; ++idx) {
        System.out.print(shirts[index][idx] + ":");
    }
}
```
- ☐ C) 

```
for (String c : colors) {
    for (String s : sizes) {
        System.out.println(s + ":");
    }
}
```
- ☐ D) 

```
for (int index = 0; index < 2;) {
    for (int idx = 0; idx < 2;) {
        System.out.print(shirts[index][idx] + ":");
        idx++;
    }
    index++;
}
```

- A. Option A
- B. Option B
- C. Option C

D. Option D

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 15

Given the code fragment:

```
public class Test{

    void readCard(int cardNo) throws Exception {
        System.out.println("Reading Card");
    }

    void checkCard(int cardNo) throws RuntimeException { // line n1
        System.out.println("Checking Card");
    }

    public static void main(String[] args) {
        Test ex = new Test();
        int cardNo = 12344;
        ex.checkCard(cardNo);           //line n2
        ex.readCard(cardNo);           //line n3
    }
}
```

What is the result?

- A. Reading Card  
Checking Card
- B. Compilation fails only at line n1.
- C. Compilation fails only at line n2.
- D. Compilation fails only at line n3.
- E. Compilation fails at both line n2 and line n3.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 16

Given the code fragment:

```

3. public static void main(String[] args) {
4.     int x = 5;
5.     while (isAvailable(x)) {
6.         System.out.print(x);
7.
8.     }
9. }
10.
11. public static boolean isAvailable(int x) {
12.     return x-- > 0 ? true : false;
13. }

```

Which modification enables the code to print 54321?

- A. Replace line 6 with System.out.print(--x);
- B. At line 7, insert x--;
- C. Replace line 6 with --x; and, at line 7, insert system.out.print(x);
- D. Replace line 12 With return (x > 0) ? false: true;

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

A.print 43210

#### QUESTION 17

Given the code fragment:

```

4. public static void main(String[] args) {
5.     boolean opt = true;
6.     switch (opt) {
7.         case true:
8.             System.out.print("True");
9.             break;
10.        default:
11.            System.out.print("***");
12.        }
13.        System.out.println("Done");
14.    }

```

Which modification enables the code fragment to print TrueDone?

- A. Replace line 5 With String opt = "true";  
Replace line 7 with case "true":
- B. Replace line 5 with boolean opt = 1;  
Replace line 7 with case 1=
- C. At line 9, remove the break statement.
- D. Remove the default section.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 18**

Given the following main method:

```
public static void main(String[] args) {  
    int num = 5;  
    do {  
        System.out.print(num-- + " ");  
    } while (num == 0);  
}
```

What is the result?

- A. 5 4 3 2 1 0
- B. 5 4 3 2 1
- C. 4 2 1
- D. 5
- E. Nothing is printed

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 19**

Given the code fragment:

```
int x = 100;  
int a = x++;  
int b = ++x;  
int c = x++;  
int d = (a < b) ? (a < c) ? a: (b < c) ? b: c;  
System.out.println(d);
```

What is the result?

- A. 100
- B. 101
- C. 102
- D. 103
- E. Compilation fails

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 20**

Given:

```

public class Test {

    public static void main(String[] args) {

        String[][] chs = new String[2][];
        chs[0] = new String[2];
        chs[1] = new String[5];
        int i = 97;

        for (int a = 0; a < chs.length; a++) {
            for (int b = 0; b < chs[a].length; b++) {
                chs[a][b] = "" + i;
                i++;
            }
        }

        for (String[] ca : chs) {
            for (String c : ca) {
                System.out.print(c + " ");
            }
            System.out.println();
        }
    }
}

```

What is the result?

- A. 97 98  
99 100 null null null
- B. 97 98  
99 100 101 102 103
- C. Compilation fails.
- D. A NullPointerException is thrown at runtime.
- E. An ArrayIndexOutOfBoundsException is thrown at runtime.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 21

Given the code fragment:

```

public class Employee {
    String name;
    boolean contract;
    double salary;
    Employee() {
        // line n1
    }
    public String toString(){
        return name + ":" + contract + ":" + salary;
    }
    public static void main(String[] args) {
        Employee e = new Employee();
        // line n2
        System.out.print(e);
    }
}

```

Which two modifications, when made independently, enable the code to print joe:true: 100.0?

- ☐ A) Replace line n2 with:  
`e.name = "Joe";`  
`e.contract = true;`  
`e.salary = 100;`
- ☐ B) Replace line n2 with:  
`this.name = "Joe";`  
`this.contract = true;`  
`this.salary = 100;`
- ☐ C) Replace line n1 with:  
`this.name = new String("Joe");`  
`this.contract = new Boolean(true);`  
`this.salary = new Double(100);`
- ☐ D) Replace line n1 with:  
`name = "Joe";`  
`contract = TRUE;`  
`salary = 100.0f;`
- ☐ E) Replace line n1 with:  
`this("Joe", true, 100);`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 22**

Given the code fragment:

```
public static void main(String[] args) {  
    List<String> names = new ArrayList<>();  
    names.add("Robb");  
    names.add("Bran");  
    names.add("Rick");  
    names.add("Bran");  
  
    if (names.remove("Bran")) {  
        names.remove("Jon");  
    }  
    System.out.println(names);  
}
```

What is the result?

- A. [Robb, Rick, Bran]
- B. [Robb, Rick]
- C. [Robb, Bran, Rick, Bran]
- D. An exception is thrown at runtime.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 23**

Given:

```
class A {  
    public A(){  
        System.out.print("A ");  
    }  
}  
  
class B extends A{  
    public B(){  
        System.out.print("B ");  
    }  
}  
  
class C extends B{  
    public C(){  
        System.out.print("C ");  
    }  
    public static void main(String[] args) {  
        C c = new C();  
    }  
}
```



What is the result?

- A. C B A
- B. C
- C. A B C
- D. Compilation fails at line n1 and line n2

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 24

Given:

```
class X {  
    static int i;  
    int j;  
    public static void main(String[] args) {  
        X x1 = new X();  
        X x2 = new X();  
        x1.i = 3;  
        x1.j = 4;  
        x2.i = 5;  
        x2.j = 6;  
        System.out.println(  
            x1.i + " " +  
            x1.j + " " +  
            x2.i + " " +  
            x2.j);  
    }  
}
```

What is the result?

- A. 3 4 5 6
- B. 3 4 3 6
- C. 5 4 5 6
- D. 3 6 4 6

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 25

Given the code fragment:

```

1. public class Test {
2.     public static void main(String[] args) {
3.         /* insert code here */
4.         array[0]=10;
5.         array[1]=20;
6.         System.out.print(array[0]+":"+array[1]);
7.     }
8. }

```

Which code fragment, when inserted at line 3, enables the code to print 10:20?

- A. `int[] array = new int[2];`
- B. `int[] array;`  
`array = int[2];`
- C. `int array = new int[2];`
- D. `int array [2];`

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 26

Given the code fragment:

```

public static void main(String[] args) {
    String[] arr = {"A", "B", "C", "D"};
    for (int i = 0; i < arr.length; i++) {
        System.out.print(arr[i] + " ");
        if (arr[i].equals("C")) {
            continue;
        }
        System.out.println("Work done");
        break;
    }
}

```

What is the result?

- A. A B C Work done
- B. A B C D Work done
- C. A Work done
- D. Compilation fails

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 27

Which three are advantages of the Java exception mechanism?

- A. Improves the program structure because the error handling code is separated from the normal program function
- B. Provides a set of standard exceptions that covers all the possible errors
- C. Improves the program structure because the programmer can choose where to handle exceptions
- D. Improves the program structure because exceptions must be handled in the method in which they occurred
- E. Allows the creation of new exceptions that are tailored to the particular program being created

**Correct Answer:** ACE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <http://javajee.com/introduction-to-exceptions-in-java>

#### QUESTION 28

Given the code from the Greeting.Java file:

```
public class Greeting {  
    public static void main(String[] args) {  
        System.out.println("Hello " + args[0]);  
    }  
}
```

Which set of commands prints Hello Duke in the console?

- ☐ A) javac Greeting  
java Greeting Duke
- ☐ B) javac Greeting.java Duke  
java Greeting
- ☐ C) javac Greeting.java  
java Greeting Duke
- ☐ D) javac Greeting.java  
java Greeting.class Duke

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 29

Given:

```

class Alpha {
    int ns;
    static int s;
    Alpha(int ns) {
        if (s < ns) {
            s = ns;
            this.ns = ns;
        }
    }
    void doPrint() {
        System.out.println("ns = " + ns + " s = " + s);
    }
}

```

And,

```

public class TestA {
    public static void main(String[] args) {
        Alpha ref1 = new Alpha(50);
        Alpha ref2 = new Alpha(125);
        Alpha ref3 = new Alpha(100);
        ref1.doPrint();
        ref2.doPrint();
        ref3.doPrint();
    }
}

```

What is the result?

- ☐ A) ns = 50 s = 125  
ns = 125 s = 125  
ns = 100 s = 125
- ☐ B) ns = 50 s = 125  
ns = 125 s = 125  
ns = 0 s = 125
- ☐ C) ns = 50 s = 50  
ns = 125 s = 125  
ns = 100 s = 100
- ☐ D) ns = 50 s = 50  
ns = 125 s = 125  
ns = 0 s = 125

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer: B**  
**Section: (none)**

### Explanation

### Explanation/Reference:

#### QUESTION 30

Given the code fragment:

```
public static void main(String[] args) {  
    int ii = 0;  
    int jj = 7;  
    for (ii = 0; ii < jj - 1; ii = ii + 2) {  
        System.out.print(ii + " ");  
    }  
}
```

What is the result?

- A. 2 4
- B. 0 2 4 6
- C. 0 2 4
- D. Compilation fails

**Correct Answer: C**

**Section: (none)**

### Explanation

### Explanation/Reference:

#### QUESTION 31

Given the code fragment:

```
LocalDate date1 = LocalDate.now();  
LocalDate date2 = LocalDate.of(2014, 6, 20);  
LocalDate date3 = LocalDate.parse("2014-06-20", DateTimeFormatter.ISO_DATE);  
System.out.println("date1 = " + date1);  
System.out.println("date2 = " + date2);  
System.out.println("date3 = " + date3);
```

Assume that the system date is June 20, 2014. What is the result?

- ☐ A) date1 = 2014-06-20  
date2 = 2014-06-20  
date3 = 2014-06-20
- ☐ B) date1 = 06/20/2014  
date2 = 2014-06-20  
date3 = Jun 20, 2014
- ☐ C) Compilation fails.
- ☐ D) A DateParseException is thrown at runtime.

- A. Option A
- B. Option B

- C. Option C
- D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 32

Given the code fragment:

```
7.  StringBuilder sb1 = new StringBuilder("Duke");
8.  String str1 = sb1.toString();
9.  // insert code here
10. System.out.print(str1 == str2);
```

Which code fragment, when inserted at line 9, enables the code to print true?

- A. String str2 = str1;
- B. String str2 = new String (str1);
- C. String str2 = sb1. toString ();
- D. String str2 = "Duke";

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 33

Given the code fragment:

```
public class Test {

    static int count = 0;
    int i = 0;

    public void changeCount() {
        while (i < 5) {
            i++;
            count++;
        }
    }

    public static void main(String[] args) {
        Test check1 = new Test();
        Test check2 = new Test();
        check1.changeCount();
        check2.changeCount();
        System.out.print(check1.count + " : " + check2.count);
    }
}
```

What is the result?

- A. 10 : 10
- B. 5 : 5
- C. 5 : 10
- D. Compilation fails

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 34

Given the code fragment:

```
public static void main(String[] args) {  
    double discount = 0;  
    int qty = Integer.parseInt(args[0]);  
    //line n1;  
}
```

And given the requirements:

- If the value of the qty variable is greater than or equal to 90, discount = 0.5
- If the value of the qty variable is between 80 and 90, discount = 0.2

Which two code fragments can be independently placed at line n1 to meet the requirements?

- ☐ A) 

```
if (qty >= 90) { discount = 0.5; }  
    if (qty > 80 && qty < 90) { discount = 0.2; }
```
- ☐ B) 

```
discount = (qty >= 90) ? 0.5 : 0;  
discount = (qty > 80) ? 0.2 : 0;
```
- ☐ C) 

```
discount = (qty >= 90) ? 0.5 : (qty > 80) ? 0.2 : 0;
```
- ☐ D) 

```
if (qty > 80 && qty < 90) {  
    discount = 0.2;  
} else {  
    discount = 0;  
}  
if (qty >= 90) {  
    discount = 0.5;  
} else {  
    discount = 0;  
}
```
- ☐ E) 

```
discount = (qty > 80) ? 0.2 : (qty >= 90) ? 0.5 : 0;
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 35

Given:

```
public class Test {  
  
    public static void main(String[] args) {  
        if (args[0].equals("Hello") ? false : true) {  
            System.out.println("Success");  
        } else {  
            System.out.println("Failure");  
        }  
    }  
}
```

And given the commands:

```
javac Test.Java  
Java Test Hello
```

What is the result?

