

Candidates are allowed 15 minutes for reading the paper only. they must NOT start writing during this time. Answer all the questions in Section A, and any four from Section B.

### SECTION A

#### Question 1:

- a) What is the difference between implicit and explicit type casting? [2]
- b) Write one short hand arithmetic operator and explain its use. [2]
- c) Name the reference data type in Java. [2]
- d) How is a Java program made executable? [2]
- e) Write any two rules of naming an identifier in Java. [2]

#### Question 2:

- a) What are tokens in Java? [2]
- b) Write the delimiters used in Java. [2]
- c) Why do we write a + in between two values to be printed using System.out.println()? [2]
- d) Explain how logic works in binary search? [2]
- e) Name the parts of a function header. [2]

#### Question 3:

- a) What are wrapper classes? [2]
- b) What is abstraction? [2]
- c) What is the difference between if and switch()? [2]
- d) Write the commands which transfers control in a Java program unconditionally. [2]
- e) Evaluate the following expression: [2]  
!(a>b && a>c) when a=7, b=5, and c=2.

#### Question 4:

[3 + 3 + 4]

Write the output for the following code segments:

a)

```
class t
{
    public static void d()
    {
        c();
        System.out.println("waiting");
    }
    public static void c()
    {
        m();
        System.out.println("am");
    }
    public static void m()
    {
        System.out.println("I");
    }
    public static void main(String args[])
    {
        d();
    }
}
```

b)

```
i=0;
do
{
    do
    {
        System.out.println(i); i++;
        break;
    }while(true);
}while(i<5);
```

c)

```
int v1=5, v2=10;
for(int x=1;x<=2;x++)
{
    System.out.println(++v1);
    System.out.println(v2--);
    System.out.println(--v2);
    System.out.println(v1++);
}
```

## SECTION B

Write programs in java along with the variable description for any 4 of the following questions: [4 x 15 = 60]

### Question 5:

To accept an integer value from the user and print it in words.

If input is: 7639

The output should be: Seven Six Three Nine

### Question 6:

To accept a string from the user and remove all the vowels from the string. Print the resultant string

### Question 7:

Declare a class **time** as follows:

Instance Variables:

int hh,mm,ss

Methods:

- i) to accept values for the instance variables.
- ii) to convert hrs., min., and secs. in seconds.
- iii) to convert seconds(passed as parameter) into hrs., min., and secs.

### Question 8:

Write overloaded functions to find the perimeter of a triangle, a quadrangle, a pentagon, and a hexagon.

### Question 9:

Declare an array of size **n**(to be taken from the user) for integer values. Store the values given by the user in it. Print only those values from the array which occur more than once.

### Question 10:

Declare arrays to store names, marks in English, Mathematics, and Science for **n** students. Store names and their marks in the three subjects in the corresponding cells of the arrays. Print the names of those who scored highest in English, Mathematics, and Science separately.

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