**Tutorial Week 10**

1. Using a Blackman window in place of a Hamming window leads to
   * + - 1. Better Frequency resolution, Improved spectral leakage and poorer scallop loss;
         2. Poorer Frequency Resolution, Improved Spectral Leakage and worse Scallop Loss.
         3. Better Frequency Resolution, Improved Spectral Leakage and Improved scallop loss.
         4. None of the above;
2. A signal comprising two cosine terms with frequencies 62 and 71 Hz respectively. If fs=2000 and N=250 samples of the signal are acquired, can these two components be resolved in an N points DFT?
3. yes
4. I don’t know
5. For H(z) = Y(z)/X(z) = (z^2 + 0.5z +1)/(z^2 – z- 1),
6. the ‘a’ vector (the coefficients of the output) and the ‘b’ vector (coefficients of the input) are:
7. a= [1 0.5 1] and b = [1 -1 1];
8. b=[1 0.5 1] and a = [1 -1 -1];
9. I don’t’ know
10. Compute the DTFT of the system
11. If x[n] = [1 1],
    1. compute the DFT of x[n] , X[k] using the DFT Matrix method;
    2. If x’[n] = [1 0 1 0], what is the DFT?
    3. If x’[n] is in input to a system with h[n] = [1 0 0.3 0.2], compute using the DFT based approach;