- A. Success
- B. Failure
- C. Compilation fails.
- D. An exception is thrown at runtime

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 36

Which three statements describe the object-oriented features of the Java language?

- A. Objects cannot be reused.
- B. A subclass can inherit from a superclass.
- C. Objects can share behaviors with other objects.
- D. A package must contain more than one class.
- E. Object is the root class of all other objects.
- F. A main method must be declared in every class.

**Correct Answer:** BCF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <http://www.javaworld.com/article/2075459/java-platform/java-101--object-oriented-language-basics--part-5--object-and-its-methods.html> (see the sub title, Object is root of all classes not all other



objects)

### QUESTION 37

Given the following code:

```
public static void main(String[] args){
    String[] planets = {"Mercury", "Venus", "Earth", "Mars"};

    System.out.println(planets.length);
    System.out.println(planets[1].length());
}
```

What is the output?

- A. 4  
4
- B. 3  
5
- C. 4  
7
- D. 5  
4
- E. 4  
5
- F. 4  
21

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 38

Given:

```
package p1;
public class Acc {
    int p;
    private int q;
    protected int r;
    public int s;
}
```

Test.java:

```
package p2;
import p1.Acc;
public class Test extends Acc {
    public static void main(String[] args) {
        Acc obj = new Test();
    }
}
```

Which statement is true?

- A. Both p and s are accessible by obj.
- B. Only s is accessible by obj.
- C. Both r and s are accessible by obj.
- D. p, r, and s are accessible by obj.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 39

Given:

Base.java:

```
class Base {  
    public void test(){  
        System.out.println("Base ");  
    }  
}
```

DerivedA.java:

```
class DerivedA extends Base {  
    public void test(){  
        System.out.println("DerivedA ");  
    }  
}
```

DerivedB.java:

```
class DerivedB extends DerivedA {  
    public void test(){  
        System.out.println("DerivedB ");  
    }  
    public static void main(String[] args) {  
        Base b1 = new DerivedB();  
        Base b2 = new DerivedA();  
        Base b3 = new DerivedB();  
        b1 = (Base) b3;  
        Base b4 = (DerivedA) b3;  
        b1.test();  
        b4.test();  
    }  
}
```

What is the result?

- A. Base  
DerivedA
- B. Base  
DerivedB
- C. DerivedB

- DerivedB
- D. DerivedB  
DerivedA
- E. A classcast Exception is thrown at runtime.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 40

Given:

```
System.out.println("5 + 2 = " + 3 + 4);  
System.out.println("5 + 2 = " + (3 + 4));
```

What is the result?

- ☐ A) 5 + 2 = 34  
5 + 2 = 34
- ☐ B) 5 + 2 + 3 + 4  
5 + 2 = 7
- ☐ C) 7 = 7  
7 + 7
- ☐ D) 5 + 2 = 34  
5 + 2 = 7

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 41

Given the code fragments:

Person.java:

```
public class Person {
    String name;
    int age;

    public Person(String n, int a) {
        name = n;
        age = a;
    }

    public String getName() {
        return name;
    }

    public int getAge() {
        return age;
    }
}
```

Test.java:

```
public static void checkAge(List<Person> list, Predicate<Person> predicate) {
    for (Person p : list) {
        if (predicate.test(p)) {
            System.out.println(p.name + " ");
        }
    }
}

public static void main(String[] args) {
    List<Person> iList = Arrays.asList(new Person("Hank", 45),
                                       new Person("Charlie", 40),
                                       new Person("Smith", 38));

    //line n1
}
```

Which code fragment, when inserted at line n1, enables the code to print Hank?

- A. `checkAge(iList, ( ) -> p. get Age ( ) > 40);`
- B. `checkAge(iList, Person p -> p.getAge( ) > 40);`
- C. `checkAge(iList, p -> p.getAge ( ) > 40);`
- D. `checkAge(iList, (Person p) -> { p.getAge() > 40; });`

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### QUESTION 42

Given the code fragment:

```

public static void main(String[] args) {
    String[][] arr = {{ "A", "B", "C"}, {"D", "E"}};
    for (int i = 0; i < arr.length; i++) {
        for (int j = 0; j < arr[i].length; j++) {
            System.out.print(arr[i][j] + " ");
            if (arr[i][j].equals("B")) {
                break;
            }
        }
        continue;
    }
}

```

What is the result?

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

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 43

Given the code fragment:

```

public static void main(String[] args) {
    String str = " ";
    str.trim();
    System.out.println(str.equals("") + " " + str.isEmpty());
}

```

What is the result?

- A. true true
- B. true false
- C. false false
- D. false true

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 44

Given the code fragment:

```

public class App {
    public static void main(String[] args) {
        String str1 = "Java";
        String str2 = new String("java");
        //line n1
        {
            System.out.println("Equal");
        } else {
            System.out.println("Not Equal");
        }
    }
}

```

Which code fragment, when inserted at line n1, enables the App class to print Equal?

- ☐ A) String str3 = str2;  
if (str1 == str3)
- ☐ B) if (str1.equalsIgnoreCase(str2))
- ☐ C) String str3 = str2;  
if (str1.equals(str3))
- ☐ D) if (str1.toLowerCase() == str2.toLowerCase())

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 45

Given:

```

public class SumTest {

    public static void doSum(Integer x, Integer y) {
        System.out.println("Integer sum is " + (x + y));
    }

    public static void doSum(double x, double y) {
        System.out.println("double sum is " + (x + y));
    }

    public static void doSum(float x, float y) {
        System.out.println("float sum is " + (x + y));
    }

    public static void doSum(int x, int y) {
        System.out.println("int sum is " + (x + y));
    }

    public static void main(String[] args) {
        doSum(10, 20);
        doSum(10.0, 20.0);
    }
}

```

What is the result?

- ☐ A) int sum is 30  
float sum is 30.0
- ☐ B) int sum is 30  
double sum is 30
- ☐ C) Integer sum is 30  
double sum is 30.0
- ☐ D) Integer sum is 30  
float sum is 30.0

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 46

Given the code fragment:

```
String[] strs = new String[2];
int idx = 0;
for (String s : strs) {
    strs[idx].concat(" element " + idx);
    idx++;
}
for (idx = 0; idx < strs.length; idx++) {
    System.out.println(strs[idx]);
}
```

What is the result?

- A. Element 0  
Element 1
- B. Null element 0  
Null element 1
- C. Null  
Null
- D. A NullPointerException is thrown at runtime.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 47

Given the definitions of the MyString class and the Test class:

MyString.java:

```
package p1;
class MyString {
    String msg;
    MyString(String msg) {
        this.msg = msg;
    }
}
```

Test.java:

```
package p1;
public class Test {
    public static void main(String[] args) {
        System.out.println("Hello " + new StringBuilder("Java SE 8"));
        System.out.println("Hello " + new MyString("Java SE 8"));
    }
}
```

What is the result?



- ☐ A) Hello Java SE 8  
Hello Java SE 8
- ☐ B) Hello java.lang.StringBuilder@<<hashcode1>>  
Hello p1.MyString@<<hashcode2>>
- ☐ C) Hello Java SE 8  
Hello p1.MyString@<<hashcode>>
- ☐ D) Compilation fails at the test class.

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 48

Given the code fragment:

```

3. public static void main(String[] args) {
4.     int iVar = 100;
5.     float fVar = 100.100f;
6.     double dVar = 123;
7.     iVar = fVar;
8.     fVar = iVar;
9.     dVar = fVar;
10.    fVar = dVar;
11.    dVar = iVar;
12.    iVar = dVar;
13. }
```

Which three lines fail to compile?

- A. Line 7
- B. Line 8
- C. Line 9
- D. Line 10
- E. Line 11
- F. Line 12

**Correct Answer:** ADF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 49**

Given:

MainTest.java:

```
public class MainTest {  
  
    public static void main(int[] args) {  
        System.out.println("int main " + args[0]);  
    }  
    public static void main(Object[] args) {  
        System.out.println("Object main " + args[0]);  
    }  
    public static void main(String[] args) {  
        System.out.println("String main " + args[0]);  
    }  
}
```

and commands:

```
javac MainTest.java  
java MainTest 1 2 3
```

What is the result?

- A. int main 1
- B. Object main 1
- C. String main 1
- D. Compilation fails
- E. An exception is thrown at runtime

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

Given the code fragment:

```
int num[][] = new int[1][3];  
for (int i = 0; i < num.length; i++) {  
    for (int j = 0; j < num[i].length; j++) {  
        num[i][j] = 10;  
    }  
}
```

Which option represents the state of the num array after successful completion of the outer loop?

- ☐ A) `num[0][0]=10`  
`num[0][1]=10`  
`num[0][2]=10`
- ☐ B) `num[0][0]=10`  
`num[1][0]=10`  
`num[2][0]=10`
- ☐ C) `num[0][0]=10`  
`num[0][1]=0`  
`num[0][2]=0`
- ☐ D) `num[0][0]=10`  
`num[0][1]=10`  
`num[0][2]=10`  
`num[0][3]=10`  
`num[1][0]=0`  
`num[1][1]=0`  
`num[1][2]=0`  
`num[1][3]=0`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 51

Given the code fragment:

```

public class Person {
    String name;
    int age = 25;

    public Person(String name) {
        this();
        setName(name);
    }

    public Person(String name, int age) {
        Person(name);
        setAge(age);
    }

    //setter and getter methods go here

    public String show() {
        return name + " " + age + " " + number ;
    }

    public static void main(String[] args) {
        Person p1 = new Person("Jesse");
        Person p2 = new Person("Walter", 52);
        System.out.println(p1.show());
        System.out.println(p2.show());
    }
}

```

What is the result?

- A. Jesse 25  
Walter 52
- B. Compilation fails only at line n1
- C. Compilation fails only at line n2
- D. Compilation fails at both line n1 and line n2

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 52

Given the following code for a Planet object:

```

public class Planet {
    public String name;
    public int moons;

    public Planet(String name, int moons) {
        this.name = name;
        this.moons = moons;
    }
}

```

And the following main method:

```

public static void main(String[] args){
    Planet[] planets = {
        new Planet("Mercury", 0),
        new Planet("Venus", 0),
        new Planet("Earth", 1),
        new Planet("Mars", 2)
    };

    System.out.println(planets);
    System.out.println(planets[2]);
    System.out.println(planets[2].moons);
}

```

What is the output?

- ☐ A) planets  
Earth  
1
- ☐ B) [LPlanets.Planet;@15db9742  
Earth  
1
- ☐ C) [LPlanets.Planet;@15db9742  
Planets.Planet@6d06d69c  
1
- ☐ D) [LPlanets.Planet;@15db9742  
Planets.Planet@6d06d69c  
[LPlanets.Moon;@7852e922
- ☐ E) [LPlanets.Planet;@15db9742  
Venus  
0

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 53**

Given the following code:

```
int[] intArr = {15, 30, 45, 60, 75};  
intArr[2] = intArr[4];  
intArr[4] = 90;
```

What are the values of each element in intArr after this code has executed?

- A. 15, 60, 45, 90, 75
- B. 15, 90, 45, 90, 75
- C. 15, 30, 75, 60, 90
- D. 15, 30, 90, 60, 90
- E. 15, 4, 45, 60, 90

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 54**

Given the following array:

```
int[] intArr = {8, 16, 32, 64, 128};
```

Which two code fragments, independently, print each element in this array?

