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Subject : Objected Oriented Program

Program : BS(SE)

Summer : Exam

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## ① Question #1

### Answer:-

Create objects whenever we we have to define class, class are a blueprint or a set of instructions to build a specific type of object.

We can think of the class as a sketch (prototype) of a house. It contains all details about the floors, doors, windows, etc.

On the based of these description, we build the house, house is an object since many. here many house can be made from same description.

We can create many object from class.

### For Example:-

```
class class name {  
    // variable  
    // method
```

## FoD Example:-

```
class Lamp {  
    // instance variable private  
    Boolean is on;  
  
    // method public void  
    turn on () {  
        is on = true;  
    }  
  
    // method  
    public void turn off () {  
        is on = false;  
    }  
}
```

Here we have created class named Lamp  
the class has an variable named (is on) and two methods turn on () and turn off (). these variable and methods define within class are called members of class  
as we know the example public and private know access modifiers.

③

### object in Class:-

An object are called an instance of a class.

for example, Suppose [Animal] is a class then cats Dog, Horse and so on can be considered as objects of Animal class.

**class name object = new class name:-**

Here we have to use the constructor `class name ()` to create the object. Constructors have the same name as the class and are similar to method.

### for example:-

// L1 object

```
Lamp L1 = new Lamp();
```

// L2 object

```
Lamp L2 = new Lamp();
```

We have created objects named L1 and L2 using the constructor of lamp class (Lamp());  
object are used to access member of a class.



(4)

## FOD Example:-

```
class Lamp
```

```
void turn on () {  
    is on = true;  
}
```

```
class classobject example {  
public static void main (  
String [] args) {  
    L1 turn on ();  
}
```

```
void turn off () {  
// initialize variable with value  
is on = false;  
System.out.println("light on") }  
}
```

```
class main {  
public static void main (String [] args)  
// create object L1 & L2  
Lamp L1 = new Lamp ();  
Lamp L2 = new Lamp ();  
// call method: turn on () & turn off ()  
L1.turn on ();  
L2.turn off ();  
}
```

for Question #2  
Answer:-

```
import java.util Scanner  
  
public class table {  
  
    public static void main  
    (String[] args) {  
        Scanner in = new Scanner(System  
        .in);  
        System.out.println("input a number  
        number:");  
        int num = in.nextInt();  
        for (int i=0; i<10; i++) {  
            System.out.println(num +  
            "x" + (i+1) + " = " +  
            (num * (i+1)));  
        }  
    }  
}
```

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### Question # "3"

Answer:-

```
import java.util.Scanner;  
public class {
```

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

```
        Scanner in = new Scanner  
        (System.in);
```

```
        System.out.println ("input speed  
        (km/H) of first car:");  
        int car1 = in.nextInt();
```

```
        System.out.println ("input speed (km/H)  
        of second car:");  
        int car2 = in.nextInt();
```

```
        System.out.println ("performance  
        of two car is: " +  
        (car1 + car2) / 2);
```

```
    }  
}
```