Ques 6:- Explain the kichhoff's law in brief.

Ans:- It consists of two laws;

(i) Kichhoff's voltage law (KVL),

(ii) kichoff's current law (KCL)

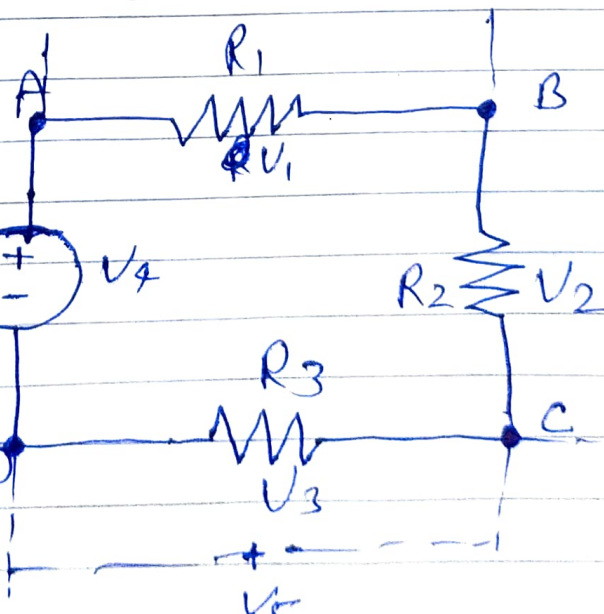
(i) kichoff's voltage law (KVL):-

The directed sum of electrical potential differences (voltage) around any closed network is zero,

The algebric sum of the products of the resistance of the conductors and the currents in them in a closed loop is equal to the total emf available in that loop.

The sum of all the voltage around a loop is equal to zero,

$V_1 + V_2 + V_3 - V_4 = 0$



(ii) Kirchhoff's Current law:-

The principle of conversation of electrical charge implies that;

At any ~~node~~ junction is an electrical circuit, the sum of currents flowings into that junction is equal to the sum of currents flowing out of that node is ~~equal to the sum of~~ or equivalently.

The algebric sum of currents is a network of conductors meeting at a point is zero.

$$I_1 + I_4 = I_2 + I_3$$