- ☐ A) 

```
for (int i : intArr) {
    System.out.print(intArr[i] + " ");
}
```
- ☐ B) 

```
for (int i : intArr) {
    System.out.print(i + " ");
}
```
- ☐ C) 

```
for (int i=0 : intArr) {
    System.out.print(intArr[i] + " ");
    i++;
}
```
- ☐ D) 

```
for (int i=0; i < intArr.length; i++) {
    System.out.print(i + " ");
}
```
- ☐ E) 

```
for (int i=0; i < intArr.length; i++) {
    System.out.print(intArr[i] + " ");
}
```
- ☐ F) 

```
for (int i; i < intArr.length; i++) {
    System.out.print(intArr[i] + " ");
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E
- F. Option F

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 55

Given the code fragment:

```
int[] array = {1, 2, 3, 4, 5};
```

And given the requirements:

1. Process all the elements of the array in the order of entry.
2. Process all the elements of the array in the reverse order of entry.
3. Process alternating elements of the array in the order of entry.

Which two statements are true?

- A. Requirements 1, 2, and 3 can be implemented by using the enhanced for loop.
- B. Requirements 1, 2, and 3 can be implemented by using the standard for loop.
- C. Requirements 2 and 3 CANNOT be implemented by using the standard for loop.
- D. Requirement 1 can be implemented by using the enhanced for loop.

E. Requirement 3 CANNOT be implemented by using either the enhanced for loop or the standard for loop.

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 56

Given:

```
public class TestScope {  
    public static void main(String[] args) {  
        int var1 = 200;  
        System.out.print(doCalc(var1));  
        System.out.print(" "+var1);  
    }  
    static int doCalc(int var1){  
        var1 = var1 * 2;  
        return var1;  
    }  
}
```

What is the result?

- A. 400 200
- B. 200 200
- C. 400 400
- D. Compilation fails.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 57

Given the following class declarations:

- public abstract class Animal
- public interface Hunter
- public class Cat extends Animal implements Hunter
- public class Tiger extends Cat

Which answer fails to compile?



- ☐ A) `ArrayList<Animal> myList = new ArrayList<>();`  
`myList.add(new Tiger());`
- ☐ B) `ArrayList<Hunter> myList = new ArrayList<>();`  
`myList.add(new Cat());`
- ☐ C) `ArrayList<Hunter> myList = new ArrayList<>();`  
`myList.add(new Tiger());`
- ☐ D) `ArrayList<Tiger> myList = new ArrayList<>();`  
`myList.add(new Cat());`
- ☐ E) `ArrayList<Animal> myList = new ArrayList<>();`  
`myList.add(new Cat());`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 58

Which statement is true about Java byte code?

- A. It can run on any platform.
- B. It can run on any platform only if it was compiled for that platform.
- C. It can run on any platform that has the Java Runtime Environment.
- D. It can run on any platform that has a Java compiler.
- E. It can run on any platform only if that platform has both the Java Runtime Environment and a Java compiler.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <http://www.math.uni-hamburg.de/doc/java/tutorial/getStarted/intro/definition.html>

Explanation:

Java bytecodes help make "write once, run anywhere" possible. You can compile your program into bytecodes on any platform that has a Java compiler. The bytecodes can then be run on any implementation of the Java VM. That means that as long as a computer has a Java VM, the same program written in the Java programming language can run on Windows 2000, a Solaris workstation, or on an iMac.

#### QUESTION 59

Given:

```

public class MarkList {
    int num;
    public static void graceMarks(MarkList obj4) {
        obj4.num += 10;
    }
    public static void main(String[] args) {
        MarkList obj1 = new MarkList();
        MarkList obj2 = obj1;
        MarkList obj3 = null;
        obj2.num = 60;
        graceMarks(obj2);
    }
}

```

How many MarkList instances are created in memory at runtime?

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

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 60

Given:

```

public class Triangle {
    static double area;
    int b = 2, h = 3;
    public static void main(String[] args) {
        double p, b, h;           //line n1
        if (area == 0) {
            b = 3;
            h = 4;
            p = 0.5;
        }
        area = p * b * h;          //line n2
        System.out.println("Area is " + area);
    }
}

```

What is the result?

- A. Area is 6.0
- B. Area is 3.0
- C. Compilation fails at line n1
- D. Compilation fails at line n2.

**Correct Answer:** D

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 61**

Given the code fragment:

```
public class Test {  
    public static void main(String[] args) {  
        //line n1  
        switch (x) {  
            case 1:  
                System.out.println("One");  
                break;  
            case 2:  
                System.out.println("Two");  
                break;  
        }  
    }  
}
```

Which three code fragments can be independently inserted at line n1 to enable the code to print one?

- A. Byte x = 1;
- B. short x = 1;
- C. String x = "1";
- D. Long x = 1;
- E. Double x = 1;
- F. Integer x = new Integer ("1");

**Correct Answer:** ABF

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 62**

Given:

```
public class App {  
    public static void main(String[] args) {  
        Boolean[] bool = new Boolean[2];  
  
        bool[0] = new Boolean(Boolean.parseBoolean("true"));  
        bool[1] = new Boolean(null);  
  
        System.out.println(bool[0] + " " + bool[1]);  
    }  
}
```

What is the result?

- A. True false
- B. True null
- C. Compilation fails
- D. A NullPointerException is thrown at runtime

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 63

Given the following code for the classes MyException and Test:

```
public class MyException extends RuntimeException {}

public class Test {
    public static void main(String[] args) {
        try {
            method1();
        }
        catch (MyException ne) {
            System.out.print("A");
        }
    }
    public static void method1() { // line n1
        try {
            throw Math.random() > 0.5 ? new MyException() : new RuntimeException();
        }
        catch (RuntimeException re) {
            System.out.print("B");
        }
    }
}
```

What is the result?

- A. A
- B. B
- C. Either A or B
- D. A B
- E. A compile time error occurs at line n1

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 64

Given:

```

public class App {

    String myStr = "7007";

    public void doStuff(String str) {
        int myNum = 0;
        try {
            String myStr = str;
            myNum = Integer.parseInt(myStr);
        } catch (NumberFormatException ne) {
            System.err.println("Error");
        }
        System.out.println(
            "myStr: " + myStr + ", myNum: " + myNum);
    }

    public static void main(String[] args) {
        App obj = new App();
        obj.doStuff("9009");
    }
}

```

What is the result?

- A. myStr: 9009, myNum: 9009
- B. myStr: 7007, myNum: 7007
- C. myStr: 7007, myNum: 9009
- D. Compilation fails

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 65

Which two are benefits of polymorphism?

- A. Faster code at runtime
- B. More efficient code at runtime
- C. More dynamic code at runtime
- D. More flexible and reusable code
- E. Code that is protected from extension by other classes

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://www.cs.princeton.edu/courses/archive/fall98/cs441/mainus/node5.html>

#### QUESTION 66

Given the code fragment:

```
int nums1[] = new int[3];
int nums2[] = {1, 2, 3, 4, 5};
nums1 = nums2;
for (int x : nums1){
    System.out.print(x + ":");
}
```

What is the result?

- A. 1:2:3:4:5:
- B. 1:2:3:
- C. Compilation fails.
- D. An ArrayOutOfBoundsException is thrown at runtime.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 67

Given:

```
public class Product {
    int id;
    String name;
    public Product(int id, String name) {
        this.id = id;
        this.name = name;
    }
}
```

And given the code fragment:

```
4. Product p1 = new Product(101, "Pen");
5. Product p2 = new Product(101, "Pen");
6. Product p3 = p1;
7. boolean ans1 = p1 == p2;
8. boolean ans2 = p1.name.equals(p2.name);
9. System.out.print(ans1 + ":" + ans2);
```

What is the result?

- A. true:true
- B. true:false
- C. false:true
- D. false:false

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 68**

Given the following classes:

```
public class Employee {  
    public int salary;  
}  
  
public class Manager extends Employee {  
    public int budget;  
}  
  
public class Director extends Manager {  
    public int stockOptions;  
}
```

And given the following main method:

```
public static void main(String[] args) {  
    Employee employee = new Employee();  
    Manager manager = new Manager();  
    Director director = new Director();  
    //line n1  
}
```

Which two options fail to compile when placed at line n1 of the main method?

- A. employee.salary = 50\_000;
- B. director.salary = 80\_000;
- C. employee.budget = 200\_000;
- D. manager.budget = 1\_000\_000;
- E. manager.stockOption = 500;
- F. director.stockOptions = 1\_000;

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 69**

Which one of the following code examples uses valid Java syntax?

A.

```
public class Boat {  
  
    public static void main (String [] args) {  
        System.out.println ("I float.");  
    }  
}
```

B.

```
public class Cake {  
    public static void main (String [] ) {  
        System.out.println ("Chocolate");  
    }  
}
```

C.

```
public class Dog {  
    public void main (String [] args) {  
        System.out.println ("Squirrel.");  
    }  
}
```

D.

```
public class Bank {  
    public static void main (String () args) {  
        System.out.println ("Earn interest.");  
    }  
}
```

A. Option A

B. Option B

C. Option C

D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://docs.oracle.com/javase/tutorial/getStarted/application/>

#### QUESTION 70

Given the code fragment:

```
int n [] [] = {{1, 3}, {2, 4}};  
for (int i = n.length-1; i >= 0; i--) {  
    for (int y : n[i]) {  
        System.out.print (y);  
    }  
}
```



What is the result?

- A. 1324
- B. 2413
- C. 3142
- D. 4231

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 71

Given:

```
public class Vowel {  
    private char var;  
    public static void main(String[] args) {  
        char var1 = 'a';  
        char var2 = var1;  
        var2 = 'e';  
        Vowel obj1 = new Vowel();  
        Vowel obj2 = obj1;  
        obj1.var = 'i';  
        obj2.var = 'o';  
        System.out.println(var1 + ", " + var2);  
        System.out.print(obj1.var + ", " + obj2.var);  
    }  
}
```

What is the result?

- A. e, e  
i, o
- B. a, e  
i, o
- C. a, e  
o, o
- D. e, e  
o, o

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 72

Given the code fragment:

```

if (aVar++ < 10) {
    System.out.println(aVar + " Hello World!");
} else {
    System.out.println(aVar + " Hello Universe!");
}

```

What is the result if the integer aVar is 9?

- A. Compilation fails.
- B. 10 Hello Universe!
- C. 10 Hello World!
- D. 9 Hello World!

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 73

Given:

```

public class MyClass {
    public static void main(String[] args) {
        String s = "Java Duke";
        int len = s.trim().length();
        System.out.print(len);
    }
}

```

What is the result?

- A. Compilation fails.
- B. 11
- C. 8
- D. 9
- E. 10

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 74

Given:

```

public class Test {
    public static void main(String[] args) {
        boolean a = new Boolean(Boolean.valueOf (args[0]));
        boolean b = new Boolean(args[1]);
        System.out.print(a + " " + b);
    }
}

```

```
}
```

And given the commands:

```
javac Test.java  
java Test TRUE null
```

What is the result?

- A. TRUE null
- B. true false
- C. false false
- D. true true
- E. A `ClassCastException` is thrown at runtime.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 75

Given the code fragments:

A.java:

```
package p1;  
public class A {  
}
```

B.java:

```
package p1.p2;  
//line n1  
public class B {  
    public void doStuff() {  
        A b = new A ();  
    }  
}
```

C.java:

```
package p3;  
//line n2  
public class C {  
    public static void main(String[] args) {  
        A o1 = new A();  
        B o2 = new B();  
    }  
}
```

Which modification enables the code to compile?

- A. Replace line n1 with:  
import p1.A;

Replace line n2 with:  
import p1.A;  
import p1.p2.B;

- B. Replace line n1 with:  
import p1;

Replace line n2 with:  
import p1;  
import p1.p2;

- C. Replace line n1 with:  
import p1.A;

Replace line n2 with:  
import p1.\*;

- D. Replace line n1 with:  
import p1.\*;

Replace line n2 with:  
import p1.p2.\*;

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 76

Which statement will empty the contents of a StringBuilder variable named sb?

- A. sb. deleteAll ();  
B. sb. delete (0, sb. size () );  
C. sb. delete (0, sb. length () );  
D. sb. removeAll ();

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 77

Given:

