Solutions of Operator-based Questions

Question 01

```
public class Test
{
	public static void main(String[] args)
	{
		System.out.println(System.out.println("hi"));
	}
}
```

Output:
error: 'void' type not allowed here

Question 02

```
public class Test
{
	public static void main(String[] args)
	{
		int a, b, c;
		a=-3+2*7-4;
		b=a*8+4%5-6;
		c=a+b*3-2%5-4;
		System.out.println(a+" "+b+" "+c);
	}
}
```

Output:
7 54 163

Question 03

```
Public class Test
{
        public static void main(String [ ] args)
        {
            int a=2,b=5,c;
            a=a*a++ - –a;
            c=b++ - b–;
            System.out.println(“a=”+a+”,b=”+b+”,c=”+c);
            System.out.println(a++ + ++a * a–);
            System.out.println(b=b++ * b–);
            System.out.println(“a=”+a+”,b=”+b+”,c=”+c);
        }
}
```

Output:-

```
a=2,b=5,c=-1
18
30
a=3,b=30,c=-1
```

Question 04

```
public class Test
{
    public static void main(String[] args)
    {
         System.out.print(011+ 1.94 + "C" + "S");
     }
}
```

Output:

```
10.94CS
```

Question 05

```
public class Test
{
	public static void main(String[] args)
	{
		System.out.println(2+3+"bc"+'c'+'a');
		System.out.println('c'+'a'+2+3+"bc");
		System.out.println("bc"+'c'+'a'+2+3);
		System.out.println("bc"+('c'+'a')+(2)+3);
	}
}
```

Output:
5bcca
201bc
bcca23
bc19623

Question 06

```
class Test
{
	public static void main (String args[])
	{
		int x = - 4;
		System.out.println(x>>1);
		int y = 4;
		System.out.println(y>>1);
	}
}
```

Output:
-2
2

Question 07

```
public class Test
{
	public static void main(String[] args)
	{
		System.out.println(10 + 15 + "Hello");
		System.out.println("Hello" + 10 + 15);
	}
}
```

Output:

```
25Hello
Hello1015
```

Question 08

```
public class Test
{
	public static void main(String[] args)
	{
		byte b = 10;
		b = b + 10;
		System.out.println(b);
	}
}
```

Output:

```
error: incompatible types: possible lossy conversion from int to byte
b = b + 10;
```

Question 09

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

```
            int i=4;
            int j =21;
            int k = ++i * 7+2 - j--;
            System.out.println("k=" +k);
        }
}
```

Output:
K = 16

Questions 10

```
public class Test
{
        public static void main(String[] args)
        {
                int a = 2;
                int b = 3;
                int result = a && b;
                System.out.println(result);
          }
 }
```

Output:
ERROR (BAD OPERATOR)
BECAUSE && OPERATOR IS DOESN'T DEFINED

Question 11

```
public class Test
{
            public static void main(String[] args)
            {
                    int x=-5;
                    System.out.println(~x);
            }
}
```

Output:
4
[(~) is a bitwise operator and in this case, it inverts the bits of (-5)}

Question 12

```
public class Test
{
	public static void main(String[] args)
	{
		int x=Integer.MAX_VALUE;
		System.out.println(x>>28);
	}
}
```

Output:
7

Question 13

```
public class Test
{
	public static void main(String[] args)
	{
		int x=10, y=5;
		System.out.println(x++^++y|(x=y)&101);

	}
}
```

Output:
12

Question 14

```
public class Test
{
        public static void main(String [] args)
        {
                 int x = -4, y = 4;
                System.out.println((x>>>30)+" "+(x>>30)+" "+(y>>1));
        }
}
```

Output

3 -1 2

Question 15

```
public class Test
{
        public static void main(String[] args)
        {
                int x=5;
                int y=x++ + ++x + ++x;
                int z=--y + x++ + y++;
                int p=z++ - (z%10) + (p=z);
                System.out.println(x+" "+y+" "+z+" "+p);
         }
}
```

Output:

9 20 47 86

Question 16

```
public class OperatorEx1
{
        public static void main(String args[])
        {
                int x=10;
```

```
                System.out.println(x++);
                System.out.println(++x);
                System.out.println(x--);
                System.out.println(--x);
        }
    }
```

Output:

10
12
12
10

Question 17

```
public class OperatorEx2
{
        public static void main(String args[])
        {
                int a=10;
                int b=10;
                System.out.println(a++ + ++a);      //10+12=22
                System.out.println(b++ + b++);      //10+11=21
         }
 }
```

Output:

22
21

Question 18

```
public class OperatorEx3
{
        public static void main(String args[])
        {
                System.out.println(10<<2);
                System.out.println(10<<3);
                System.out.println(20<<2);
```

```
            System.out.println(15<<4);
        }
}
```

