

ECE 310: Quiz #2 (6pm Section CCS) Fall 2018

UIN: _____

Name: _____

1. (6 pts) Consider the system specified by the following input-output relation:

$$y[n] = x[n] \cdot x[n - 2]$$

Determine if it is: (i) linear or non-linear, (ii) time-invariant or time-varying. **Justify your answers with proofs or counter-examples.**

2. (4 pts) Compute the convolution $x[n] * h[n]$ for $x[n] = u[n - 2] - 0.5u[n - 5]$ and $h[n] = (n^3 - 2)(u[n] - u[n - 2])$.