**21 May**

**Python Basic - 2**

**Q.1. Create two int type variables, apply addition, subtraction, division and multiplications and store the results in variables. Then print the data in the following format by calling the variables:**

**First variable is \_\_ & second variable is \_\_.**

**Addition: \_\_ + \_\_ = \_\_ Subtraction: \_\_ - \_\_ = \_\_ Multiplication: \_\_ \* \_\_ = \_\_**

**Division: \_\_ / \_\_ = \_\_**

first\_variable = 10

second\_variable = 5

Addition = first\_variable + second\_variable

Subtraction = first\_variable - second\_variable

Multiplication = first\_variable \* second\_variable

Division = first\_variable / second\_variable

**Q.2. What is the difference between the following operators:**

* **(i)  ‘/’ & ‘//’**

/ : division operator, performs normal division, which returns floating point result

print(10/3) => 3.333

//: floor division operator, also known as integer division, it rounds result to nearest integer

print(10//3) => 3

* (ii)  ‘\*\*’ & ‘^’

\*\* : exponentiation operator, used to get power

print(2\*\*3) => 8

^ :

**Q.3. List the logical operators.**

Logical AND

Logical OR

Logical NOT

**Q.4. Explain right shift operator and left shift operator with examples.**

**Right shift operator:** shifts the bits of an integer to the right by a specified number of positions.

*x = 10*

*result = x >> 2*

*print(result) # Output: 2 (Binary: 10)*

**Left shift operator:** shifts the bits of an integer to the left by a specified number of positions.

*x = 10*

*result = x << 2*

*print(result) # Output: 40 (Binary: 101000)*

**Q.5. Create a list containing int type data of length 15. Then write a code to check if 10 is present in the list or not.**

my\_list = [5, 8, 12, 10, 15, 20, 17, 9, 11, 13, 6, 3, 18, 14, 7]

if 10 in my\_list:

print("yes")

else:

print("no")