

ECE 360 Optional Questions
Will not be collected

- Read Chapter 11.1-11.4
- There will be a review session on Friday, September 27, 2002 between 12:35-1:40pm.
- Office Hours: M, T 10:00-11:30 in 2210 EB.
- Check the web page for extra problems with solutions.
- Exam 1 is on Wednesday, October 2, 2002 during class time.

1. 11.2 from Ambardar
2. 11.7 c,e,f from Ambardar
3. 11.19 b,d,e from Ambardar
4. Consider the LTI system described by the following differential equation.

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

- a) Find the transfer function of this system.
- b) Find the impulse response, $h(t)$, for this system.
- c) Find the unit step response, $s(t)$, for this system.

Note: You can do this in the Laplace domain by taking $X(s) = \frac{1}{s}$, computing $Y(s)$ in the s-domain, and then finding the inverse transform. Or you can do it in the time-domain.

- d) Verify that $h(t) = \frac{ds(t)}{dt}$

5. 11.30 b from Ambardar.