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Solution 92

(a) A is sodium and B is chlorine

(b) C is sodium chloride and D is sodium hydroxide

(c) C will have no effect on litmus solution since it is neutral in nature.

(d) B is a gas at room temperature.

(e) EB_3

Solution 93

(a) Mercury, Hg

(b) Cinnabar, HgS

(c)

$$2HgS(s) + 3O_2 \xrightarrow{\text{Roasting}} 2HgO(s) + 2SO_2(g)$$

Mercury (II) Sulphide — Oxygen — Mercury (II) Oxide — Sulphur dioxide

$$2HgO(s) \xrightarrow[\text{Reduction}]{\text{Heat}} 2Hg(l) + O_2(g)$$

Mercury (III) Oxide — Mercury metal — Oxygen

(d) Thermometer

(e) No; Because it is less reactive than copper.

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Solution 94

(a) A is iron (III) oxide and B is aluminium powder.

(b) C is molten iron metal and D is aluminium oxide.

(c)

$$Fe_2O_3(s) + 2Al(s) \rightarrow 2Fe(l) + Al_2O_3(s) + \text{Heat}$$

Iron (III) Oxide — Aluminium Powder — Iron metal — Aluminium oxide

(d) This reaction is called thermite reaction. It is used for welding of broken pieces of heavy iron objects like railway tracks, etc.

(e) Displacement reactions and oxidation-reduction reactions.

Solution 95

(a) Positively charged carbon electrode (Anode)

(b) This carbon electrode is burnt away because oxygen produced during the electrolysis of molten aluminium oxide reacts gradually with the carbon of carbon anode to form carbon dioxide gas.

Solution 96

(a) X is aluminium and Y is zinc.

(b) X is more reactiv e than Y.

(c) Bauxite; $Al_2O_3.2H_2O$

(d) Calamine, $ZnCO_3$

(e) Alloy of metal X: Duralumin; Alloy of metal Y : Brass

Solution 97

(a) Silver

(b) Copper

(c) Silver sulphide

(d) Basic copper carbonate

(e) Dilute acid solution; The acid sol ution dissolves green coloured basic copper carbonate present on the corroded copper object makes it look shiny, red brown again.

Solution 98

Metal P is zinc; Metal Q is tin; Metal R is lead; Metal S is iron.

Metal P (zinc) is used to form a thin layer on metal S (iron) by the process of galvanisation to prevent its corrosion.

Metal Q (tin) is used for electroplating tiffin boxes made of metal S (iron).
Metal R (lead) is used in making car batteries.
Metals Q (tin) and R (lead) form an alloy called solder .
Solution 99
(a) Manganese
(b) Manganese dioxide
(c) Aluminium
(d) Chromium
Solution 100
Metal X is gold and Metal Y is silver; The colour of metal X (gold) is yellow.

********** END **********