ECE 343 - Homework #14

Natural Response - Summer 2018

1) Find y(t) for the system

$$y' + 7y = 0$$

$$y(0) = 10$$

Plot y(t) you computed vs. the impulse response from Matlab for Y(s)

2) Find y(t) for the system

$$y'' + 6y' + 5y = 0$$

$$y(0) = 10$$

$$y'(0) = 1$$

Plot y(t) you computed vs. the impulse response from Matlab for Y(s)

3) Find y(t) for the system

$$y'' + 6y' + 34y = 0$$

$$y(0) = 10$$

$$y'(0) = 1$$

Plot y(t) you computed vs. the impulse response from Matlab for Y(s)

4) Find y(t) for the system

$$y''' + 9y'' + 33y' + 65y = 0$$

$$y(0) = 10$$

$$y''(0) = y'(0) = 0$$

Plot y(t) you computed vs. the impulse response from Matlab for Y(s)