QUICK REVIEW

1. A class is a collection of a fixed number of components.
2. Components of a class are called the members of the class.
3. Members of a class are accessed by name.
4. In C++, class is a reserved word.
5. Members of a class are classified into one of three categories: private, protected, and public.
6. The private members of a class are not accessible outside of the class.
7. The public members of a class are accessible outside of the class.
8. By default, all members of a class are private.
9. The public members are declared using the member access specifier public and the colon, :
10. The private members are declared using the member access specifier private and the colon, :
11. A member of a class can be a function or a variable.
12. If any member of a class is a function, you usually use the function prototype to declare it.
13. If any member of a class is a variable, it is declared like any other variable.
14. In the definition of a class, you cannot initialize a variable when you declare it.
15. In C++, a class is a definition. No memory is allocated for the class itself; memory is allocated for the class variables when you declare them.
16. In C++, class variables are called class objects or class instances or, simply, objects.
17. A class member is accessed using the class variable name, followed by the dot operator (.), followed by the member name.
18. The only built-in operations on classes are the assignment and member selection.
19. As parameters to functions, classes can be passed either by value or by reference.
20. A function can return a value of type class.
21. Any program (or software) that uses a class is called a client of the class.
22. A member function of a class that only accesses (that is, does not modify) the value(s) of the member variable(s) is called an accessor function.
23. A member function of a class that modifies the value(s) of the member variable(s) is called a mutator function.
24. A member function of a class is called a constant function if its heading contains the reserved word const at the end. Moreover, a constant member function of a class cannot modify the member variables of the class.
25. A constant member function of a class can only call the other constant member functions of the class.
26. Constructors guarantee that the member variables are initialized when an object is declared.
27. The name of a constructor is the same as the name of the class.
28. A class can have more than one constructor.
29. A constructor without parameters is called the default constructor.
30. Constructors automatically execute when a class object enters its scope.
31. Destructors automatically execute when a class object goes out of scope.
32. A class can have only one destructor, and the destructor has no parameters.
33. The name of a destructor is the tilde (~), followed by the class name (no spaces in between).
34. Constructors and destructors are functions without any type; that is, they are neither value-returning nor void. As a result, they cannot be called like other functions.