Quiz #6 EE 360 Fall 2021   Name:_____

Open book and open notes

Show your work for credit and place boxes around your answers.

1. Consider an analog system described by the differential equation,

$$\frac{dy(t)}{dt} + 3y(t) = 2\frac{dx(t)}{dt} + 4x(t)$$

Where $x(t)$ is the system's input signal and $y(t)$ is the system's output signal. Determine the input/output relation of this system (solve for the total response of the differential equation) when,

$$y(t = 0) = -1$$

And $x(t) = \delta(t)$.