

$$\begin{aligned}
1.E &\approx \frac{q_{(K^+)}q_{(Cl^{-1})}}{4\pi\epsilon_0r_{12}}\frac{N_A}{10^3} + IE_1(K) - EA(Cl) \\
&= \frac{(1.602 \times 10^{-19}C)^2}{4 \times 3.142 \times (8.854 \times 10^{-12}C^2N^{-1}m^{-2}) \times (2.67 \times 10^{-10}m)} \frac{6.022 \times 10^{23}mol^{-1}}{10^3} \\
&\quad + 495.8kJmol^{-1} - 349.0kJmol^{-1} \\
&\approx 667.0kJmol^{-1}
\end{aligned}$$

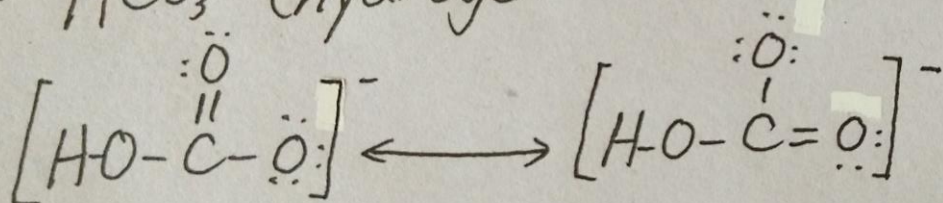
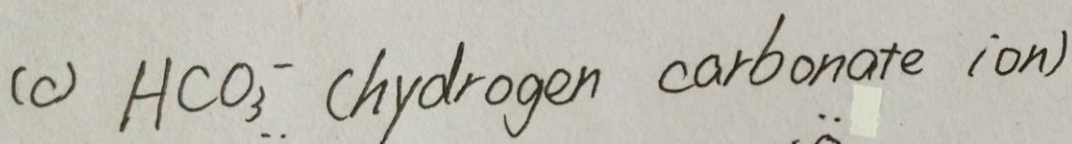
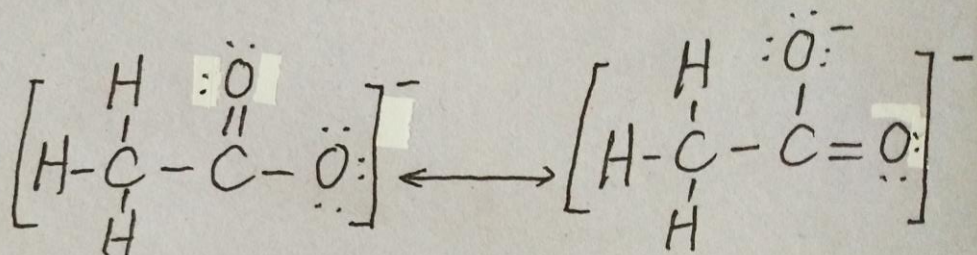
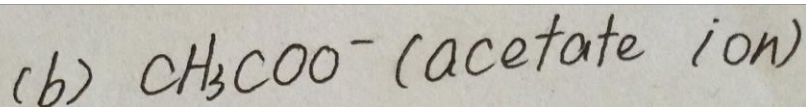
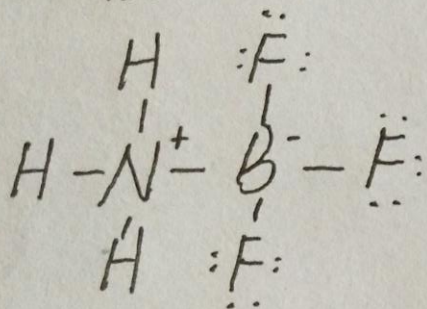
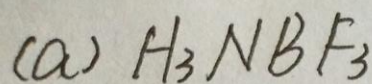
$$\begin{aligned}
2.\delta(ClO) &= \frac{0.2082^{\circ}_A\mu(ClO)}{R(ClO)} \\
&= \frac{0.2082^{\circ}_A \times 1.239D}{1.573^{\circ}_A} \\
&\approx 0.1640
\end{aligned}$$

$$\begin{aligned}
\delta(KI) &= \frac{0.2082^{\circ}_A\mu(KI)}{R(KI)} \\
&= \frac{0.2082^{\circ}_A \times 10.82D}{3.051^{\circ}_A} \\
&\approx 0.7384
\end{aligned}$$

