

CHRIST (Deemed to be University)
DEPARTMENT OF MATHEMATICS
LA-IV
SEPTEMBER-2018
Introduction to Python Programming

1. Evaluate $y = \sum_{n=1}^{n=\infty} \frac{(-1)^n x^{2n+1}}{(2n+1)}$ for 10 terms.
2. Write a Python program to calculate sine function using series expansion and plot it.
3. Write Python Program to Find the Sum of the Series: $1 + 1/2 + 1/3 + \dots + 1/N$.
4. Write a Python program to plot the Venn diagram of three sets $A = \{3, 6, 7, 8, 9, 2\}$, $B = \{1, 3, 4, 7, 8\}$ and $C = \{1, 3, 5, 6, 8, 9\}$.
5. Find the area between the curves $f(x) = \sqrt{16 - x^2}$ and $g(x) = \sqrt{4 + x^2}$.

* * * * *