

Chapter 17 Study Guide

Prior to lecture:

1. Read Ch. 17 in the textbook
2. Work through example problem 17.1 in the text.
3. Complete the “Check your understanding” on pages 601, 604, 608, 619, and 626
4. On a sheet of paper, complete the “Take-Home Experiments” on pages 600 and 578. Answer all questions.
5. In section 17.7 of the text, the process of using ultrasound in medical therapy and as a medical diagnostic is discussed. Briefly describe both types of usage and explain the underlining physics.
6. Answer conceptual questions 1, 4, 6, 9, 11, and 15 on page 628 of the text.
7. Define the following terms:
 - a. Doppler effect
 - b. Overtones
 - c. Infrasound
 - d. Sound
 - e. Timber
 - f. Tone
 - g. Pitch
 - h. Loudness
 - i. Ultrasound
 - j. Intensity

After lecture:

1. Review notes from lecture
2. Redo all example problems from lecture
3. Reread text
4. Work through examples 17.3, 17.4, 17.5 and 17.8 in the text.
5. Redo all recitation worksheet problems
6. Answer conceptual questions 2, 3, 7, 8, 12, 13, and 14 on page 628 of the text.
7. Complete homework for chapter 17
8. For extra practice, try the following problems from chapter 17 of the textbook: 2, 3, 6, 11, 16, 19, 21, 28, 29, 31, 36, 40, 43, 44, 47, 51, 54, 58, 66, 70, 83, 84