Output

40
80
80
240

Question 19

```
public class OperatorEx4
{
        public static void main(String args[])
        {
            System.out.println(10>>2);
            System.out.println(20>>2);
            System.out.println(20>>3);
        }
}
```

Output:

2
5
2

Question-20

```
public class OperatorEx5
{
        public static void main(String args[])
        {
             int a=10;
            int b=5;
            int c=20;
            System.out.println(a < b && a < c);
            System.out.println(a < b & a < c);
        }
 }
```

Output:

False

False

Question 21

```
public class OperatorEx6
{
	public static void main(String args[])
	{
		int a=10;
		int b=5;
		int c=20;
		System.out.println(a < b && a < c);
		System.out.println(a);
		System.out.println(a < b & a++ < c);
		System.out.println(a);
	}
}
```

Output

false

10

false

11

Question 22

```
public class OperatorEx7
{
	public static void main(String[] args)
	{
		int a=10;
		int b=6;
		int c=30;
		System.out.println(a > b || a < c);
		System.out.println(a > b | a < c);
		System.out.println(a > b || a++ < c);
```

```
                System.out.println(a);
                System.out.println(a > b | a ++ < c);
                System.out.println(a);
        }
}
```

Output:

```
true
true
true
10
true
11
```

Question 23

```
public class Test
{
        public static void main(String args[])
        {
                int a=4;
                int b=5;
                int x=(a++ < b)?a:b;
                int y=a+b-x;
                System.out.println("x="+x);
                System.out.println("y="+y);
        }
}
```

Output:

```
x=5
y=5
```

Question 24

```
    public class OperatorEx9
    {
            public static void main(String[] args)
            {
                    int a=10;
                    a+=3;
```

```
                System.out.println(a);
                a-=4;
                System.out.println(a);
                a*=2;
                System.out.println(a);
                a/=2;
                System.out.println(a);
        }
    }
```

OUTPUT :

13
9
18
9

Question 25

```
public class IntegerConversion
{
        public static void main(String args[])
        {
                long l = 55;
                int i = 44;
                short s = 33;
                byte b = 22;
                i = (int) l;
                s = (short) i;
                b = (byte) s;
                System.out.println("l = " + l);
                System.out.println("i = " + i);
                System.out.println("s = " + s);
                System.out.println("b = " + b);
        }
}
```

Output:

l = 55
i = 55
s = 55
b = 55

Question 26

```
public class Conversion2
{
        public static void main(String args[])
        {
                int i = 132;
                short s = 15;
                byte b = (byte) i;
                int x = b + s;
                System.out.println("Value of x is " + x);
        }
}
```

Output:
Value of x is -109

Question 27

```
public class IntegerGroupAddition
{
        public static void main(String[ ]args)
        {
                long l = 30;
                int i = 50;
                short s = 60;
                byte b = 70;
                byte sum = (byte)( l + i + s + b);
                System.out.println(“Sum= “+sum);
        }
}
```

Output:
Sum= -46

Question 28

```
public class demo1
{
	public static void main(String args[])
	{
		byte y=5,z=-y;
		System.out.println(~y);
		System.out.println(~z);
		y&= ~y;
		System.out.println(y);
		byte x = -1;
		System.out.println(x>>>6);
		byte a=-5,b=-6;
		System.out.println(a|b);
	}
}
```

Output:
ERROR, incompatible types: possible lossy conversion from int to byte

Question 29

```
public class demo2
{
	public static void main(String args[])
	{
		System.out.println(2!=3 && (7>8 || 6>5 ));
		System.out.println(!(2!=3) && (7>8 || 6>5));
		System.out.println(3==3 && z>=10 );
		System.out.println(2!=3 && (7>8 || 6>5 )) ;
	}
}
```

Output
error: cannot find symbol **z**

Question 30

```
public class demo3
{
	public static void main(String args[])
	{
		int v=10;
		System.out.println(v%=3*4);
		int x=11;
		System.out.println(- x--);
		System.out.println(x);
		x = - x--;
		System.out.println(x);
		int y = - x--;
		System.out.println(x+" "+y);
	}
}
```

Output:

```
 10
-11
 10
-10
-11  10
```

Question 31

```
public class demo4
{
	public static void main(String args[])
	{
		int x=-11;
		System.out.println(x%2);
		System.out.println(x/2);
	}
}
```

Output:

```
-1
-5
```

Question 32

```
Public class demo5
{
        public static void main(String args[])
        {
                int 1stnum=10,nu-m2=20,3rd num=40;
                System.out.println("/"hello/"");
                byte b=128; float c=2.1; char c='a'; char cc=20;
                System.out.println(cc);
        }
}
```

Output:
P in capital in Public
nu-m2, 3rd num are invalid variables
Not a valid statement **/"**
b variables can not store value 128

