

Lecture 14

Pre-Lecture Preparation (due within the first 5 minutes of class):

Read pages 808 – 814 and 819 – 822 in the textbook (Serway 9th edition) and do the following:

- 1) Quick Quizzes: 27.1 - 27.2, 27.4 - 27.5
- 2) Book Objective Questions (p. 824): 6 and 7
- 3) Book Problems (p. 827): 29

Goals for the Lecture:

- 1) Understand the terms current, drift velocity, and charge carrier
- 2) Understand Ohm's Law and how to find resistance of a conductor
- 3) Understand how temperature changes resistance in common conductive materials and in semiconductors and superconductors
- 4) Pay particular attention to equations: 27.1-27.3, 27.7-27.8, 27.10, 27.20, and 27.21-27.22

Post-Lecture Study Guide (I do not collect this):

Review the worksheets or other lecture material within 24 hours (preferably the same day as the lecture) to reinforce the ideas. Review the pre-lecture questions to make sure you understand them.

Do problems:

Ch 27: Conceptual Questions: 2 and 5

Ch 27: Objective Questions: 1 and 12

Ch 27: Problems: 19 and 43

Continue with the additional recommended study problems from chapter 27