# PROGRAMMING IN JAVA

## Assignment2

### TYPE OF QUESTION:  MCQ

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

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## QUESTION 1:

**Which of the following is an incorrect way of initializing a variable in Java?**

    a.  Different line declaration and initialization

```
int a,b;
a=1;
b=2;
```

    b.  Single line declaration and initialization (One at a each line)

```
int a = 1;
int b = 2;
```

    c.  Single line declaration and initialization (One line multiple variable)

```
int a=1,b=2;
```

    d.  Single line declaration and initialization (One line multiple variable)

```
int a, b = 1, 2;
```

**Correct Answer: d**

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## QUESTION 2:

**Which of the following is an invalid method overloading?**

a. 
```
static double add(int a, double b){return a*b;}
static double add(double a, int b){return a*b;}
```

b. 
```
static int add(int a, int b){return a*b;}
static int add(int a, int b, int c){return a*b*c;}
```

c. 
```
static int add(int a, int b){return a*b;}
static double add(int a, int b, double c){return a*b*c;}
```

d. 
```
static int add(int a,int b){return a*b;}
static double add(int a,int b){return a*b;}
```

**Correct Answer: d**

**Detailed Solution:**

In Java, method overloading is not possible by changing only the return type of the method. It is ambiguous because multiple methods having same parameter signature may execute together. So, changing the return type along with parameter signature will ensure unambiguous execution of the code.

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## QUESTION 3:

**Which of the following is/areTRUE regarding the string array provided as a parameter to the main method in Java?**

a. It can be used to get command line arguments from the user.
b. It is mandatory to name the string array as 'args'.
c. Accessibility of the values provided as command line argument is restricted only to the main method.
d. Only one command line argument input is allowed at a time.

**Correct Answer: a**

**Detailed Solution:**

In Java, the function of the string array provided in the main method is to get the command line arguments provided by the user during the execution of the program. This is just like any other string array and hence, its name can be set anything. Since, the command line values are passed to the main method, this can be used anywhere in the program. Users are allowed to put multiple command line arguments one after another using spaces in between.

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## QUESTION 4:

**Which of the following can be used to take input from user during the execution of a program?**

    a. Using the string array provided as a parameter to the main method.
    b. getText() method can be used to get user input from the command line.
    c. Scanner class can be used by passing the predefined object System.in
    d. Once the execution starts, there is no way to provide user input.

**Correct Answer: c**

**Detailed Solution:**

The easiest way to read input in a Java program during execution is by using the Scanner class in java.util package. It can be used for obtaining the input of the primitive types like int, double, etc. and strings. The argument values provided in the main method is only applicable when the execution starts but during execution no value can be passed in that argument.

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## QUESTION 5:

**Which of the following is/are TRUE about print() and println() methods?**

    a. `print()` prints in a single line only and multiple lines cannot be printed in any way.
    b. `println()`prints and then appends a line break.
    c. `println()` prints in a single line only and multiple lines cannot be printed.
    d. `print()` prints and then appends a line break.

**Correct Answer: b**

**Detailed Solution:**

Method print() can be used to print in a single line only but multiple lines can be printed using escape sequence '\n'. Similarly, println() prints in a single line only and multiple lines can be

printed using escape sequence '\n'. Method print() prints but does not appends a line break. So, option (b) println() prints and then appends a line break is the only correct option.

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## QUESTION 6:

**Which of the following is called when a method having the same name as that the name of the class where it is defined?**

    a. abstract
    b. this
    c. constructor
    d. final

**Correct Answer: c**

**Detailed Solution:**
In a class, if more than one method having the same name but with different signature is used, then it is called a constructor.

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## QUESTION 7:

**Which of the following is NOT true about a method in a class?**

    a. A method can be defined recursively.
    b. A method can be defined without any statement in it.
    c. A constructor is a special kind of method, which can be defined recursively.
    d. A method can be defined with variable number of arguments passed into it.

**Correct Answer: c**

**Detailed Solution:**
A constructor cannot be defined recursively. Other statements are true.

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**QUESTION 8:**

Following is a program given for this question.

```java
Public class Question8{
     Public static void main(String args[]){
          char a ='2';
          int b=8;
          System.out.println(a+b);
     }
}
```

What will be the output of the above program?

a. 10
b. 58
c. 82
d. 106

**Correct Answer: b**

**Detailed Solution:**
The argument will take the + operator to concatenate the ASCII value of char variable and the integer variable like a string.

## QUESTION 9:

What will happen during the execution of the following code for the command line input?

```
public class Question9{
     public static void main(String args[]){
          System.out.println(args[5]);
     }
}
```

Consider the following input on command line and select the options with the correct output(s).

*Input:*

       **A**: Indian Institute of Technology

       **B**: 1 2 3 4 5 6

       **C**: Indian Institute of Technology NPTEL

       **D**: 1 2 3 4 5

   a. A :ArrayIndexOutOfBoundsException
   b. B :6
   c. C : NPTEL
   d. D : 1 2 3 4 5

**Correct Answer: a,b**

**Detailed Solution:**
The args[5] will return the 6$^{th}$ item present in the args array. If no item is present at 5$^{th}$ index then ArrayIndexOutOfBoundsException occurs.

## QUESTION 10:

**Which of the following is a Class in Java?**

   a. int
   b. String
   c. short
   d. double

**Correct Answer: b**

**Detailed Solution:**
Except String all other options are primitive datatypes in Java. String is a class.

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