

Quiz 7**True/False**

Indicate whether the statement is true or false.

- ___ 1. Local variables are accessible to any method in the class.
- ___ 2. Every method must have a postcondition.
- ___ 3. An object's state can be changed through its behavior.
- ___ 4. Constructors are used to initialize variables in a class.
- ___ 5. The constructor of a class is automatically executed when an object is instantiated.
- ___ 6. The constructor of a class always has a different name than the class.
- ___ 7. Class members can be called from the class itself.
- ___ 8. Accessor methods are instance methods.
- ___ 9. The Object class is a subclass of all other classes.
- ___ 10. Casting is required to convert an object to its superclass Object.

Multiple Choice

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

- ___ 11. A problem-solving approach that breaks tasks into smaller subtasks is called
 - a. bottom-up development.
 - b. task division development.
 - c. top-down development.
 - d. procedural development.
- ___ 12. A method is executed when it is
 - a. typed.
 - b. called.
 - c. declared.
 - d. named.
- ___ 13. Which keyword is an access modifier?
 - a. static
 - b. void
 - c. public
 - d. call
- ___ 14. Which keyword declares a method a class method?
 - a. static
 - b. void
 - c. public
 - d. call
- ___ 15. Which keyword indicates a method will not return a value?
 - a. static
 - b. void
 - c. public
 - d. call
- ___ 16. Which statement calls the method `inchesToCentimeters()`?
 - a. `call inchesToCentimeters;`
 - b. `inchesToCentimeters(call);`
 - c. `inchesToCentimeters();`
 - d. `execute inchesToCentimeters();`

- _____ 17. How many arguments are passed in the statement `checkGuess(i, valItem)`?
- a. 1
 - b. 2
 - c. 3
 - d. 4
- _____ 18. A method that performs a different action depending on the number or type of arguments it receives is said to be
- a. a function.
 - b. flexible.
 - c. instantiated.
 - d. overloaded.
- _____ 19. *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
- \_\_\_\_\_ 20. How many values can a `return` statement return?
- a. 0
  - b. 1
  - c. 3
  - d. An unlimited number.
- \_\_\_\_\_ 21. Which is included in a class declaration?
- I. access level
  - II. keyword `class`
  - III. class name
  - IV. class body
- a. I and II only
  - b. I, II, and III only
  - c. II, III, and IV only
  - d. III and IV only
- \_\_\_\_\_ 22. The visibility of a member variable is controlled with a(n)
- a. behavior.
  - b. constructor.
  - c. access modifier.
  - d. instance variable.
- \_\_\_\_\_ 23. Which are called from within a class by other methods?
- a. accessor methods
  - b. modifier methods
  - c. helper methods
  - d. constructor methods
- \_\_\_\_\_ 24. Which keyword is used to declare a class variable?
- a. `private`
  - b. `public`
  - c. `static`
  - d. `void`
- \_\_\_\_\_ 25. When a subclass redefines a superclass method, the subclass method
- a. overrides the superclass method.
  - b. inherits the superclass method.
  - c. encapsulates the superclass method.
  - d. casts the superclass method.

- \_\_\_\_\_ 26. Which describes an application that uses components that are separately written and maintained?
- a. client code
  - b. modular
  - c. reusable
  - d. inherited

```
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);
 }
}
```

- \_\_\_\_\_ 27. Which is the name of the class?
- a. Moo
  - b. calculate
  - c. factor
  - d. public
- \_\_\_\_\_ 28. Which is the name of the data member?
- a. i
  - b. j
  - c. Moo
  - d. factor
- \_\_\_\_\_ 29. Which is the modifier member?
- a. calculate()
  - b. factor()
  - c. getI()
  - d. setI()

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

- \_\_\_\_\_ 30. Which data members are class members?
- a. i and j only
  - b. j and k only
  - c. i and k only
  - d. i, j, and k only

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

ID: A

### Completion

Complete each statement.

