Molecular Formula W.S.

1) $P_2O_5 = 141.94\,g$ $\quad \frac{283.89}{141.94} = 2$ $\quad$ Molecular = P_4O_{10}

2) $CH = 13.02\,g$ $\quad \frac{78.110}{13.02} = 6$ $\quad$ Molecular = C_6H_6

3) $\frac{1\ mol\ H}{1.01\,g\ H} \mid \frac{0.44\,g\ H}{} = \frac{0.43564\ mol\ H}{0.4325} = 1$

$\frac{1\ mol\ O}{16.00\,g\ O} \mid \frac{6.92\,g\ O}{} = \frac{0.4325\ mol\ O}{0.4325} = 1$

Molecular: H_2O_2

Empirical = $HO = 17.01\,g$ $\quad \frac{34}{17.01} = 2$

4) $\frac{1\ mol\ N}{14.01\,g\ N} \mid \frac{4.04\,g\ N}{} = \frac{0.28837\ mol\ N}{0.28837} = 1 \times 2 = 2$

$\frac{1\ mol\ O}{16.00\,g\ O} \mid \frac{11.46\,g\ O}{} = \frac{0.71625\ mol\ O}{0.28837} = 2.5 \times 2 = 5$

Empirical = $N_2O_5 = 108.02\,g$ $\quad \frac{108.0}{108.02} = 1$

Molecular = N_2O_5

5) $OCNCl = 77.47\,g$

$\frac{232.41\,g}{77.47\,g} = 3$ $\quad$ Molecular = $O_3C_3N_3Cl_3$

6) $\frac{1\ mol\ N}{14.01\,g\ N} \mid \frac{0.606\,g\ N}{} = \frac{0.043255\ mol\ N}{0.043255} = 1$

$\frac{1\ mol\ O}{16.00\,g\ O} \mid \frac{1.390\,g\ O}{} = \frac{0.086875\ mol\ O}{0.043255} = 2$ $\quad \frac{92}{46.01} = 2$

Empirical = $NO_2 = 46.01\,g$ $\quad$ Molecular = N_2O_4

7) $NH_2 = 16.03\,g$ $\quad \frac{32.06}{16.03} = 2$ $\quad$ Molecular = N_2H_4