1. True or False: In a class, all of the method definitions are indented below the class header.

* Answer: True

1. True or False: Within the class definition, the names of instance variables must begin with this.

Answer: False -> self

1. Methods that allow a user to modify an object’s state are called which of the following?
2. accessor methods
3. \_str\_ methods
4. mutator methods
5. \_init\_ methods

Answer: c. mutator methods

1. To overload the % arithmetic operator, you need to define a new method using which of the following method names?
2. \_add\_
3. \_mul\_
4. \_div\_
5. \_mod\_

* Answer: d. \_\_mod\_\_

1. What is operator overloading?  
   Answer: Operator overloading is another example of an abstraction mechanism. In this case, programmers can use operators with single, standard meanings even though the underlying operations vary from data type to data type.
2. Explain that most object-oriented languages require the programmer to master the following techniques: *data encapsulation*, and *polymorphism*.  
   Answer:  
   Data encapsulation: Restricting the manipulation of an object’s state by external users to a set of method calls.  
   Polymorphism: Allowing several different classes to use the same general method names.
3. Explain that with object-oriented programming, although well-designed objects decrease the likelihood that a system will break when changes are made within a component, this technique can sometimes be overused.  
   Answer:
4. Which of the following concepts restricts the manipulation of an object’s state by external users to a set of method calls?
5. data encapsulation
6. inheritance
7. polymorphism
8. abstraction

Answer: a. data encapsulation

1. Which of the following concepts allows a class to automatically reuse and extend the code of similar but more general classes?
2. data encapsulation
3. inheritance
4. polymorphism
5. abstraction

Answer: b. inheritance

1. What is polymorphism?  
   Answer: Allowing several different classes to use the same general method names.
2. True or False: In Python, all classes automatically extend the built-in object class.

Answer: True

1. The use of cooperating subprograms to solve problems is called which of the following?
2. imperative programming
3. object-oriented programming
4. functional programming
5. procedural programming

Answer: d. procedural programming