# CHAPTER 09: CLASSES AND OBJECTS

## REVIEW QUESTIONS:

1. An object is a(n) _____ of a class.

   a. child
   b. institution
   c. instantiation
   d. relative

2. A class header or class definition can contain all of the following *except* _____.

   a. an optional access modifier
   b. the keyword class
   c. an identifier
   d. initial field values

3. Most fields in a class are created with the _____ modifier.

   a. public
   b. protected
   c. new
   d. private

4. Most methods in a class are created with the _____ modifier.

   a. public
   b. protected
   c. new
   d. private

5. Instance methods that belong to individual objects are _____ static methods.

   a. always
   b. usually

c. occasionally

d. never

6. To allocate memory for an object instantiation, you must use the _____ operator.

a. mem

b. alloc

c. new

d. instant

7. Assume that you have created a class named MyClass. The header of the MyClass constructor can be _____.

a. public void MyClass()

b. public MyClassConstructor()

c. Either of these can be the constructor header.

d. Neither of these can be the constructor header.

8. Assume that you have created a class named MyClass. The header of the MyClass constructor can be _____.

a. public MyClass()

b. public MyClass (double d)

c. Either of these can be the constructor header.

d. Neither of these can be the constructor header.

9. Assume that you have created a class named DemoCar. Within the Main() method of this class, you instantiate a Car object named myCar and the following statement executes correctly:

```
WriteLine("The Car gets {0} miles per gallon",
  myCar.ComputeMpg());
```

Within the Car class, the ComputeMpg() method can be _____.

a. public and static

b. public and nonstatic

c. private and static

d. private and nonstatic

10. Assume that you have created a class named TermPaper that contains a character field named letterGrade. You also have created a property for the field. Which of the following cannot be true?

    a. The property name is letterGrade.
    b. The property is read-only.
    c. The property contains a set accessor that does not allow a grade lower than 'C'.
    d. The property does not contain a get accessor.

11. A this reference is _____.

    a. implicitly passed to nonstatic methods
    b. implicitly passed to static methods
    c. explicitly passed to nonstatic methods
    d. explicitly passed to static methods

12. When you use an instance variable within a class's nonstatic methods, you _____ explicitly refer to the method's this reference.

    a. must
    b. can
    c. cannot
    d. should (even though it is not required)

13. A class's default constructor _____.

    a. sets numeric fields to 0
    b. is parameterless
    c. both of these
    d. none of these

14. Assume that you have created a class named Chair with a constructor defined as Chair(int height). Which of the following overloaded constructors could coexist with the Chair constructor without ambiguity?

a. Chair(int legs)

b. Chair(int height, int legs)

c. both of these

d. none of these

15. Which of the following statements correctly instantiates a House object if the House class contains a single constructor with the declaration House(int bedrooms, double price)?

a. House myHouse = new House();

b. House myHouse = new House(3, 125000.00);

c. House myHouse = House(4, 200000.00);

d. two of these

16. You explicitly call a destructor _____.

a. when you are finished using an object

b. when an object goes out of scope

c. when a class is destroyed

d. You cannot explicitly call a destructor.

17. In a program that creates five object instances of a class, the constructor executes _____ time(s) and the destructor executes _____ time(s).

a. one; one

b. one; five

c. five; one

d. five; five

18. Suppose that you declare a class named Furniture that contains a string field named woodType and a conventionally named property with a get accessor. When you declare an array of 200 Furniture objects named myChairs, which of the following accesses the last Furniture object's wood type?

a. Furniture.Get(woodType[199])

b. myChairs[199].WoodType()

c. myChairs.WoodType[199]

d. myChairs[199].WoodType

19. A collection of methods that can be used by any class, as long as the class provides a definition to override the collection's do-nothing, or abstract, definitions is _____

    a. a superclass

    b. a polymorph

    c. a perimeter

    d. an interface

20. When you create a class and want to include the capability to compare its objects so they can use the Array.Sort() or Array.BinarySearch() method, you must _____.

    a. include at least one numeric field within the class

    b. write a CompareTo() method for the class

    c. be careful not to override the existing IComparable.CompareTo() method

    d. Two of these are true.