

Chapter 23 Study Guide

Prior to lecture:

1. Read Ch. 23 in textbook
2. Work through example problem 23.1, 23.5 and 23.6.
3. Read the “Problem-Solving Strategies for Lenz’s Law” on pages 821. Rewrite the procedure in your own words.
4. Answer conceptual questions 3, 4, and 29 on page 857 of the text.
5. Define the following terms:
 - a. Induced emf
 - b. Magnetic flux
 - c. Faraday’s law of induction
 - d. Lenz’s law
 - e. Motional emf
 - f. Peak emf
 - g. Eddy current
 - h. Back emf
 - i. Transformer
 - j. Inductor
 - k. Self-inductance
 - l. Mutual inductance
 - m. Time constant for RL circuit
 - n. Inductive reactance
 - o. Capacitive reactance
 - p. RLC series circuit impedance
 - q. Resonant frequency
 - r. Power factor
 - s. Phase angle

After the lecture

1. Review notes from lecture.
2. Redo all example problems from lecture.
3. Reread text
4. Work through example problem 23.7, 23.11, and 23.14.
5. Redo all recitation worksheet problems
6. Answer conceptual questions 5, 16, 18, and 28 of the text.
7. Complete homework for chapter 23
8. For extra practice, try the following problems from chapter 23 of the textbook: 12, 14, 17, 18, 20, 36, 40, 48, 55, 60, 67, 76, 80, 89, 103, and 104.