NPTEL Online Certification Courses

Indian Institute of Technology Kharagpur

PROGRAMMING IN JAVA

Assignment 5

TYPE OF QUESTION: MCQ

Number of questions: 10 **Total mark: 10× 1 = 10**

QUESTION 1:

Consider the following program.

```
class Question{
     int i;
}
class Test extends Question{
     int j;
     void display(){
     super.i = j + 1;
     System.out.println(j + " " + i);
}}
public class Query{
 public static void main(String args[]){
     Test obj = new Test();
     obj.i=1;
     obj.j=2;
     obj.display();
}}
```

If the program is executed, then what will be the output?

a. 2 2
b. 3 3
c. 2 3

d. 3 2

Correct Answer: c

Detailed Solution:
The output can be checked by execution.

QUESTION 2:

Consider the following piece of code.

```
package java.util;
public interface EventListener
{
}
```

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

a. It is an empty interface.
b. It is a tag interface.
c. It is a marker interface.
d. It is a nested interface.

Correct Answer: a, b, c

Detailed Solution:

An empty interface is known as tag or marker interface.

QUESTION 3:

What is the output of the following code?

```
interface A {
  int x=10;
  void m1();
}
class B implements A {
int x = 20;
public void m1(){
  System.out.println("java");
 }
}
public class Test {
public static void main(String[] args){
 A a = new B();
  a.m1();
  System.out.println(a.x);
  }
}
```

a. java
   10
b. java
   20
c. 10
   java
d. 20
   java

Correct Answer: a

Detailed Solution:
The output can be checked by execution.

QUESTION 4:

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

a. All abstract methods defined in an interface must be implemented.
b. The variables defined inside an interface are static and final by default.
c. An interface is used to achieve full abstraction.
d. Inside an interface, a constructor can be called using the super keyword with hierarchy.

Correct Answer: a, b, c

Detailed Solution:

A constructor cannot be called inside an interface using the super keyword with hierarchy.

QUESTION 5:

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

1. A class can extend more than one class.

2. A class can extend only one class but many interfaces.

3. An interface can extend many interfaces.

4. An interface can implement many interfaces.

5. A class can extend one class and implement many interfaces.

a. 1 and 2
b. 2 and 4
c. 3 and 5
d. 3 and 4

Correct Answer: c

Detailed Solution:

An interface can extend many interfaces. A class can extend one class and implement many interfaces.

QUESTION 6:

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

a. Abstract class can have abstract and non-abstract methods.
b. Abstract class can have final, non-final, static and non-static variables.
c. Interface has only static and final variables.
d. Interface can provide the implementation of an abstract class.

Correct Answer: a, b, c

Detailed Solution:

Interface can't provide the implementation of an abstract class.

QUESTION 7:

Consider the following piece of code.

```
public class Question {
  public static void main(String args[]) {
     try {
     int a, b;
     b = 0;
     a = 25 / b;
     System.out.print("A"); }
     catch(ArithmeticException e) {
             System.out.print("B");
     }
     finally
     {
     System.out.print("C");
     } } }
```

What is the output of the above code?

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

Correct Answer: c

Detailed Solution:

Test by execution.

QUESTION 8:

The class at the top of exception class hierarchy is .....

a. Object
b. Throwable
c. Exception
d. ArithmeticException

Correct Answer: b

Detailed Solution:

The class at the top of the exception class hierarchy is the Throwable class, which is a direct subclass of the Object class.

QUESTION 9:

Which of these class is superclass of every class in Java?

a. Object class
b. Abstract class
c. String class
d. ArrayList class

Correct Answer: a

Detailed Solution:

All classes in java are inherited from Object class.

QUESTION 10:

```
interface calculate{
     int VAR = 0;
     void cal(int item);
}
class display implements calculate{
     int x;
     public void cal(int item){
       if (item<2)
          x = VAR;
       else
          x = item * item;
   }
}
public class Question {
  public static void main(String args[]){
     display[] arr=new display[3];
     for(int i=0;i<3;i++)
     arr[i]=new display();
     arr[0].cal(0);
     arr[1].cal(1);
     arr[2].cal(2);
     System.out.print(arr[0].x+"   "   +   arr[1].x   +   "   "   +
     arr[2].x);
  }
}
```

If the program is executed, then what will be the output?

a. 0 1 2
b. 0 0 4
c. 0 2 4

d. 0 4 4

Correct Answer: b

Detailed Solution:

The output can be checked by execution.

**********END**********