
Q1 Fill in the blanks

1 Acid Base salt

2 chemical

3 negative

4 electroplating

5 cation

6 anion

7 electrolysis

8 acid or base

9 electrical

10 copper

Q2 choose the correct option

1 positive

2 both 1 and 'II

3 oxygen

4 hydrogen

5 to increase conductivity

6 zinc

7 it does not corrode and prevent scratches

8 electroplating

9 distilled water

10 tin is less reactive than iron

Q3 Answer in detail

1 the chemical effect of electric current are electrolytes and electroplating

Electrolysis

When electric current passes through a conducting solution it causes chemical reaction by decomposing the electrolyte. This is called electrolysis. In electrolysis, the chemical compound in solution form decomposes when an electric current passes through the compound. It decomposes into positive charge and negative charge particles called ions and this conducts electricity in an electrolytic solution.

electroplating

It is a process in which coating of one metal is done over another by passing an electric current through an electrolyte. In this process, an electrolyte is taken through which current passes. Two electrodes are inserted in the electrolyte and are connected to the terminals of a battery which has a switch in

between the metal to be used for coating is chosen as anode and object to be electroplated is chosen as cathode the electrolyte is a salt of anodic metal which get decomposed into its respective ions

2 chemical effect of electric current are

The passage of electric current through out a conductors solution cause chemical reaction as result bubble of gas formed on the electrode deposit of metal may be seen on electrode change of colour of solution

3 conductor of electricity means a substance which allowed to pass the current from it is called conductor of electricity

4 some material that are good conductor of electricity are iron Copper Gold Silver aluminium etc

5 substance which do not allow electric current to pass through them are called insulators such as plastic rubber etc if they allow very less amount of electricity to pass through them they are called insulator

6 LED means light emitting diode LED glow even when a small electric current flow through it there are two wires attached to LED one is slightly longer than other longer one is connected to positive terminal and shorter when is connected to negative terminal of battery

7 the electric current passes through a conducting solution it cause chemical reaction by decomposing the electrolyte this is called electrolysis

8 it is a process in which coating of one metal is done over another by passing an electric current through an electrolyte the metal to be used for coating is chosen as anode and object to be electroplated his chosen as cathode

9 the process of refining and extracting of pure metals from impure sample by electrolysis is called electrorefining

10 ornament made of silver are other chief metal are electroplated with gold to give them appearance like gold

Chromium plating is done on but a Car Bumper bicycle handlebar towel rail etc chromium does not corrode it can polished to give a bright attractive appearance and it is a hard metal which register scratches and wear and tear

Cutlery and Jewellery items are often silver-plated since they have the appearance of silver but they much less expensive

11 do by own

Q Answer in short

1 LED can be used in place of bulb in tester because when a small electric current flow through it it can glow

2 by putting the compass near electric circuit if there is current the needle of compass will deflect

3 as a result bubble of gas may be formed on the electrode deposit of metal may be seen on electrodes change of colour of solution may occur

4 chromium does not corrode it can be polished to give a bright attractive appearance and it is hard metal which register scratches and wear and tear chromium not use itself because it is costly

5 copper Nickel chromium zinc and Tin used as a electro plating material

HOTS

1 no we cannot use AC current in electrolysis in electrolysis the ionization of electrolyte take place where the positive and negative charges move to word opposite electrodes hence electrolysis cannot take place with AC current

2 if the substance is greenish blue its copper sulphate the copper form from the terminal clamp react with the lead in the battery if the vehicle used for Short trip the alternator may not be running long

enough to properly charge the battery overtime human it is loss of tracking power

NCERT QUESTION

1 deflection occurs because the circuit become complete since free and of the tester are dipped in a solution the solution is certainly a conducting solution this is the reason why the compass needle shows deflection

3 pure water is an excellent insulator and does not conduct electricity if we want to conduct electricity then we have to add acid our base

4 it may cause shock

5 it is not safe as rain water consists of dissolving salt it conduct electricity

6 rain water may be contaminated by impurities suspended in the atmosphere through it is as pure as distilled water these impurity make the rainwater conducting has the compass needle show the deflection

8 copper is positively charged so it will get attracted to the negative electrodes

6

