



PROGRAMMING IN JAVA

Assignment5

TYPE OF QUESTION: MCQ

Number of questions: 10

Total mark: $10 \times 1 = 10$

QUESTION 1:

Which of the following statement(s) is/are true?

- a. All abstract, default, and static methods in an interface are implicitly public.
- b. All constant values defined in an interface are implicitly public, static, and final.
- c. An interface can extend any number of interfaces.
- d. A class that implements an interface must implement all the methods declared in the interface.

Correct Answer: a, b, c, d

Detailed Solution:

All options are correct.

QUESTION 2:

Which of the following interface(s) is/are valid?

- a.

```
public interface Question {  
    void disp(int x) {  
        System.out.println("Hello java");  
    }  
}
```
- b.

```
public interface Question {  
    void disp(int x);  
}
```
- c.

```
public interface Question {  
    default void disp(int x) {  
        System.out.println("Hello java");  
    }  
}
```
- d.

```
public interface Question { }
```

Correct Answer: b, c, d



Detailed Solution:

Only default and static methods have implementations. Empty interfaces can be used as types and to mark classes without requiring any particular method implementations.

QUESTION 3:

Consider the following piece of program.

```
class Question {  
    int a=4;  
    int b=2;  
}  
  
public class Child1 extends Question {  
    int a=10;  
    int b=20;  
  
    void add(int a,int b) {  
        //body  
    }  
    public static void main(String[] args) {  
        Child1 c = new Child1();  
        c.add(100,200);  
    }  
}
```

Which of the following statements(s) is/are replaced in body of the function definition of `void add(int a,int b)` to get the output 12?

- a. `System.out.println(this.a+ super.b);`
- b. `System.out.println(this.a+this.b)`
- c. `System.out.println(super.a+super.b);`
- d. `System.out.println(a+b);`

Correct Answer: a

Detailed Solution:

`this.a =10` and `super.b =2`, so addition is 12.



QUESTION 4:

Which of the following statement(s) is/are true?

- a. A subclass inherits all of the public and protected members of its parent class.
- b. A subclass inherits the package-private members of the parent, if it is present in the same package as of its parent class.
- c. A nested class has access to all the private members of its enclosing class.
- d. A subclass does not inherit the package-private members of the parent, if it is present in the same package as of its parent class.

Correct Answer: a, b, c

Detailed Solution:

A subclass inherits the package-private members of the parent, if it is present in the same package as of its parent class.

QUESTION 5:

What is the output of the following code?

```
try {  
    int num = Integer.parseInt("Two thousand nineteen");  
} catch (NumberFormatException e) {  
    System.out.println("You don't have a number.");  
} catch (Exception e) {  
    System.out.println("Something went terribly wrong!"); }  
finally {  
    System.out.println("Program is in execution...");  
}
```

- a. You don't have a number.
 - a. Program is in execution...
- b. Something went terribly wrong!
 - a. Program is in execution...
- c. Program is in execution...
- d. You don't have a number.
 - a. Something went terribly wrong!
 - b. Program is in execution...

Correct Answer: a

Detailed Solution:



There will be an error in the statement in the try { } block for which the exception object of type `NumberFormatException` will occur, which then be caught by the first catch { } block in the program.

QUESTION 6:

What is the output of this program?

```
class ExceptionHandling {
    public static void main(String args[ ]) {
        try {
            int a, b;
            b = 0;
            a = 5 / b;
            System.out.print("A");
        } catch(ArithmeticException e) {
            System.out.print("B");
        }
        finally {
            System.out.print("C");
        }
    }
}
```

- a. A
- b. B
- c. AC
- d. BC

Correct Answer: d

Detailed Solution:

There will be a divide-by-zero error in the statement `a = 5/b`; and as a consequence it will throw an exception object of type `ArithmeticException` which will be caught by the catch { } block in the program. From the point of exception, the control will jump to the catch block and then to the finally { } block.

QUESTION 7:



The exception class is defined in which of the following Java package?

- a. java.awt
- b. java.io
- c. java.lang
- d. java.util

Correct Answer: c

Detailed Solution:

The exception class and all its sub-classes are defined in `java.lang` package .

QUESTION 8:

Which of the following statement(s) is/are true?

- a. Static methods in interfaces are never inherited.
- b. You will get a compile-time error if you attempt to change an instance method in the super class to a static method in the subclass.
- c. A protected instance method in the super class can be made public, but not private, in the sub class.
- d. An instance method in a subclass with the same signature (name, plus the number and the type of its parameters) and return type as an instance method in the super class overrides the super class's method.

Correct Answer: a,b,c,d

Detailed Solution:

All options are correct.

Option (c): The access specifier for an overriding method can allow more, but not less, access than the overridden method.

QUESTION 9:



Consider the classes as given below.

```
class Explanation{
    public void Print() {
        System.out.println("This is Explanation's Print method");
    }
}
class Answer extends Explanation{
    public void Print() {
        super.super.Print();
        System.out.println("This is Answer's Print method");
    }
}

public class Question15{
    public static void main(String[] args) {
        Answer a = new Answer();
        a.Print();
    }
}
```

What will be the output of the code given above?

- a. Output : *This is Explanation's Print method*
This is Answer's Print method
- b. Error: '*super.super*' is not allowed.
- c. Error: Compilation unsuccessful, as there is only one super class of Answer.
- d. Output : *This is Answer's Print method*
This is Explanation's Print method

Correct Answer: b

QUESTION 10:



Which of the following statement(s) is /are true?

- a. An abstract class can only be sub classed; it cannot be instantiated.
- b. An abstract class may or may not include abstract methods.
- c. You can prevent a class from being sub classed by using the final keyword in the class's declaration.
- d. Methods in an interface that are not declared as default or static are implicitly abstract.

Correct Answer: a, b, c, d

*****END*****