

**Northwestern University**  
Department of Electrical and Computer Engineering

ECE 222

Fall 2004

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**Problem set 5:**

**Date Issued: Oct. 27**

**Date Due: Nov. 3**

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Reading Assignment: Sect. 3.8, 4.1-4.4 in Oppenheim and Willsky. *Note in Chapter 3, we will not cover sections 3.9-3.11.*

Do the following problems in Oppenheim and Willsky. Be sure to clearly explain your work and state any assumptions that you make.

- 3.38 (work this problem by first finding the frequency response  $H(e^{j\omega})$  of the LTI system and the Fourier series for the input. Then use the eigenfunction property of complex exponentials to find the Fourier Series for the output.)
- 4.21 (a),(b), (d),(f)
- 4.22 (a),(b),(c)
- 4.23
- 4.24