

## Quiz 8

### True/False

Indicate whether the statement is true or false.

- \_\_\_ 1. All Java applications contain a main() method.
- \_\_\_ 2. The return type `void` means that the method will return a value.
- \_\_\_ 3. Return types can only include primitive types.
- \_\_\_ 4. The state of an object is described by its methods.
- \_\_\_ 5. A class is written in a separate file.
- \_\_\_ 6. Declaring a variable as `private` makes it visible to the class, but not to the client code.
- \_\_\_ 7. Subclasses inherit the methods of its superclass.
- \_\_\_ 8. Casting is required to convert an object to its superclass `Object`.
- \_\_\_ 9. When implementing a subclass, existing methods in the base class can be overridden.
- \_\_\_ 10. A class can implement one interface only.

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_ 11. Which keyword is an access modifier?
  - a. `static`
  - b. `void`
  - c. `public`
  - d. `call`
- \_\_\_ 12. Which part of the method declaration determines if the method can be called by other methods?
  - a. the access modifier
  - b. the access level
  - c. the arguments
  - d. the postcondition
- \_\_\_ 13. Which keyword declares a method a class method?
  - a. `static`
  - b. `void`
  - c. `public`
  - d. `call`
- \_\_\_ 14. Which statement calls the method `inchesToCentimeters()`?
  - a. `call inchesToCentimeters;`
  - b. `inchesToCentimeters(call);`
  - c. `inchesToCentimeters();`
  - d. `execute inchesToCentimeters();`
- \_\_\_ 15. When more than one method of the same name is included in a class, it is referred to as method
  - a. passing.
  - b. duplicating.
  - c. overloading.
  - d. voiding.

\_\_\_\_\_ 16. Given the following code segment:

```
public static int prob2(int x, int y) {
    y += x * 2;
    return(y);
}

public static void main(String[] args) {
    int j = 6, k = 4;
    j = prob2(j, k);
    System.out.println(j);
}
```

Which will be displayed after the code executes?

- a. 4 6
- b. 12
- c. 16
- d. 20

\_\_\_\_\_ 17. Which is true about objects?

- I. Objects can store data.
- II. Objects can perform actions.
- III. Objects can provide communication.

- a. I only
- b. I and II only
- c. II and II only
- d. I, II, and III

\_\_\_\_\_ 18. Which refers to the data an object stores?

- a. behavior
- b. state
- c. instance
- d. encapsulation

\_\_\_\_\_ 19. The methods in a class can be

- I. accessor methods
- II. modifier methods
- III. helper methods

- a. I only
- b. I and II only
- c. I and III only
- d. I, II, and III

```
public class Moo {  
    private int i;  
  
    public Moo {  
        i = 100;  
    }  
  
    public void setI(int j) {  
        i = j;  
    }  
  
    public int getI() {  
        return(i);  
    }  
  
    public int calculate() {  
        i = i * factor();  
        return(i);  
    }  
  
    private int factor() {  
        return(1.2);  
    }  
}
```

- \_\_\_\_ 20. Which is the name of the data member?  
a. i  
b. j  
c. Moo  
d. factor
- \_\_\_\_ 21. Which is the helper member?  
a. calculate()  
b. factor()  
c. getI()  
d. setI()
- \_\_\_\_ 22. Which is the name of the constructor?  
a. calculate  
b. factor  
c. getI()  
d. Moo

```
public class Roo {  
    private double i;  
    private double i;  
    private static int j;  
    private static final int k;
```

- \_\_\_\_ 23. Which data members are variables?  
a. i only  
b. j only  
c. i and j only  
d. j and k only
- \_\_\_\_ 24. Which keyword is used to access methods of the base class?  
a. static  
b. interface  
c. extends  
d. super

Name: \_\_\_\_\_

ID: A

*Given the following code segment:*

```
public class Box extends Square {  
    private double sides;  
}
```

- \_\_\_\_\_ 25. Which is the derived class?
- a. Square
  - b. Box
  - c. sides
  - d. extends

**Completion**

*Complete each statement.*

- 26. Using \_\_\_\_\_ to define tasks is called procedural abstraction.
- 27. A method may not have a precondition, but every method must have a \_\_\_\_\_.
- 28. An application that uses one or more classes is referred to as \_\_\_\_\_ code.
- 29. A class that contains class member variables demonstrates a \_\_\_\_\_ relationship.
- 30. Object-oriented development requires the solution to a task be implemented as a system of \_\_\_\_\_.

## Quiz 8

### Answer Section

#### TRUE/FALSE

- |            |        |  |
|------------|--------|--|
| 1. ANS: T  | PTS: 1 | TOP: Program Development Using Methods |
| 2. ANS: F  | PTS: 1 | TOP: Writing Methods                   |
| 3. ANS: F  | PTS: 1 | TOP: The return Statement              |
| 4. ANS: F  | PTS: 1 | TOP: What is an Object?                |
| 5. ANS: T  | PTS: 1 | TOP: Designing and Writing a Class     |
| 6. ANS: T  | PTS: 1 | TOP: Designing and Writing a Class     |
| 7. ANS: T  | PTS: 1 | TOP: The Object Class                  |
| 8. ANS: F  | PTS: 1 | TOP: The Object Class                  |
| 9. ANS: T  | PTS: 1 | TOP: Implementing a Subclass           |
| 10. ANS: F | PTS: 1 | TOP: Interfaces                        |

#### MULTIPLE CHOICE

- |            |        |   |
|------------|--------|---|
| 11. ANS: C | PTS: 1 | TOP: Writing Methods                          |
| 12. ANS: B | PTS: 1 | TOP: Writing Methods                          |
| 13. ANS: A | PTS: 1 | TOP: Writing Methods                          |
| 14. ANS: C | PTS: 1 | TOP: Program Development Using Methods        |
| 15. ANS: C | PTS: 1 | TOP: Method Overloading                       |
| 16. ANS: C | PTS: 1 | TOP: Method Parameters   The return Statement |
| 17. ANS: D | PTS: 1 | TOP: What is an Object?                       |
| 18. ANS: B | PTS: 1 | TOP: What is an Object?                       |
| 19. ANS: D | PTS: 1 | TOP: Designing and Writing a Class            |
| 20. ANS: A | PTS: 1 | TOP: Designing and Writing a Class            |
| 21. ANS: B | PTS: 1 | TOP: Designing and Writing a Class            |
| 22. ANS: D | PTS: 1 | TOP: Designing and Writing a Class            |
| 23. ANS: C | PTS: 1 | TOP: Instance and Class Members               |
| 24. ANS: D | PTS: 1 | TOP: Implementing a Subclass                  |
| 25. ANS: B | PTS: 1 | TOP: Implementing a Subclass                  |

#### COMPLETION

- |                        |        |  |
|------------------------|--------|--|
| 26. ANS: methods       |        |  |
|                        | PTS: 1 | TOP: Program Development Using Methods |
| 27. ANS: postcondition |        |  |
|                        | PTS: 1 | TOP: Documenting Methods               |

28. ANS: client

PTS: 1

TOP: What is an Object?

29. ANS:

has-a

has a

PTS: 1

TOP: Classes Using Classes

30. ANS: objects

PTS: 1

TOP: Object-Oriented Development