An electric current is passed through acidified water. Bubbles of oxygen gas and hydrogen gas are produced at the two electrodes immersed in it. Oxygen is formed at the positive electrode (anode) which is connected to the positive terminal of the battery and Hydrogen gas is formed at the negative electrode (cathode) which is connected to the negative terminal of the battery. The decomposition of acidified water into hydrogen and oxygen by passing an electric current is an example of electrolysis. Thus, electrolysis is the passage of electricity through a liquid or a solution accompanied by a chemical change.

1. Which of the following energy is used to decompose water into its elements?

(a) Heat energy
(b) Light energy
(c) Chemical energy
(d) Electrical energy

2. In the process of electrolysis, the current is carried out inside the electrolyte by

(a) Electron
(b) Atoms
(c) positive and negative ions
(d) All of the above.

3. Not pure water but acidic water is used for carrying out electrolysis because

(a) Pure water is a good conductor of electricity
(b) Pure water is a bad conductor of electricity
(c) pure water is hardly available.
(d) None of these.

4. Which of the following is the application of Electrolysis?

(a) Extraction of metals
(b) Purification of metals
(c) Electroplating
(d) All of these