

CHAPTER REVIEW

Chapter 2

Magnetism

I. Vocabulary Review

Complete the following sentences using these terms: magnetic poles, magnetic field, electric motor, induced magnetism, electromagnet, loudspeaker, induced current, electric generator, transformer.

1. A device used to change variations in electric current into sound waves is called a(n) _____.
2. The two ends of a bar magnet that point north-south are called the _____.
3. A(n) _____ can raise or lower electric voltage.
4. An electric current produced by using a magnet is a(n) _____.
5. The region around a magnet where the magnetic force acts is its _____.
6. A(n) _____ changes kinetic energy of rotation into electric energy.
7. A(n) _____ uses an electromagnet to change electric energy into mechanical energy, which can be used to do work.
8. Magnetism that occurs only in the presence of a magnetic field is called _____.
9. A magnet produced by current flowing through a coil of wire is a(n) _____.

II. Concept Review

Answer the following questions in phrases or complete sentences.

10. On a bar magnet, where will the magnetic lines of force be closest together? _____

11. What effect does a magnetic field have on a rubber eraser? Explain why? _____

12. Use the concept of magnetic domains to explain why striking a magnet with a hammer could cause the magnet to lose some or all of its magnetism. _____

13. Describe the effect of a magnetic field on a static charge. _____

Chapter Review 2 (continued)

14. What is the name of the device between the voltmeters in Figure 1? _____

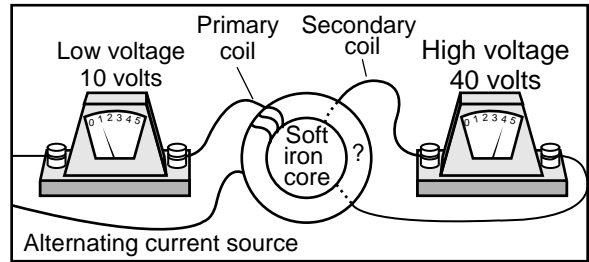


FIGURE 1

15. In Figure 1, how many times does the secondary coil need to wrap around the soft iron core in order to generate the 40 volts of current shown?

16. In Figure 1, how many volts would be indicated by the high voltage galvanometer if the low voltage galvanometer were to read 15 volts? _____

III. Skills/Process Review

Answer the following questions in complete sentences.

Teanna assembled the armature of an electric motor by inserting a knitting needle through a coil of wire with 30 turns. She then mounted it on two pairs of crossed nails between opposite poles of two bar magnets. Teanna completed the armature by taping each of the wire's bare ends to one side of the needle, making a commutator. She took the ends of two wires that she had connected to the terminals of a 6-volt battery and touched each side of the commutator, and the armature began to spin.

17. Describe the transfer of energy achieved by Teanna's electric motor. _____

18. Describe the two different types of magnets that Teanna used in her electric motor. _____

19. How would the operation of Teanna's electric motor differ if she had used 60 turns in her wire coil? _____

IV. EYV Review

20. **History Connection: Granville T. Woods** Summarize the contribution that Granville T. Woods made to the telephone microphone. _____