BRITISH COLUMBIA CHEMISTRY 12 (MCH--12) · UNIT C · 10 QUESTIONS

Solubility and Acid-Base Equilibria — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A solution with $[H_3O^+] = 1.0 \times 10^{-9}$ mol/L has a pH of**

- **A** 5
- **B** 7
- **C** 9
- **D** 11

Understand It with Pulse | Flag a mistake

2 **A solution with pOH 3 has a pH of**

A 3

B 7

C 14

D 11

Understand It with Pulse | Flag a mistake

3 **The pH of a 0.010 mol/L $HNO_3(aq)$ solution is**

A 2

B 1

C 12

D 13

Understand It with Pulse | Flag a mistake

4 **A strong base differs from a weak base in that a strong base**

- **A** ionizes only slightly in water
- **B** always has a pH below 7
- **C** never conducts electricity
- **D** ionizes almost completely in water

Understand It with Pulse | Flag a mistake

5 **Which 0.10 mol/L solution has the lowest pH**

- **A** HF(aq)
- **B** HCl(aq)
- **C** $CH_3COOH(aq)$
- **D** HCN(aq)

Understand It with Pulse | Flag a mistake

6 **Which 0.10 mol/L solution has the highest pH**

A $NaOH(aq)$

B $HCl(aq)$

C $NH_3(aq)$

D $CH_3COOH(aq)$

Understand It with Pulse | Flag a mistake

7 **Adding a small amount of strong acid to a buffer will**

A cause a large drop in pH

B make the solution basic

C cause only a small change in pH

D destroy all the buffer at once

Understand It with Pulse | Flag a mistake

8 **A buffer made from NH_3 and NH_4Cl resists pH change because**

- **A** it contains no ions
- **B** it is a strong acid
- **C** it neutralizes itself
- **D** acid reacts with NH_3 , base with NH_4^+

Understand It with Pulse | Flag a mistake

9 **The conjugate base of HF(aq) is**

- **A** $F^-(aq)$
- **B** $H_2F^+(aq)$
- **C** $H_3O^+(aq)$
- **D** $OH^-(aq)$

Understand It with Pulse | Flag a mistake

10 **The conjugate acid of $NH_3(aq)$ is**

A $NH_2^-(aq)$

B $N^{3-}(aq)$

C $NH_4^+(aq)$

D $NO_3^-(aq)$

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**5.**	B	**9.**	A
2.	D	**6.**	A	**10.**	C
3.	A	**7.**	C		
4.	D	**8.**	D		

© 2026 Brett Robbins. All Rights Reserved.