HELLENIC REPUBLIC

UNIVERSITY OF CRETE

Academic English

Section: Listening Salts & Neutralisation Processes

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E2 Wk 4 Listening Salts & Neutralisation Processes

Note-taking task: Complete the missing information.

Water is the driving force1)……... When you have an acid and a base, what you get is a salt, an ionic species such as sodium chloride and water. When you put salt into an 2)…… solution, you get sodium ions and chloride ions.

A 3)……..reaction involves an acid and a base forming salt and water

The 4)…….. of the salt may determine whether it remains in its ionic form, in plus or cations or minus or anions or as a precipitate of the solution. A hydrolysis reaction is the 5)……of neutralisation, where the salt and the water go 6)…… to form back the acid and the base.

Scenario 1 The reaction of a **strong acid** and a **strong base**. Strong acids and strong bases are strong electrolytes and when something is an electrolyte it means that when you put it in an aqueous solution, it completely 7)…… to make its cationic states and its anionic states. They're both completely 8)……. Strong acid HCl aqueous, sodium hydroxide, our strong base aqueous, forms the salt sodium chloride and water undergoing an acid base 9)…….. reaction.

Scenario 2 The reaction of a **strong acid** and a **weak base.** One of the most common strong acid, 10) ……., HCl, and a common weak base ammonia. The NH4 is a plus and Cl is a minus. HCl completely dissociates but the weak base has some ammonia remaining. So then this ammonium ion can react with water to then 11)……. the weak base ammonia. And so since the strong acid is here, it 12) ……. So your ph is going to be less than seven making the solution fairly 13)……...

Scenario 3 The reaction of a **weak acid** and a **strong base**. 14) …… as our weak acid and sodium hydroxide as our strong base to form 15) …….. and water. The ph is going to be greater than seven, its basic and since we have a strong base, which means that our ph is going to remain higher. The strong base completely dissociates into its ionic species. We have remaining acidic species with the weak acid so sodium hypochloride can react with water to 16) …… your weak acid, i.e. hydrochlorous acid.

Scenario 4 The reaction of a **weak acid** and a **weak base** such as hypochlorous acid plus ammonia, respectively. So since we have both a weak acid and a weak base, the ph of your overall solution depends on the 17) ……. of your reactants.

So the higher the ka, the 18) ……, the likelier it is that one of these guys is going to give away its proton. So for this particular scenario, it would end up being basic because the ka of the ammonia is higher than that of the hydrochlorous a- the hypochlorous acid.

Notes

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