

Problem 9.3

Given the LTI has the system function:

$$H(z) = 1 + 5z^{-2} - 3z^{-3} + 2z^{-5} + 4z^{-7}$$

(a) Difference equation that relates output $y[n]$ to input $x[n]$:

$$y[n] = x[n] + 5x[n-2] - 3x[n-3] + 2x[n-5] + 4x[n-7]$$

(b) Plot of the output sequence $y[n]$ when input is $x[n] = \delta[n]$:

