Name: _____

Date: _____ Grade: _____

SECTION QUIZ 6-1



Remember:
Score an average of 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.5 points.

Fill in the blank or circle True or False.

1. The process that makes chrome by coating a metal such as iron with chromium is: _____.
   (a) electrolysis (b) electromagnetic induction (c) oxidation (d) paint

2. One of Faraday's discoveries showed the relationship of _____ and electricity.

3. The First Law of Electrolysis states that: _____.
   (a) the amount of an element transformed at each electrode is proportional to the amount of electricity
   (b) electrolysis releases elements proportional to their equivalent weight
   (c) the force of attraction between two poles is directly proportional to the product of their strength and inversely proportional to the square of the distance separating them
   (d) both electrolysis and valence depend on the number of electrons an element is willing to release or accept

4. The Second Law of Electrolysis states that: _____.
   (a) the amount of an element transformed at each electrode is proportional to the amount of electricity
   (b) electrolysis releases elements proportional to their equivalent weight
   (c) the force of attraction between two poles is directly proportional to the product of their strength and inversely proportional to the square of the distance separating them
   (d) both electrolysis and valence depend on the number of electrons an element is willing to release or accept

5. Dividing atomic weight by _____ gives equivalent weight.

6. Aluminum has an atomic weight of 27 and a valence of 3. Its equivalent weight is: _____.

7. To change the aluminum ion, Al^{+++}, to a neutral atom, the ion must: _____.
   (a) be boiled in oil
   (b) gain three electrons
   (c) lose three electrons
   (d) be heated at low temperatures

8. A _____ is a natural magnet.

9. Stroking iron to make it magnetic is an example of _____ magnetism.
   (a) reduced (b) enhanced (c) induced (d) stroked

10. Unlike (opposite) magnetic poles _____ one another.

11. Geographic north pole and magnetic north pole are at _____ locations.

12. The difference between geographic north and magnetic north is magnetic: _____.
    (a) declination (b) inclination (c) induction (d) refraction

13. The Law of Magnetic Force states that: _____.
    (a) the amount of an element transformed at each electrode is proportional to the amount of electricity
    (b) electrolysis releases elements proportional to their equivalent weight
    (c) the force of attraction between two poles is directly proportional to the product of their strength and inversely proportional to the square of the distance separating them
    (d) both electrolysis and valence depend on the number of electrons an element is willing to release or accept

14. The Inverse Square Law for force applies to: _____.
    (a) electric forces only (c) electric, gravitational and magnetic forces
    (b) gravitational forces only (d) reciprocal squares

15. A domain is: _____.
    (a) a small elementary magnet in a ferromagnetic substance
    (b) a series of electrons spinning in opposite directions
    (c) an area over which a magnet rules
    (d) the length of the magnet

16. A _____ iron nail has its domains all organized in the same direction.

17. To decrease the magnetism of a metal it should be _____.

18. A needle can be made magnetic by: _____.
    (a) stroking the needle in the same direction with a magnet
    (b) heating the needle
    (c) moving a magnet back and forth along the needle
    (d) putting the needle in liquid magnetism

19. Striking a magnet sharply with a hammer _____ its magnetism.
    (a) unaffected (b) weakens (c) strengthens (d) multiplies

20. Electrons traveling along wires produce a _____ field around the wire.

21. Magnetism is due to electric charge in _____.

22. The recording heads in audio and videocassette recorders use _____.

23. A magnetic field can be created by a wire that carries an _____ current.

24. A magnetic field is _____ when the current changes direction.

25. _____ electricity produces a magnetic field.

26. The lines of force around a wire form _____ circles.

27. An electromagnet can be made stronger by sending more current through it or by: _____.
    (a) increasing the number of turns of wire
    (b) removing the insulation
    (c) removing the iron from the core of the solenoid
    (d) applying heat

28. Joseph Henry's electric _____ became an essential part of Samuel F. B. Morse's telegraph.

29. Bell's telephone surprised scientists because of its _____.

30. When carbon particles are _____, they conduct electricity better.

31. A magnetic field is: _____.
    (a) a series of magnets that act together
    (b) the region in which a magnet exerts its influence
    (c) the region in space that has no magnetic lines of force
    (d) a place where magnets grow

32. When a paperclip jumps to a magnet before being touched, it responds to: _____.
    (a) action at a distance
    (b) static electricity
    (c) the lines of force of the magnetic field
    (d) anti-rotational gravity

33. Magnetism can be produced by: _____.
    (a) current electricity
    (b) static
    (c) electricity
    (d) striking lodestones together

34. A magnetic field can be created by a wire provided: _____.
    (a) it carries an electric current
    (b) it is in a strong static electric field
    (c) it is made of aluminum
    (d) the field coordinates are the same

35. A moving electric field produces magnetism. A moving magnetic field produces electricity. The production of either electricity or magnetism by the other is electromagnetic _____.

36. *"Success is the result of perfection, hard work, learning from failure, loyalty and _____."*

37. According to Vincent Van Gogh, *"Great things are not done by impulse, but by a series of _____ brought together."*

38. *"Unlike magnetic poles and personalities, our _____ is like a magnet that attracts people like us and repels people not like us."*

39. According to Benjamin Disraeli, *"Action may not always bring happiness; but there is no happiness without _____."*

40. *"The heights by great men reached and kept, Were not attained by _____, But they, while their companions slept, Were toiling upward in the night."*