SAU **Programming with Python** , **Quiz 01 (Total Marks 20) Duraton: 40 minutes**

28/02/2025, BTech Sem 2nd, Name: ……..……Roll No:.....

Q 1: What will the output of the 3 print statements in the following: ***3 marks***

***Soln (Write your answer here)*:**

```
>>> message = “Welcome to Python Programming”
>>> print(message[7:20])
>>> cubes = [x**2 for in range(3, 8)]
>>> print(cubes)
>>> mystr= ‘>’.join([‘one’, ‘two’, ‘three’])
>>> print(mystr)
```

Q 2: Find the output of the following: ***6 marks***

1.

```
a = 150
b = 190
while(a!=b)
        if (a > b):
                a = a - b
        else:
                b = b - a
print(a, b)
```

Soln:

2.

```
total = 0
N = 11
for i in range(1, N+1):
        for j in range(1, N+1):
                total = i+j
print(total)
```

Soln:

3.

```
i = x = 0
while i < 10:
        if ( i % 5 == 0):
                print(x)
                x += 1
        i += 1
print(x)
```

Soln:

Q 3: Revise the following *‘for’* loop code using a *‘while’* loop : ***3 marks***

***Soln (Write your answer here)*:**

```
total = 0
for count in range(1, n, 2):
      total += count
```

Q 4: Write a program to display the following. Input the number of rows from the user. ***4 marks***

***Soln (Write your answer here)*:**

```
* * * * *
  * * * *
    * * *
      * *
        *
```

Q 5: Write a Python function `collatz(n)` that takes a positive integer n and returns the sequence of numbers following the rules below until it reaches 1. ***4 marks***

If `n` is even, divide it by `2`.

***Soln (Write your answer here)*:**

If `n` is odd, multiply it by `3` and add `1`.

Repeat this process until `n` becomes `1`.