1. Write a Python Program to Display Fibonacci Sequence Using Recursion?

Ans1

def fibonacci\_recursive(n):

if n <= 1:

return n

else:

return fibonacci\_recursive(n-1) + fibonacci\_recursive(n-2)

n\_terms = int(input("Enter the number of terms: "))

if n\_terms <= 0:

print("Invalid input!")

else:

print("Fibonacci sequence:")

for i in range(n\_terms):

print(fibonacci\_recursive(i), end=" ")

2. Write a Python Program to Find Factorial of Number Using Recursion?

Ans2

def factorial\_recursive(n):

if n == 0:

return 1

else:

return n \* factorial\_recursive(n-1)

n = int(input("Enter a non-negative integer: "))

if n < 0:

print("Invalid input!")

else:

result = factorial\_recursive(n)

print(f"The factorial of {n} is {result}")

3. Write a Python Program to calculate your Body Mass Index?

Ans3

height = float(input("Enter your height in meters: "))

weight = float(input("Enter your weight in kilograms: "))

bmi = weight / (height \*\* 2)

print(f"Your BMI is {bmi:.2f}")

4. Write a Python Program to calculate the natural logarithm of any number?

Ans4

import math

x = float(input("Enter a positive number: "))

if x <= 0:

print("Invalid input!")

else:

result = math.log(x)

print(f"The natural logarithm of {x} is {result:.2f}")

5. Write a Python Program for cube sum of first n natural numbers?

Ans5

n = int(input("Enter a positive integer: "))

if n <= 0:

print("Invalid input!")

else:

cube\_sum = sum(i\*\*3 for i in range(1, n+1))

print(f"The cube sum of the first {n} natural numbers is {cube\_sum}")