

## Set A: Properties of acids and bases

Objective: To test your knowledge of properties of acids, bases, and neutral solution

Write "acidic" or "basic" or "both acidic and basic" or "neutral" to indicate, if the property describes a solution that is an acid, a base, both or neutral.

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|--|----------------|
| 1. A solution has a pH greater than 7.   | <u>basic</u>   |
| 2. A solution turns the color of litmus to blue.   | <u>basic</u>   |
| 3. A solution has a higher concentration of $\text{H}_3\text{O}^+$ ions than $\text{OH}^-$ ions. | <u>acidic</u>  |
| 4. A solution has a pH equal to 7.   | <u>neutral</u> |
| 5. A solution in which phenolphthalein stays colorless.  | <u>acidic</u>  |
| 6. A solution changes color of indicators.   | <u>both</u>    |
| 7. A solution is added to water, and the $\text{H}^+$ concentration of the water increases.      | <u>acidic</u>  |
| 8. A solution changes phenolphthalein from colorless to pink.                                    | <u>basic</u>   |
| 9. A solution has a higher concentration of hydroxide ion than hydrogen ion.                     | <u>basic</u>   |
| 10. A solution with equal number of $\text{H}^+$ ions to $\text{OH}^-$ ions.                     | <u>neutral</u> |
| 11. A solution contains electrolytes.  | <u>both</u>    |
| 12. A solution increases the $\text{OH}^-$ ion concentration of another solution.                | <u>basic</u>   |
| 13. A solution decreases the alkalinity of another solution.                                     | <u>acidic</u>  |
| 14. A solution contains hydrogen ion as the only positive ion.                                   | <u>acidic</u>  |
| 15. A solution in which bromthymol will be yellow.   | <u>acidic</u>  |
| 16. A solution undergoes neutralization reaction.  | <u>both</u>    |
| 17. A solution reacts with a metal to produce hydrogen gas.                                      | <u>acidic</u>  |
| 18. A solution contains mobile ions that conducts electrical current.                            | <u>both</u>    |
| 19. A solution that can turn litmus red.   | <u>acidic</u>  |
| 20. A substance donates a proton in a reaction.  | <u>acidic</u>  |
| 21. A substance accepts a hydrogen ion in a reaction.  | <u>basic</u>   |