

Electricity

Electric potential: The Electric potential of a point in an electric field is defined as the work to be done to move a unit positive charge from infinity to that point.

Potential difference: The potential difference between two separate points is defined as the work done to move a unit positive charge from one point to another.

$$V = \frac{W}{Q}$$

Unit: Volt

 $1 \text{ Volt} = \frac{1 \text{ joule}}{1 \text{ coulomb}} \qquad \qquad \boxed{1 \text{ V} = 1 \text{ J } \text{C}^{-1}}$

- The distribution of charge in a body is measured in coulombs. The quantization of charge requires that a charge on a body always remain the integral multiple of charges in an electron.
- Following is the relation between charge on the body (*Q*), number of electrons (*n*) and charge on an electron (*e*)
 Q = *ne*
- The SI unit of electric charge is coulomb, denoted to the eter 'C
- The magnitude of an electric current is deined as the amount of electrons passing through a cross-sectional area of the wire within a given inter al optime.
- $I = \frac{Q}{t}$
- The Similar Current (I) is taken as a more A.
- electric current flows from the positive terminal to the negative terminal.



- The bulb will glow or the magnetic needle will show deflection if the liquid in the beaker is a good conductor of electricity.
- Greater the deflection of needle or brighter the light, better is the conductivity of the liquid.

Good conductor	Poor conductor
Lemon Juice	Coal tar
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