

BASIC

Assignment Questions

Q1. Explain the purpose of the escape sequence `\n` in Java. Provide an example of its usage in a program, and predict the output.

Output:

Hello, World!
Java is great.

Ans:

The purpose of the escape sequence `\n` in java used to print the text in next line.

```
public class EscapeSequence
{
    public static void main(String[] args)
    {
        System.out.println("Hello, World! \nJava is great.");
    }
}
```

Q2. Write a Java program that declares an integer variable, initializes it with a value, prints the value, updates the value, and prints the updated value.

Output:

Original Value: 5
Updated Value: 8

Ans:

```
public class Assigment02
{
    public static void main(String[] args)
    {
        int intVar;
        intVar=5;
        System.out.println("Original value: "+intVar);
    }
}
```

```
intVar+=3;
System.out.println("Updated value: "+intVar);

}

}
```

Q3. Create a Java program that performs arithmetic operations (addition, subtraction, multiplication, division) on integers, floats, and doubles. Print the results.

Output:

Integer Result: 15

Float Result: 12.3

Double Result: 24.5

Division Result: 5.0

```
public class Assigment03
{
    public static void main(String[] args)
    {
        int x=10;
        int y=5;
        System.out.println("Integer Result: "+(x+y));

        float f1=15.6f, f2= 3.3f;
        System.out.println("Float Result: "+(f1-f2));

        double d1= 49.0,d2=2.0;
        System.out.println("Double Result: "+(d1/d2));

        double d3=50,d4=10;
        System.out.println("Division Result: "+(d3/d4));
    }
}
```

```
}
```

Q4. Write a Java program that demonstrates the use of increment (++), decrement (--), and modulus (%) operators. Print the results.

Output:

Original Value: 10

After Increment: 11

After Decrement: 10

Remainder: 1

```
public class Assigment04
{
    public static void main(String[] args)
    {
        byte num1=10;
        System.out.println("Original Value: "+num1);

        num1 ++;
        System.out.println("After Increment: "+num1);

        num1--;
        System.out.println("After Decrement: "+num1);

        int rem=num1%3;
        System.out.println("Remainder: "+rem);

    }
}
```

Q5. Write a Java program to calculate the area of a circle and the simple interest. Take necessary inputs from the user.

Output:

Enter the radius of the circle: 3.5

Area of Circle: 38.484512

Enter principal amount: 1000

Enter rate of interest: 5

Enter time (in years): 2

Simple Interest: 100.0

```
import java.util.Scanner;
public class Assignment05
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);

        System.out.print("Enter the radius of circle: ");
        float radius=sc.nextFloat();
        double area=3.14*radius*radius;
        System.out.println("Area of circle: "+area);

        System.out.print("Enter principal amount: ");
        float p=sc.nextFloat();
        System.out.print("Enter rate of interest: ");
        float r=sc.nextFloat();
        System.out.print("Enter time (in years): ");
        float t=sc.nextFloat();
        double si=(p*r*t)/100;
        System.out.println("Simple interest: "+si);
    }
}
```

Q6. Provide examples of correct and incorrect variable names according to Java's naming rules.

Output:

Correct Variable Values:

Age: 25

Average Score: 92.5

Student Name: John

```
public class Assignment06
{
    public static void main(String[] args)
    {
        System.out.println("Correct variable Values: ");
        byte age=25;
        System.out.println("Age: "+age);

        float avgScore=92.5f;
        System.out.println("Average Score: "+avgScore);

        String studName="John";
        System.out.println("Student Name: "+studName);
    }
}
```

Q7. Write a Java program that uses boolean variables and relational operators to compare two numbers. Print whether the numbers are equal, not equal, greater, or less.

Output:

Are numbers equal? false
Are numbers not equal? true
Is the first number greater? false
Is the first number less? true

```
public class Assigment07
{
    public static void main(String[] args)
    {
        boolean result;
        int num1=10, num2=20;

        result=num1==num2;
        System.out.println("Are number equal? "+result);

        result=num1 !=num2;
        System.out.println("Are number not equal? "+result);

        result=num1>num2;
        System.out.println("Is the first number greater? "+result);

        result=num1<num2;
        System.out.println("Is the first number less? "+result);
    }
}
```



**THANK
YOU !**