Name of Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Matlab (and certain other programming languages) does not allow arrays to be defined for the indice value 0, nor for negative values.

e.g. In Matlab, define y(-1) = 5 and then run the program. You will get the following error:

Attempted to access y(-1); index must be a positive integer or logical.

# Lab1: OPERATION ON DISCRETE TIME SIGNALS

Preliminaries:

Error in *program name* (line *#*)

y(-1) = 5;

As a result, you must define all indices to be whole numbers.

In order to plot negative values, you need to create a dummy array n. For e.g., if you are plotting from n = -5 to +5, then you must declare the array n as n = -5:5 in Matlab.

Exercise a): Plot the discrete-time signal: x[n]={0, 0, 0, **0**, 0, 0, 1, 2, 3, 4, 0, 0…}. The boldface indice denotes the n = 0 value.

Determine and plot the following sequences: You must include all non-zero results

1. y1[n] = x[n] - x[n-3] (signal shifting and subtraction)

For this exercise, you will need to pad the array with zeros

1. y2[n]=0.5x[n] (scaling)
2. y3[n]= x[-n] (folding)

Upload you code to eConestoga under Lab1. Show the results on the due day to the instructor.

If you are unsure about a command, use one of the following Matlab documents at the command prompt indicated by >> in the command window:

1. help,
2. lookfor,
3. helpdesk,
4. helpwin,
5. intro
6. demo,