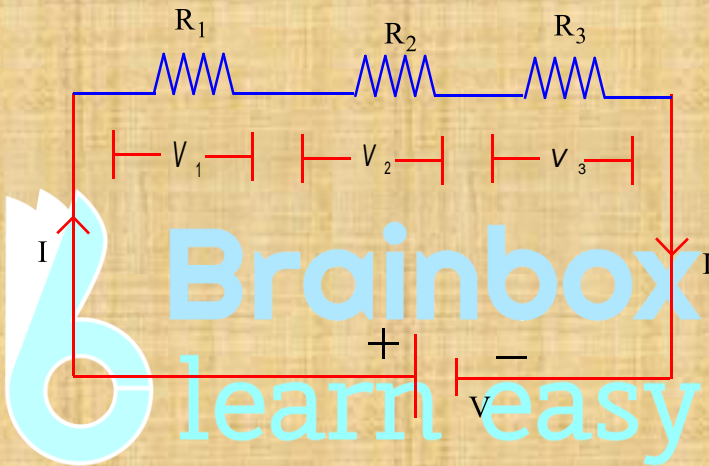


Chapter 12

CURRENT ELECTRICITY

Resistors in Series:

When two or more resistors are connected end to end, the arrangement is called Series.



(i) Effective resistance in series:

$$R_s = R_1 + R_2 + R_3$$

(ii) Current through each resistor same:

$$I_1 : I_2 : I_3 = 1 : 1 : 1$$

(iii) Total Voltage

$$V_1 : V_2 : V_3 = R_1 : R_2 : R_3$$

$$(iv) \quad V_1 = \left(\frac{R_1}{R_1 + R_2 + R_3} \right) V_{Total} ,$$

$$V_2 = \left(\frac{R_2}{R_1 + R_2 + R_3} \right) V_{Total} ,$$

$$V_3 = \left(\frac{R_3}{R_1 + R_2 + R_3} \right) V_{Total}$$

- (v) If 'n' equal resistor of Resistance 'R' connected in Series.

$$R_s = nR$$

