**Module 2**

**Python Assignment 3**

1. Write a Python program to find area of a circle using math function.

import math

r = float(input("Enter the radius of the circle: "))

area = math.pi\* r \* r

print("%.2f" %area)

**Input:**

6

**Output:**

113.10

1. Write a program to find Area of Regular Polygonusing math function.

import math

n\_sides = int(input("Input number of sides: "))

s\_length = float(input("Input the length of a side: "))

p\_area = n\_sides \* (s\_length \*\* 2) / (4 \*math.tan(math.pi / n\_sides))

print("The area of the polygon is: ",p\_area)

**Output:**

Input number of sides: 4

Input the length of a side: 20

The area of the polygon is: 400.00000000000006

1. Write a program to find Area of a Segment of a Circle Formulausing math function.

|  |
| --- |
| import math    pi = 3.14159    def area\_of\_segment(radius, angle):        area\_of\_sector = pi \* (radius \* radius) \* (angle / 360)    area\_of\_triangle=1/2\*(radius\*radius)\*math.sin((angle\*pi)/180)      return area\_of\_sector - area\_of\_triangle;     radius = 10.0  angle = 90.0  print("Area of minor segment=", area\_of\_segment(radius,angle))  print("Area of major segment =",  area\_of\_segment(radius, (360 - angle))) |

**Output :**

Area of minor segment = 28.5397

Area of major segment = 285.619

1. Write a python program to shuffle list l1=[100,1,2,3,30,40,”hai”,”hello”].
2. Write a program to generate random numbers between 1,10000 and difference between each random number is 50.
3. Write a python program by using math module to find
4. Sin600

math.sin(60)

Output: -0.3048106211022167

1. cos(pi)

math.cos(pi)

Output: -0.9999987317275395

1. tan900

math.tan(90)

Output: -1.995299814162892

1. angle of sin(0.8660254037844386)
2. 5^8
3. Square root of 400
4. The value of 5^e
5. The value of Log(1024), base 2
6. The value of Log(1024), base 10
7. The Floor and Ceiling value of 23.56