2022_26_II_Java_CA1 G1

Test Summary

- No. of Sections: 2
- No. of Questions: 11
- Total Duration: 90 min

Section 1 - MCQ

Section Summary

- No. of Questions: 9
- Duration: 15 min

Additional Instructions:

None

Q1. What will be output of the program?

```
1  public class Main
2  {
3  public static void main(String[] args) {
4
5          int arr[] = {1,2,3,4,5};
6      int count = 0;
7
8      for(int i = 0 ; i<5; i++ ){
9          if(arr[i]%2==0)
10             arr[i] *= 2;
11         System.out.print(arr[i]);
12     }
13
14   }
15 }
```

- 12345
- 135
- 22222
- 14385

Q2. Which data types can be used as expressions in a Java switch case?

- Integer
- Character
- String
- All of the listed options

Q3. What is the output of the program?

```
1  class Main
2  {
3
4     public static void main(String [] args)
5     {
6        int x = 0x80000000;
7        System.out.print(x + " and ");
```

```
        x = x >>> 31;
        System.out.println(x);
    }
}
```

- -2147483648 and 1
- 0x80000000 and 0x00000001
- -2147483648 and -1
- 1 and -2147483648

Q4. What is the output of the following Java code?

```
class Main
{
    public static void main(String[] args)
    {
        boolean balloonInflated = false;
        do
        {
            if (!balloonInflated)
            {
                balloonInflated = true;
                System.out.print("inflate-");
            }
        } while (! balloonInflated);
        System.out.println("done");
    }
}
```

- done
- inflate-done
- The code does not compile
- This is an infinite loop

Q5. What is the output of the program?

```
public class Main
{
  public static void main(String ars[])
  {
    int [] x = {1,2,3,4};
    int [] y = x;
    x = new int[2];
    for(int i = 0; i<x.length; i++)
    {
        System.out.println(y[i] + " ");

    }
}
}
```

- 1
  2
  3
  4

0
0
0
0

1
2

0
0

Compilations Error

Q6. What happens if a break statement is omitted in a switch case?

It causes a compilation error.

It results in a runtime exception.

It falls through to the next case, executing its code as well.

None of the listed options.

Q7. What will be the output of the following Java code?

```
int arr[] = new int [5];
System.out.print(arr);
```

0

value stored in arr[0]

00000

Class name@ hashcode in hexadecimal form

Q8. What is correct sequence of execution of any Java program?

Editing -> Compilation -> Class Loader -> Bytecode Verifier -> Execution

Editing -> Bytecode Verifier -> Compilation -> Class Loader -> Execution

Editing -> Compilation -> Bytecode Verifier -> Class Loader -> Execution

None of the listed options

Q9. What will happen when you compile and run the following code?

```
1  public class Test{
2     public static void main(String[] args){
3        for(int a = 0, b = 3; a < 3 && b > 0; a++, b--){
4           System.out.print(a + " " + b + ", ");
5        }
6     }
```

```
7  }
```

0 3, 1 2, 2 1,

1 2, 1 1,

1 3, 2 2, 3 1,

Compilation error

Section 2 - Coding

Section Summary

- No. of Questions: 2
- Duration: 75 min

Additional Instructions:

None

Q1. An astrologer is creating a software to forecast the future. He needs assistance in developing a program that can determine if a given year is a leap year or not. The program should prompt the user to input a year and provide the corresponding output.

Note: Use nested if else statement.

Input Format

Input to get a year.

Output Format

Display input followed by Leap year or Not leap year.

Sample Input

```
1900
```

Sample Output

```
1900 Not leap year
```

Sample Input

```
1880
```

Sample Output

```
1880 Leap year
```

Sample Input

```
2023
```

Sample Output

```
2023 Not leap year
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q2. Janu and Banu are playing a multiplication game, If Janu tells a set of numbers, Banu needs to multiply first number with second number, third number with fourth number, fifth number with six number and so on. Help Banu to do this calculation.

Also, if Janu tells odd set of numbers, Banu should tell "You are FOOL"

Input Format

Number of elements in first line(N)

N number of elements in second line separated by space

Output Format

Multiplied output as shown in sample output

Sample Input

```
5
23 10 5 7 11
```

Sample Output

```
You are FOOL
```

Sample Input

```
6
1 23 10 5 7 11
```

Sample Output

```
23 50 77
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Answer Key & Solution

Section 1 - MCQ

Q1

14385

Solution

No Solution

Q2

All of the listed options

Solution

No Solution

Q3

-2147483648 and 1

Solution

No Solution

Q4

inflate-done

Solution

No Solution

Q5

1

2

Solution

No Solution

Q6

It falls through to the next case, executing its code as well.

Solution

No Solution

Q7

Class name@ hashcode in hexadecimal form

Solution

No Solution

Q8

Editing -> Compilation -> Class Loader -> Bytecode Verifier -> Execution

Solution

No Solution

Q9

0 3, 1 2, 2 1,

Solution

No Solution

Section 2 - Coding

Q1

Test Case

Input

```
2000
```

Output

```
2000 Leap year
```

Weightage - 20

Input

```
2001
```

Output

```
2001 Not leap year
```

Weightage - 20

Input

```
2022
```

Output

```
2022 Not leap year
```

Weightage - 20

Input

```
1700
```

Output

```
1700 Not leap year
```

Weightage - 20

Input

```
2100
```

Output

```
2100 Not leap year
```

Weightage - 20

Sample Input

```
1900
```

Sample Output

```
1900 Not leap year
```

Sample Input

```
1880
```

Sample Output

```
1880 Leap year
```

Sample Input

```
2023
```

Sample Output

```
2023 Not leap year
```

Solution

```
import java.util.Scanner;
class Main {
public static void main(String[] args) {
Scanner sc=new Scanner(System.in);
        int year;
        year=sc.nextInt();
        boolean leap = false;
         if(year % 4 == 0)
        {
            if( year % 100 == 0)
            {
                if ( year % 400 == 0)
                    leap = true;
                else
                    leap = false;
            }
            else
                leap = true;
        }
        else
            leap = false;

        if(leap)
            System.out.println(year+" Leap year");
        else
            System.out.println(year+" Not leap year");
    }
}
```

Q2

Test Case

Input

```
10
101 102 103 104 105 106 107 108 109 110
```

Output

```
10302 10712 11130 11556 11990
```

Weightage - 25

Input

```
15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
```

Output

```
You are FOOL
```

Weightage - 25

Input

```
57
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 1
```

Output

```
You are FOOL
```

Weightage - 25

Input

```
6
1 23 10 5 7 12
```

Output

```
23 50 84
```

Weightage - 25

Sample Input

```
5
23 10 5 7 11
```

Sample Output

```
You are FOOL
```

Sample Input

```
6
1 23 10 5 7 11
```

Sample Output

```
23 50 77
```

Solution

```
import java.io.*;
import java.util.*;
class Main{
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        int size,i,j;
        size=sc.nextInt();
        int[] array=new int[size];
        int[] newarray=new int[size];
        for(i=0;i<size;i++){
            array[i]=sc.nextInt();
        }
        if (size%2!=0)
            System.out.print("You are FOOL");
        else{
            for(i=0,j=0;i<size;i=i+2,j++){
                newarray[j]=(array[i]*array[i+1]);
            }
            for(i=0;i<j;i++)
                System.out.print(newarray[i]+" ");
        }
    }
}
```