

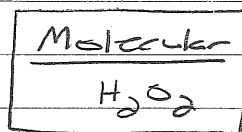
Molecular Formula W.S.

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

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

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

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



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

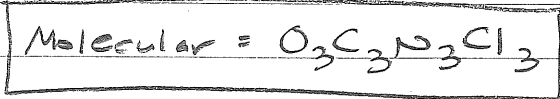
4)  $\frac{1 \text{ mol N} \mid 4.04 \text{ g N}}{14.01 \text{ g N}} = \frac{0.28837 \text{ mol N}}{0.28837} = 1 \times 2 = 2$

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

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



5)  $OCNCl = 77.47 \text{ g}$   
 $\frac{232.41 \text{ g}}{77.47 \text{ g}} = 3$



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

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

Empirical =  $NO_2 = 46.01 \text{ g}$



7)  $NH_2 = 16.03 \text{ g}$        $\frac{32.06}{16.03} = 2$

