**Chemistry 3.6 AS 91392** Demonstrate understanding of equilibrium principles in aqueous systems



Writing Excellence answers to **Concentration of Species** questions

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| **Concentration of Species QUESTION** | |
| **Question:**  Ethyl ammonium chloride, CH3CH2NH3Cl, is a weak acid that will also react with water.  List all the species present in a solution of CH3CH2NH3Cl, in order of decreasing concentration.  Do not include water.  Justify the order you have given.  Include equations, where necessary. | |
| **ANSWER** | |
| **1.** write the **equation** for the dissociation of salt |  |
| **2.** link to complete dissociation AND formation of an **(spectator) ion** that does not react further so will be in greatest concentration |  |
| **3.** write the **equation** for the weak acid (formed from equation above) in water |  |
| **4.** link to partial dissociation due to being a **weak acid** AND most will remain so will be next in concentration |  |
| **5.** Explain **H30+ ions** are formed during reaction in same quantity as conjugate PLUS small contribution from water AND so will be next in concentration |  |
| **6.** Explain **conjugate base** are formed during reaction in same quantity as H30+ AND so will be next in concentration  (but both H30+ ions and conjugate will be at smaller concentration to acid as only weak acid) |  |
| **7.** Finally Explain **OH- ions** present in small amounts from water dissociation only AND so will be last in concentration |  |
| **8**. list **species in order** |  |

NOTE: The white column is how your answer would appear on your test paper so make sure you **write out complete sentences**. The grey area is just to help you structure your answer and would not appear in the question.