```
String stuff = "TV";
String res = null;

if (stuff.equals ("TV")) {
    res = "Walter";
} else if (stuff.equals ("Movie") ) {
    res= "White";
} else {
    res= "No Result";
}
```

Which code fragment can replace the if block?

- A. `stuff.equals ("TV") ? res= "Walter" : stuff.equals ("Movie") ? res = "White" : res = "No Result";`
- B. `res = stuff.equals ("TV") ? "Walter" else stuff.equals ("Movie")? "White" : "No Result";`
- C. `res = stuff.equals ("TV") ? stuff.equals ("Movie")? "Walter" : "White" : "No Result";`
- D. `res = stuff.equals ("TV")? "Walter" : stuff.equals ("Movie")? "White" : "No Result";`

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 78

Given:

```
class Patient {
    String name;
    public Patient (String name) {
        this.name = name;
    }
}
```

And the code fragment:

```

8. public class Test {
9.     public static void main (String [] args) {
10.         List ps = new ArrayList ();
11.         Patient p2 = new Patient ("Mike");
12.         ps.add(p2);
13.
14.         // insert code here
15.
16.         if (f >= 0) {
17.             System.out.print ("Mike Found");
18.         }
19.     }
20. }

```

Which code fragment, when inserted at line 14, enables the code to print Mike Found?

- A. `int f = ps.indexOf (p2)`
- B. `int f = ps.indexOf (Patient ("Mike") );`
- C. `int f = ps.indexOf (new Patient "Mike") );`
- D. `Patient p = new Patient ("Mike");`  
`int f = ps.indexOf (p)`

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 79

Which statement is true about the switch statement?

- A. It must contain the default section.
- B. The break statement, at the end of each case block, is mandatory.
- C. Its case label literals can be changed at runtime.
- D. Its expression must evaluate to a single value.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference <http://www.dummies.com/programming/java/switch-statements-in-java/>

#### QUESTION 80

Given the code fragment:

```

public class Test {
    public static void main(String[] args) {

```

```

String names [] = {"Thomas", "Peter", "Joseph"};
String pwd [] = new String [3];
int idx = 0;
try {
    for (String n: names) {
        pwd [idx] = n.substring (2, 6);
        idx++;
    }
}
catch (Exception e) {
    System.out.println ("Invalid Name");
}
for (String p: pwd) {
    System.out.println (p);
}
}

```

What is the result?

- A. Invalid Name
- B. Invalid Name  
omas
- C. Invalid Name  
omas  
null  
null
- D. omas  
ter  
seph

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 81

Given the code fragment:

```

class Employee {
    private String name;
    private int age;
    private int salary;

    public Employee (String name, int age) {
        setName (name)
        setAge (age)
        setSalary (2000);
    }
    public Employee (String name, int age, int salary) {
        setSalary (salary);
        this (name, age);
    }
    //getter and setter methods for attributes go here
    public void printDetails () {
        System.out.println (name + " : " + age + " : " + salary);
    }
}

```

Test.java

```

class Test {
    public static void main (String [] args {
        Employee e1 = new Employee ();
        Employee e2 = new Employee ("Jack, 50);
        Employee e3 = new Employee ("Chloe", 40, 5000);
        e1.printDetails ();
        e2.printDetails ();
        e3.printDetails ();
    }
}

```

Which is the result?



- A. Compilation fails in the Employee class.
- B. null : 0 : 0  
Jack : 50 : 0  
Chloe : 40 : 5000
- C. null : 0 : 0  
Jack : 50 : 2000  
Chloe : 40 : 5000
- D. Compilation fails in the Test class.
- E. Both the Employee class and the test class fail to compile.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## **QUESTION 82**

Given the code fragments:

A. java:

```
package p1;  
public class A {  
}
```

B. java:

```
package p1.p2;  
//line n1  
public class B {  
    public void doStuff () {  
        A b = new A ();  
    }  
}
```

C. java

```
package p3;  
//line n2  
public class C {  
    public static void main (String [] args) {  
        A 01 = new A ();  
        B 02 = new B ();  
    }  
}
```

Which modification enables the code to compile?

- A. Replace line n1 with:  
import p1.\*;

Replace line n2 with:  
import p1. p2.\*;

- B. Replace line n1 with:  
import p1. A;

Replace line n2 with:  
import p1.\*;

- C. Replace line n1 with:  
import p1. A;

Replace line n2 with:  
import p1. A;

```
import p1. p2.B ;
```

D. Replace line n1 with:  
`import p1;`

Replace line n2 with:  
`import p1;`  
`import p1. p2;`

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 83**

Given:

```

class A {
    public void test () {
        System.out.println ("A");
    }
}
class B extends A {
    public void test () {
        System.out.println ("B");
    }
}
public class C extends A {
    public void test () {
        System.out.println ("C");
    }
}

public static void main (String [] args) {
    A b1 = new A ();
    A b2 = new C ();
    b1 = (A) b2;
    A b3 = (B) b2;           //line n1
    A b3 = (B) b2;           //line n2
    b1.test ();
    b3.test ();
}
}

```

What is the result?

- A. A
- B. B
- C. A
- D. C
- E. C
- F. A ClassCastException is thrown only at line n1.
- G. A ClassCastException is thrown only at line n2.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 84**

Given:

```
public class SumTest {  
  
    public static void doSum(Integer x, Integer y) {  
        System.out.println("Integer sum is " + (x + y));  
    }  
  
    public static void doSum(double x, double y) {  
        System.out.println("double sum is " + (x + y));  
    }  
  
    public static void doSum(float x, float y) {  
        System.out.println("float sum is " + (x + y));  
    }  
  
    public static void doSum(int x, int y) {  
        System.out.println("int sum is " + (x + y));  
    }  
  
    public static void main(String[] args) {  
        doSum(10, 20);  
        doSum(10.0, 20.0);  
    }  
}
```

What is the result?

- A. int sum is 30  
float sum is 30.0
- B. int sum is 30  
double sum is 30.0
- C. integer sum is 30  
double sum is 30.0
- D. integer sum is 30  
float sum is 30.0

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 85**

Given the code fragment:

```
Public static void main (String [] args) {  
    System.out.println ("Result A " + 0 + 1);  
    System.out.println ("Result B " + (1) + (2) );  
}
```

What is the result?

- A. Result A 1  
Result B 3
- B. Result A 01  
Result B 3
- C. Result A 01  
Result B 12
- D. Result A 1  
Result B 12

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 86**

Given the code fragment:

```
public class Test {  
  
    static int count = 0  
    int i = 0;  
  
    public void changeCount () {  
        while (i<5) {  
            i++;  
            count++;  
        }  
    }  
  
    public static void main (String [] args) {  
        Test check1 = new Test ();  
        Test check2 = new Test ();  
        check1.changeCount ();  
        check2.changeCount ();  
        System.out. print (check1.count + " : " + check2.  
    }  
}
```

What is the result?

- A. 5 : 5
- B. 10 : 10
- C. 5 : 10
- D. Compilation fails.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference:

## Your Code ...

```
1 public class Test {  
2  
3     static int count = 0 ;  
4     int i = 0;  
5  
6     public void changecount () {  
7         while (i<5) {  
8             i++;  
9             count++;  
10        }  
11    }  
12    public static void main (String [ ] args) {  
13        Test check1 = new Test () ;  
14        Test check2 = new Test () ;  
15        check1.changecount () ;  
16        check2.changecount () ;  
17        System.out. print (check1.count + " : " + check2.count) ;  
18    }  
19 }  
20
```

## External Libraries ...

[Add External Library \(from Maven Repo\)](#)[cs1.keyboard](#)

## Input Arguments (args of Main Method)...

Interactive mode : ☐ OFF

## Stdin Inputs...

Execute

Save

My Projects

Recent

Collaborate

Others ▾

Goto Another Language/DB ▾

## Result...

compiled and executed in 1.357 second(s)

10 : 10

## QUESTION 87

Given the code fragment:



```
public static void main (String [] args) {  
    ArrayList<Integer> points = new ArrayList<> ();  
    points.add (1);  
    points.add (2);  
    points.add (3);  
    points.add (4);  
    points.add (null);  
    points.remove (2);  
    points.remove (null);  
    System.out.println(points);  
}
```

What is the result?

- A. A NullPointerException is thrown at runtime.
- B. [1, 2, 4]
- C. [1, 2, 4, null ]
- D. [1, 3, 4, null ]
- E. [1, 3, 4 ]
- F. Compilation fails.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 88**

Given:

```

class Test {
    public static void main (String [] args) {
        int numbers [ ];
        numbers = new int [2];
        numbers [0] = 10;
        numbers [1] = 20;

        numbers = new int [4];
        numbers [2] = 30;
        numbers [3] = 40;
        for (int x : numbers) {
            System.out.print (" " + x) ;
        }
    }
}

```

What is the result?

- A. 10 20 30 40
- B. 0 0 30 40
- C. Compilation fails.
- D. An exception is thrown at runtime.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 89

Which code fragment causes a compilation error?

- A. `float flt = 100F;`
- B. `float flt = (float) 1_11.00;`
- C. `float flt = 100;`
- D. `double y1 = 203.22;`  
`float flt = y1;`
- E. `int y2 = 100;`  
`float flt = (float) y2;`

- A. Option A

- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 90

Given:

```
public class Fieldinit {  
    char c;  
    boolean b;  
    float f;  
    void printAll() {  
        System.out.println ("c = " + c);  
        System.out.println ("b = " + b);  
        System.out.println ("f = " + f);  
    }  
    public static void main (String [] args) {  
        FieldInit f = new FieldInit ();  
        f.printAll ();  
    }  
}
```

What is the result?

- A. c=  
b = false  
f = 0.0
- B. c= null  
b = true  
f = 0.0
- C. c=0  
b = false  
f = 0.0f
- D. c= null  
b = false  
f = 0.0F

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 91**

Given the code fragment:

```
public static void main (String [ ] args) {  
    int [] stack = {10,20,30}  
    int size = 3;  
    int idx = 0;  
    /*line n1 */  
    System.out.print ("The Top element: " + stack [idx]  
}
```

Which code fragment, inserted at line n1, prints The Top element: 30?

- A. do {  
 idx++;  
} while (idx >=size);
- B. while (idx < size) {  
 idx++;  
}
- C. do {  
 idx++;  
} while (idx <size -1);
- D. do {  
 idx++;  
} while (idx<= size);
- E. while (idx <= size -1) {  
 idx++  
}

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 92**

Given the code fragment:

```
public static void main (String [] args) {  
    String myStr = "Hello World";  
    myStr.trim ()  
    int i1 = myStr.indexOf (" ");  
    System.out.println (i1);  
}
```

What is the result?

- A. An exception is thrown at runtime.
- B. -1
- C. 5
- D. 0

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 93**

Given:

```
class Equal {  
    public static void main (String [] args) {  
        String str1 = "Java";  
        String [] str2 = { "J", "a", "v", "a"};  
        String str3 = "";  
        for (String str : str2) {  
            str3 = str3+str;  
        }  
        boolean b1 = (str1== str3);  
        boolean b2 = (str1.equals (str3));  
        System.out.print (b1+"",    "+b2);  
    }  
}
```

What is the result?

- A. false, false
- B. false, true
- C. true, false

D. true, true

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 94

Which two statements are true?

- A. Error class is unextendable.
- B. Error class is extendable.
- C. Error is a RuntimeException.
- D. Error is an Exception.
- E. Error is a Throwable.

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 95

Given the code fragment:

```
public static void main (String[ ] args) {  
    int data [] = {2010, 2013, 2014, 2015, 2014};  
    int key = 2014;  
    int count = 0;  
    for (int e: data) {  
        if (e != key) {  
            continue;  
            count++;  
        }  
    }  
    System.out.print (count + "Found");  
}
```

What is the result?

- A. Compilation fails.
- B. 0 Found
- C. 1 Found
- D. 3 Found

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 96**

Given the code fragment:

```
LocalDate Time dt= LocalDateTime.of (2014, 7, 31, 1, 1);  
dt.plusDays (30);  
dt. plusMonths (1);  
System.out.print (dt format (DateTimeFormatter. ISO_DATE))
```

What is the result?

- A. An exception is thrown at runtime.
- B. 07-31-2014
- C. 2014-07-31
- D. 2014-09-30

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

dt.plusDays(30);改成dt= dt.plusDays(30);  
dt.plusMonths(1);改成dt= dt.plusMonths(1);  
则选D

**QUESTION 97**

Given:

```
public class Test {  
    public static final int MIN =1;  
    public static void main(String[] args) {  
        int x = args.length;  
        if (checkLimit (x)) {  
            System.out.println("Java SE");  
        } else {  
            System.out.println("Java EE");  
        }  
    }  
    public static boolean checkLimit (int x){  
        return (x >= MIN)? true: false;  
    }  
}
```

And given the commands:

