ECAT Chemistry Chapter 8 Chemical Equilibrium Online Test

Sr	Questions	Answers Choice
1	At certain temperature, 50% of HI is dissociated into $H_2$and $I_2$the equilibrium constant is	A. 1.0 B. 3.0 C. 0.5 D. 0.25
2	Question Image	A. Total pressure B. Amount of A₂and B₂ C. Temperature D. Catalyst
3	In an exothermic reaction, a 10° rise in temperature will	A. Decrease the value of equilibrium constant B. Double the value of K_c C. Not produce any change in K_c D. Produce some increase in K_c
4	In which of the following cases, the reaction goes farthest to completion	A. K = 10³ B. K = 10⁻² C. K = 10 D. K = 10⁰
5	Question Image	A. 0.02 B. 0.2 C. 50 D. 25
6	The state of equilibrium refers to	A. State of rest B. Dynamic state C. Stationary state D. State of inertness
7	Two moles of HI was heated in a sealed tube at 440°C till the equilibrium was reached. HI was found to be 22% decomposed. The equilibrium constant for dissociation is	A. 0.282 B. 0.0796 C. 0.0199 D. 1.99
8	The avtive mass of 64 g of HI in a two litre flask would be	A. 2 B. 1 C. 5 D. 0.25
9	Which of the following factors will favour the reverse reaction in a chemical equilibrium?	A. Increase in concentration of one of the reactants B. Increase in concentration of one of the products C. Removal of one of the products regularly D. None of these
10	Question Image	A. Favour the formation of N₂O₄ B. Favour the decomposition of N₂O₄ C. Not alter the equilibrium D. Stop the reaction
11	According to Le-Chatelier's principal, adding heat to a solid and liquid in equilibrium will cause the	A. Amount of solid to decrease B. Amount of liquid to decrease C. Temperature to rise D. Temperature to fall
12	Question Image	A. Equal volumes of N₂and H₂are reacting B. Equal masses of N₂and H₂are reacting C. The reaction has stopped D. The same amount of ammonia is formed as is decomposed into N₂and H₂

13	Question Image	A. [A] = [B] B. [A] < [B] C. [B] = [C] D. [A] > [B]
14	Question Image	A. Complete conversion of A to B has taken place B. Conversion of A to B is only 50% complete C. Only 10% conversion of A to B has taken place D. The rate of transformation of A to B is just equal to rate of transformation of B to A in the system
15	The equilibrium constant in a reversible chemical reaction at a given temperature	A. Depends on the initial concentration of the reactants B. Depends on the concentration of one of the products at equilibrium C. Does not depend on the initial concentration of rectants D. It is characteristic of the reaction
16	In a reversible chemical reaction having two reactants in equilibrium, if the concentration of the reactants are doubled then the equilibrium constant will	A. Also be doubled B. Be halved C. Becomes one fourth D. Remains the same
17	Question Image	A. 0.60 B. 1.67 C. 0.66 D. 2.6
18	Question Image	A. Forward reaction is favoured B. Backward reaction is favoured C. No effect D. None of the above
19	The solubility product of $Ca(OH)_2$ is 6.5×10^{-6}. The concentration of OH^- ions is	A. 1.175 x 10⁻² B. 2.35 x 10⁻² C. 3.25 x 10⁻³ D. 3.25 x 10⁻⁴
20	The solubility of PbF_2 is 2.6×10^{-3} mole dm^{-3} then its solubility product is	A. 2.6 x 10⁻³ B. 6.76 x 10⁻⁶ C. 5.2 x 10⁻⁶ D. 7.0 x 10⁻⁸
21	K_{sp} value for $PbSO_4 = 1.8 \times 10^{-8}$ mole^2 dm^{-6}. The maximum concentration of Pb^{++} ions is	A. 1.34 x 10⁻⁴mole dm⁻³ B. 1.8 x 10⁻⁴ C. 3.6 x 10⁻¹⁶mole dm⁻³ D. 1.0 x 10⁻⁸mole dm⁻³
22	The solubility product of AgCl is 2.0×10^{-10} mole $^2dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is	A. 2.0 x 10⁻¹⁰mole dm⁻³ B. 1.41 x 10⁻⁵mole dm⁻³ C. 1.0 x 10⁻¹⁰ D. 4.0 x 10⁻²⁰mole dm⁻³
23	Product of concentration of ions raised to the power equal to the co-efficient of ions in balanced equation for saturated solution of a salt is called	A. Ionic product B. Equilibrium constant K_c C. K_w D. Solubility product (K_{sp})
24	Buffers having pH less than 7 are made	A. Mixture of weak acid + salt of it with strong base B. Mixture of weak acid + salt of it with weak base C. Mixture of weak base + salt of it with strong acid D. Mixture of weak base + salt of it with weak base
25	The relation between Kc and Kp is	
26	pH of the human blood which is essentially maintained constant due to carbonates, biocarbonates, phosphates etc., is	A. 7.00 B. 7.25 C. 7.35 D. 7.47
27	A buffer solution of 0.1 molar HCOOH and 0.1 molar HCCONa has pH = 3.78 To is 0.01 molar HCl is added, then pH of the buffer solution becomes	A. 2.78 B. 4.78 C. 3.78

	molar HCl is added, then pH of the buffer solution becomes	C. 3.78 D. 3.70
28	If pH of buffer of 1 mole dm^{-3} of HCOOH + 0.1 mole dm^{-3} HCOONa having pKa = 3.78 is	A. 1.78 B. 2.78 C. 3.78 D. 4.78
29	pH of 0.1 molar HCl solution is	A. 1 B. zero C. 13 D. 14
30	A buffer of a 0.09 molar acetic acid and 0.11 molar sodium acetate has pH = 4.83. If 0.01 mole NaOH in 1 dm^3 of the buffer solution is added, then pH of the buffer becomes	A. 4.74 B. 4.92 C. 5.0 D. 4.0