NOVA SCOTIA CHEMISTRY 12 · UNIT B

Equilibrium: Acids and Bases in Chemical Changes — Practice Test

Nova Scotia Chemistry 12 • 25 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 has a hydrogen ion concentration of 0.001 moles per litre. The pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A solution has a hydrogen ion concentration of 0.0001 moles per litre. The pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A solution has a hydrogen ion concentration of 0.01 moles per litre. The pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A solution has pH 3. The pOH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A solution has pH 5. The pOH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A solution has pH 11. The pOH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A solution has pH 3. The hydrogen ion concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A solution has pH 4. The hydrogen ion concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A solution has pH 2. The hydrogen ion concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **For a reaction at equilibrium the product concentration is 0.4 moles per litre and each reactant concentration is 0.2 moles per litre. With one product and two reactants the equilibrium constant is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **For a reaction at equilibrium the product concentration is 0.9 moles per litre and each reactant concentration is 0.3 moles per litre. With one product and two reactants the equilibrium constant is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **For a reaction at equilibrium the product concentration is 0.2 moles per litre and each reactant concentration is 0.2 moles per litre. With one product and two reactants the equilibrium constant is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A titration uses 20 millilitres of 0.1 moles per litre sodium hydroxide. The moles of hydroxide used are**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A titration uses 30 millilitres of 0.1 moles per litre sodium hydroxide. The moles of hydroxide used are**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A titration uses 50 millilitres of 0.1 moles per litre sodium hydroxide. The moles of hydroxide used are**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **An acid solution has concentration 0.1 moles per litre and ionised concentration 0.01 moles per litre. The percent ionisation is**

ANSWER

Understand It with Pulse | Flag a mistake

17 **An acid solution has concentration 0.4 moles per litre and ionised concentration 0.08 moles per litre. The percent ionisation is**

ANSWER

Understand It with Pulse | Flag a mistake

18 **An acid solution has concentration 0.2 moles per litre and ionised concentration 0.01 moles per litre. The percent ionisation is**

ANSWER

Understand It with Pulse | Flag a mistake

19 **Increasing temperature shifts an exothermic equilibrium towards the**

A reactants

B products

C catalyst

D solid only

Understand It with Pulse | Flag a mistake

20 **A strong acid in water**

A ionises partly

B ionises completely

C does not ionise

D forms a buffer

Understand It with Pulse | Flag a mistake

21 **The conjugate base of hydrochloric acid is the**

A hydrogen ion

B hydroxide ion

C chloride ion

D sodium ion

Understand It with Pulse | Flag a mistake

22 **A buffer solution resists changes in**

A temperature

B pressure

C volume

D pH

Understand It with Pulse | Flag a mistake

23 **At the equivalence point of a titration the moles of acid equal the moles of**

- A base added
- B water
- C indicator
- D salt only

Understand It with Pulse | Flag a mistake

24 **A weak acid has a higher pH than a strong acid at the same concentration because it**

- A ionises more
- B ionises less
- C has fewer moles
- D is dilute only

Understand It with Pulse | Flag a mistake

25 **A large equilibrium constant means the equilibrium lies towards the**

A reactants

B catalyst

C products

D solvent

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	3	**10.**	10	**19.**	A
2.	4	**11.**	10	**20.**	B
3.	2	**12.**	5	**21.**	C
4.	11	**13.**	0.002	**22.**	D
5.	9	**14.**	0.003	**23.**	A
6.	3	**15.**	0.005	**24.**	B
7.	0.001	**16.**	10	**25.**	C
8.	0.0001	**17.**	20		
9.	0.01	**18.**	5		

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