```
javac Test.java  
java Test
```

What is the result?

- A. Java SE
- B. Java EE
- C. Compilation fails at line n1.
- D. A NullPointerException is thrown at runtime.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 98

Given the code fragment:

```
24. float var1 = (12_345.01 >= 123_45.00) ? 12_456 : 124_56.02f;  
25. float var2 = var1 + 1024;  
26. System.out.print(var2);
```

What is the result?

- A. An exception is thrown at runtime.
- B. Compilation fails.
- C. 13480.0
- D. 13480.02

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 99

Given:

```
public class Test {  
    public static int stVar = 100;  
    public int var = 200;  
    public String toString() {  
        return var + ":" + stVar;  
    }  
}
```

And given the code fragment:

```
Test t1 = new Test();  
t1.var = 300;  
System.out.println(t1);  
Test t2 = new Test();  
t2.stVar = 300;  
System.out.println(t2);
```

What is the result?

- A. 300:300  
200:300
- B. 300:100  
200:300
- C. 300:0  
0:300
- D. 200:300  
200:300



**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 100**

Given:

```
class C2 {  
    public void displayC2() {  
        System.out.print("C2");  
    }  
}  
interface I {  
    public void displayI();  
}  
class C1 extends C2 implements I {  
    public void displayI() {  
        System.out.print("C1");  
    }  
}
```

And given the code fragment:

```
C2 obj1 = new C1();  
I obj2 = new C1();  
  
C2 s = obj2;  
I t = obj1;  
  
t.displayI();  
s.displayC2();
```

What is the result?

- A. C2C2
- B. C1C2
- C. C1C1
- D. Compilation fails

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

```
C2 s = obj2;  
I t = obj1;
```

有错，若改成：

```
C2 s = obj1;  
I t = obj2;
```

则选B。

#### QUESTION 101

Given the code fragments:

```
class Student {  
    String name;  
    int age;  
}
```

And,

```
4. public class Test {  
5.     public static void main(String[] args) {  
6.         Student s1 = new Student();  
7.         Student s2 = new Student();  
8.         Student s3 = new Student();  
9.         s1 = s3;  
10.        s3 = s2;  
11.        s2 = null;  
12.    }  
13. }
```

Which statement is true?

- A. After line 11, three objects are eligible for garbage collection.
- B. After line 11, two objects are eligible for garbage collection.
- C. After line 11, one object is eligible for garbage collection.
- D. After line 11, none of the objects are eligible for garbage collection.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 102

Given the code fragment:

```

int wd = 0;
String days[] = {"sun", "mon", "wed", "sat"};
for (String s:days) {
    switch (s) {
        case "sat":
        case "sun":
            wd -= 1;
            break;
        case "mon":
            wd++;
        case "wed":
            wd += 2;
    }
}
System.out.println(wd);

```

What is the result?

- A. 3
- B. 4
- C. -1
- D. Compilation fails.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 103

Given the code fragment:

```

public static void main(String[] args) {
    LocalDate date = LocalDate.of(2012, 01, 32);
    date.plusDays(10);
    System.out.println(date);
}

```

What is the result?

- A. 2012-02-10
- B. 2012-02-11
- C. Compilation fails
- D. A DateTimeException is thrown at runtime.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 104**

Given:

```
public class App {  
    public static void main(String[] args) {  
        int i = 10;  
        int j = 20;  
        int k = j += i / 5;  
        System.out.print(i + " : " + j + " : " + k);  
    }  
}
```

What is the result?

- A. 10 : 30 : 6
- B. 10 : 22 : 22
- C. 10 : 22 : 20
- D. 10 : 22 : 6

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation

#### Your Code ...

```
1 public class App {  
2     public static void main (String[] args) {  
3         int i = 10;  
4         int j = 20;  
5         int k = j += i / 5;  
6         System.out.print (i + " : " + j + " : " + k);  
7     }  
8 }  
9
```

#### External Libraries ...

[Add External Library \(from Maven Repo\)](#)

#### CommandLine Arguments ...

Interactive mode : ☐ OFF

Version:

JDK 9.0.1

#### Stdin Inputs...

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#### Result...

CPU Time: 0.20 sec(s), Memory: 32080 kilobyte(s)

10 : 22 : 22

#### QUESTION 105

Given the code fragment:

```
13. List colors = new ArrayList();  
14. colors.add("green");  
15. colors.add("red");  
16. colors.add("blue");  
17. colors.add("yellow");  
18. colors.remove(2);  
19. colors.add(3, "cyan");  
20. System.out.print(colors);
```

What is the result?

- A. (green, red, yellow, cyan)
- B. (green, blue, yellow, cyan)
- C. (green, red, cyan, yellow)
- D. An `IndexOutOfBoundsException` is thrown at runtime.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 106**

Given:

```
public class Test {
    int x, y;

    public Test(int x, int y) {
        initialize(x, y);
    }

    public void initialize(int x, int y) {
        this.x = x * x;
        this.y = y * y;
    }

    public static void main(String[] args) {
        int x = 3, y = 5;
        Test obj = new Test(x, y);
        System.out.println(x + " " + y);
    }
}
```

What is the result?

- A. Compilation fails.
- B. 3 5
- C. 0 0
- D. 9 25

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 107**

Given:

```
class Test {
    int a1;

    public static void doProduct(int a) {
        a = a * a;
    }

    public static void doString(StringBuilder s) {
        s.append(" " + s);
    }

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

```

        Test item = new Test();
        item.a1 = 11;
        StringBuilder sb = new StringBuilder("Hello");
        Integer i = 10;
        doProduct(i);
        doString(sb);
        doProduct(item.a1);
        System.out.println(i + " " + sb + " " + item.a1);
    }
}

```

What is the result?

- A. 10 Hello Hello 11
- B. 10 Hello Hello 121
- C. 100 Hello 121
- D. 100 Hello Hello 121
- E. 10 Hello 11

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 108

Given the code fragment:

```

public static void main (String[] args) {
    String[] arr = {"Hi", "How", "Are", "You"};
    List<String> arrList = new ArrayList<>(Arrays.asList(arr));
    if (arrList.removeIf((String s) -> (return s.length() <= 2;))) {
        System.out.println(s + "removed")
    }
}

```

What is the result?

- A. Compilation fails.
- B. Hi removed
- C. An UnsupportedOperationException is thrown at runtime.
- D. The program compiles, but it prints nothing.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 109

Which two class definitions fail to compile?

- A. 

```
abstract class A3 {
    private static int i;
    public void doStuff(){}
```

- ```

        public A3(){}
    }
B.    final class A1 {
        public A1(){}
    }
C.    public class A2 {
        private static int i;
        private A2(){}
    }
D.    class A4 {
        protected static final int i;
        private void doStuff(){}
    }
E.    final abstract class A5 {
        protected static int i;
        void doStuff(){}
        abstract void dolt();
    }

```

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

D.错误: 变量 i 未在默认构造器中初始化

E.错误: 非法的修饰符组合: **abstract**和**final**

## QUESTION 110

Given:

```

class Student {
    String name;
    public Student(String name) {
        this.name = name;
    }
}
public class Test {
    public static void main(String[] args) {
        Student[] students = new Student[3];
        students[1] = new Student("Richard");
        students[2] = new Student("Donald");
        for (Student s: students ) {
            System.out.println("" + s.name);
        }
    }
}

```

What is the result?

- A. null  
Richard  
Donald
- B. Richard  
Donald
- C. Compilation fails.
- D. An `ArrayIndexOutOfBoundsException` is thrown at runtime.
- E. A `NullPointerException` is thrown at runtime.

**Correct Answer:** E



**Section: (none)**

**Explanation**

**Explanation/Reference:**

增加:

students[0] = new Student(null);

则选A

**QUESTION 111**

The following grid shows the state of a 2D array:

|   |   |   |
|---|---|---|
| 0 | 0 |   |
|   | X | 0 |
|   | X | X |

This grid is created with the following code:

```
char[][] grid = new char[3][3];
grid[1][1] = 'X';
grid[0][0] = '0';
grid[2][1] = 'X';
grid[0][1] = '0';
grid[2][2] = 'X';
grid[1][2] = '0';
```

Which line of code, when inserted in place of //line n1, adds an X into the grid so that the grid contains three consecutive X's?

- A. grid[1][3] = 'X';
- B. grid[3][1] = 'X';
- C. grid[0][2] = 'X';
- D. grid[2][0] = 'X';
- E. grid[1][2] = 'X';

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 112**

Given:

```

public class Test {
    public static void main(String[] args) {
        int x = 1;
        int y = 0;
        if(x++ > ++y) {
            System.out.print("Hello ");
        } else {
            System.out.print("Welcome ");
        }
        System.out.print("Log " + x + ":" + y);
    }
}

```

What is the result?

- A. Hello Log 1:0
- B. Hello Log 2:1
- C. Welcome Log 2:1
- D. Welcome Log 1:0

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 113

Given the code snippet from a compiled Java source file:

```

public class MyFile
{
    public static void main (String[] args)
    {
        String arg1 = args[1];
        String arg2 = args[2];
        String arg3 = args[3];
        System.out.println("Arg is " + arg3);
    }
}

```

Which command-line arguments should you pass to the program to obtain the following output?

Arg is 2

- A. java MyFile 1 3 2 2
- B. java MyFile 2 2 2
- C. java MyFile 1 2 2 3 4
- D. java MyFile 0 1 2 3

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 114**

Given the code fragment:

```
public class Test {  
    public static void main(String[] args) {  
        int[] arr = {1, 2, 3, 4};  
        int i = 0;  
        do {  
            System.out.print(arr[i] + " ");  
            i++;  
        } while (i < arr.length - 1);  
    }  
}
```

What is the result?

- A. 1 2 3 4  
followed by an `ArrayIndexOutOfBoundsException`
- B. 1 2 3
- C. 1 2 3 4
- D. Compilation fails.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 115**

Given:

```
public class Test {  
    public static void main(String[] args) {  
        Test ts = new Test();  
        System.out.print(isAvailable + " ");  
        isAvailable= ts.doStuff();  
        System.out.println(isAvailable);  
    }  
    public static boolean doStuff() {  
        return !isAvailable;  
    }  
    static boolean isAvailable = false;  
}
```

What is the result?

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

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## Exam B

### QUESTION 1

Given the code fragment:

```
public class Test {
    static int count = 0;
    int i = 0;
    public void changeCount() {
        while (i < 5) {
            i++;
            count++;
        }
    }
    public static void main(String[] args) {
        Test check1 = new Test();
        Test check2 = new Test();
        check1.changeCount();
        check2.changeCount();
        System.out.println(check1.count + " : " + check2.count);
    }
}
```

What is the result?

- A. 10 : 10
- B. 5 : 5
- C. 5 : 10
- D. Compilation fails

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

Given:

```
public class Circle {
    double radius;
    public double area;
    public Circle(double r) { radius = r;}
    public double getRadius() { return radius; }
    public void setRadius(double r) { radius = r; }
    public double getArea ( ) { return /* ??? */; }
}

class App {
    public static void main(String[] args) {
        Circle c1 = new Circle(17.4);
        c1.area = Math.PI * c1.getRadius() * c1.getRadius();
    }
}
```

The class is poorly encapsulated. You need to change the circle class to compute and return the area instead.

Which two modifications are necessary to ensure that the class is being properly encapsulated?

- A. Remove the area field.
- B. Change the getArea( ) method as follows:  
    public double getArea ( ) { return Math.PI \* radius \* radius; }
- C. Add the following method:  
    public double getArea ( ) { area = Math.PI \* radius \* radius; }
- D. Change the cases modifier of the SetRadius ( ) method to be protected.

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

View the exhibit.

```
class MissingInfoException extends Exception {
}
class AgeOutOfRangeException extends Exception {
}
class Candidate {
    String name;
    int age;
    Candidate(String name, int age ) throws Exception {
        if (name == null) {
            throw new MissingInfoException();
        } else if (age <= 10 || age >= 150) {
            throw new AgeOutOfRangeException();
        } else {
            this.name = name;
            this.age = age;
        }
    }
    public String toString() {
        return name + " age: " + age;
    }
}
```

Given the code fragment:

```
4. public class Test{
5.     public static void main(String[] args)    {
6.         Candidate c = new Candidate("James", 20);
7.         Candidate c1 = new Candidate("Williams", 32);
8.         System.out.println(c);
9.         System.out.println(c1);
10.    }
11. }
```

Which change enables the code to print the following?