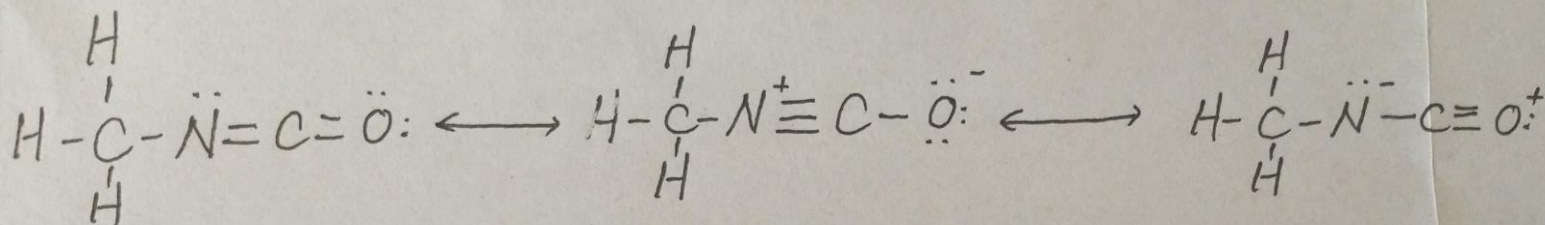
$$\begin{aligned}
\delta(TiCl) &= \frac{0.2082^{\circ}_A\mu(TiCl)}{R(TiCl)} \\
&= \frac{0.2082^{\circ}_A \times 4.543D}{2.488^{\circ}_A} \\
&\approx 0.3802
\end{aligned}$$

$$\begin{aligned}
\delta(InCl) &= \frac{0.2082^{\circ}_A\mu(InCl)}{R(InCl)} \\
&= \frac{0.2082^{\circ}_A \times 3.79D}{2.404^{\circ}_A} \\
&\approx 0.3282
\end{aligned}$$

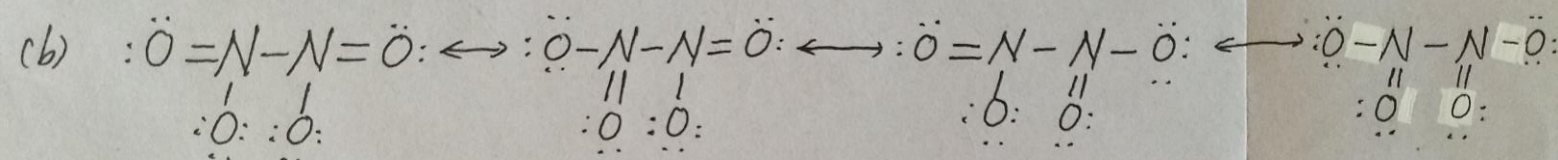
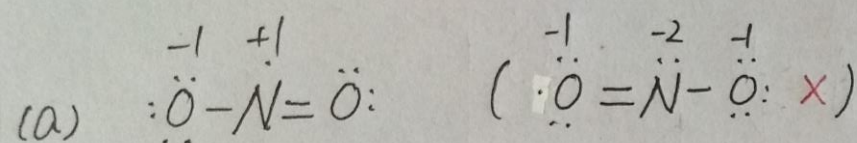
3.



4.

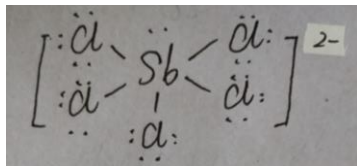


5.



(a) 中由于右式形式电荷多于左式，故舍去，选择更加合理的左式

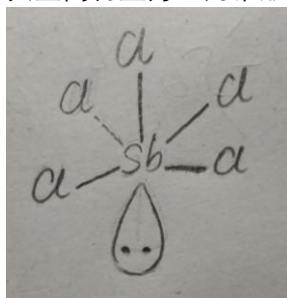
6. (a) $[\text{SbCl}_5]^{2-}$ 离子的路易斯点式结构：



可视为： $[\text{AX}_5\text{E}_1]$

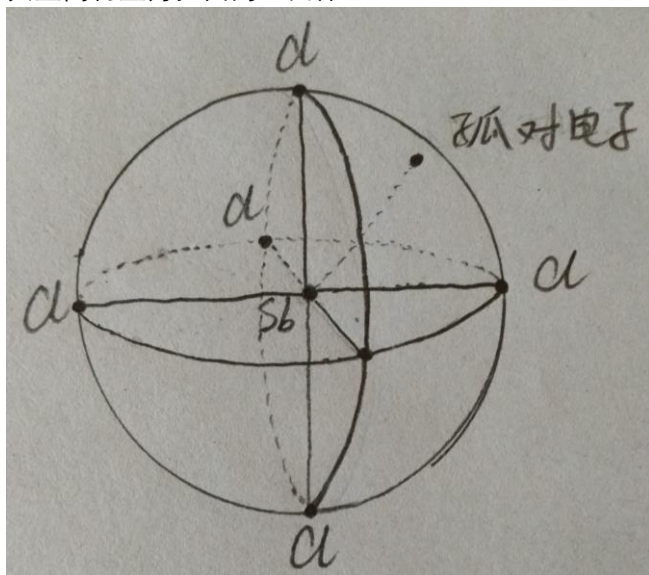
$$\text{SN} = 5 + 1 = 6$$

其空间构型为四角锥形：



(b) $[\text{SbCl}_6]^{3-}$ ；离子的 $\text{SN} = 6 + 1 = 7$

其空间构型为扭曲的八面体



或五角双锥形

