✅ Topic: OOPs Concepts (General)

🔷 Direct Questions

1. **Which of the following is not an OOP concept?**
a) Inheritance
b) Encapsulation
c) Compilation ✅
d) Polymorphism

2. **What does encapsulation provide?**
a) Multiple inheritance
b) Data hiding ✅
c) Method overloading
d) Dynamic dispatch

3. **Which concept allows using the same method name with different signatures?**
a) Inheritance
b) Overriding
c) Overloading ✅
d) Abstraction

4. **Which OOP principle refers to exposing only essential details?**
a) Abstraction ✅
b) Polymorphism
c) Encapsulation
d) Inheritance

5. **Which keyword is used for inheritance in Java?**
a) inherit
b) extends ✅
c) implements
d) super

🔷 Scenario-Based Questions

6. **A method behaves differently depending on input parameters. Which concept?**
a) Inheritance
b) Polymorphism ✅
c) Encapsulation
d) Composition

7. **You want to restrict access to class data directly. What will you apply?**
a) public modifier
b) Abstraction
c) Encapsulation ✅
d) Overriding

8. A base class defines a method, and a subclass changes it. Which is this?
a) Overloading
b) Inheritance
c) Overriding ✅
d) Polymorphism

9. You define a general class and derive specific classes from it. What is this?
a) Abstraction
b) Inheritance ✅
c) Interface
d) Encapsulation

10. Your design uses multiple related objects behaving in similar ways. Use?
a) Abstraction ✅
b) Aggregation
c) Overloading
d) Inheritance

✅ Topic: Classes and Objects

🔷 Direct Questions

1. Which of the following creates an object in Java?
a) new ✅
b) create
c) this
d) class

2. Which method is called when an object is created?
a) finalize
b) main
c) constructor ✅
d) init

3. Which of the following is a correct class definition?
a) class MyClass {} ✅
b) public void class MyClass
c) MyClass class {}
d) class = MyClass {}

4. What is the default value of an object reference?
a) 0
b) false
c) null ✅
d) undefined

5. **Which of the following is not true about objects?**
a) They are instances of classes
b) They allocate memory when created
c) They cannot be passed to methods ✅
d) They are created using `new`

🔷 Scenario-Based Questions

6. **You have a `Student` class and want to create 100 students. What do you use?**
a) Inheritance
b) Object instantiation ✅
c) Interface
d) Composition

7. **You want to access object data from another class. What should be used?**
a) public getters/setters ✅
b) private methods
c) static methods
d) abstract classes

8. **You define a class without any methods. Can you create an object?**
a) No
b) Only with constructor
c) Yes ✅
d) Only if static

9. **Two objects have same data but are not equal. Why?**
a) Memory address differs ✅
b) equals() overridden
c) Constructor differs
d) JVM issue

10. **You want to share a method among all objects. Use?**
a) instance method
b) abstract method
c) static method ✅
d) final method

✅ Topic: Inheritance

🔷 Direct Questions

1. **What type of inheritance is supported in Java?**
a) Multiple via classes
b) Single ✅

c) Hybrid
d) All of the above

2. **What keyword is used to inherit a class?**
a) inherit
b) this
c) extends ✅
d) implements

3. **What is the superclass of all Java classes?**
a) Object ✅
b) Class
c) Parent
d) Base

4. **Can private members be inherited?**
a) Yes
b) No ✅
c) Only in same package
d) Only if static

5. **Which of these prevents inheritance?**
a) static
b) final ✅
c) abstract
d) protected

🔷 Scenario-Based Questions

6. **You want a subclass to reuse methods from the superclass. Use?**
a) extends ✅
b) super
c) implements
d) abstract

7. **A subclass has same method as superclass. What occurs?**
a) Inheritance
b) Overloading
c) Overriding ✅
d) Encapsulation

8. **You want to access parent class constructor. Use?**
a) base
b) super() ✅
c) extends
d) this()

9. **Superclass has a method not in subclass. Can it be called?**
a) No

b) Yes ✅
c) Only if overridden
d) If method is private

10. You want to prevent class from being inherited. What do you do?
a) Mark it as static
b) Use abstract
c) Use final ✅
d) Don't extend it