DSP LAB-29

• Generating elementary signals like Unit Step, Ramp, Exponential, Sine, and

Cosine sequences.

• Demonstrates the effect of sampling, aliasing.

• Show that the highest rate of oscillation in a discrete-time sinusoidal is obtained

when ω=π.

• Consider the analog signal

⟹Sampling it at 200 Hz and 75 Hz. Show the discrete-time signal after sampling. -> realization.

• Consider the analog signal: Show the effect of sampling rate.

• The impulse response of a discrete-time LTI system is h(n)={u(n)-u(n-5)}.

⟹Determine the output of the system for the input x[n]=u(n), using the convolution sum.

• Given x(n)=[1,3,-2,4] y(n)=[2,3,-1,3], z(n)=[2,-1,4,-2]

⟹Find the correlation between x(n) & y(n) and y(n) & z(n). ⟹ observe the realization.

• Filter realization using 6-point averaging, 6-point differencing equations.

• DFT of

⟹Also DFT with window + window function realization.

• Design a low pass FIR filter to remove high-frequency noise from a signal using convolution.