CHAPTER 1. (ELECTRICITY REVISION) (BASED ON NCERT PATTERN)
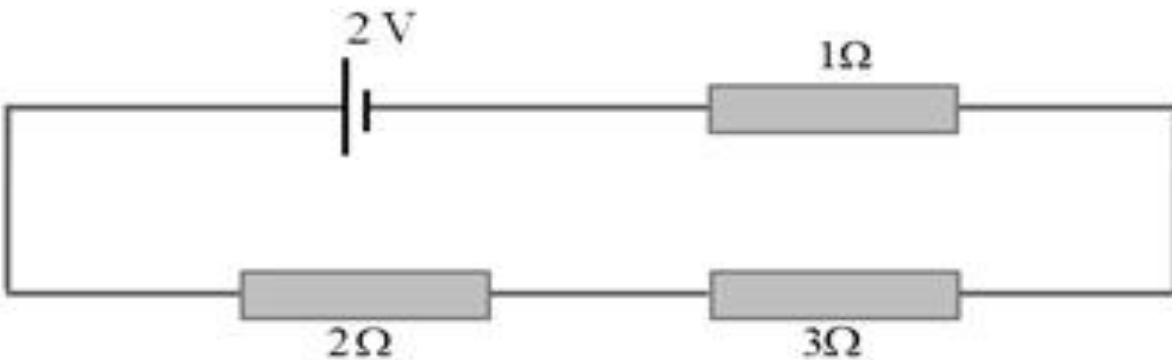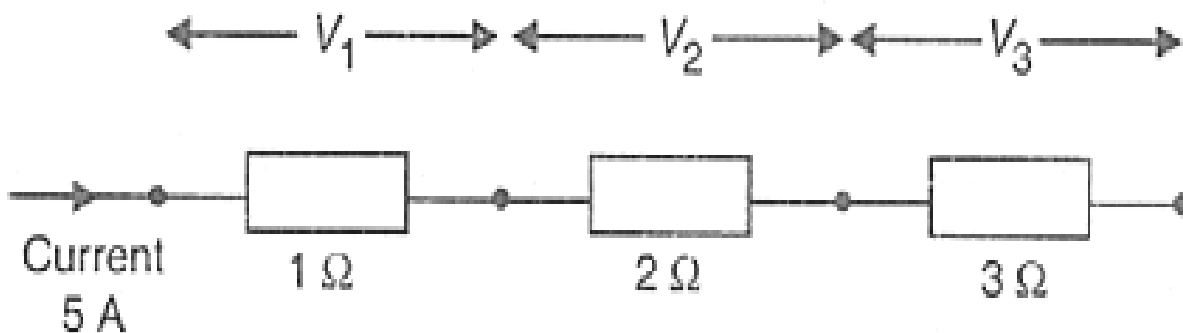
1. The potential difference across the 3 Ω resistor in the following diagram is:

(a) 1/9 V

(b) 1/2 V

(c) 2V

(d) 1V

Answer: (d) 1V

2. V_1, V_2 and V_3 are the potential differences across the 1Ω, 2Ω and 3Ω resistors in the following diagram, and the current is 5A.

Which of the following shows the correct values of V_1, V_2 and V_3 measured in volts?

    (a) $V_1 = 1$, $V_2 = 2$ and $V_3 = 3$

    (b) $V_1 = 5$, $V_2 = 10$ and $V_3 = 15$

    (c) $V_1 = 5$, $V_2 = 2.5$ and $V_3 = 1.6$

    (d) $V_1 = 4$, $V_2 = 3$ and $V_3 = 2$

Answer: (b) $V_1 = 5$, $V_2 = 10$ and $V_3 = 15$

3. A wire of resistance R_1 is cut into five equal pieces. These five pieces of wire are then connected in parallel. If the resultant resistance of this combination be R_2, then the ratio R_1/ R_2 is:
(a) 1/25

(b) 1/5

(c) 5

(d) 25

Answer: (d) 25

4. Two appliances of rating 200 watt-250 volts and 100 watt-250 volts are joined in series to a 250 volts supply. Total power consumed in the circuit is
(a) 46 watt

(b) 67 watt

(c) 10 watt

(d) 30 watt

Answer: (b) 67 watt

5. When a current 'I' flows through a resistance 'R' for time 't' the electrical energy spent is given by
(a) IRt

(b) I^2Rt

(c) IR^2t

(d) I^2R/t

Answer: (b) I^2Rt