

ECE 310: Quiz #3 (6pm Section CSS) Fall 2018

UIN: _____

Name: _____

Score: _____

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

$$x[n] = \left[\left(\frac{1}{2}\right)^n + \left(\frac{1}{3}\right)^n \right] u[n]$$

2. (5 pts) Given the z-transform pair $x[n] \leftrightarrow X(z) = \frac{1}{1 - \frac{1}{5}z^{-1}}$ with ROC: $|z| > 1/5$, use the z-transform properties to determine the z-transform of the signal $y[n] = (n - 3)x[n - 3]$