

Chapter 27 Study Guide

Prior to lecture:

1. Read Ch. 27 in textbook
2. Work through example problem 27.1 and 27.8.
3. On a sheet of paper, complete the “Take-Home Experiments” on pages 969 and 974.
4. Read the “Problem-Solving Strategies for Wave Optics” on pages 981. Rewrite the procedure in your own words.
5. Answer conceptual questions 1, 4, 7, 34 and 35 on page 994 of the text.
6. Define the following terms:
 - a. Wave Optics
 - b. Physical Optics
 - c. Constructive and Destructive Interference of light
 - d. Wavelet
 - e. Wavefront
 - f. Diffraction
 - g. Huygen’s Principle
 - h. Diffraction grating
 - i. Grating number
 - j. Rayleigh criterion
 - k. Thin film interference
 - l. Polarization of light
 - m. Polarized light
 - n. Malu’s Law
 - o. Brewster’s Law

After the lecture

1. Review notes from lecture.
2. Redo all example problems from lecture.
3. Reread text
4. Work through example problem 27.3, 27.4, 27.7 and 27.9.
5. Redo all recitation worksheet problems
6. Answer conceptual questions 2, 9, 12, 16, 19, 30 and 32 of the text.
7. Complete homework for chapter 27
8. For extra practice, try the following problems from chapter 27 of the textbook: 5, 10, 12, 15, 19, 21, 34, 37, 38, 39, 47, 51, 57, 60, 62, 70, 80, 85, 90, 92, and 96.