James age: 20

Williams age: 32

- A. Replacing line 5 with `public static void main (String [] args) throws MissingInfoException, AgeOutOfRangeException {`
- B. Replacing line 5 with `public static void main (String [] args) throws Exception {`
- C. Enclosing line 6 and line 7 within a try block and adding: `catch (Exception e1) { //code goes here} catch (missingInfoException e2) { //code goes here} catch (AgeOutOfRangeException e3) { //code goes here}`
- D. Enclosing line 6 and line 7 within a try block and adding: `catch (missingInfoException e2) { //code goes here} catch (AgeOutOfRangeException e3) { //code goes here}`

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 4

Given:

```
public class Series {  
    public static void main(String[] args)      {  
        int arr[] = {1,2,3};  
        for (int var : arr ) {  
            int i=1;  
            while (1<= var);  
            System.out.println(i++);  
        }  
    }  
}
```

What is the result?

- A. 1 1 1
- B. 1 2 3
- C. 2 3 4
- D. Compilation fails
- E. The loop executes infinite times

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 5

Given the code fragment:

```
class X{  
    public void printFileContent(){
```

```

        /* code goes here */
        throw new IOException();
    }
}
public class Test {
public static void main(String[] args) {
    X xobj= new X();
    xobj.printFileContent();
}
}

```

Which two modifications should you make so that the code compiles successfully?

- ☐ A) Replace line 8 with `public static void main(String[] args) throws Exception {`
- ☐ B) Replace line 10 with:

```

try {
    xobj.printFileContent();
}
catch(Exception e) { }
catch(IOException e) { }

```
- ☐ C) Replace line 2 with `public void printFileContent() throws IOException {`
- ☐ D) Replace line 4 with `throw new IOException("Exception raised");`
- ☐ E) At line 11, insert `throw new IOException();`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Add throws clause in both printFileContent and main.

#### QUESTION 6

Which two actions will improve the encapsulation of a class?

- A. Changing the access modifier of a field from public to private
- B. Removing the public modifier from a class declaration
- C. Changing the return type of a method to void
- D. Returning a copy of the contents of an array or ArrayList instead of a direct reference

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

encapsulation封装

#### QUESTION 7



Given:

```
public abstract class Shape    {
    private int x;
    private int y;
    public abstract void draw();
    public void setAnchor(int x, int y )    {
        this.x = x;
        this.y = y;
    }
}
```

Which two classes use the shape class correctly?

- ☐ 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 \*/ }  
}

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E
- F. Option F

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 8

Given the code fragment:

```

public class Test{
    void readCard(int cardNo) throws Exception{
        System.out.println("Reading Card");
    }
    void checkCard(int cardNo) throws RuntimeException{ // line
n1        System.out.println("Checking Card");
    }
    public static void main (String[] args){
        Test ex = new Test();
        int cardNo = 12344;
        ex.checkCard(cardNo); // line n2
        ex.readCard(cardNo); // line n3
    }
}

```

What is the result?

- A. Reading Card  
Checking Card
- B. Compilation fails only at line n1.
- C. Compilation fails only at line n2.
- D. Compilation fails only at line n3.
- E. Compilation fails at both line n2 and line n3.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

Given:

```

import java.io.IOException;
public class TestApp{
    public void doList () throws Exception    {
        throw new Error ("Error");
    }
    public void doPrint () throws Exception    {
        throw new RuntimeException("Exception");
    }
    public static void main(String[] args)    {
        TestApp t = new TestApp();
        try    {
            t.doPrint();
            t.doList();
        }
        catch (Exception e2)    {
            System.out.println("Caught " + e2);
        }
    }
}

```

What is the result?

```
C A) Caught java.lang.RuntimeException: Exception
    Exception in thread "main" java.lang.Error: Error
      at TestApp.doList(TestApp.java: 14)
      at TestApp.main(TestApp.java: 6)

C B) Exception in thread "main" java.lang.Error: Error
    at TestApp.doList(TestApp.java: 14)
    at TestApp.main(TestApp.java: 6)

C C) Caught java.lang.RuntimeException: Exception
    Caught java.lang.Error: Error

C D) Caught java.lang.RuntimeException: Exception
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 10

Given the code fragment:

```
public class Test {
public static void main(String[] args) {
boolean isChecked = false;
int array[] = {1,3,5,7,8,9};
int index = array.length;
while ( <code1> ) {
if (array[index-1] % 2 ==0) {
isChecked = true;
}
<code2>
}
System.out.print(array[index]+", "+isChecked);
}
}
```

Which set of changes enable the code to print 1, true?

- A. Replacing <code1> with index > 0 and replacing <code2> with index--;
- B. Replacing <code1> with index > 0 and replacing <code2> with --index;
- C. Replacing <code1> with index > 5 and replacing <code2> with --index ;
- D. Replacing <code1> with index and replacing <code2> with --index ;

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 11**

Which two are Java Exception classes?

- A. SercurityException
- B. DuplicatePathException
- C. IllegalArgumentException
- D. TooManyArgumentsException

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 12**

A method is declared to take three arguments. A program calls this method and passes only two arguments. What is the results?

- A. Compilation fails.
- B. The third argument is given the value null.
- C. The third argument is given the value void.
- D. The third argument is given the value zero.
- E. The third argument is given the appropriate falsy value for its declared type.
- F. An exception occurs when the method attempts to access the third argument.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 13**

Which statement best describes encapsulation?

- A. Encapsulation ensures that classes can be designed so that only certain fields and methods of an object are accessible from other objects.
- B. Encapsulation ensures that classes can be designed so that their methods are inheritable.
- C. Encapsulation ensures that classes can be designed with some fields and methods declared as abstract.
- D. Encapsulation ensures that classes can be designed so that if a method has an argument MyType x, any subclass of MyType can be passed to that method.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Encapsulation封装

**QUESTION 14**

Given the code fragment:

```
StringBuilder sb = new StringBuilder ( ) ;  
Sb.append ( "world" );
```

Which code fragment prints Hello World?

- A. sb.insert(0,"Hello ");  
System.out.println(sb);
- B. sb.append(0,"Hello ");  
System.out.println(sb);
- C. sb.add(0,"Hello ");  
System.out.println(sb);
- D. sb.set(0,"Hello ");  
System.out.println(sb);

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 15

The protected modifier on a Field declaration within a public class means that the field \_\_\_\_\_.

- A. Cannot be modified
- B. Can be read but not written from outside the class
- C. Can be read and written from this class and its subclasses only within the same package
- D. Can be read and written from this class and its subclasses defined in any package

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 16

Given:

```
public class MyClass {  
    public static void main(String[] args) {  
        while (int ii = 0; ii < 2) {  
            ii++;  
            System.out.println("ii = " + ii);  
        }  
    }  
}
```

What is the result?

- A. ii = 1 ii = 2
- B. The program prints nothing

- C. The program goes into an infinite loop with no output
- D. The program goes to an infinite loop outputting: `ii = 1 ii = 1`
- E. Compilation fails

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

The while statement is incorrect. It has the syntax of a for statement.

The while statement continually executes a block of statements while a particular condition is true. Its syntax can be expressed as:

```
while (expression) { statement(s)
}
```

The while statement evaluates expression, which must return a boolean value. If the expression evaluates to true, the while statement executes the statement(s) in the while block. The while statement continues testing the expression and executing its block until the expression evaluates to false.

Reference: The while and do-while Statements

#### QUESTION 17

You are asked to develop a program for a shopping application, and you are given the following information:

- The application must contain the classes Toy, EduToy, and consToy. The Toy class is the superclass of the other two classes.
- The `int calculatePrice (Toy t)` method calculates the price of a toy.
- The `void printToy (Toy t)` method prints the details of a toy.

Which definition of the Toy class adds a valid layer of abstraction to the class hierarchy?

- ☐ A) 

```
public abstract class Toy{
    public abstract int calculatePrice(Toy t);
    public void printToy(Toy t) { /* code goes here */ }
}
```
- ☐ B) 

```
public abstract class Toy {
    public int calculatePrice(Toy t) ;
    public void printToy(Toy t) ;
}
```
- ☐ C) 

```
public abstract class Toy {
    public int calculatePrice(Toy t);
    public final void printToy(Toy t){ /* code goes here */ }
}
```
- ☐ D) 

```
public abstract class Toy {
    public abstract int calculatePrice(Toy t) { /* code goes here */ }
    public abstract void printToy(Toy t) { /* code goes here */ }
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 18**

Given:

```
1. public class Whizlabs {
2.
3.     public static void main(String[] args) {
4.         try {
5.             Double number = Double.valueOf("120D");
6.         } catch (NumberFormatException ex) {
7.         }
8.         System.out.println(number);
9.     }
10. }
```

What is the result?

- A. 120
- B. 120D
- C. A NumberFormatException will be thrown.
- D. Compilation fails due to error at line 5.
- E. Compilation fails due to error at line 8.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

At line 5, we have created a wrapper object of double by passing 120D, which is convertible to a Double, so there won't be any exception there. But if you check carefully, you can see the variable number is declared inside try block, so the scope of the variable number is limited to that block, so trying to access it outside causes a compile time error.

**QUESTION 19**

Given:

```
public class MyFor3 {
    public static void main(String[] args) {
        int[] xx = null;
        for (int ii : xx) {
            System.out.println(ii);
        }
    }
}
```

What is the result?

- A. Null
- B. Compilation fails
- C. An exception is thrown at runtime

D. 0

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

NullPointerException。改成int[] xx = {}, 则返回空

#### QUESTION 20

Given:

```
package p1;
public class Test {
    static double dvalue;
    static Test ref;
    public static void main(String[] args) {
        System.out.println(ref);
        System.out.println(dvalue);
    }
}
```

What is the result?

- A. p1.Test.class  
0.0
- B. <the summary address referenced by ref>  
0.000000
- C. Null  
0.0
- D. Compilation fails
- E. A NullPointerException is thrown at runtime

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 21

Given:

```
public class ColorTest {
    public static void main(String[] args) {
        String[] colors = {"red", "blue", "green", "yellow",
"maroon", "cyan"};
        int count = 0;
        for (String c : colors) {
            if (count >= 4) {
                break;
            }
            else {
                continue;
            }
            if (c.length() >= 4) {
```



```

        colors[count] = c.substring(0,3);
    }
    count++;
}
System.out.println(colors[count]);
}
}

```

What is the result?

- A. Yellow
- B. Maroon
- C. Compilation fails
- D. A StringIndexOutOfBoundsException is thrown at runtime.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

if else 中的break和continue作用于循环for\while\do while\程序块switch，不作用于if语句。任意去掉一个即可。去掉break则结果为red，去掉continue，则结果为maroon。

## QUESTION 22

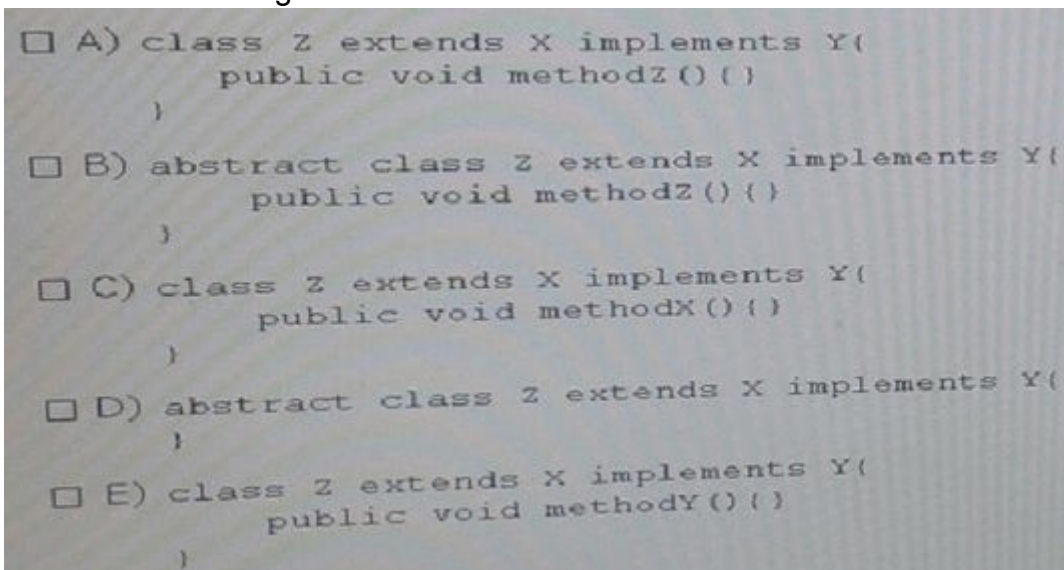
Given:

```

abstract class X {
    public abstract void methodX();
}
Interface Y {
    public void methodY();
}

```

Which two code fragments are valid?



