

# Signals and Systems ECE 202

## Assignment 5

Classify the following CT systems as to linearity, time invariance, causality, stability, and invertibility.

1.

$$y(t) = \cos(2\pi t)x(t)$$

2.

$$y(t) = x(t - 5) - x(3 - t)$$

3.

$$y(t) = u(x(t))$$

4.

$$ty'(t) - 8y(t) = x(t)$$

5.

$$y(t) = \int_{-\infty}^{t/3} x(\lambda)d\lambda$$

6.

$$y(t) = \int_{-\infty}^{t+3} x(\lambda)d\lambda$$