CENG 4331 Review for Final Exam

Review your homeworks and Previous Exams!

Ch1. Review the Basics

Ch2. 2.3 Difference Equations

Ch. 3 The Fourier Series and Fourier Transforms

1. Be able to calculate the Trigonometric Fourier Series as shown in example 3.2, page 103.
2. Be able to calculate the complex exponential series as illustrated in Example 3.4, page 109.
3. Be able to calculate the Fourier Transform as illustrated in Example 3.8, page 115.
4. Understand how to use the Properties of the Fourier Transform, page 141.
5. Understand how to use the Table of Fourier Transform Pairs, page 142.

Ch. 4 Fourier Analysis of Discrete-Time Signals

1. Understand the definition of the DFT (eq. 4.33)
2. Understand the computation of DFT (Example 4.8).
3. Understand the general concepts of the FFT and why it is used.

Ch. 5 Fourier Analysis of Systems

1. Review Example 5.2, page 224-228 in detail. Know Equation 5.11.
2. Review 5.3, Analysis of Ideal Filters and the sinusoidal response given by equation 5.34, page 237.
3. Understand the sampling theorem as discussed in 5.4 pages 242-246. Compare Examples 5.6 and 5.7 for sampling speech.

Ch. 6 The Laplace Transforms and the Transfer Function Representation HW7

1. Laplace definition and relation to Fourier Transform, pages 281-283.
2. Review the tables of Laplace Transforms for use in applications, pages 297-298.
3. Initial and final-value theorem pages 294-295.
4. Understand the calculation of the inverse Laplace Transform using partial fraction expansion as in Examples 6.17-6.21.
5. Laplace response of differential equations as in Example 6.28, page 318.
6. Transfer functions as in Examples 6.37, page 333.
7. Feedback loops Figure 6.20, Page 340.

Chapter 7 The Z Transform   HW 7

1. Compute the z transform and inverse transform.
2. Solve difference equations using z transforms.

OF COURSE, REVIEW ALL HOMEWORKS, QUIZZES AND TESTS.