- A. Option A
- B. Option B
- C. Option C

- D. Option D
- E. Option E

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

When an abstract class is subclassed, the subclass usually provides implementations for all of the abstract methods in its parent class (C). However, if it does not, then the subclass must also be declared abstract (B).

Note: An abstract class is a class that is declared abstract—it may or may not include abstract methods. Abstract classes cannot be instantiated, but they can be subclassed.

#### QUESTION 23

Given:

```
interface Readable {  
    public void readBook();  
    public void setBookMark();  
}  
abstract class Book implements Readable {    // line n1  
    public void readBook() { }  
    // line n2  
}  
class EBook extends Book {                    // line n3  
    public void readBook() { }  
    // line n4  
}
```

Which option enables the code to compile?

- ☐ A) Replace the code fragment at line n1 with:  
class Book implements Readable {
- ☐ B) At line n2 insert:  
public abstract void setBookMark();
- ☐ C) Replace the code fragment at line n3 with:  
abstract class EBook extends Book {
- ☐ D) At line n4 insert:  
public void setBookMark() { }

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 24**

Given:

```
public class Palindrome {  
    public static int main(String[] args) {  
        System.out.print(args[1]);  
        return 0;  
    }  
}
```

And the commands:

```
javac Palindrome.java
```

```
java Palindrome Wow Mom
```

What is the result?

- A. Compilation fails
- B. The code compiles, but does not execute.
- C. Paildrome
- D. Wow
- E. Mom

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 25**

Given:

```
class Product {  
    double price;  
}  
  
public class Test {  
    public void updatePrice(Product product, double price) {  
        price = price * 2;  
        product.price = product.price + price;  
    }  
    public static void main(String[] args) {  
        Product prt = new Product();  
        prt.price = 200;  
        double newPrice = 100;  
  
        Test t = new Test();  
        t.updatePrice(prt, newPrice);  
        System.out.println(prt.price + " : " + newPrice);  
    }  
}
```

What is the result?

- A. 200.0 : 100.0
- B. 400.0 : 200.0
- C. 400.0 : 100.0
- D. Compilation fails.

**Correct Answer:** C

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 26

Given the code fragment:

```
1. class X {  
2.     public void printFileContent() {  
3.         /* code goes here */  
4.         throw new IOException();  
5.     }  
6. }  
7. public class Test {  
8.     public static void main(String[] args) {  
9.         X xobj = new X();  
10.        xobj.printFileContent();  
11.    }  
12. }
```

Which two modifications should you make so that the code compiles successfully?

- ☐ A) Replace line 8 with `public static void main(String[] args) throws Exception {`
- ☐ B) Replace line 10 with:  

```
try {  
    xobj.printFileContent();  
}  
catch(Exception e) { }  
catch(IOException e) { }
```
- ☐ C) Replace line 2 with `public void printFileContent() throws IOException {`
- ☐ D) Replace line 4 with `throw IOException("Exception raised");`
- ☐ E) At line 11, insert `throw new IOException();`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** AC

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 27

Given the following two classes:

```
public class Customer {
    ElectricAccount acct = new ElectricAccount();

    public void useElectricity(double kWh) {
        acct.addKWh(kWh);
    }
}

public class ElectricAccount {
    private double kWh;
    private double rate = 0.07;
    private double bill;

    //line n1
}
```

How should you write methods in the ElectricAccount class at line n1 so that the member variable bill is always equal to the value of the member variable kWh multiplied by the member variable rate?

Any amount of electricity used by a customer (represented by an instance of the customer class) must contribute to the customer's bill (represented by the member variable bill) through the method useElectricity method. An instance of the customer class should never be able to tamper with or decrease the value of the member variable bill.

- ☐ A) 

```
public void addKWh(double kWh) {
    this.kWh += kWh;
    this.bill = this.kWh*this.rate;
}
```
- ☐ B) 

```
public void addKWh(double kWh) {
    if (kWh > 0){
        this.kWh += kWh;
        this.bill = this.kWh * this.rate;
    }
}
```
- ☐ C) 

```
private void addKWh(double kWh) {
    if (kWh > 0) {
        this.kWh += kWh;
        this.bill = this.kWh*this.rate;
    }
}
```
- ☐ D) 

```
public void addKWh(double kWh) {
    if(kWh > 0) {
        this.kWh += kWh;
        setBill(this.kWh);
    }
}

public void setBill(double kWh) {
    bill = kWh*rate;
}
```

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** AC

**Section:** A

**Explanation**

**Explanation/Reference:**

#### **QUESTION 28**

Given:

```

interface Readable {
    public void readBook();
    public void setBookMark();
}

abstract class Book implements Readable {    // line n1
    public void readBook() { }
    // line n2
}

class EBook extends Book {                    // line n3
    public void readBook() { }
    // line n4
}

```

Which option enables the code to compile?

- ☐ A) Replace the code fragment at line n1 with:  
class Book implements Readable {
- ☐ B) At line n2 insert:  
public abstract void setBookMark();
- ☐ C) Replace the code fragment at line n3 with:  
abstract class EBook extends Book {
- ☐ D) At line n4 insert:  
public void setBookMark() { }

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer: C**

**Section: A**

**Explanation**

**Explanation/Reference:**

#### QUESTION 29

You are developing a banking module. You have developed a class named ccMask that has a maskcc method.

Given the code fragment:

```

class CCMask {
    public static String maskCC(String creditCard) {
        String x = "XXXX-XXXX-XXXX-";
        //line n1
    }

    public static void main(String[] args) {
        System.out.println(maskCC("1234-5678-9101-1121"));
    }
}

```

You must ensure that the maskcc method returns a string that hides all digits of the credit card number except the four last digits (and the hyphens that separate each group of four digits).

Which two code fragments should you use at line n1, independently, to achieve this requirement?

- ☐ A) `StringBuilder sb = new StringBuilder(creditCard);`  
`sb.substring(15, 19);`  
`return x + sb;`
- ☐ B) `return x + creditCard.substring(15, 19);`
- ☐ C) `StringBuilder sb = new StringBuilder(x);`  
`sb.append(creditCard, 15, 19);`  
`return sb.toString();`
- ☐ D) `StringBuilder sb = new StringBuilder(creditCard);`  
`StringBuilder s = sb.insert(0, x);`  
`return s.toString();`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Correct Answer:** BC

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 30

Given the code fragment:



```

public static void main(String[] args) {
    ArrayList myList = new ArrayList();
    String[] myArray;
    try {
        while (true) {
            myList.add("My String");
        }
    }
    catch (RuntimeException re) {
        System.out.println("Caught a RuntimeException");
    }
    catch (Exception e) {
        System.out.println("Caught an Exception");
    }
    System.out.println("Ready to use");
}

```

What is the result?

- A. Execution terminates in the first catch statement, and caught a RuntimeException is printed to the console.
- B. Execution terminates in the second catch statement, and caught an Exception is printed to the console.
- C. A runtime error is thrown in the thread "main".
- D. Execution completes normally, and Ready to use is printed to the console.
- E. The code fails to compile because a throws keyword is required.

**Correct Answer: C**

**Section: A**

**Explanation**

**Explanation/Reference:**

### QUESTION 31

Given:

```

class Vehicle {
    int x;
    Vehicle() {
        this(10); // line n1
    }
    Vehicle(int x) {
        this.x = x;
    }
}

class Car extends Vehicle {
    int y;
    Car() {
        super();
        this(20); // line n2
    }
    Car(int y) {
        this.y = y;
    }
    public String toString() {
        return super.x + ":" + this.y;
    }
}

```

And given the code fragment:

And given the code fragment:

```

Vehicle y = new Car();
System.out.println(y);

```

What is the result?

- A. 10:20
- B. 0:20
- C. Compilation fails at line n1
- D. Compilation fails at line n2

**Correct Answer: D**

**Section: A**

**Explanation**

**Explanation/Reference:**

### QUESTION 32

You are asked to develop a program for a shopping application, and you are given the following information:

- The application must contain the classes Toy, EduToy, and ConsToy. The Toy class is the superclass of the other two classes.
- The int calculatePrice (Toy t) method calculates the price of a toy.
- The void printToy (Toy t) method prints the details of a toy.

Which definition of the Toy class adds a valid layer of abstraction to the class hierarchy?

- ☐ A) 

```
public abstract class Toy{
    public abstract int calculatePrice(Toy t);
    public void printToy(Toy t) { /* code goes here */ }
}
```
- ☐ B) 

```
public abstract class Toy {
    public int calculatePrice(Toy t) ;
    public void printToy(Toy t) ;
}
```
- ☐ C) 

```
public abstract class Toy {
    public int calculatePrice(Toy t);
    public final void printToy(Toy t){ /* code goes here */ }
}
```
- ☐ D) 

```
public abstract class Toy {
    public abstract int calculatePrice(Toy t) { /* code goes here */ }
    public abstract void printToy(Toy t) { /* code goes here */ }
}
```

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Correct Answer:** A

**Section:** A

**Explanation**

**Explanation/Reference:**

### QUESTION 33

Given the content of three files:

A.java:

```
public class A {  
    public void a() {}  
    int a;  
}
```

B.java:

```
public class B {  
    private int doStuff() {  
        private int x = 100;  
        return x++;  
    }  
}
```

C.java:

```
import java.io.*;  
package p1;  
class A {  
    public void main(String fileName) throws IOException { }  
}
```

Which statement is true?

- A. Only the A.Java file compiles successfully.
- B. Only the B.java file compiles successfully.
- C. Only the C.java file compiles successfully.
- D. The A.Java and B.java files compile successfully.
- E. The B.java and C.java files compile successfully.
- F. The A.Java and C.java files compile successfully.

**Correct Answer: A**

**Section: A**

**Explanation**

**Explanation/Reference:**

#### QUESTION 34

Given:

```
class Caller {  
    private void init () {  
        System.out.println("Initialized");  
    }  
    public void start () {  
        init ();  
        System.out.println("Started");  
    }  
}  
  
public class TestCall {  
    public static void main(String[] args) {  
        Caller c = new Caller();  
    }  
}
```

```

        c.start();
        c.init();
    }
}

```

What is the result?

- A. An exception is thrown at runtime.
- B. Initialized  
Started  
Initialized
- C. Initialized  
Started
- D. Compilation fails.

**Correct Answer: D**

**Section: A**

**Explanation**

**Explanation/Reference:**

14: 错误: init()可以在Caller中访问private

### QUESTION 35

Given the code fragment:

```

public static void main(String[] args) {
    try {
        int num = 10;
        int div = 0;
        int ans = num/ div;
    } catch (ArithmeticException ae) {
        ans = 0; // line n1
    } catch (Exception e ) {
        System.out.println("Invalid calculation");
    }
    System.out.println("Answer = " + ans); // line n2
}

```

What is the result?

- A. Answer = 0
- B. Invalid calculation
- C. Compilation fails only at line n1.
- D. Compilation fails only at line n2.
- E. Compilation fails both at line n1 and n2.

**Correct Answer: E**

**Section: A**

**Explanation**

**Explanation/Reference:**

### QUESTION 36

Given:

```

public class MyField {
    int x;
    int y;
}

```

```

    public void doStuff(int x, int y) {
        this.x = x;
        y = this.y;
    }
    public void display() {
        System.out.print(x + " " + y + " : ");
    }
    public static void main(String[] args) {
        MyField m1 = new MyField();
        m1.x = 100;
        m1.y = 200;
        MyField m2 = new MyField();
        m2.doStuff(m1.x, m1.y);
        m1.display();
        m2.display();
    }
}

```

What is the result?