Question 33

```
public class Test
{
        public static void main(String[] args)
        {
                int a = 10;
                System.out.println(a++++);
        }
}
```

Output:
ERROR
java: unexpected type
required: variable
found: value

Question 34

```
public class Test
{
        public static void main (string[ ] args)
        {
                int a= 2;
                int b= 4;
                System. Out. Println("value of XOR B:"+(a^b)) ;
        }
}
```

Output:
value of a xor B : 6

Question 35

```
public class Test
{
        public static void main(String[] args)
        {
            int a = 10;
            if(++a==11 || ++a==12)
                    ++a;
            System.out.println(a);
        }
}
```

Output **:**
12

Question 36

```
public class Test
{
        public static void main(String s[])
        {
                int a, b, result;
                a=10; b=20;
```

```
                result=(b>=a);
                System.out.println(result);
        }
}
```

Output:
Error: incompatible types: boolean cannot be converted to int at **result=(b>a)**

Question 37

```
public class Test
{
        public static void main (String[] args)
        {
                int x=20;
                String sup = (x < 15) ? "small" : (x < 22)? "tiny" : "huge";
                System.out.println(sup);
        }
}
```

Output:
tiny

Question 38

```
public class Alpha
{
        public static void main (String [ ] args)
        {
                int a = 12+21*3-9/2;
                 int b = 14-32*4+175/8-3;
                 boolean p = (++a>71&&--b<20);
                 System.out.println(p);
                 boolean p1 = (b--==-99||a-->100);
                 System.out.println(p1);
        }
}
```

Output:
true
false

Question 39

```
public class Alpha
{
        public static void main(String[] args)
        {
            char a = 'A';
            System.out.println(++a +" "+ (int)a++);
         }
}
```

Output:
B 66

Question 40

```
public class Alpha
{
        public static void main(String [] args)
        {
                float x = 5.3f;
                boolean p = (x==5.3);
                System.out.println(p);
        }
}
```

Output
false

Question 41

```
public class Alpha
{
        public static void main(String[] args)
        {
                int temp = 9;
                int data = 8;
                System.out.println(temp & data);
                System.out.println(temp | data);
                System.out.println(temp ^ data);
        }
}
```

Output

8
9
1

Question 42

```
public class Alpha
{
        public static void main(String[] args)
        {
            double d1 = 123.456;
            double d2 = 12_3.4_5_6;
            double d3 = 12_3.4_56;
            System.out.println(d1);
            System.out.println(d2);
            System.out.println(d3);
        }
 }
```

Output

123.456
123.456
123.456

Question 43

```
public class Test1
{
        public static void main(String[] args)
        {
                int x = 7;
                int y = 4;
                x+=4/3 + x– + y++ + x++ + y--;
                System.out.println("x =" + x);
                System.out.println("y ="+ y);
        }
}
```

Output

```
x =30
y =4
```

Question 44

```
public class Test2
{
        public static void main(String[] args)
        {
                int a, b = 10;
                a = - b--;
                System.out.println("a ="+a);
                System.out.println("b ="+b);
        }
}
```

Output:

```
a =-10
b =9
```

Question 45

Which of the following are the legal identifiers:
(a) int a;
(b) int :b;
(c) int ____2_w;
(d) int e#;
(e) int this_is_a_very_detailed_name_for_an_identifier;
(f) int $c;
(g) int -d;
(h) int -$;
(i) int .f ;
(j) int 7g;

Output:
a) int a;
(c) int ____2_w;
(e) int this_is_a_very_detailed_name_for_an_identifier;
(f) int $c;
(j) int 7g;

Question 46

```
public class Test3
{
    public static void main(String[] args)
    {
            int i = 1;
            byte b = i;
            System.out.print("b ="+b);
    }
}
```

Output
Exception in thread “main” java .lang.Error: unresolved
Compilation problem:
Type mismatch: cannot convert from int to byte at Test3.main(Test3.java:9)

Question 47

```
public class Test4
{
        public static void main(String[] args)
        {
                int a = 4, b=2;
                a*=a/b;
                System.out.print("a ="+a);
                System.out.print("b ="+b);
        }
}
```

Output

a =8
b =2

Question 48

```
public class Alpha
{
         public static void main(String[] args)
        {
                int x = 5 ;x = x << 3 + 2 ;
                System.out.println( " x = " + x );
        }
}
```

Output

x = 160

Question 49

```
public class Alpha
{
  public static void main (String [ ] args)
   {
     int x = 5 ;
```

```
      boolean r = x <2 && ++x > 4;
      System.out.println( " r = " + r + " x = " + x );
    }
}
```

Output

r = false x = 5

Question 50

In which format -ve numbers are represented in computer memory ?

