Topic: Design of Linear phase FIR filter

1. For the given impulse response below

And consider

* 1. Find Magnitude and Phase response of above LTI systems.
  2. Plot the following windows with N=61

1. Generalized Hamming window

1. Hamming window is Generalized Hamming window with
2. Hanning window is Generalized Hamming window with
3. Bartlet window is defined below
4. Blackman window is defined below
   1. Calculate and plot the DTFT of above window functions.

2. Let

Calculate the frequency response of by considering each window function defined in 1(b).

b) State your observations and conclusions for the above operations?

Note:

1. Generalize your program as much as possible, which will be helpful for further labs
2. Zip all your files (includes soft copy and ‘.m’ files) and submit to respective lab TA.