- A. 100 0 : 100 200:
- B. 100 0 : 100 0 :
- C. 100 200 : 100 200 :
- D. 100 200 : 100 0 :

**Correct Answer:** D

**Section:** A

**Explanation**

**Explanation/Reference:**

### QUESTION 37

Given:

```

class Animal {
    String type = "Canine";
    int maxSpeed = 60;

    Animal () {}

    Animal (String type, int maxSpeed) {
        this.type = type;
        this.maxSpeed = maxSpeed;
    }
}

class WildAnimal extends Animal {
    String bounds;

    WildAnimal (String bounds) {
        //line n1
    }

    WildAnimal (String type, int maxSpeed,
        //line n2
    )
}

```

And given the code fragment:

```

7. WildAnimal wolf = new WildAnimal ("Long");
8. WildAnimal tiger = new WildAnimal ("Feline", 80, "Short");
9. System.out.println (wolf.type + " " + wolf.maxSpeed + " " +
wolf.bounds);
10. System.out.println (tiger.type + " " + tiger.maxSpeed + " " +
tiger.bounds);

```

Which two modifications enable the code to print the following output?

```

Canine 60 Long
Feline 80 Short

```

A. Replace line n1 with:

```
super ();  
this.bounds = bounds;
```

B. Replace line n1 with:

```
this.bounds = bounds;  
super ();
```

C. Replace line n2 with:

```
super (type, maxSpeed);  
this (bounds);
```

D. Replace line n1 with:

```
this ("Canine", 60);  
this.bounds = bounds
```

E. Replace line n2 with:

```
super (type, maxSpeed);  
this.bounds = bounds;
```

**Correct Answer: A**

**Section: A**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 38**

Given the code fragment:

```
4. class X {  
5.     public void printFileContent () {  
6.         /* code goes here */  
7.         throw new IOException ();  
8.     }  
9.}  
10. public class Test {.  
11.     public static void main (String [] args) {  
12.         X xobj = new X ();  
13.         xobj.printFileContent ();  
14.     }  
15. }
```

Which two modifications should you make so that the code compiles successfully?



- A. At line 14, insert `throw new IOException ();`
- B. Replace line 5 with `public void printFileContent () throws IOException {`
- C. Replace line 11 with `public static void main (String [] args) throws Exception {`
- D. Replace line 13 with:

```
try {  
    xobj.printFileContent ();  
}  
catch (Exception e) {}  
catch (IOException e) {}
```

- E. Replace line 7 with `throw IOException ("Exception raised");`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**Correct Answer:** E

**Section:** A

**Explanation**

**Explanation/Reference:**

#### **QUESTION 39**

You are asked to create a method that accepts an array of integers and returns the highest value from that array.

Given the code fragment:

```

class Test {
    public static void main (String [] args) {
        int numbers [] = {12, 13, 42, 32, 15, 156, 23,
        int max = findMax (numbers);
    }
    /*line n1 */ {
        int max = 0;
        /* code goes here*/
        return max;
    }
}

```

Which method signature do you use at line n1?

- A. public int findMax (int [] numbers)
- B. static int[] findMax (int max)
- C. static int findMax (int [] numbers)
- D. final int findMax (int [] )

**Correct Answer:** C

**Section:** A

**Explanation**

**Explanation/Reference:**

/\*code goes here\*/:

```

for ( int i : numbers ){
    if (max <= i) {
        max = i;
    }
}

```

#### QUESTION 40

Which three statements are true about the structure of a Java class?

- A. A public class must have a main method.
- B. A class can have only one private constructor.
- C. A method can have the same name as a field.
- D. A class can have overloaded static methods.
- E. The methods are mandatory components of a class.
- F. The fields need not be initialized before use.

**Correct Answer:** ACE

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 41

Given:

```
public class App {  
    int count;  
    public static void displayMsg () {  
        count++;  
        System.out.println ("Welcome "+"Visit Count: "+count  
    }  
    public static void main (String [] args) {  
        App.displayMsg ();  
        App.displayMsg ();  
    }  
}
```

What is the result?

- A. Compilation fails at line n3 and line n4.
- B. Compilation fails at line n1 and line n2.
- C. Welcome Visit Count:1  
Welcome Visit Count: 2
- D. Welcome Visit Count:1  
Welcome Visit Count: 2

**Correct Answer: B**

**Section: A**

**Explanation**

**Explanation/Reference:**

错误: 无法从静态上下文中引用非静态 变量 count。n1和n2都引用了count。

**QUESTION 42**

Given the code fragment:

```

public class Person {
    String name;
    int age = 25;

    public Person (String name) {
        this (); // //line n1
        setName(name);
    }
    public Person (String name, int age) {
        Person (name); //line n2
        setAge (age);
    }
    //setter and getter methods go here

    public String show () {
        return name + " " + age;
    }
    public static void main (String [] args) {
        Person p1 = new Person ("Jesse");
        Person p2 = new Person ("Walter", 52);
        System.out.println (p1.show () );
        System.out.println (p2.show () );
    }
}

```

What is the result?

- A. Compilation fails at both line n1 and line n2.
- B. Compilation fails only at line n2.
- C. Compilation fails only at line n1.
- D. Jesse 25  
Walter 52

**Correct Answer:** A

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 43

Which three statements are true about exception handling?

- A. Only unchecked exceptions can be rethrown.
- B. All subclasses of the RuntimeException class are recoverable.
- C. The parameter in a catch block is of Throwable type.
- D. All subclasses of the RuntimeException class must be caught or declared to be thrown.
- E. All subclasses of the Exception class except the RuntimeException class are checked exceptions.
- F. All subclasses of the Error class are checked exceptions and are recoverable.

**Correct Answer:** CEF

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 44

Given:

```
interface Readable {
    public void readBook();
    public void setBookMark();
}

abstract class Book implements Readable {    // line n1
    public void readBook() { }
    // line n2
}

class EBook extends Book {                    // line n3
    public void readBook() { }
    // line n4
}
```

And given the code fragment:

```
Book book1 = new EBook ();
book1.readBook();
```

Which option enables the code to compile?

- A. Replace the code fragment at line n3 with:  

```
abstract class EBook extends Book {
```
- B. Replace the code fragment at line n1 with:  

```
class Book implements Readable {
```
- C. At line n2 insert:  

```
public abstract void setBookMark ();
```
- D. At line n4 insert:  

```
public void setBookMark () { }
```

- A. Option A
- B. Option B
- C. Option C

D. Option D

**Correct Answer:** A

**Section:** A

**Explanation**

**Explanation/Reference:**

**QUESTION 45**

Given the following class:

```
public class CheckingAccount {  
    public int amount:  
    // line n1  
}
```

And given the following main method, located in another class:

```
public static void main (String [] args) {  
    CheckingAccount acct = new CheckingAccount ();  
    //line n2  
}
```

Which three pieces of code, when inserted independently, set the value of amount to 100?

- A. At line n2 insert:  
    amount = 100;
- B. At line n2 insert:  
    This. amount = 100
- C. At line n2 insert:  
    acct.amount = 100
- D. At line n1 insert:  
    public CheckingAccount () {  
        amount = 100;  
    }
- E. At line n1 insert:  
    public CheckingAccount () {  
        this.amount = 100;  
    }
- F. At line n1 insert:  
    public CheckingAccount () {  
        acct.amount = 100;  
    }

- A. Option A  
B. Option B  
C. Option C  
D. Option D  
E. Option E  
F. Option F

**Correct Answer:** BCE

**Section:** A

**Explanation**

**Explanation/Reference:**

**QUESTION 46**

Given the code fragments:

```

Interface Exportable {
    Void export();
}

class Tool implements Exportable {
    protected void export () {           //line n1
        System.out.println("Tool::export");
    }
}

class ReportTool extends Tool implements Exportable {

    public void export() {                //line n2
        System.out.println("RTool::export");
    }

    public static void main(String[] args) {
        Tool aTool = new ReportTool();
        Tool bTool = new Tool();
        callExport(aTool);
        callExport(bTool);
    }

    public static void callExport (Exportable ex) {
        ex.export();
    }
}

```

What is the result?

- A. Compilation fails only at line n2.
- B. RTool::export  
Tool::export
- C. Tool::export  
Tool:export
- D. Compilation fails only at line n1.
- E. Compilation fails at both line n1 and line n2.

**Correct Answer:** E

**Section:** A

**Explanation**

**Explanation/Reference:**

**QUESTION 47**



Given:

```
package clothing;
public class Shirt {
    public static String getColor() {
        return "Green";
    }
}
```

Given the code fragment:

```
package clothing.pants;
// line n1
public class Jeans {
    public void matchShirt(){
        //line n2
        if(color.equals("Green")) {
            System.out.print("Fit")
        }
    }
    public static void main (String[] args) {
        Jeans trouser = new Jeans();
        trouser.matchShirt();
    }
}
```

Which two sets of actions, independently, enable the code fragment to print `Fit`?

- A. At line n1 insert: `import clothing.Shirt;`  
At line n2 insert: `String color = getColor();`
- B. At line n1 insert: `import clothing.*;`  
At line n2 insert: `String color = Shirt.getColor();`
- C. At line n1 insert: `import static clothing.Shirt.getcolor;`  
At line n2 insert: `String color = getColor();`
- D. At line n1 no changes required.  
At line n2 insert: `String color = Shirt.getColor();`
- E. At line n1 insert: `import clothing;`  
At line n2 insert: `String color = Shirt.getColor();`

**Correct Answer: A**

**Section: A**

**Explanation**

**Explanation/Reference:**

#### QUESTION 48

Given:

```

interface Downloadable {
    public void download();
}

interface Readable extends Downloadable {           // line n1
    public void readBook();
}

abstract class Book implements Readable {          // line n2
    public void readBook() {
        System.out.println("Read Book");
    }
}

class EBook extends Book {                         // line n3
    public void readBook() {
        System.out.println("Read E-Book");
    }
}

```

And given the code fragment:

```

Book book1 = new EBook();
book1.readBook();

```

What is the result?

- A. Compilation fails at line n2.
- B. Read Book
- C. Read E-Book
- D. Compilation fails at line n1.
- E. Compilation fails at line n3.

**Correct Answer: B**

**Section: A**

**Explanation**

**Explanation/Reference:**

#### QUESTION 49

Given the following class:

```

public class Rectangle {
    private double length;
    private double height;
    private double area;

    public void setLength(double length) {
        this.length = length;
    }
    public void setHeight(double height) {
        this.height = height;
    }
    public void setArea() {
        area = length*height;
    }
}

```

Which two changes would encapsulate this class and ensure that the area field is always equal to `length * height` whenever the Rectangle class is used?

- A. Call the setArea method at the end of the setHeight method.
- B. Call the setArea method at the beginning of the setHeight method.
- C. Call the setArea method at the end of the setLength method.
- D. Call the setArea method at the beginning of the setLength method.
- E. Change the setArea method to private.
- F. Change the area field to public.

**Correct Answer:** AE

**Section:** A

**Explanation**

**Explanation/Reference:**

#### QUESTION 50

Given the code fragment:

```

abstract class Toy {
    int price;
    // line n1
}

```

Which three code fragments are valid at line n1?

- A. `public static void insertToy() {  
 /* code goes here */  
}`
- B. `public abstract Toy getToy() {  
 return new Toy();  
}`
- C. `public void printToy();`
- D. `public int calculatePrice() {  
 return price;  
}`
- E. `public abstract int computeDiscount();`

**Correct Answer:** CDE

**Section: A**  
**Explanation**

**Explanation/Reference:**

**QUESTION 51**

Given the code fragment:

```
public static void main(String[] args) {  
    int array[] = {10, 20, 30, 40, 50};  
    int x = array.length;  
    /* line n1 */  
}
```

Which two code fragments can be independently inserted at line n1 to enable the code to print the elements of the array in reverse order?

- A.   while (x > 0) {  
            x--;  
            System.out.print(array[x]);  
        }
- B.   do {  
            x--;  
            System.out.print(array[x]);  
        } while (x >= 0);
- C.   while (x >= 0) {  
            System.out.print(array[x]);  
            x--;  
        }
- D.   do {  
            System.out.print(array[x]);  
            --x;  
        } while (x >= 0);
- E.   while (x > 0) {  
            System.out.print(array[--x]);  
        }

**Correct Answer: BE**

**Section: A**  
**Explanation**

**Explanation/Reference:**