ECAT Chemistry Chapter 8 Chemical Equilibrium

Sr	Questions	Answers Choice
1	Whenever a week 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
2	Question Image	A. 0.60 B. 1.67 C. 0.66 D. 2.6
3	Which statement about the following equilibrium in correct? $2SO_{2\,(g)} + O_{2(g)}$----------$2sO_{3(g)}$H= - 188.3 KJ mol-1	A. T value of K_{p falls witha rise in temperate.} B. The value of K_{p falls withincreasing pressure} <o:p></o:p> C. Adding V_{2O}₅catalyst increase the equilibrium yield of sulfur trioxide <o:p></o:p> D. The value of K_{p is equal to}K_p E. <o:p></o:p> <o:p></o:p>
4	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
5	Question Image	A. Total pressure B. Amount of A₂and B₂ C. Temperature D. Catalyst
6	Question Image	A. Decrease in temperature favour more dissolution of the salt B. Increase in temperature favour more dissolution of the salt C. Lowering pressure favour more dissolution of the salt D. Increasing pressure favour more dissolution of the salt
7	The rate of which the reaction proceeds is directly proportional to the product of the active masses of the reactants is according to	A. Law of mass action B. Le Chateliers principle C. Equilibrium law D. Law of constant proportion
8	$N_2 + O_2 \rightleftharpoons 2NO$ The unit of K_c for tis reaction will be:	A. <o:p></o:p> No unit<o:p></o:p> B. <o:p></o:p> <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">mol⁻² dm⁻³<o:p></o:p> C. <o:p></o:p> <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin:

		initial; background-clip: initial;">mol⁻¹ dm⁻³<o:p></o:p> D. <o:p></o:p> <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">mol⁻² dm⁺³<o:p></o:p>
9	pH of 1 molar NaOH is	A. 7 B. zero C. 14 D. 10
10	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
11	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
12	Question Image	A. 0.073 B. 0.147 C. 0.05 D. 0.026
13	A solution having pH = 4 its OH^-ion concentration in mole $dm^{-3}$is	A. 1.0 x 10⁻⁴ B. 1.0 x 10⁻¹⁰ C. 1.0 x 10⁻¹⁴ D. 1 x 10⁰
14	Question Image	A. At equilibrium there is no further change in the concentration of HI B. At equilibrium concentration of I₂remains constant C. At equilibrium concentration of H₂remains unaltered D. At equilibrium the rate of formation of HI is equal to the rate of decomposition of HI
15	Question Image	A. 32 B. 64 C. 16 D. 4
16	$K_a$value of HF acid is 6.7 x $10^{-15}$the acid is a	A. Weak acid B. Moderately strong acid C. Strong acid D. Very weak acid
17	In the particular reaction for the valueK_c 1 x10^{-25}which statement is correct :	A. Almost forward reaction is completed. B. Amount of reactant is negligible as compared to product. C. Amount of product is negligible as compared to reactant. D. Amount of product is equal to amount of reactant.
18	Question Image	A. Reaction occurs at STP B. Reaction is exothermic C. Reaction is endothermic D. Number of moles of production and reactant are same
19	Question Image	A. 0.02 B. 0.2 C. 50 D. 25
20	pH of 0.1 molar HCl solution is	A. 1 B. zero C. 13 D. 14