Electric Current

The amount of charge flowing through a particular area in unit time (or) it is the rate of flow of electric charges

In an electric circuit the direction of electric current is taken as opposite to the direction of the flow of electrons, which are negative charges

If a net charge Q, flows across any cross-section of a conductor in time t, then the current I, through the cross-section is I=Q/t

The SI unit of electric charge is coulomb (C), which is equivalent to the charge contained in nearly 6 × 1018 electrons.

The electric current is expressed by a unit called ampere (A)

One ampere is constituted by the flow of one coulomb of charge per second, that is, 1 A = 1 C/1 s.

Small quantities of current are expressed in milliampere (1 mA = 10–3 A) or in microampere (1 μA = 10–6 A).

Electric Circuit

If the electric charge flows through a conductor (for example, through a metallic wire), we say that there is an electric current in the conductor

A switch makes a conducting link between the cell and the bulb. A continuous and closed path of an electric current is called an electric circuit.

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