9 Lecture - CS506

Important Mcqs

Certainly, here are 10 multiple-choice questions (MCQs) related to Abstract Classes and Interfaces, along with their solutions and multiple options:

Question 1: What is an abstract class in Java?

a) A class that cannot be instantiated

b) A class that can only have static methods

c) A class with no methods

d) A class without any instance variables

Solution: a) A class that cannot be instantiated

Question 2: What is the main purpose of an abstract class?

a) To provide multiple inheritance in Java

b) To define a base template for other classes

c) To hide the implementation details of a class

d) To restrict access to methods and variables

Solution: b) To define a base template for other classes

Question 3: What is the keyword used to define an abstract class in Java?

a) abstract

b) class

c) interface

d) extends

Solution: a) abstract

Question 4: Can an abstract class have concrete (fully implemented) methods?

a) Yes, only one concrete method

b) No, all methods must be abstract

c) Yes, any number of concrete methods

d) Yes, but only in subclasses

Solution: c) Yes, any number of concrete methods

Question 5: What is an interface in Java?

a) A concrete class

b) A blueprint for an object

c) A type of array

d) A collection of methods without implementations

Solution: d) A collection of methods without implementations

Question 6: Can a class implement multiple interfaces in Java?

a) Yes, but only if they have the same method names

b) No, a class can implement only one interface

c) Yes, there's no limit to how many interfaces a class can implement

d) Yes, if the interfaces are in the same package

Solution: c) Yes, there's no limit to how many interfaces a class can implement

Question 7: What is the keyword used to declare that a class is implementing an interface in Java?

a) extends

b) implements

c) includes

d) uses

Solution: b) implements

Question 8: Which of the following is true about abstract methods in interfaces?

a) They are not allowed in interfaces

b) They must have a method body

c) They are implicitly public and abstract

d) They can be marked as final

Solution: c) They are implicitly public and abstract

Question 9: Can an interface extend another interface in Java?

a) No, interfaces cannot extend other interfaces

b) Yes, but only one interface can extend another

c) Yes, interfaces can extend multiple interfaces

d) Yes, but only if they are in the same package

Solution: c) Yes, interfaces can extend multiple interfaces

Question 10: Which one allows for more flexibility in class design: abstract classes or interfaces?

a) Abstract classes

b) Interfaces

c) Both provide equal flexibility

d) None, they provide the same level of flexibility

Solution: b) Interfaces