

Lab No. – 04, Time: 1:30 Hours

Course No. – CSE 4104

**Instructions:** Use separate MATLAB script for the questions that's described below.

Consider the following signals:

$x(n) = \{1, 2, \mathbf{0}, -3, 4\}$ ,  $h(n) = \{\mathbf{4}, 0, -5, 1, 0\}$  where the bold values are in zero index respectively.

- Q1. Perform the following operations on the given signals  $x(n)$  &  $h(n)$ . Finally, draw 6 the resultant signals using subplot function. Use stem function for observing the signals of Q1.
- Addition
  - Subtraction
  - Multiplication
- Q2. Now, perform the convolution operation for the signals  $x(n)$  &  $h(n)$ . After 7 performing the convolution operation, plot the  $x(n)$ ,  $h(n)$  and convolved signals using subplot function. Use stem function for observing the signals of Q2.
- Q3. Now, perform the correlation operation for the signals  $x_1$  &  $x_2$ . After performing 7 the correlation operation, plot the  $x(n)$ ,  $h(n)$  and correlated signals using subplot function. Use stem function for observing the signals of Q3.