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



|  |  |
| --- | --- |
| **Conductivity and Ions QUESTION** | |
| **Question:**  The table shows the pH and electrical conductivity of three solutions. The concentrations of the solutions are the same. Compare and contrast the pH and electrical conductivity of these three solutions. Include appropriate equations in your answer. | |
| **ANSWER** | |
| 1. Identify each solution as either being a **weak or strong acid or base (or salt)** linked to the **pH** (and presence of ions) |  |
| 2. State requirements for **conductivity** |  |
| 3. **Solution NaOH** (pH 13.2)  Write equation **AND** link ions formed to conductivity and level of dissociation |  |
| 4. pH **Solution NaOH** (pH 13.2)  Link amounts of H3O+ / OH- ions to pH |  |
| 5.  **Solution CH3NH2** (pH 11.9)  Write equation **AND** link ions formed to conductivity and level of dissociation |  |
| 6. pH **Solution CH3NH2** (pH 11.9)  Link amounts of H3O+ / OH- ions to pH (compared to previous solution) |  |
| 7.  **Solution CH3COONa** (pH 8.98)  Equation 1. [salt dissociation]  Write equation **AND** link ions formed to conductivity and level of dissociation |  |
| 8.  **Solution CH3COONa** (pH 8.98)  Equation 2.[acid reaction]  Write equation **AND** link ions formed to conductivity and level of dissociation |  |
| 9. pH **Solution H3COONa** (pH 8.98)  Link amounts of H3O+ / OH- ions to pH (compared to previous solution) |  |

Writing Excellence answers to **Conductivity and Ions** questions

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.