

## E.2 Electric Current

Electric current is the movement of charges. It is the measure of the **amount** of charge passing a point every **second**.

$$I = \frac{q}{t}$$

where  $q$  = charge in coulomb  
 $t$  = time interval in seconds

The units of current are Ampere (Amp).

The direction of current is the direction of movement of the **positive** charges. i.e. positive to negative. We know that it is really the **electrons** that move, but this definition stays for historical reasons.

Example

Determine the amount of charge that has flowed through a torch battery producing a current of 300 mA if it has been left on for 20 minutes.

$$q = I t = 300 \times 10^{-3} \times (20 \times 60) = 360 \text{ C}$$

**Problem Set #2:** Text Page 101 Section 3.2 Questions 1, 3, 4, 5, 6, 7, 8, 9, 10