

Acid-Base Chemistry

Sr	Questions	Answers Choice
1	Which indicator is typically used for titration involving strong acids and strong bases.	A. Methyl red B. Phenolphthalein C. Bromothymol blue D. Litmus solution
2	Which is amphoteric	A. H ₂ O B. HCl C. NaOH D. NH ₃
3	The pK _a value for HCOOH is.	A. 4.74 B. 3.78 C. 4.78 D. 4.24
4	Which has the highest pH	A. 0.01 M NaOH B. 0.1 M NaOH C. 0.1 M HCl D. 0.01 M HCl
5	Which species is both a Bronsted acid and base.	A. H ₂ O B. Na ⁺ C. OH ⁻ D. Cl ⁻
6	Which of the following is a weak base.	A. KOH B. NaOH C. NH ₃ D. Ca(OH) ₂
7	A salt that hydrolyzes in water in from	A. Strong acid and base B. Weak acid or base C. None D. Both strong
8	pH of 10 ⁻⁹ M HCl is	A. 5 B. 9 C. Slightly below 7 D. Exactly -9
9	Litmus turns which color in a basic solution.	A. Red B. Orange C. Blue D. Colorless
10	NaOH is not considered an Bronsted Lowry acid because.	A. It's neutral B. It's not soluble C. Doesn't donate H ⁺ D. Doesn't produce H ⁺
11	pH of 1 x 10 ⁻⁴ M HCl is	A. 4 B. 1 C. 3.5 D. 7
12	Strong bases have	A. Low K _b B. High K _b C. Low pH D. High K _a
13	Which of the following is a tribasic acid.	A. H ₃ PO ₄ B. HNO ₃ C. HCl D. H ₂ SO ₄
14	Acid rain is mainly due to	A. SO ₃ and NO ₃ B. CO ₂ C. H ₂ D. CH ₄
15	CH ₃ COONa is a salt of.	A. Strong acid+ Strong base B. Weak acid+Strong base C. None D. Weak base+Weak acid

16	The conjugate acid of NH_3 is	A. NH_4 B. NH_2 C. NO_3 D. N_2H_4
17	Strong acids completely dissociate in water because.	A. High solubility B. High K_a C. Forms complex D. Low K_a
18	A solution with equal $[\text{H}^+]$ and $[\text{OH}^-]$ is	A. Basic B. Acidic C. Neutral D. Salt
19	If the concentration of Cl^- ion in a solution is increased, the solubility of silver chloride will	A. Decrease B. Increase C. Remain unchanged D. Become zero
20	The strength of base is measured by its.	A. K_a B. K_b C. pK_w D. K_w
