Welland Gouldsmith School ,Patuli
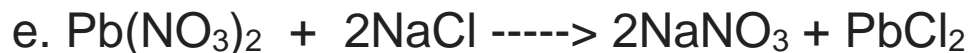## Class- IX
Chemistry Worksheet   Answer key
Session 2020-21

1. Balance the following equations: -

a. $Fe + 2HCl \longrightarrow FeCl_2 + H_2$
b. $Mg_3N_2 + 6H_2O \longrightarrow 3Mg(OH)_2 + 2NH_3$
c. $S + 2 H_2SO_4 \longrightarrow 3SO_2 + 2H_2O$
d. $2ZnS + 3O_2 \longrightarrow 2ZnO + 2SO_2$
e. $Pb(NO_3)_2 + 2NaCl \longrightarrow 2NaNO_3 + PbCl_2$

2. Fill in the blanks: -

a. penultimate.
b. 1
c. Aluminium/Chromium/Nitride/Phosphate/Phosphide.
d. Copper/Mercury/Silver

3. A chemical compound is a chemical substance composed of many identical molecules composed of atoms from more than one element held together by chemical bonds.

Example- Pure water is a compound made from two elements - hydrogen and oxygen. The ratio of hydrogen to oxygen in water is always 2:1. Each molecule of water contains two hydrogen atoms bonded to a single oxygen atom.

Iron sulphide (FeS) characteristics

1. Elements Fe and S combined in - *a definite proportion*.
2. Composition – cannot be varied,hence uniform composition.
3. Components- *may not be seen separately*.
4. Components in compound – *do not retain their* original properties and – *can be separated* – only by chemical means.
Particels in FeS – *are chemically combined* and hence Fe in FeS cannot be attracted by magnet and does not give H_2 gas with dil.acid.
5. S present in FeS – is *insoluble* in solvent CS_2.

4.
a.$Mg(NO_3)_2$.
b.$Al_2(CO_3)_3$
c.$PbSO_4$
d.$NaHSO_3$
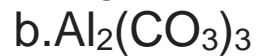
5.i).Calcium nitide.

ii).Calcium phosphate.

iii)Sodium chlorate.

iv)Magnesium bicarbonate.

6.Calcium sulphate formula = CaSO4

Molecular weight of CaSO4 = 40 + 32 + 4X16

$$=136.$$

7. The chemical formula of potassium phosphate is K_3PO_4 .

   Molecular weight of K_3PO_4 = 3X39 + 31 + 4X16
                                   = 212

212 g of K_3PO_4 contains 117g of potassium
Hence,100g of K_3PO_4 contains (117/212)X100 = 55.2% of potassium

Similarly, 212g of K_3PO_4 contains 31g of phosphorous
Hence,100g of K_3PO_4 contains (31/212)X100 = 14.6% of phosphorous

Similarly 212g of K_3PO_4 contains 64g of oxygen
Hence, 100g of K_3PO_4 contains (64/212)X100 = 30.2% of oxygen

Ans- Thus Potassium phosphate contains 55.2% of potassium, 14.6% of phosphorous and 30.2% of oxygen.