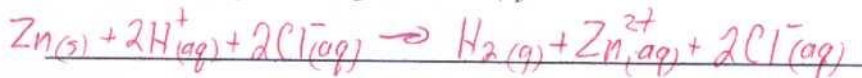


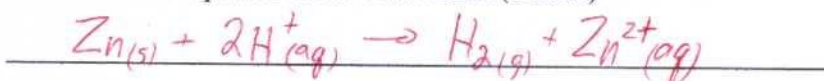
3. Complete balanced **dissociation** equations for the following compounds: (3 marks)



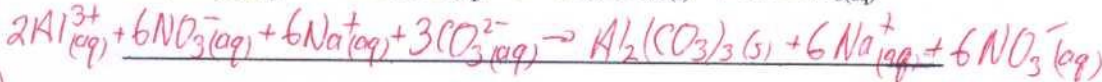
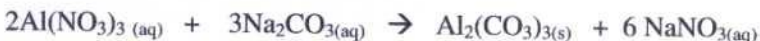
4. a) Write the following equation in **complete ionic** form: (2 marks)



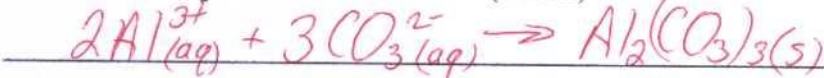
b) Write the same equation in **net-ionic** form: (1 mark)



5. a) Write the following equation in **complete ionic** form: (2 marks)



b) Write the same equation in **net-ionic** form (1 mark)



6. Given the reaction:  $\text{Al}(\text{s}) + 3\text{Cl}_2(\text{g}) \rightarrow 2\text{AlCl}_3(\text{s})$

It is found that chlorine is consumed at a rate of 0.2485 g/s. Calculate the total mass of  $\text{AlCl}_3$  produced if this rate is maintained for 3.00 minutes. (3 marks)

3 
$$\frac{0.2485 \text{ g Cl}_2}{\text{s}} \times \frac{1 \text{ mol Cl}_2}{71.0 \text{ g Cl}_2} \times \frac{2 \text{ mol AlCl}_3}{3 \text{ mol Cl}_2} \times \frac{133.5 \text{ g AlCl}_3}{1 \text{ mol AlCl}_3} \times \frac{60 \text{ s}}{1 \text{ min}} \times 3.00 \text{ min} = 56.1 \text{ g AlCl}_3$$

(0.0035) (0.002333) (0.3115) (18.69) (56.07)

<del>1012</del>
1012

Answer

56.1 g  $\text{AlCl}_3$