

ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The chemical method used for determination of rate of reaction is	A. Spectroscopic B. Conductimetric C. Refractometric D. Titration
2	Question Image	A. Zero B. 253 sec C. 150 sec D. 500 sec
3	In the expression rate = $K[A]^a[B]^b$ K is	A. The order of reaction B. The speed of reaction C. The specific rate constant D. The overall order of reaction
4	The rate of reaction determined at a given time is called	A. Average rate B. Instantaneous rate C. Specific rate D. Overall rate
5	With the progressive of the reaction the slope of the curve between concentration of product and time	A. Gradually becomes more steep B. Gradually becomes less steep C. No change occurs in slope D. None of these occurs
6	The reaction rate is expressed in the units of	A. $\text{Mol dm}^{-3}\text{s}^{-1}$ B. Mol dm^{-3} C. $\text{Mol dm}^{-3}\text{N}^{-1}$ D. $\text{dm}^{-3}\text{s}^{-1}$
7	Addition of solid NaHCO_3 in water causes ionization of NaHCO_3 its $K_a = 4.7 \times 10^{-1}$. Then this solution has character	A. Acidic B. Very weakly basic C. Alkaline D. Neutral
8	The ionization constant of an acid is expressed in term of the following constant	A. K_w B. K_n C. K_a D. K_b
9	A solution having pH = 4 its OH^- ion concentration in mole dm^{-3} is	A. 1.0×10^{-4} B. 1.0×10^{-10} C. 1.0×10^{-14} D. 1×10^0
10	Which one of the following is not a buffer	A. $\text{H}_2\text{CO}_3 + \text{NaHCO}_3$ solution B. $\text{H}_3\text{PO}_4 + \text{NaH}_2\text{PO}_4$ solution C. $\text{HI} + \text{NaI}$ solution D. $\text{NH}_4\text{OH} + \text{NH}_4\text{Cl}$ solution
11	Which one of the following is a buffer	A. $\text{HCl} + \text{NaCl}$ solution B. $\text{CH}_3\text{COOH} + \text{CH}_3\text{COONH}_4$ solution C. $\text{H}_2\text{SO}_4 + \text{CaSO}_4$ solution D. $\text{CH}_3\text{COOH} + \text{CH}_3\text{COONa}$
12	Base buffer solution can be prepared by mixing	A. Weak acid and its salt B. Strong acid and its salt with weak base C. Weak base and its salt with strong acid D. Strong base and its salt with weak acid
13	Whenever a weak base is dissolved in water, it give its conjugate acid. similarly a weak acid in water produces its conjugate base. This conjugate acid-base pair concept is stated by	A. Law of mass action B. Le-charlier's principle C. Common ion effect D. Lowery Bronsted concept
		A. Acid with smaller pK_a is 10 times stronger acid B. Acid with greater pK_a is 10 times stronger

14	If the difference of pKa values of the two acids is 2, then	acid C. Acid with smaller pKa is 100 times stronger acid D. Acid with greater pKa is 100 times stronger acid
15	0.1 M HCl has pH = 1.0, it is about 100 times stronger than acetic acid. Then pH of acetic acid will be	A. 0.1 B. 2.0 C. 1.3 D. 3.0
16	Units of Kw are	A. Mole dm^{-3} B. Mole $^2 \text{dm}^{-3}$ C. Mole $^2 \text{dm}^{-6}$ D. Mole $^2 \text{dm}^{-3}$
17	Which of the following solution have zero pH	A. 1 M HCl B. $\text{MH}^{+2}\text{SO}^{2-4}$ C. 0.1 M HNO_3 D. 1 M CH_3COOH
18	The solubility of KClO_3 salt in water is decreased by adding	A. NaClO_3 B. NaCl C. KClO_4 D. KCl
19	K_b for NH_4OH is 1.81×10^{-5} , then K_a value of its conjugate base is	A. $1.81 \times 10^{+5}$ B. 1.81×10^{-9} C. 5.5×10^{-9} D. 5.5×10^{-10}
20	On passing HCl gas through a saturated solution of commercial sodium chloride, pure crystals of NaCl are precipitated due to	A. Increase in pH of the solution B. Decrease in pH of the solution C. Common ion effect D. Increase in ionization of NaCl
21	When a weak acid is dissolved in water or a weak base dissolved in water, then in both cases the conjugate acid base pair is produced. The ionization constants K_a and K_b of a pair are related with each other as	A. $K_a = K_b$ B. $K_a \cdot K_b = K_w$ C. $K_a \cdot K_b = K_w$ D. $K_b \cdot K_w = K_a$
22	K_a value of HF acid is 6.7×10^{-15} the acid is a	A. Weak acid B. Moderately strong acid C. Strong acid D. Very weak acid
23	In 1000 molecules of 0.001 M acetic acid the number of H^+ ions is 12.6, then its percentage of ionization is	A. 1.33% B. 1.26% C. 12.6 D. 1%
24	Acetic acid is 1.33% ionized, In 1000 molecules of 0.1 M acetic acid the number of H^+ ions is	A. 1.33 B. 13.3 C. 1.33 D. 1
25	A solution of NaOH has pH = 13, then concentration of NaOH is	A. 10^{-13} M B. 10^{13} M C. 10^{-1} M D. 10^{+1} M
26	A solution has pH = 0, its H^+ ion concentration is	A. 1×10^{-14} B. 1×10^{14} C. 1×10^1 D. 1
27	The pH of $10^{-3} \text{ mole dm}^{-3}$ of an aqueous solution of H_2SO_4 is	A. 3.0 B. 2.7 C. 2.0 D. 1.5
28	An aqueous solution is neutral when its	A. pH = 14 B. pH = zero C. pH = 7 D. $K_w = 10^{-7}$
29	The ionic product of H^+ ions and OH^- in water is called ionization constant of water Kw. The value of Kw at 25°C is	A. 0.11×10^{-14} B. 0.30×10^{-14} C. 1.0×10^{-14} D. 3×10^{-14}
30	Question Image	A. 450°C B. 250°C C. 850°C D. 1000°C

