

Q.1) What is java? Explain its features.

Ans: - Java is a programming language developed by Sun microsystem. Designed by James gosling. Java is an object-oriented and dynamic language. Except static and primitive data types, Java is dynamic and object oriented. JVM (Java virtual machine) Executes java code.

Q.2) What is Class and Object? Explain with Example.

Ans: - Class is a blueprint for creating objects. Objects are a memory. Example: - Cars are class and Swift,Astar,Kwid are objects. With new keyword we are making an object. Code: -

```
package com.assignment;

import java.util.Scanner;
//Class
public class ClassesAndObjects {
    public static void main(String[] args) {
        //Object
        Scanner sc = new Scanner(System.in);
    }
}
```

Q.3) Explain Array in java with practical Example. Perform the code.

Ans: - Array is used to keep multiple elements of the same type. Array elements are accessed by index and array index starts with zero (0).

Example: -

```
package com.assignment;

public class Array {
    public static void main(String[] args) {
        // 1D
        System.out.println("1D Array");
        int [] arr = {1,2,3,4,5,6,7,8,9,10};
        for (int i=0;i<arr.length;i++) {
            System.out.print(arr[i] + "\t");
        }
        System.out.println("\n");
        // 2D
        System.out.println("2D Array");
        int [][] dimension =
        {{1,2,3,4,5},{6,7,8,9,10}};
        for (int j=0;j<dimension.length;j++) {
            for (int
k=0;k<dimension[j].length;k++) {
                System.out.print(dimension[j][k]
+ "\t");
            }
        }
    }
}
```

Output: -

```
"C:\Program Files\Java\jdk-15\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.2\lib\idea_rt.jar=63238:C:\Program File
1D Array
1 2 3 4 5 6 7 8 9 10

2D Array
1 2 3 4 5 6 7 8 9 10
Process finished with exit code 0
```

Q.4) What are the object orientation Concepts.  
Explain.

Ans: - Object orientation is a Programming style that is based on objects and classes. In Object orientation all things are dynamic. With new keyword we create objects.

Q.5) Perform the codes in java: - Find the Factorial of input Number. Ans: -

```
package com.assignment;
```

```
import java.util.Scanner;
```

```
public class Factorial {
    public static void main(String[] args)
    {
        Scanner sc = new
Scanner(System.in);
        System.out.println("Enter the
number : ");
        int no = sc.nextInt();
        int fact=1;
        for (int i=1;i<=no;i++) {
            fact = fact * i;
        }
    }
}
```

```

        System.out.print("Factorial of " +
no + " is : " + fact);
    }
}

```

Output: -

```

"C:\Program Files\Java\jdk-15\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.2\lib\i
Enter the number :
6
Factorial of 6 is : 720
Process finished with exit code 0

```

## 2) Print the Table of Input Code.

Ans: -

```

package com.assignment;

```

```

import java.util.Scanner;

```

```

public class Table {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number :
");
        int no = sc.nextInt();
        for (int i=1;i<=10;i++) {
            System.out.print((no*i) + "\t");
        }
    }
}

```

Output: -

```
"C:\Program Files\Java\jdk-15\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.2\lib\i
Enter the number :
7
7 14 21 28 35 42 49 56 63 70
Process finished with exit code 0
```

3) Calculate the Summation of Even Numbers from 1 to 100.

Ans: -

```
package com.assignment;
```

```
public class Even {
```

```
    public static void main(String[] args)
```

```
{
```

```
    for (int i=1;i<=100;i++) {
```

```
        if (i%2==0) {
```

```
            System.out.print(i + "\t");
```

```
        }
```

```
    }
```

```
}
```

```
}
```

Output: -

```
"C:\Program Files\Java\jdk-15\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.2\lib\i
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 6
Process finished with exit code 0
```

```
Edition 2020.2.2\lib\idea_rt.jar=63261:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.2.2\bin" -Dfile.encoding=
56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100
```