Chapter 21: Induction and Alternating Currents

1. Be able to describe and calculate magnetic flux and to identify when it is increasing or decreasing.
2. Be able to describe at least two ways in which magnetic flux can be changed.
3. Be able to use plots of magnetic flux Φ *vs* t to determine induced emf.
4. Be able to calculate the size of the emf and/or the direction of the current induced in a coil of wire as a result of a change in magnetic flux in a specified amount of time.
5. Be able to explain how door bells, credit card readers, and magnetic disks in hard drives exploit emfs induced by changes in magnetic flux.
6. Be able to describe what alternating current (AC) is and to distinguish it from direct current (DC).
7. Be able to describe how alternating current is produced by generators.
8. Be able to make calculations for ideal transformers using the numbers of windings on primary and secondary coils in raising or lowering alternating emfs. (Why aren't transformers used to change DC emfs?)
9. Be able to describe things that you have observed that illustrate something we have dealt with in this chapter.