

Ch. 36 – Magnetism (p. 562)

1. What regions of areas produce a magnetic force?
2. All magnets have both a _____ and _____ pole.
3. Like poles _____, opposite poles _____.
4. If you break a magnet in half (figure 36.3, pg. 564), can you separate it into North & South poles? What happens?
5. What is a magnetic field?
6. What is the direction of the magnetic field outside of the magnet?
7. What do magnetic field lines that are close together represent about the magnetic field?
8. What is the main difference between an ordinary piece of iron and a strongly magnetized piece of iron?
9. Most common magnets are made from alloys containing four types of metals. What metals can be found in magnets? (*pg. 566 footnote.*)
10. How can a magnet attract a piece of iron that is not magnetic?
11. How do you make a permanent magnet?
12. A moving (electric) charge produces a _____.
13. What is an electromagnet?
14. If a charged particle moves in a magnetic field, the magnetic character of motion becomes evident. The charged particle experiences a _____.
15. A current carrying wire experiences a _____ in a magnetic field.
16. How does a simple DC motor work?

17. Compasses point towards the North Pole because even the _____ has a magnetic field.

Ch. 37 - Electromagnetic Induction (p. 577)

1. Examine figure 37.1 on page 577: When a magnet is moved into a coil of wire _____ is induced in the coil and _____ in the coil are set in motion.

2. How much voltage is produced depends on what two things:

a) _____

b) _____

3. What is electromagnetic induction?

4. State Faraday's Law:

5. What is a generator?

6. Transformers can "step-up" or "step-down" voltage. What is the purpose of a transformer?

7. What does it mean to "induce" an electric or magnetic field?

8. An electromagnetic wave is composed of... _____
