Electric Current (I) Page 314-315

- Measure of the rate at which electric charges move past a given point in a circuit.

- The SI unit used to measure current is amperes and the symbol for amps is abbreviated A.

- In a formula Electric current is represented with an I.

- We can use an ammeter to determine the amount of electric current passing through it.

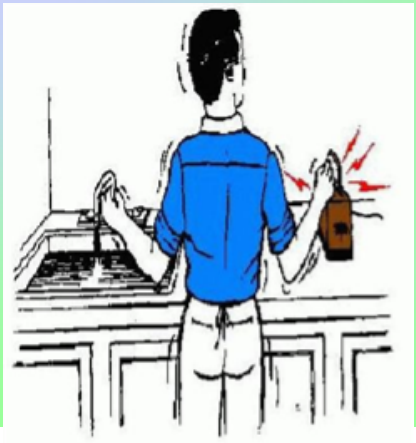
- The ammeter is connected to the circuit and as the current moves past it, it measures how fast or slow the electrons are moving.

Electric Currents can create shocks much like static electricity, however the shocks produced from electric currents can be deadly or cause bodily harm.

A small amount of current can be lethal.

If you touch an electric current you become part of the circuit and the current will flow through you. You can feel a current as small as 0.002A.

At 0.016A your muscles will begin to convulse. Refer to Figure 1: pg. 314



Voltage

commonly referred to as electric potential

- **The energy that each electron has as it is released into a closed circuit is called the "voltage" or "electric potential". (for every electron that leaves the negative portion of the cell and enters the circuit another electron must enter the positive terminal)**

- **The unit of measurement for electric potential is the volt and the symbol is V.**

- **The amount of voltage that there is determines how safe things may be to touch. For example, it is safe for us to touch both ends of a 1.5 V battery, but not to put our fingers in a wall socket which carries 120 V. The energy leaving a wall outlet is 80 times greater than that leaving a battery.**

- Voltage is measured using a voltmeter.

- A voltmeter is used differently than an ammeter. It has connecting wires that must be connected to each load in the circuit.

Electrical Resistance

- The molecules of all types of conductors impede or resist, the flow of electrons to some extent.

- This ability to slow the flow of electrons is called electrical resistance.

- Electrical resistors are devices that are used for this purpose.

- The unit for resistance is the ohm (Ω), and the symbol is R.

Attachments

Chp 9 senteo quiz.notebook