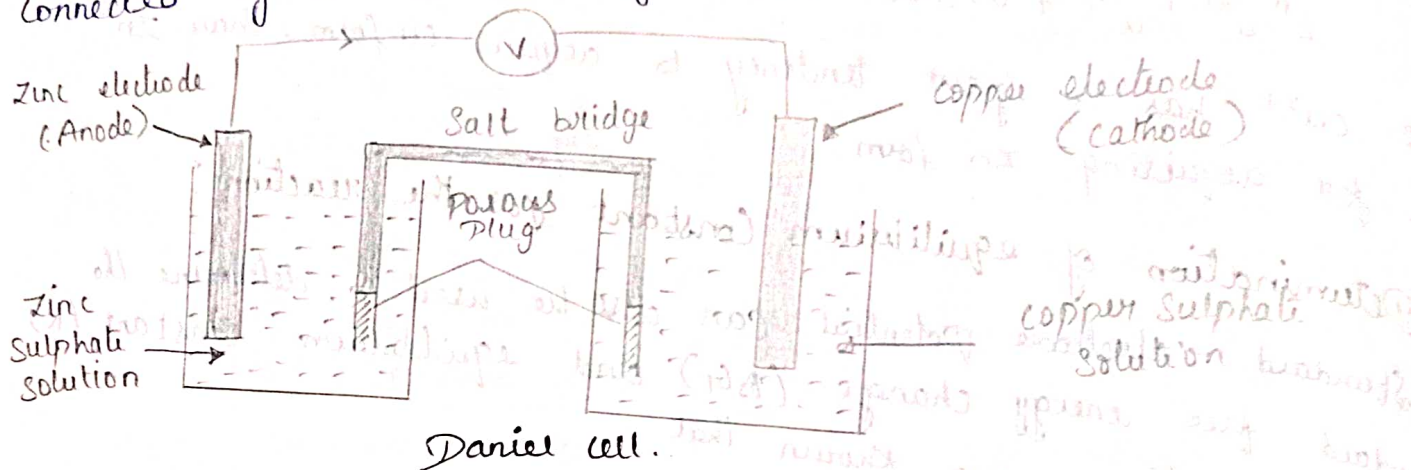


Electrochemical cells (or) Galvanic cells.

Galvanic cells are electrochemical cells in which the electrons transferred due to redox reaction are converted into electrical energy. Eg. Daniel cell.

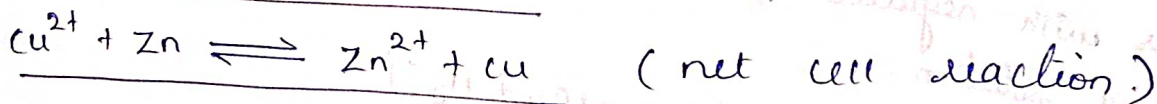
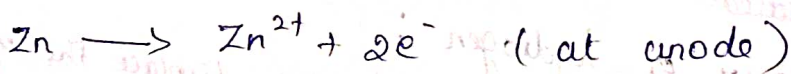
Construction :

Galvanic cell consists of a zinc electrode dipped in $1M ZnSO_4$ solution and a copper electrode dipped in $1M CuSO_4$ solution. Each electrode is known as a half cell. The two solutions are inter connected by a salt bridge and the electrodes are connected by a wire through a voltmeter.



At anode : Oxidation takes place in the zinc electrode by liberation of electrons, so this electrode is called negative electrode or anode.

At cathode : Reduction takes place in the copper electrode by acceptance of electrons, so this electrode is called positive electrode or cathode.



The electrons liberated by the oxidation reaction flow through the external wire and are consumed by the copper ions at the cathode.

Salt Bridge :

It consists of a U-tube containing saturated solution of KCl or NH_4NO_3 in agar-agar gel. It connects the two half cells of the galvanic cells.

Function of Salt bridge :

It eliminates liquid junction potentials.

It provides the electrical continuity between the two half cells.

Difference between Electrolytic cells and Electrochemical cells:

Sl. NO	Electrolytic cell	Electrochemical cell
1.	Electrical energy is converted into chemical energy.	Chemical energy is converted into chemical energy.
2.	The anode carries (+) charges	The anode carries negative charge.
3.	The cathode carries (-) charge.	The cathode carries (+) charges.
4.	The electrons are supplied to the cell from the external battery. (i) electrons move in through cathode and comes out from anode.	But electrons are drawn from the cell. (ii) electrons move from anode to cathode through external circuit.
5.	Battery is used.	voltmeter is used.