Question 1:

What does an electric circuit mean?

Answer 1:

An electric circuit is the pathway in which current can flow. It consists of electric devices, switching devices, source of electricity, etc. that are connected by conducting wires.

Question 2:

Define the unit of current.

Answer 2:

The unit of electric current is ampere (A). *When 1 C of charge flows through a conductor in 1 s, it called 1 ampere (A) current.*

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

Question 3:

Calculate the number of electrons constituting one coulomb of charge.

Answer 3:

We know that one electron possesses a charge of 1.6×10^{-19} C.

$$Number\ of\ electron = \frac{Total\ charge}{Charge\ on\ 1\ electron}$$
$$= \frac{1}{1.6 \times 10^{-19}} = 6.25 \times 10^{18}$$

So, the number of electrons constituting one coulomb of charge is 6×10^{18}.