**Chapter 9 Concept Quiz**

Determine whether each of the following statements is true or false. If a statement is false, please explain why.

1. In Java, all classes can be instantiated to create objects.
2. In an abstract class, all methods must be empty without any implementation details.
3. Subclass of an abstract class must be concrete class.
4. An interface can’t serve as a superclass.
5. The relationship between a concrete class that implements an interface is considered a HAS-A relationship.
6. Static method can’t be overridden while default method can be overridden.
7. In Java, all methods must be implemented.
8. clone() method is defined in Cloneable interface.
9. In Java the comparison operators (<, >, ==, <=, >=) can be used by any data type.
10. Classes that implement Comparator are standalone classes that define rules for comparing other classes.

**Answers to the Quiz**

1. **False**. Abstract class can’t be instantiated to create objects.
2. **False**. Abstract classes allow instance methods, static methods and default methods which can be implemented.
3. **False**. A subclass of an abstract class can also be an abstract class.
4. **True**.
5. **False**. Their relationship is an IS-A relationship.
6. **True**.
7. **False**. Abstract method in abstract class and interface can’t be implemented.
8. **False**. Cloneable interface is a marker interface and doesn’t contain any methods or constants. clone() method is from Object superclass.
9. **False**. The comparison operators can only be used by primitive data types. For reference-type objects, implementation of Comparable interface is needed.
10. **True.**