

Abhyas science

① electrolysis

② Solids

③ lemon juice, vinegar, salt when added in water.

④ Conductors are material that permit electrons to flow freely from particle to particle. In contrast to conductor eg - copper, silver, gold.

Insulators are material in which electric current does not flow freely. The atoms of insulator have tightly bound electrons which cannot readily move. eg - paper, wood etc.

⑤ The ordinary water can conduct electricity while distilled water does not. Distilled water is pure and will not contain any impurities. due to the absence of ions in distilled water, they will not conduct electricity.

- ⑥ When acidified water is electrolysed by using carbon rods, oxygen gas is liberated at positive carbon electrode.
- Hydrogen is liberated at negative carbon electrodes.
- ⑦
- Nature and state of electrolyte.
  - Nature and electrode potential of ions present in electrolyte.
  - Nature of electrode.
  - Overvoltage at the electrode.
- ⑧ Formation of bubbles of a gas on electrode, deposits of metal on electrodes, changes of colour of solution. When electric current is passed through a conducting solution, some chemical reactions take place in solution. This is known as chemical effect of electric current. Michael Faraday.
- ⑨ Bubbles of gas may be formed at electrode deposit of metal may be seen on electrodes.

(10) A substance that dissociates into ions in solution acquires the capacity to conduct electricity. Eg- chloride, potassium, calcium, magnesium etc.

(11) Take some water in a plastic or glass vessel pinch of salt or few drops of an acid such as a vinegar to water.

(12) Possible reasons which the bulb does not glow are

- (1) It could be a poor conductor of heat and electricity.
- (2) bulb is fused.
- (3) battery may be dead.
- (4) The wires might not be conducting.
- (5) The connection of wires might be loose.