SAMPLE EXAM QUESTIONS

Write the letter of the best answer in the blank to the left.

1) _____ A certain Java/CN1 class named “Point” has constructors “Point()” and “Point(int x, int y)”. This is an example of

A. abstraction
B. encapsulation
C. inheritance
D. overloading
E. overriding

2) _____ A certain Java/CN1 class named Sphere contains a method named getColor() which returns the color of the Sphere object. This method is an example of a (an)

A. accessor
B. mutator
C. aggregation
D. design pattern
E. abstraction

3) _____ A certain Java/CN1 class named “B” extends another class named “A”. Class B defines a method named “C” with the same signature as that of a method named “C” in Class A. Method C in Class B does not contain the keyword “super”. A program constructs an instance of B and invokes method “C” in that object. The code which will be executed as a result of this invocation is

A. the code in A.C
B. the code in B.C
C. the code in A.C followed by the code in B.C
D. the code in B.C followed by the code in A.C
E. it depends on the code in A.C and B.C

4) _____ If a Java/CN1 program contains a declaration such as “class A {...}”, where “...” represents the code defining the class, then

A. A has no parent class
B. A is its own parent
C. A is a superclass of Object
D. A is a subclass of Object
E. A is an abstraction of Object

5) _____ In Java/CN1, inheritance is indicated using the keyword

A. abstract
B. extends
C. implements
D. static
E. new

6) _____ Before Java 8, an interface consists of

A. a set of method declarations (abstract methods)
B. a set of method definitions (implementations)
C. a class description given in an online Application Programming Interface (API)
D. the set of classes in an inheritance hierarchy
E. a set of accessor (selector and/or mutator) methods

7) _____ In a UML Class Diagram depicting classes named “Student” and “Course”, a label named “takes” on the diagram would most likely represent

A. a method in Student
B. a method in Course
C. an association
D. a multiplicity
E. a composition

8) _____ In CN1, when one object is registered as containing the method(s) to be invoked when another object generates an “ActionEvent”, we say the first object is a (an)

A. event generator
B. action performer
C. listener
D. layout manager
E. exception handler

9) _____ An association between two objects named “A” and “B” such that (1) B is referenced by A but not by any other object, and (2) the lifetime of B is controlled by A, is called a (an)

A. Composition
B. Aggregation
C. Abstraction
D. Encapsulation
E. Inheritance

10) _____ A CN1 build-in class Container is a

A. component
B. layout manager
C. design pattern
D. framework
E. none of the above

11) _____ A class Counter defines a method increment(int amount) which increments the counter value by the specified amount. A class UnitCounter extends Counter and specifies a method increment(int amount) which ignores the value of amount and always increments the counter value by 1. Which category of inheritance usage would be the best fit for this program?

A. extension
B. specialization
C. specification
D. more than one of the above
E. none of the above

12) _____ A class Vehicle declares that every instance has a way to turn itself (but it does not define how the instances are turned). A class Truck extends Vehicle and contains a method defining the way in which the Truck is turned. Which category of inheritance usage would be the best fit for this program?

A. extension
B. specialization
C. specification
D. more than one of the above
E. none of the above

13) _____ A class Clock defines methods for keeping track of the current time. A class AlarmClock extends Clock and defines methods for enabling and disabling an alarm to go off at a certain time. Which category of inheritance usage would be the best fit for this program?

A. extension
B. specialization
C. specification
D. more than one of the above
E. none of the above

14) _____ A program should not be allowed to create multiple AudioPlayer objects. Which design pattern would be the best fit for this program?

A. iterator
B. composite
C. singleton
D. observer
E. command

15) _____ A program uses a Vector to store a collection of objects, but the programmer wants to make sure that any subsequent decision to replace the use of Vector with some other data structure will not break any existing clients which use the collection. Which design pattern would be the best fit for this program?

A. strategy
B. proxy
C. factory
D. iterator
E. composite

[THERE WOULD BE MORE MULTI-CHOICE QUESTIONS IN THE REAL EXAM...]