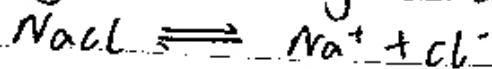
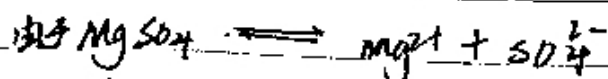


157.5,



$\text{Mg}^{2+}$  所带正电荷是  $\text{Na}^+$  的两倍, 故, 浓度的  $\text{MgSO}_4$  电解质是  $\text{NaCl}$  的两倍  
而对于同浓度溶液,  $c(\text{MgSO}_4)$  与  $c(\text{NaCl})$  近似相等, 从而

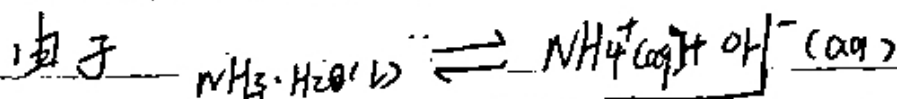
由于  $\Delta T_f = K_f \cdot m$  而二者  $K_f$  相近, 故凝固点下降大致相同

$$b. T_{fp} = -1.853 \times 0.6 \times 2 = -2.2^\circ\text{C}$$

$$T_{bp} = 100 + 0.515 \times 0.6 \times 2 = 106.2^\circ\text{C}$$

$$\pi = CRT = 0.6 \times 0.83145 \times 298.15 \times 2 = 2974.5 \text{ kPa}$$

11. 查表得  $\text{NH}_3$  的  $K_b = 1.77 \times 10^{-5}$



$$\therefore c(\text{OH}^-) = \sqrt{c(\text{NH}_3 \cdot \text{H}_2\text{O}) \cdot K_b} = 1.87 \times 10^{-3} \text{ mol/L}$$

$$\text{pH} = -\lg \frac{1 \times 10^{-14}}{c(\text{OH}^-)} = 11.27$$

$$\alpha = \frac{c(\text{OH}^-)}{c(\text{NH}_3 \cdot \text{H}_2\text{O})} = 0.1935\%$$

$$(2) c(\text{H}^+) = K_a = 5.65 \times 10^{-10}$$

$$c(\text{OH}^-) = 1.77 \times 10^{-5}$$

$$\text{pH} = -\lg c(\text{H}^+) = 9.25$$

$$\alpha = \frac{c(\text{OH}^-)}{c(\text{NH}_3 \cdot \text{H}_2\text{O})} = 0.0089\%$$

(3) 加入  $\text{NH}_4\text{Cl}$  会抑制  $\text{NH}_3 \cdot \text{H}_2\text{O}$  的解离