P3:

```
class SampleProgram2
{
  psvm (String[] args)
  {
    System.out.println("Hi, Welcome again " + "and again to Java");
                                    // '+' To join two String data with
                                    seperate " "
  }
}
```

O/P:-

Hi, Welcome again and again to Java

P4:

```
class Demo1
{
  psvm( )
  {
    Sop (10 + 10);      // here + adds 10+10 first and then
                           displays the result
  }
}
```

O/P:- 20

P5:

```
class Demo2
{
  psvm(String[] args)
  {
    Sop ("Program starts...");
    int id;  // declaration
    id = 2012345; //initialization
    Sop (id);  // prints id value
    Sop ("Program ends...");
  }
}
```

O/P:
Program starts...
2012345
Program ends...

NOTE: 13) Before using a variable, we need to initialize, before initializing we need to declare the variable.

P6:
6) class AssignProgram1
{
public static void main(String[] args)
{
Sop("Program starts...");
int num1;
int num2;
int sum;
num1 = 10;
num2 = 20;
sum = num1 + num2;
Sop(sum);
Sop("Program ends...");
}
}

O/P: Program starts...
30
Program ends...

P7:
7) class Demo4
{
psvm( )
{
Sop("Program starts...");
final int empID; // final
empID = 12973;
Sop("empID is "+empID);
Sop("Program ends...");
}
}

O/P: Program starts...
empID is 12973
Program ends...

P8
8) class Demo3
{
psvm( )
{
Sop("Program starts...");
double salary = 15000.98;
Sop("Salary is "+salary);
salary = 25128.54;
Sop("Salary is "+salary);
salary = 35978.54;
Sop("Salary is "+salary);
Sop("Program ends...");
}
}

O/P: Program starts
Salary is 15000.98
Salary is 25128.54
Salary is 35978.54
Program ends

14*) If we need to initialize a variable only once, the such variable has to be declared as final by using final keyword

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Variables

15*) In java variables are used to store the data of programmes

16*) The variable has to be declared first before initializing. &

16.1*) The syntax to declare a variable

```
datatype Variablename;
```

17*) Datatype: indicates the type of value that we assign to the variable. Java supports 8 type of datatypes.

1. byte
2. short
3. int
4. long
5. float
6. double
7. char
8. boolean

NOTE 18*) In java there is no String variable. Inorder to store String value java provides a class String, StringBuffer & StringBuilder.

19*) Every variable has to be initialized before using in any operation. The syntax to initialize variable is

```
Variablename = value;
```

20*) If any variable is used without initialization, then compiler throws an error.

21*) A variable can have diff values initialized, throughout the program execution.

P9

9) class AreaOfCircle

```
{
psvm(String[] args)
 {
  Sop("Program starts...");
  final float PI;
  PI = 3.14f;
  double r;
  r = 2.5;
  float Area;
  Area = PI*r*r;
  Sop("Area of Circle" + Area);
  Sop("Program ends...");
 }
}
```

O/p: Program starts...
Area of Circle -
Program ends...

```
// float variablename = value f;
   long variablename = value l;

final double PI = 3.14;
   double radius = 10.0;
   double Area;
   Area = PI * radius * radius;
Sop("Area of Circle with radius " +radius + "is"
   + Area);
Sop("Program ends...");
}
```

P10

10) class AssignSimpleInterest

```
{
  psvm(String[] args)
  {
    Sop("Program starts...");
    double Interest;
    long Principle = 10000 l;
    double Rate = 0.15;
    int Time = 2;
    Interest = Principle * Rate * Time;
   Sop("The Simple Interest for " + Principle + " amount at the rate of "
        Rate + " for " + Time + " years duration is " + Interest);
   Sop("Program ends...");
  }
}
```

O/p:- Program starts...
The Simple Interest for 10000 amount at the rate of 15% for 2yrs
duration is 3000
Program ends...

11) PTI

```
class AssignDegToFahrenheit
{
    psvm(String[] args)
    {
     Sop("Program starts...");
     double Fahrenheit;
     double DegreeCelsius = 28;
     Fahrenheit = (DegreeCelsius * 1.8) + 32;
     Sop( DegreeCelsius + "Degree Celsius is equal to " + Fahrenheit + " Fahrenheit");
     Sop ("Program ends...");
    }
}
```

O/P :-

Program starts...

28 Degree Celsius is equal to 82.4 Fahrenheit

Program ends...

******