

Question 1

Which of the following methods would properly compute the value of $x \% y$ ($x \bmod y$) recursively, assuming that x and y not negative numbers?

A) `public int recursiveMod(int x, int y)`

```
{  
    if (x < y) return y;  
    else return recursiveMod(x, y - x);  
}
```

B) `public int recursiveMod(int x, int y)`

```
{  
    if (x == y) return 0;  
    else return recursiveMod(x - y, y) + 1;  
}
```

C) `public int recursiveMod(int x, int y)`

```
{  
    if (x < y) return x;  
    else return recursiveMod(x - y, y) + 1;  
}
```

D) `public int recursiveMod(int x, int y)`

```
{  
    if (x < y) return x;  
    else return recursiveMod(x - y, y);  
}
```

E) `public int recursiveMod(int x, int y)`

```
{  
    while (x > y)  
        x = x - y;  
    return x;  
}
```

Answer: <https://biology-forums.com/index.php?topic=342051>

Question 2

Given the following assignment statement, which of the following answers is true regarding the order that the operators will be applied based on operator precedence?

`a = (b + c) * d / e - f;`

A) +, /, *, -

B) *, /, +, -

C) *, +, /, -

D) +, -, *, /

E) +, *, /, -

Answer: <https://biology-forums.com/index.php?topic=342141>

Question 3

Having multiple class methods of the same name where each method has a different number of or type of parameters is known as

A) method overloading

B) importing

C) encapsulation

D) information hiding

E) tokenizing

Answer: <https://biology-forums.com/index.php?topic=342201>

Question 4

A unique aspect of Java that allows code compiled on one machine to be executed on a machine of a different hardware platform is Java's

A) syntax

B) use of exception handling

C) bytecodes

D) use of objects

E) all of the above

Answer: <https://biology-forums.com/index.php?topic=342119>

Question 5

StringTokenizer is a class in the java.util library that can divide a String based on some delimiter String (a delimiter is a separator). If the instruction StringTokenizer st = new StringTokenizer(str, "&&"); is executed, where str is some String, then st divides up str into separate Strings whenever

- A) two ampersands are found
- B) two blank spaces are found
- C) a blank space is found
- D) two ampersands or the substring "and" or "AND" is found
- E) a single ampersand ("&") is found

Answer: <https://biology-forums.com/index.php?topic=342207>

Question 6

If x is currently 0, a = 1 and b = -1, what will x become after the above statement is executed?

- A) 0
- B) 2
- C) 3
- D) 4
- E) 5

Answer: <https://biology-forums.com/index.php?topic=342219>

Question 7

The size of each rectangle (bar)

- A) increases in width while staying the same height
- B) stays the same size
- C) decreases in height while staying the same width
- D) increases in height while staying the same width
- E) increases in both width and height

Answer: <https://biology-forums.com/index.php?topic=342233>

Question 8

Both the Insertion Sort and the Selection Sort algorithms have efficiencies on the order of _____ where n is the number of values in the array being sorted.

- A) n
- B) n²
- C) n * log n
- D) n³
- E) Insertion sort has an efficiency of n and Selection Sort has an efficiency of n²

Answer: <https://biology-forums.com/index.php?topic=341922>

Question 9

"class Aggregate" is incorrect. Choose the correct line so that this program prints

Granite: weight=25.0 value=4 numKind=7

```
public class Inherit
{
    abstract class Stone
    {
        protected float weight = 13;
        protected int value = 4;
        abstract public String toString( );
    }
    class Aggregate
    {
        protected int numKind;
    }
    class Granite extends Aggregate
    {
        Granite( )
    {
```

```
weight = 25; numKind = 7;
}
public String toString( )
{
    return "Granite: weight="
        + weight + " value="
        + value + " numKind="
        + numKind;
}
}
Inherit( )
{
    Granite g = new Granite( );
    System.out.println(g);
}
public static void main(String[ ] args)
{
    new Inherit( );
}
}
```

- A) class Aggregate extends Stone {
- B) abstract class Aggregate {
- C) abstract class Aggregate extends Granite {
- D) abstract class Aggregate extends Stone {
- E) none of the above

Answer: <https://biology-forums.com/index.php?topic=341988>

Question 10

Java does not support multiple inheritance, but some of the abilities of multiple inheritance are available by

- A) implementing interfaces
- B) importing classes
- C) overriding parent class methods
- D) creating aliases
- E) using public rather than protected or private modifiers

Answer: <https://biology-forums.com/index.php?topic=342251>

Question 11

Java does not support multiple inheritance, but some of the abilities of multiple inheritance are available by

- A) overriding parent class methods
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- C) implementing interfaces
- D) creating aliases
- E) importing classes

Answer: <https://biology-forums.com/index.php?topic=341948>

Question 12

Inheritance through an extended (derived) class supports which of the following concepts?

- A) correctness
- B) code reuse
- C) interfaces
- D) information hiding
- E) modularly

Answer: <https://biology-forums.com/index.php?topic=341945>

Question 13

Assume at some point in processing, grid's row 0 has become 3 3 3 1 1 1 0 0. Which direction will next be tried?

- A) up
- B) left
- C) right

D) down
E) none, the recursion ends at this point
Answer: <https://biology-forums.com/index.php?topic=342052>

Question 14

Which of the following is a legal Java identifier?

- A) i
- B) class
- C) ilikeclass!
- D) idon'tlikeclass
- E) i-like-class

Answer: <https://biology-forums.com/index.php?topic=342118>

Question 15

Which of the following is true regarding Java classes?

- A) All classes must have 1 child (derived or extended) class but may have any number of parent classes
- B) All classes can have any number (0 or more) of parent classes and any number of children (derived or extended) classes
- C) All classes must have 1 parent class and may have a single child (derived or extended) class
- D) All classes can have either 0 or 1 parent class and any number of children (derived or extended) classes
- E) All classes must have 1 parent but may have any number of children (derived or extended) classes

Answer: <https://biology-forums.com/index.php?topic=341956>

Question 16

If a method does not have a return statement, then

- A) it must be a void method
- B) it will produce a syntax error when compiled
- C) it must be defined to be a public method
- D) it can not be called from outside the class that defined the method
- E) it must be an int, double, float or String method

Answer: <https://biology-forums.com/index.php?topic=342197>

Question 17

What is output if $x = 0$, $y = 1$ and $z = 1$?

- A) 0.0
- B) 0
- C) 0.67
- D) 0.6666666666666667
- E) 0.6666666666666666

Answer: <https://biology-forums.com/index.php?topic=342159>

Question 18

The statement `int[] list = {5, 10, 15, 20};`

- A) initializes list to have 4 int values
- B) declares list but does not initialize it
- C) causes a syntax error because it does not include "new int[4]" prior to the list of values
- D) initializes list to have 20 int values
- E) adds 4 int values to array list

Answer: <https://biology-forums.com/index.php?topic=341930>

Question 19

Abstract Data Types have which of the following object-oriented features?

- A) polymorphism
- B) information hiding
- C) inheritance
- D) message passing
- E) all of the above

Answer: <https://biology-forums.com/index.php?topic=342064>

Question 20

It is easier to correct errors found in a program if

- A) they are identified early in the development cycle
- B) they are identified during program use
- C) they are identified during maintenance
- D) they are identified during testing
- E) all of the above are equally true, errors are easily corrected in any of these stages

Answer: <https://biology-forums.com/index.php?topic=342242>