
Exam

Control Engineering

FCHPT STU in Bratislava

19.8.2006

Answers

Problem 1. Critical gain of a P controller in closed-loop with controlled system described by transfer function

$$G_p(s) = \frac{1}{s^3 + 5s^2 + 3s + 7} \text{ je}$$

Answer: 8.00

2

Problem 2. The step response function of the process described by the differential equation $10y''(t) + 60y'(t) + 90y(t) = 3u(t)$ is

Answer: $1/30 - 1/30 e^{-3t} - 1/10 e^{-3t}t$

3
