Questões de certificação, sobre os assuntos das aulas 1 e 2.

1) Uso do if/else e operadores de comparação

```
class GuessAnimal {
  public static void main(String[] args) {
    String animal = "unknown";
    int weight = 700;
    char sex = 'm';
    double colorWaveLength = 1.630;
    if (weight >= 500) { animal = "elephant"; }
    if (colorWaveLength > 1.621) { animal = "gray " + animal; }
    if (sex <= 'f') { animal = "female " + animal; }
    System.out.println("The animal is a " + animal);
  }
}
```

2) Uso do if/else, operadores de comparação e operadores lógicos

```
1.  class TestOR {
2.    public static void main(String[] args) {
3.      if ((isItSmall(3)) || (isItSmall(7))) {
4.        System.out.println("Result is true");
5.      }
6.      if ((isItSmall(6)) || (isItSmall(9))) {
7.        System.out.println("Result is true");
8.      }
9.    }
10.
11.   public static boolean isItSmall(int i) {
12.     if (i < 5) {
13.       System.out.println("i < 5");
14.       return true;
15.     } else {
16.       System.out.println("i >= 5");
17.       return false;
18.     }
19.   }
20. }
```

3) Operadores de comparação e operador ternário

1. Given:

```
class Hexy {
  public static void main(String[] args) {
    Integer i = 42;
    String s = (i<40)?"life":(i>50)?"universe":"everything";
    System.out.println(s);
  }
}
```

What is the result?

A. `null`
B. `life`
C. `universe`
D. `everything`
E. Compilation fails
F. An exception is thrown at runtime

4) Uso do operador '+'

4. Given:

```
class Feline {
  public static void main(String[] args) {
    Long x = 42L;
    Long y = 44L;
    System.out.print(" " + 7 + 2 + " ");
    System.out.print(foo() + x + 5 + " ");
    System.out.println(x + y + foo());
  }
  static String foo() { return "foo"; }
}
```

What is the result?

A. 9 foo47 86foo

B. 9 foo47 4244foo

C. 9 foo425 86foo

D. 9 foo425 4244foo

E. 72 foo47 86foo

F. 72 foo47 4244foo

G. 72 foo425 86foo

H. 72 foo425 4244foo

I. Compilation fails

5) Operadores de comparação, condição e incremento

8. Given:

```
4. public class SpecialOps {
5.   public static void main(String[] args) {
6.     String s = "";
7.     Boolean b1 = true;
8.     Boolean b2 = false;
9.     if((b2 = false) | (21%5) > 2) s += "x";
10.    if(b1 || (b2 = true))         s += "y";
11.    if(b2 == true)                s += "z";
12.    System.out.println(s);
13.  }
14. }
```

Which are true? (Choose all that apply.)

A. Compilation fails

B. x will be included in the output

C. y will be included in the output

D. z will be included in the output

E. An exception is thrown at runtime

6) Uso do for e foreach

5. Given:

```
1. class Loopy {
2.   public static void main(String[] args) {
3.     int[] x = {7,6,5,4,3,2,1};
4.     // insert code here
5.       System.out.print(y + " ");
6.     }
7. } }
```

Which, inserted independently at line 4, compiles? (Choose all that apply.)

A. `for(int y : x) {`

B. `for(x : int y) {`

C. `int y = 0; for(y : x) {`

D. `for(int y=0, z=0; z<x.length; z++) { y = x[z];`

E. `for(int y=0, int z=0; z<x.length; z++) { y = x[z];`

F. `int y = 0; for(int z=0; z<x.length; z++) { y = x[z];`

7) Uso do for e do switch e static

8. Given:

```
3. public class Ebb {
4.   static int x = 7;
5.   public static void main(String[] args) {
6.     String s = "";

7.     for(int y = 0; y < 3; y++) {
8.       x++;
9.       switch(x) {
10.        case 8: s += "8 ";
11.        case 9: s += "9 ";
12.        case 10: { s+= "10 "; break; }
13.        default: s += "d ";
14.        case 13: s+= "13 ";
15.      }
16.    }
17.    System.out.println(s);
18.  }
19.  static { x++; }
20. }
```

What is the result?

A. 9 10 d

B. 8 9 10 d

C. 9 10 10 d

D. 9 10 10 d 13

E. 8 9 10 10 d 13

F. 8 9 10 9 10 10 d 13

G. Compilation fails

8) Uso do for e do foreach (continue e break)

10. Given:

```
3. public class Circles {
4.   public static void main(String[] args) {
5.     int[] ia = {1,3,5,7,9};
6.     for(int x : ia) {
7.       for(int j = 0; j < 3; j++) {
8.         if(x > 4 && x < 8) continue;
9.         System.out.print(" " + x);
10.        if(j == 1) break;
11.        continue;
12.      }
13.      continue;
14.    }
15.  }
16. }
```

What is the result?

A. 1 3 9

B. 5 5 7 7

C. 1 3 3 9 9

D. 1 1 3 3 9 9

E. 1 1 1 3 3 3 9 9 9

F. Compilation fails

9) Uso do do/while, comparação e incremento

Given:

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

What is the result?

A. 5,6

B. 5,5

C. 6,5

D. 6,6

10) Uso do for com break

Given:

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

What is the result?

A. 6

B. 7

C. 10

D. 11

E. Compilation fails.

F. An exception is thrown at runtime.