Solubility and Acid-Base Equilibria — Practice Test

Northwest Territories Chemistry 12 (MCH--12) • 10 questions

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

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

- A 3
- B 7
- C 14
- D 11

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

- A 2
- B 1
- C 12
- D 13

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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

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

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

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

- **A** $NaOH(aq)$
- **B** $HCl(aq)$
- **C** $NH_3(aq)$
- **D** $CH_3COOH(aq)$

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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

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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^+

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

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

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

- **A** $NH_2^-(aq)$
- **B** $N^{3-}(aq)$
- **C** $NH_4^+(aq)$
- **D** $NO_3^-(aq)$

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ANSWER KEY

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

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