

ECE 310: Quiz #3 (10am Section G) Fall 2018

UIN: _____

Name: _____

Score: _____

1. (5 pts) Determine the z-transform and sketch the pole-zero plot with the ROC for the signal

$$x[n] = \frac{1}{2} \left(\frac{1}{2}\right)^n u[n] - \delta[n-1]$$

2. (5 pts) Given the z-transform pair $x[n] \leftrightarrow X(z) = \frac{1}{1-\frac{1}{4}z^{-1}}$ with ROC: $|z| > 1/4$, use the z-transform properties to determine the z-transform of the signal $y[n] = 2^{n-1}x[n-1]$