Atomic Mass and Molecular Mass Practice

1. State the full meaning of the following:

   a) Fe b) $CuCl_2$ c) 2 Ca d) 4 $Fe_2(SO_4)_3$

2. How many atoms of hydrogen are represented in each of the following molecules?

   a) $KHCO_3$ b) H_2SO_4 c) C_3H_8 d) $HC_2H_3O_2$ e) $(NH_4)_2SO_4$ f) $(CH_3)_3COH$

3. Asbestos, a known cancer-causing agent, has a typical formula, $Ca_3Mg_5(Si_4O_{11})_2(OH)_2$. How many atoms of each element are given in the formula?

4. How many atoms of each kind are represented in the following formulas?

   a) Na_3PO_4 b) $Ca(H_2PO_4)_2$ c) C_4H_{10}

   d) $Fe_3(AsO_4)_2$ e) $Cu(NO_3)_2$ f) $MgSO_4 \cdot 7H_2O$

5. How many atoms of each element are represented in the formula of cobalt (II) chloride hexahydrate?

6. Calculate the molecular mass of H_3PO_4 and $HClO_4$.

7. Calculate the molecular masses of:

   a) SO_2 b) P_4O_{10} c) UF_6 d) NH_3 e) CCl_4

8. Determine the molecular mass of these compounds:

   a) methane, CH_4 b) potassium perchlorate c) phosphorus trichloride d) sulphuric acid

   e) silicon dioxide f) nitrogen dioxide g) dinitrogen pentoxide h) glucose, $C_6H_{12}O_6$

9. What is the molecular mass of each of these common chemicals compounds?

   a) sodium bicarbonate, $NaHCO_3$ b) laughing gas, N_2O

   c) Potassium permanganate, $KMnO_4$ d) limestone, $CaCO_3$

   e) Epsom salts, $MgSO_4 \cdot 7H_2O$ f) ozone, O_3