31. Using \_\_\_\_\_ to define tasks is called procedural abstraction.
32. A method may not have a precondition, but every method must have a \_\_\_\_\_.
33. An application that uses one or more classes is referred to as \_\_\_\_\_ code.
34. When a class contains more than one constructor, the compiler uses the number and types of \_\_\_\_\_ to determine which constructor to execute.
35. A class that contains class member variables demonstrates a \_\_\_\_\_ relationship.
36. Object-oriented development requires the solution to a task be implemented as a system of \_\_\_\_\_.

### Short Answer

37. Assume a class for CellularPhoneCustomer.
  - a) List one possible object.
  - b) List two possible method members.
  - c) List one possible data members.

## Quiz 7

### Answer Section

#### TRUE/FALSE

- |            |        |                                    |
|------------|--------|------------------------------------|
| 1. ANS: F  | PTS: 1 | TOP: Writing Methods               |
| 2. ANS: T  | PTS: 1 | TOP: Documenting Methods           |
| 3. ANS: T  | PTS: 1 | TOP: What is an Object?            |
| 4. ANS: T  | PTS: 1 | TOP: Designing and Writing a Class |
| 5. ANS: T  | PTS: 1 | TOP: Writing Constructors          |
| 6. ANS: F  | PTS: 1 | TOP: Writing Constructors          |
| 7. ANS: T  | PTS: 1 | TOP: Instance and Class Members    |
| 8. ANS: T  | PTS: 1 | TOP: Instance and Class Members    |
| 9. ANS: F  | PTS: 1 | TOP: The Object Class              |
| 10. ANS: F | PTS: 1 | TOP: The Object Class              |

#### MULTIPLE CHOICE

- |            |        |                                               |
|------------|--------|-----------------------------------------------|
| 11. ANS: C | PTS: 1 | TOP: Program Development Using Methods        |
| 12. ANS: B | PTS: 1 | TOP: Program Development Using Methods        |
| 13. ANS: C | PTS: 1 | TOP: Writing Methods                          |
| 14. ANS: A | PTS: 1 | TOP: Writing Methods                          |
| 15. ANS: B | PTS: 1 | TOP: The return Statement                     |
| 16. ANS: C | PTS: 1 | TOP: Program Development Using Methods        |
| 17. ANS: B | PTS: 1 | TOP: Method Parameters                        |
| 18. ANS: D | PTS: 1 | TOP: Method Overloading                       |
| 19. ANS: C | PTS: 1 | TOP: Method Parameters   The return Statement |
| 20. ANS: B | PTS: 1 | TOP: The return Statement                     |
| 21. ANS: B | PTS: 1 | TOP: Designing and Writing a Class            |
| 22. ANS: C | PTS: 1 | TOP: Designing and Writing a Class            |
| 23. ANS: C | PTS: 1 | TOP: Designing and Writing a Class            |
| 24. ANS: C | PTS: 1 | TOP: Instance and Class Members               |
| 25. ANS: A | PTS: 1 | TOP: The Object Class                         |
| 26. ANS: B | PTS: 1 | TOP: Object-Oriented Development              |
| 27. ANS: A | PTS: 1 | TOP: Designing and Writing a Class            |
| 28. ANS: A | PTS: 1 | TOP: Designing and Writing a Class            |
| 29. ANS: D | PTS: 1 | TOP: Designing and Writing a Class            |
| 30. ANS: B | PTS: 1 | TOP: Instance and Class Members               |

#### COMPLETION

- |                  |                                        |  |
|------------------|----------------------------------------|--|
| 31. ANS: methods |                                        |  |
| PTS: 1           | TOP: Program Development Using Methods |  |

32. ANS: postcondition  
PTS: 1 TOP: Documenting Methods
33. ANS: client  
PTS: 1 TOP: What is an Object?
34. ANS:  
parameters  
parameter  
PTS: 1 TOP: Writing Constructors
35. ANS:  
has-a  
has a  
PTS: 1 TOP: Classes Using Classes
36. ANS: objects  
PTS: 1 TOP: Object-Oriented Development

**SHORT ANSWER**

37. ANS:  
*Answers will vary. A possible answer is:*  
a) servicePackage  
b) minutesUsed() and changeAreaCode()  
c) packageMinutes  
PTS: 1 TOP: Designing and Writing a Class  
NOT: Cannot be included on an online test.