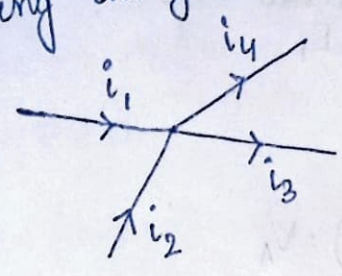


NCERT EXAMPLE PROBLEMS:

7. Kirchoff junction rule is a reflection of [More than one answer correct]
- Conservation of current density vector
 - Conservation of charge
 - the fact that the momentum with which a charged particle approaches a junction is unchanged (as a vector) as the charged particle leaves the junction.
 - the fact that there is no accumulation of charges at a junction.

Answer: b, d.

- Junction rule \rightarrow At any junction, the sum of currents entering the junction is equal to the sum of currents leaving the junction.



$$i_1 + i_2 = i_3 + i_4$$

Algebraic sum of currents flowing towards any junction in an electric circuit is zero; i.e., charges are conserved in an electric network. \therefore (b) is correct.

No charge gets accumulated at the junctions as the total current flowing in must be equal to the total current flowing out. \therefore (d) is correct.