

EENG307: Intro to Feedback Control

Fall 2020

Homework Assignment #5

Quiz #2

Quiz Question Monday: For the following systems, estimate the rise time, settling time, and percent overshoot for a step reference input

1. $G(s) = \frac{6}{s+15}$

2. $G(s) = \frac{16}{s^2+3s+25}$

Which of the following is the correct answer for question 2?

(a) $t_s = 0.31\text{s}, t_r = 0.44\text{s}, \%OS = 30\%$

(b) $t_s = 3.1\text{s}, t_r = 0.44\text{s}, \%OS = 37\%$

(c) $t_s = 1.5\text{s}, t_r = 0.2\text{s}, \%OS = 0\%$

(d) $t_s = 3.1\text{s}, t_r = 5\text{s}, \%OS = 0.3\%$

(e) $t_s = 0.44\text{s}, t_r = 3.1\text{s}, \%OS = 30\%$