# Java MCQs – Questions 1 to 15

1. What is the difference between composition and aggregation?

* ⭕ Aggregation is a stronger relationship than composition
* ⭕ Composition implies a part-whole relationship, while aggregation is a weaker association
* ⭕ Aggregation is a form of inheritance
* ⭕ Composition is only used for interfaces

2. Which keyword is used to access the methods of an interface implemented by a class?

* ⭕ this
* ⭕ super
* ⭕ implements
* ⭕ interface

3. In Java, a subclass can inherit from

* ⭕ Multiple classes
* ⭕ Multiple interfaces
* ⭕ One class only
* ⭕ Both classes and interfaces

4. Which of the following statements about constructors is true?

* ⭕ Constructors can be inherited
* ⭕ Constructors can have a return type
* ⭕ Constructors can be overridden
* ⭕ Constructors can't have parameters

5. What is the purpose of method overloading?

* ⭕ To provide multiple implementations of the same method with different parameters
* ⭕ To override methods in the superclass
* ⭕ To hide methods from being accessed
* ⭕ To implement multiple inheritance

6. Which of the following is a correct way to achieve encapsulation?

* ⭕ Using public access modifiers for instance variables
* ⭕ Using static methods for all operations
* ⭕ Using private access modifiers and getter/setter methods
* ⭕ Declaring all variables as protected

7. Which concept allows a class to have multiple methods with the same name but different parameters?

* ⭕ Polymorphism
* ⭕ Overloading
* ⭕ Overriding
* ⭕ Encapsulation

8. Which of the following is NOT a benefit of encapsulation?

* ⭕ Code reusability
* ⭕ Flexibility in modifying implementation
* ⭕ Data hiding
* ⭕ Reduced complexity

9. What is the purpose of the 'instanceof' operator in Java?

* ⭕ To check if an object is of a specific class or interface type
* ⭕ To compare two objects for equality
* ⭕ To check if a variable is declared
* ⭕ To access static members of a class

10. Which of the following statements about abstract classes is true?

* ⭕ An abstract class can be instantiated
* ⭕ An abstract class cannot have instance variables
* ⭕ An abstract class must implement all methods declared in an interface
* ⭕ An abstract class cannot be a superclass

11. What is the role of a constructor in Java?

* ⭕ To create instances of a class
* ⭕ To provide method implementations
* ⭕ To define class variables
* ⭕ To declare interfaces

12. What is the primary purpose of an interface in Java?

* ⭕ To define a blueprint for a class
* ⭕ To provide default method implementations
* ⭕ To declare private methods
* ⭕ To restrict method access

13. Inheritance in Java allows a subclass to

* ⭕ Access all private members of the superclass
* ⭕ Override final methods in the superclass
* ⭕ Implement multiple classes
* ⭕ Inherit attributes and methods from the superclass

14. Which of the following is an example of an abstract method?

* ⭕ public void print()
* ⭕ private int calculate()
* ⭕ protected String getName()
* ⭕ abstract double calculateArea();

15. What is the main purpose of using interfaces in Java?

* ⭕ To provide multiple inheritance
* ⭕ To define concrete method implementations
* ⭕ To create objects directly
* ⭕ To implement code encapsulation