Revision Notes

CHAPTER – 12

Electricity and Circuits

- **Electiricity :-** It is a flow of electic current.
- **SOURCES OF ELECTRICAL ENERGY :-** Electrical energy is available to us from electric power houses,domestic generators, batteries, and dry cells.
- **Electric Current :-** The Electic current is a flow of elcetric charges (electron).
- Electric current flows in one direction only.
- **Electric Circuit:** The complete ath from one terminal of the cell (say positive) through the bulb and back to the other terminal of the cell (say negative) is calle an electric circuit .
- **CLOSED CIRCUIT** :- An unbroken path travelled by electrIcity is known as a CLOSED CIRCUIT.
- **OPEN CIRCUIT** :- A broken path is known as an OPEN CIRCUIT.
- **Circuit Diagram:** It is a symbolic representation of the electric circuit and the electrical parts (electrical components) .

Component of Electricity:

1. **Connecting wires**: Help to conduct the electric current and complete the circuit. A metalic wire used for connections in an circuit is also called a 'lead'.
2. **Bulb:** Lights up when an electric current flows through it. An electric bulb has a filament that is connected to its terminals. An electric bulb glows when electric current passes through it. The filament of an electric bulb is made of a tiny , coiled tungsten wire.
3. **Battery** :- A series combination of two or more cells.
4. **Switch**: Switch is a simple device that is used to either break the electric circuit or to complete it. When a switch is on, a gap in the circuit is bridge by a conducting material through which the current flows.
5. **Electric cell or dry cell** : An electric cell has two terminals; one is called positive (+ ve) while the other is negative (– ve).Inside the electric cell the electric charges flows from negative (- ive) terminal to the positive (+ ive) terminal.

Connecting wires, bulb, switch and electric cell is used in Torch, Battery, LED (Light Emitting Diode), etc.

Electric current is carried by Conductor.

Conductor: Materials that allow electic current to pass through them. All metals are good conductors of electricity. Carbon is the only non-metal which is a good conductor of electricity.

Electric current is stopped by Insulators.

Insulators: Materials which do not allow electric current to pass through them. Example: plastic, rubber, wood, glass, polythene, PVC, etc.

Electricity can give us magnetism

Electricity is a form of energy which helps us with ,

- heating effect,
- light effect , and
- magnetic effect.