a) 1's Complement format

b) 2' Complement format

c) Original binary equivalent of the number

d) none of the above

Output:

b) 2's Complement format

Question 51

```
public class increment
 {
       public static void main(String args[])
       {
             double var1 = 1+5;
             double var2 = var1/4;
              int var3 = 1+5;
              int var4 = var3/4;
              System.out.print(var2 + " "+ var4);
              }
 }
```

Output

1.5 1

Question 52

```
public class p1
{
        public static void main(string args[ ])
        {
                int a=10, b=9;
                boolean k;
                k=(a<b) && (++b==a);
                System.out.println(b);
    }
}
```

Output:
9

Question 53

```
public class p2
{
        public static void main(string args[ ])
        {
                final int a=10;
                int b=++a;
                System.out.println(b);
    }
}
```

Output:
Error:final
Without final(output 11);

Question 54

```
public class p3
{
        public static void main(String[] args)
        {
```

```
            System.out.println((10|5)+"-"+(10|6));
        }
}
```

Output:
15-14

Question 55

```
public class p4
{
        public static void main(String args [] )
        {
                String s1 = "ITER";
                String s2 = "ITER";
                System.out.println("s1 == s2 is:" + s1 == s2);
        }
}
```

Output:
false

Question 56

```
public class p5
{
    public static void main(String[] args)
   {
                int x = -1;
                System.out.println(x>>>29);
                System.out.println(x>>>30);
                System.out.println(x>>>31);
    }
}
```

Output
7
3
1

Question 57

```
public class p6
{
	public static void main(String[] args)
	{
		byte x=127; // Line 5
		x= x << 3; // Line 6
		System.out.println(x);
	}
}
```

Output
error: incompatible types: possible lossy conversion from int to byte at **Line 6**

Question 58

```
public class p7
{
	public static void main(String[] args)
	{
		int x=127, y=128;
		x= (x & 3) | y;
		System.out.println(x);
	}
}
```

Output:
131

Question 59

```
public class p8
{
	public static void main(String[] args)
	{
		int x= 9, y=0;
		System.out.println((++x)==10 && (++y)==1);
	}
```

```
}
```

Output
True

Question 60

```
public class p9
{
        public static void main(String[] args)
        {
                int x=127; // Line 5
                x+= (x << 3); // Line 6
                System.out.println(x);
        }
}
```

Output
1143

Question 61

```
public class p10
{
        public static void main(String[] args)
        {
                int x=12, y=7, z=9; // Line 5
                z= (x<y)? (x > z ? z: x) : (y < z ? z: y);
                System.out.println(z);
        }
  }
```

Output:
9

Question 62

```
public class p11
{
	public static void main(String[] args)
	{
		int ++a=100;
		System.out.println(a++);
	 }

 }
```

Output:
error: not a statement at **++a=10**

Question 63

```
public class p12
{
	public static void main(String[] args)
	{
		int x = 100;
		double y = 100.1;
		boolean b = (x=y); //Line 7
		System.out.println(b);
	 }
 }
```

Output:
error: incompatible types: possible lossy conversion from double to int.

Question 64

With x = 0, which of the following are legal lines of Java code for changing the value of x to 1?

1. x++;
2. x=x+1;
3. x+=1;

4. x=+1;

Output:
x++;
x=x+1;
x+=1;

Question 65

```
public class p14
{
        public static void main(String[] args)
        {
                int x;
                System.out.println(x);
        }
}
```

Output:
error: variable x might not have been initialized

Question 66

```
public class p15
{
    public static void main(String[] args)
    {
            double a, b, c;
             a = 3.0/0;
             b = 0/4.0;
             c=0/0.0;
             System.out.println(a);
             System.out.println(b);
             System.out.println(c);
    }
}
```

Output:
Infinity
0.0
NaN

Question 67

```
public class p16
{
    public static void main(String[] args)
    {
            // the line below this gives an output
            // \u000d System.out.println("comment executed");
    }
}
```

Output:
comment executed
(Note: \u000d indicates new line, so “System.out.println("comment executed");
statement not part of comment”)

Question 68

```
public class p17
{
    public static void main(String[] args)
    {
            int $_ = 5;
            System.out.println($_);
    }
}
```

Output:
5
(Note: valid identifier or variable)

Question 69

```
public class p18
{
    public static void main(String[] args)
    {
            String s1 = "abc";
             String s2 = s1;
             s1 += "d";
             System.out.println(s1+" "+s2+" "+(s1==s2));
    }
}
```

Output:

abcd abc false

Question 70

```
public class p19
{
    public static void main(String[] args)
    {
            int a = 5;
            System.out.println(a>>33);
    }
}
```

Output:

2

Question 71

```
public class 20
{
    public static void main(String[] args)
    {
            int x = 07;
             int y = 08;
            System.out.println("" + x + y);
    }
}
```

Output:

error: integer number too large **y = 08**