

Full Name: \_\_\_\_\_

EEE 5502 (Fall 2022) – Practice

The Inverse Z-Transform, 2022

**Question #1:** Determine the impulse responses  $h[n]$  for the following difference equations.

(a)  $y[n] + (0.8)y[n - 1] = x[n]$  (Assume system is causal)

(b)  $y[n] - 4y[n - 1] + 4y[n - 2] = x[n]$  (Assume system is anti-causal)

(c)  $y[n] - 2.5y[n - 1] + y[n - 2] = x[n]$  (Assume system is causal)