<u>Given:</u> $HCl_{(aq)}$ and $HC_2H_3O_{2(aq)}$

1) Refer to Table **K**
   a) State **three** properties that these acids have in common.

   b) Which of these acids is **stronger**? How could you prove this experimentally?

2) According to **Arrhenius**, what ion is responsible for acidic properties?

3) What happens to the pH of water as $CO_2(g)$ is blown into it? Explain.

4) Which of the following oxides is acidic?

   a) K_2O b) P_2O_5 c) BaO d) FeO

1) C 2) B 3) C 4) A 5) B 6) A 7) B 8) A 9) C 10) C 11) D 12) C

Name: _____

1) A substance that conducts an electrical current when dissolved in water is called
   A) a metalloid B) a catalyst C) an electrolyte D) a nonelectrolyte

2) Which species can conduct an electric current?
   A) $H_2O(s)$ B) $HCl(aq)$ C) $NaOH(s)$ D) $CH_3OH(aq)$

3) Which formula represents an electrolyte?
   A) CH_3OH B) CH_3OCH_3 C) CH_3COOH D) C_2H_5CHO

4) Which compound is an electrolyte?
   A) $CaCl_2$ B) $C_6H_{12}O_6$ C) CH_3OH D) CCl_4

5) Which pair of formulas represents two compounds that are electrolytes?
   A) C_5H_{12} and NaOH B) HCl and NaOH C) HCl and CH_3OH D) C_5H_{12} and CH_3OH

6) An Arrhenius acid has
   A) hydrogen ions as the only positive ions in solution
   B) hydrogen ions as the only negative ions in solution
   C) only hydrogen ions in solution
   D) only hydroxide ions in solution

7) The only positive ion found in an aqueous solution of sulfuric acid is the
   A) sulfate ion B) hydronium ion C) hydroxide ion D) sulfite ion

8) When an Arrhenius acid dissolves in water, the only positive ion in the solution is
   A) H^+ B) Na^+ C) K^+ D) Li^+

9) Hydrogen chloride, HCl, is classified as an Arrhenius acid because it produces
   A) Cl^- ions in aqueous solution C) H^+ ions in aqueous solution
   B) OH^- ions in aqueous solution D) NH_4^+ ions in aqueous solution

10) The compound HNO_3 can be described as an
   A) Arrhenius acid and a nonelectrolyte C) Arrhenius acid and an electrolyte
   B) Arrhenius base and a nonelectrolyte D) Arrhenius base and an electrolyte

11) Which substance is an Arrhenius acid?
   A) $LiF(aq)$ B) $Mg(OH)_2(aq)$ C) CH_3CHO D) $HBr(aq)$

12) Which substance is an Arrhenius acid?
   A) KOH B) NH_3 C) $HC_2H_3O_2$ D) CH_3OH