Chapter 17 – Introduction to Electricity

1. Law of Electric Charges - like charges repel and opposite charges attract
2. Electric Force - the force between charged objects
3. Conduction - occurs when electrons are transferred from one object to another by direct contact.
4. Induction - occurs when charges in an uncharged object are rearranged without direct contact with a charged object.
5. Conductor - material is which charges can move easily.
6. Insulator - material in which charges cannot move easily.
7. Static Electricity - is the build up of charges on an object
8. Electric Discharge - This static electricity moving off the object
9. Cell – a device that produces an electric current by converting chemical energy into electrical energy
10. Battery – a device that is made of several cells and that produces an electric current by converting chemical energy into electrical energy
11. Potential Difference – energy per unit charge; specifically, the difference in energy per unit charge as a charge moves between teo points in an electric current (same as voltage); expressed in Volts (V)
12. Photocell – the part of a solar panel that converts light into electrical energy
13. Thermocouple – a device that converts thermal energy into electrical energy
14. Current – the rate at which charge passes a given point; expressed in amperes
15. Voltage – the difference in energy per unit charge as a charge moves between two points in an electric circuit;( same as potential difference) (A)
16. Resistance – the opposition to the flow of electric charge; expressed in ohms(Ω)
17. Electric power – the rate at which electrical energy is used to do work; expressed in watts (W)
18. Circuit - complete, closed path through which electric charges flow
19. Load - a device that uses electrical energy to do work
20. Series Circuit - circuit where all parts are connected in a single loop
21. Parallel – a circuit where different loads are located on different branches