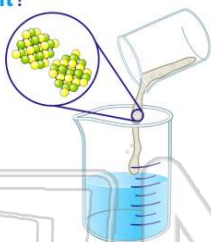




Name _____ Class _____ Date _____

- 1 Which aqueous solution has the **lowest freezing point**?

A 1.0 M $C_6H_{12}O_6$
B 1.0 M C_2H_5OH
C 1.0 M CH_3COOH
D 1.0 M NaCl



- 2 When the **salt** NH_4NO_3 is dissolved in **water**, it produces a **solution** that is

A acidic, with a pH less than 7
B acidic, with a pH greater than 7
C basic, with a pH less than 7
D basic, with a pH greater than 7

- 3 In **aqueous solution**, a **chloride ion** is attracted to which end of the water molecule?

A the hydrogen end, which is the positive pole
B the oxygen end, which is the negative pole



- 4 Equal volumes of 0.1 M NaOH and 0.1 M HCl are thoroughly mixed. The **resulting solution has a pH closest to**

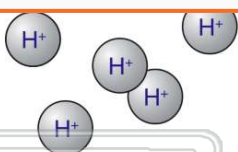
A 5
B 7
C 3



PREVIEW

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C HBr
C NH_3
D NaCl



B It changes blue litmus to red and has a pH greater than 7.
C It changes red litmus to blue and has a pH less than 7.
D It changes red litmus to blue and has a pH greater than 7.

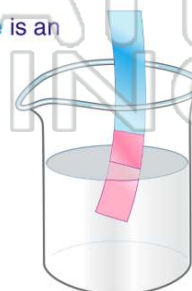
- 9 A student observed that the temperature of water **increased** when a salt was dissolved in it. The student should conclude that **dissolving** the salt caused

A formation of an acidic solution
B formation of a basic solution
C an exothermic reaction
D an endothermic reaction



- 10 Which **substance** is an **Arrhenius acid**?

A LiF(aq)
B HBr(aq)
C $Mg(OH)_2$ (aq)
D CH_3CHO

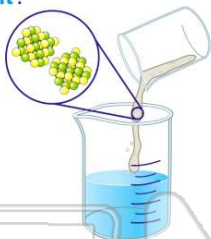




ANSWER KEY

Which aqueous solution has the **lowest freezing point**?

- A 1.0 M $C_6H_{12}O_6$
- B 1.0 M C_2H_5OH
- C 1.0 M CH_3COOH
- D 1.0 M NaCl



(d)

When the **salt NH_4NO_3** is dissolved in **water**, it produces a **solution** that is

- A acidic, with a pH less than 7
- B acidic, with a pH greater than 7
- C basic, with a pH less than 7
- D basic, with a pH greater than 7

(a)

In **aqueous solution**, a **chloride ion** is attracted to which end of the water molecule?

- A the hydrogen end, which is the positive pole
- B the hydrogen end, which is the negative pole
- C the oxygen end, which is the positive pole
- D the oxygen end, which is the negative pole



(a)

Equal volumes of 0.1 M NaOH and 0.1 M HCl are thoroughly mixed. **The resulting solution has a pH closest to**

- A 5
- B 7
- C 3
- D 9



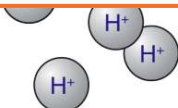
(b)



PREVIEW

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D NaCl



- C It changes red litmus to blue and has a pH less than 7.
- D It changes red litmus to blue and has a pH greater than 7.

A student observed that the temperature of water **increased** when a salt was dissolved in it. The student should conclude that **dissolving** the salt caused

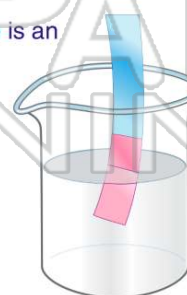
- A formation of an acidic solution
- B formation of a basic solution
- C an exothermic reaction
- D an endothermic reaction



(c)

Which **substance** is an **Arrhenius acid**?

- A $LiF(aq)$
- B $HBr(aq)$
- C $Mg(OH)_2(aq)$
- D CH_3CHO



(b)