Inheritence -Java Programming MCQ Questions and Answers

6. What will be the output?

```
interface A{
        public void method1();
}
class One implements A{
        public void method1(){
                System.out.println("Class One method1");
        }
}
class Two extends One{
        public void method1(){
                System.out.println("Class Two method1");
        }
}
public class Test extends Two{
        public static void main(String[] args){
                A a = new Two();
                a.method1();
        }
}
```

A. ○ **Compilation Error**

B. ○ **Class One method1**

C. ○ **Class Two method1**

D. ○ **Throws a NoSuchMethodException at runtime.**

E. ○ **None of these**

Answer & Solution

Discuss in Board (https://www.examveda.com/what-will-be-the-output-interface-a-public-java-by-java-programming-on-inheritence-6)

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Answer & Solution

Answer: Option C

No explanation is given for this question **Let's Discuss on Board (https://www.examveda.com/what-will-be-the-output-interface-a-public-java-by-java-programming-on-inheritence-6)**

7. What is the result of compiling and running this program?

```
class Mammal{
	void eat(Mammal m){
		System.out.println("Mammal eats food");
	}
}
class Cattle extends Mammal{
	void eat(Cattle c){
		System.out.println("Cattle eats hay");
	}
}
class Horse extends Cattle{
	void eat(Horse h){
		System.out.println("Horse eats hay");
	}
}
public class Test{
	public static void main(String[] args){
		Mammal h = new Horse();
		Cattle c = new Horse();
		c.eat(h);
	}
}
```

A. ○ **prints "Mammal eats food"**

B. ○ **prints "Cattle eats hay"**

C. ○ **prints "Horse eats hay"**

D. ○ **Class cast Exception at runtime.**

E. ○ **None of these**

Answer & Solution

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Answer & Solution

Answer: Option A

No explanation is given for this question **Let's Discuss on Board (https://www.examveda.com/what-is-the-result-of-compiling-and-running-this-program-java-programming-on-inheritence-7)**

8. Determine output:

```
class A{
        public void method1(){
                System.out.print("Class A method1");
        }
}
class B extends A{
        public void method2(){
                System.out.print("Class B method2");
        }
}
class C extends B{
        public void method2(){
                System.out.print("Class C method2");
        }
        public void method3(){
                System.out.print("Class C method3");
        }
}
public class Test{
        public static void main(String args[]){
                A a = new A();
                C c = new C();
                c.method2();
                a = c;
                a.method3();
        }
}
```

A. ○ **Class B method2 Class C method3**

B. ○ **Class C method2 Class C method3**

C. ○ **Compilation Error**

D. ○ **Runtime exception**

E. ○ **None of these**

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Answer & Solution

Answer: Option C

Solution:

It is important to understand that it is the type of reference variable - not the type of the object that it refers to - that which determines what members can be accessed. That is, when a reference to a subclass object is assigned to a super class reference variable, we will have access only to those parts of the object defined by the superclass.

In the above program method **method3()** is defined in the class **C** which is a subclass of **B** and so **A**. Even the reference variable a refers to c, a can't access **method3()** as this method is unknown to class **A**.

9. What will be printed after executing following program code?

```
class Base{
        int value = 0;
        Base(){
                addValue();
        }
        void addValue(){
                value += 10;
        }
        int getValue(){
                return value;
        }
}
class Derived extends Base{
        Derived(){
                addValue();
        }
        void addValue(){
                value +=  20;
        }
}
public class Test{
        public static void main(String[] args){
                Base b = new Derived();
                System.out.println(b.getValue());
        }
}
```

A. ○ **30**

B. ○ **10**

C. ○ **40**

D. ○ **20**

E. ○ **None of these**

Answer & Solution

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Answer & Solution

Answer: Option C
Solution: When object of new **derived** is called, the flow goes to Derived() first, by default super(); is present in Derived() as the first statement, so the flow now goes to Base. Here value is initialised to 0 and then addValue() is called. The addValue has been overridden in Derived() hence The Base's addValue() will perform value+20(0+20) .After this control flows back to Derived()'s addValue() where again value+20 is done (20+20). Hence Answer is 40

10. What will be the output?

```
class Parent{
	public void method(){
		System.out.println("Hi i am parent");
	}
}
public class Child extends Parent{
	protected void method(){
		System.out.println("Hi i am Child");
	}
	public static void main(String args[]){
		Child child = new Child();
		child.method();
	}
}
```

A. ○ **Compiles successfully and print**

B. ○ **Compiles successfully and print**

C. ○ **Compile time error**

D. ○ **Run Time error**

E. ○ **None of This**

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Answer & Solution

Answer: Option C
Solution:
We cannot reduce the visibility of the inherited method from super class. If the overridden or hidden method is public, then the overriding or hiding method must be public; otherwise, a compile-time error occurs. If the overridden or hidden method is protected, then the overriding or hiding method must be protected or public; otherwise, a compile-time error occurs. If the overridden or hidden method has default (package) access, then the overriding or hiding method must not be private; otherwise, a compile-time error occurs.

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