

Department of Computer Science
Semester Assignment Spring 2020

ID :14283

Name :rafiullah

Department : BS(CS) 5th Semester

Subject: Object Oriented Programming

Time: 48hrs (9:00 am Monday (20th April) to 9:00 am Wednesday (22nd April))

BS (CS,SE)

Instructor: M.Ayub Khan

There are total 3 questions in this paper.

Max Marks: 30

Note:

At the top of the answer sheet there must be the ID, Name and semester of the concerned Student.

Students must have to provide the output of their respective programs. Students have same answers or programs will be considered fail. Programs in Python or codes should be explained clearly.

As this paper is online so incase of any ambiguity my Whatsapp no. is 034499121116.

**Each question carry equal marks.
Please answer briefly.**

Q1. What is Class and role of object in a Class, explain in detail with the help of a suitable program ?

Ans: A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type.

Object determines the behavior of the class. It is a basic unit of Object Oriented Programming and represents the real life entities. A typical Java program creates many objects, which as you know, interact by invoking methods.

Example:

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

```
Class One {
```

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

```
        //creating new object
```

```
        Two object = new Two();
```

```
        System.out.println(object.x);
```

```
    }
```

```
}
```

```
//creating second class for calling object
```

```
class Two{
```

```
    int x=89;
```

```
}
```

Q2. Write a program about table printing which takes input from the user on the basis of OOP and explain in detail.

Ans:

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

```
public class Table {
```

```

public static void main(String[] args) {

    Scanner obj = new Scanner(System.in);
    System.out.println("Enter the Value =");

    int input = obj.nextInt();

    for(int y=1;y<=10;y++)
    {
        System.out.println(input*y);
    }
}

```

Q3. Write a program about any 2 cars which can calculate the performance of both of them and explain in detail.

```

public class Car {

    public static void main(String[] args) {
        Honda hon = new Honda();
        Toyota toyo= new Toyota();

        if(hon.Speed>toyo.Speed && hon.Engine>toyo.Engine &&
hon.accelerator>toyo.Engine)
        {
            System.out.println("Honda is the fastest");
            System.out.println("And Toyota is slower than Honda");
        }

        if(hon.Speed<toyo.Speed && hon.Engine<toyo.Engine &&
hon.accelerator<toyo.Engine)
        {
            System.out.println("Toyota is the fastest");
            System.out.println("And Honda is slower than Toyota");
        }
    }
}

```

```
    }  
  }  
}  
  
class Honda{  
  int Speed = 290;  
  double Engine = 3.5;  
  double accelerator = 65;  
}  
class Toyota{  
  int Speed = 150;  
  double Engine = 2.2;  
  double accelerator = 43.1;  
}
```