ECAT Chemistry Chapter 8 Chemical Equilibrium

Sr	Questions	Answers Choice
1	0.1 MHCl 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
2	$N_2O_4 \rightleftharpoons 2NO_2$ For the above reaction, which of the Following expression of K_c correct :	A. <o:p></o:p> Kc = [N₂O₄]/[NO₂]²<o:p></o:p> B. Kc = [N₂O₄]/[NO₂]<o:p></o:p> C. Kc = [N₂O]²/[N₂O₄]<o:p></o:p> D. Kc = [N₂O₄]/[NO₂]<o:p></o:p>
3	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
4	Question Image	A. Introduction of an inert gas at constant volume B. Introduction of PCl₃(g) at constant C. Introduction of PCl₅(g) at constant volume D. Introduction of Cl₂at constant volume
5	Question Image	A. Temperature is increased B. Pressure is increased C. HCl is added D. HCl is removed
6	Question Image	A. KC = KP B. Kp = KcRT C. Kp = kc(RT)⁻² D. Kp = Kc(RT)⁻¹
7	When the rate of formation of reactants is equal to the rate of formation of products, this is known as	A. Chemical reaction B. Chemical equilibrium C. Chemical kinetics D. None
8	A large value of $K_c$means that at equilibrium :	A. Less reactant and more products. B. Reactants and product in same amounts. C. More reactants and less products. D. None of above.
9	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
10	Le-chatlier's principle is applied on the reversible reaction in order to	A. Determine the rate of reaction B. Predict the direction of reaction C. Determine the extent of reaction D. Find best conditions for favorable shifting the position of equilibrium
11	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

12	The relation between Kc and Kp is	
13	strength of an acid can be determined by	A. P^{ka} B. P^{kp} C. P^{oH} D. P^{kw}
14	A chemical reaction A---------->B is said to be in equilibrium when :	A. Rate of transformation of A to B is equal to B to A. B. 50% reactant has been changed to B. C. Conversion of A to B is 50% complete D. Complete conversion of A to B has taken place.
15	A solution of NaOH has pH = 13, then concentration of NaOH is	A. 10⁻¹³M B. 10¹³M C. 10⁻¹M D. 10⁺¹M
16	Question Image	A. Favour the formation of N₂O₄ B. Favour the decomposition of N₂O₄ C. Not alter the equilibrium D. Stop the reaction
17	pH of 1 molar NaOH is	A. 7 B. zero C. 14 D. 10
18	Units of Kw are	A. Mole dm⁻³ B. Mole²dm⁻³ C. Mole²dm⁻⁶ D. Mole²dm⁻³
19	Chemical equilibrium involving reactants and products in more than one phase is called	A. Static B. Dynamic C. Homogeneous D. Heterogeneous
20	Which of the following solution have zero pH	A. 1 M HCl B. MH₂SO₄ C. 0.1 M HNO₃ D. 1 M CH₃COOH