Date: 18 August, 2020

CLASS ASSIGNMENT – 1

Instructions:

- **The programs should be in a single doc file and the script file program can be copy and paste in it followed by addition of the output window. You can use the direct "printscreen" option.**

- **The submission deadline for this assignment is 23 August, 2020 and the evaluation will not done after the deadline.**

1. Define a row vector and column vector and perform the following operations:
(i) Addition of both the vectors.
(ii) Subtraction of both the vectors
(iii) Multiplication of both the vectors
(iv) Division of both the vectors
(v) Find the size of both the vectors
(vi) Reference any element of both the vectors

2. For a vector x, write down the Matlab/octave command to compute the following for x = 1 : 0.3 : 4:
(i) $\cos x^2 - \sin x^2$
(ii) $e^x(1 + \cos 3x))$

3. Let u be the row vector defined as [1 2 3 4 5] then write the following commands in a script file:
(i) Subtract 1 from each element
(ii) Add 10 to the even-index elements
(iii) Compute the square root of each element
(iv) Raise to the power 2 each element

4. Consider two complex numbers as (-2 + 4i) and (6 - 9i) and make a script file for the addition, subtraction, multiplication and division operations of these defined numbers. And check the output with the hand calculations.

5. Make a script file to make a plot the following functions using the linearly spaced vector initialization command (plot figures should consist the axis labels and a title):
(i) Cos x (range of x: 0 to $4\times\pi$)
(ii) Cosec x (range of x: 0 to $4\times\pi$)
(iii) Tan x (range of x: 0 to $4\times\pi$)
(iv) Cot x (range of x: 0 to $4\times\pi$)
(v) e^x (range of x: 0 to 10)