Class XI Assignment
Topic: Operators in Python

1. Write the output of the following code:

a) x=2 x=5 x=x + x print(x)	b) x = 2 y = 3 x + y + 5 print(x + y)
c) p=10 q=20 p=p*q//4 q=p+q**3 print(p,q)	d) x=2 y=6 x=x+y/2 + y//4 print(x)
e) a,b,c=7,8 ,9 a=a+b+c b=a+b+c c=a+b print(c)	f) a=10 b=36 print(a>5 and b>40)
g) a=10 b=36 print(a>5 or b<40)	h) x=-2 y=x+2 x+=y y-=x print(x, y)
i) p=21//5 q=p%4 r=p*q p= p + q –r r = r * p – q + r q =p + q print(p, q, r)	j) a=5 b= 2* a a += a +b b *= a + b print(a, b)
k) a=90 b=12 c=3 a+=b//c b=b%4 c=a//b+c print(a,b,c)	l) a=2 b=8 c=10 print(a**4+2*b/c)

2. Multiple-Choice Questions - Choose the correct answer for each question:

i) Which of the following is NOT a Python operator?

a) Arithmetic operators

b) Assignment operators

c) Logical operators

d) Keyword operators

ii) The '%' operator is used for:

a) Exponentiation

b) Modulus (remainder) division

c) Floor division

d) Bitwise AND

iii) What does the '==' operator check for in Python?

a) Identity

b) Value equality

c) Assignment

d) Multiplication

iv) Which operator is used for concatenating two strings in Python?

a) +

b) *

c) -

d) /

v) In Python, the 'and' operator returns True if:

a) Both operands are True

b) Either operand is True

c) Both operands are False

d) Neither operand is False

3. Python Programs

I. **Write a Python program that calculates the area of a rectangle. Prompt the user for the length and width of the rectangle and then display the area. Use appropriate operators for calculation.**

II. **Create a Python function called calculate_discount that takes two arguments: the original price of an item and the discount percentage. The function should return the final price after applying the discount. Use appropriate operators for calculation.**

III. **Write a Python program that converts temperature from Celsius to Fahrenheit. Prompt the user for a temperature in Celsius and then display the equivalent temperature in Fahrenheit. Use the formula: Fahrenheit = (Celsius * 9/5) + 32.**

4. Debug the following Python code snippet, which is intended to calculate the average of three numbers:

```
num1 = 10
num2 = 20
num3 = 30

average = num1 + num2 + num3 / 3

print("The average is:", average)
```

Identify the error(s) and correct the code to calculate the correct average. Also, state the type of error.