Question-1
Which of the given statements about the reaction below are incorrect?

$$2PbO(s) + C(s) \longrightarrow 2Pb(s) + CO_2(g)$$

a. Lead is getting reduced
b. Carbon dioxide is getting oxidised
c. Carbon is getting oxidised
d. Lead oxide is getting reduced
(i) (a) and (b)
(ii) (a) and (c)
(iii) (a), (b) and (c)
(iv) all
Solution:
i) (a) and (b)

Question-2

$$Fe_2O_3 + 2Al \longrightarrow Al_2O_3 + 2Fe$$

The above reaction is an example of a
(i). Combination reaction
(ii). Double displacement reaction
(iii). Decomposition reaction
(iv). Displacement reaction
Solution:
(iv) Displacement reaction

Question-3
What happens when dilute hydrochloric acid is added to iron fillings? Tick the correct answer.
a. Hydrogen gas and iron chloride are produced
b. Chlorine gas and iron hydroxide are produced
c. No reaction takes place
d Iron salt and water are produced
Solution:
Hydrogen gas and iron chloride are produced

Question-4
What is a balanced chemical equation? Why should chemical equations be balanced?
Solution:
An equation for a chemical reaction is an equation in which the number of atoms for each element in the reaction and the total charge are the same for both the reactants and the products. In other words, the mass and the charge are balanced on both sides of the reaction.

Question-5
Translate the following statements into chemical equations and then balance them.
a. Hydrogen gas combines with nitrogen to form ammonia
b. Hydrogen sulphide gas burns in air to give water and sulphur

dioxide
c. Barium chloride reacts with Aluminium sulphate to give Aluminium chloride and a precipitate of barium sulphate
d. Potassium metal reacts with water to give a potassium hydroxide and hydrogen gas
Solution:
a. $3H_2 + N_2 \rightarrow 2NH_3$
b. $2H_2S + 3O_2 \rightarrow 2H_2O + 2SO_2$
c. $3BaCl_2 + Al_2(SO_4)_3 \rightarrow 2AlCl_3 + 3BaSO_4$
d. $2K + 2H_2O \rightarrow 2KOH + H_2$

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