

# **ELECTRICAL**

$$R \propto L/A$$

so  $R = \rho L/A$  where  $\rho$  is the specific resistance.

#### 5. **SPECIFIC RESISTANCE:**

It is defined as the resistance offered by unit cube of the material between its opposite faces .It is denoted by  $\rho$  and its unit is ohmmeter.

$$\rho = RA/L$$

#### 6. **OHMS LAW:**

Temperature remaining constant the current flowing through the conductor is directly proportional to the potential difference across the ends of the conductor.

$$V \propto I$$

$$V = RI \text{ volts}$$

$$V/I = R \text{ ohms}$$

#### 7. **ELECTRIC POWER:**

It is defined as the rate of doing work. It is also given by work done per second.

Power = work done /time.

$$P = V^2 /R$$

#### 8. **ELECTRIC ENERGY:**

It is defined as the capacity to do work. 'W' denotes it and its unit is watt-second.

Energy = power x time

$$W = P \times T \text{ watt –second}$$

The larger unit of energy is kilo watt hour (Kw hr).

$$1 \text{ Kw hr} = 1000 \times 3600 \text{ watt-second}$$

#### 9. **RATING OF WIRING MATERIALS:**

WIRING MATERIALS	RATINGS
Switches	5A,250V

7. Knife switch
8. Two way switch

## **12. TOOLS FOR LIGHTING AND WIRING:**

1. Screw driver (thin blade type and square type).
2. Hammer (ball peen type and Claw hammer).
3. Pliers (side cutting plier, diagonal cutting plier, long nose plier, slip joint plier).
4. Pocket knife
5. Hand drill
6. Chisel
7. Wooden saw
8. Hacksaw
9. Center punch
10. Pipe Vice
11. Pipe cutter
12. Dies
13. Wrenches
14. Scratch.

## **13. WIRING ACCESSORIES:**

The commonly used accessories in domestic wiring include switches, lamp holders, socket outlets, ceiling roses, plugs, flexible cords, distribution boards, fuses and ratles etc.

## **14. STAIRCASE WIRING**

In this type of wiring it uses two way switches to control the lamp. One can switch ON and Switch OFF the lamps from more than one place. The lamp control circuit using two ways switch as shown in figure.