44-542 Object Oriented Programming

Exam 2 Part 1 A (2 pts each, 50 pts total)

Write the letter corresponding to the correct answer **on the answer sheet**. Select only ONE answer for each question.

1. To determine how many items are currently stored in an ArrayList aList, use
   1. aList.capacity()
   2. aList.length
   3. aList.size()
2. The class ArrayList is defined in which Java package?
   1. java.collection
   2. java.lang
   3. java.util
3. Suppose myNums is an ArrayList of integers that currently contains 6 elements. Then the statement  
   myNums.set(10, 4)  
   is legal and executes with no error.
   1. true
   2. false
4. Code-testing using data based on program structure is called \_\_\_\_\_\_\_\_\_\_ testing.
   1. black-box
   2. white-box
5. In UML, the symbol for private visibility is
   1. #
   2. -
   3. +
6. Multiple inheritance is allowed in Java.
   1. true
   2. false
7. The Object class has a toString() method.
   1. true
   2. false
8. A try block can have more than one associated catch block.
   1. true
   2. false
9. IOExceptions are checked exceptions.
   1. true
   2. false
10. An exception is advertised using the keyword
    1. raises
    2. throw
    3. throws
11. Assume the definition of class A begins as follows:  
     public class A extends B  
    Then class A is a \_\_\_\_\_ of class B.
    1. subclass
    2. superclass
12. Assume the definition of class C begins as follows:  
     public class C extends D  
    Then an object of type C is-a object of type D.
    1. true
    2. false
13. An ArrayList is fixed in size and cannot grow.
    1. true
    2. false
14. A class can implement more than one interface.
    1. true
    2. false
15. A class can extend more than one class.
    1. true
    2. false
16. A class can have more than one subclass.
    1. true
    2. false
17. If MyInterface is an interface, it is legal to declare a variable to be of type MyInterface.
    1. true
    2. false
18. If AbstractDog is an abstract class, it is legal to declare a variable to be of type AbstractDog.
    1. true
    2. false
19. All methods in an abstract class must be abstract methods.
    1. true
    2. false
20. An abstract class cannot have attributes.
    1. true
    2. false
21. An interface cannot have attributes.
    1. true
    2. false
22. All methods in an interface must be abstract methods.
    1. true
    2. false
23. Assume class SuperHero extends class Hero. Then the statement  
     Hero harry = new SuperHero();  
    is an example of
    1. inheritance
    2. polymorphic substitution
    3. late-binding polymorphism
24. Assume class SuperHero extends class Hero. A toString() method is defined in Hero but not in SuperHero. Suppose the variable gandalf is declared and initialized as follows  
     SuperHero gandalf = new SuperHero();  
    When the expression gandalf.toString() is executed, the toString() method from the Hero class is used. This is an example of
    1. inheritance
    2. polymorphic substitution
    3. late-binding polymorphism
25. Assume class SuperHero extends class Hero. A toString() method is defined in both classes. The variable harry is declared and initialized as follows:  
     Hero harry = new SuperHero();  
    When the expression harry.toString() is executed, the toString() method of class SuperHero will be invoked. This is an example of
    1. inheritance
    2. polymorphic substitution
    3. late-binding polymorphism