ECAT Chemistry Chapter 8 Chemical Equilibrium Online Test

Sr	Questions	Answers Choice
1	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 x 10⁻¹⁴ B. 0.30 x 10⁻¹⁴ C. 1.0 x 10⁻¹⁴ D. 3 x 10⁻¹⁴
2	Question Image	A. 450°C B. 250°C C. 850°C D. 1000°C
3	For which system does the equilibrium constant, KC has units of concentration	
4	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
5	Question Image	A. Shift reaction toward forward direction B. Shift reaction backward C. Lower the value of K_c D. No change in reaction
6	Question Image	A. Shift reaction toward forward direction B. Shift reaction backward C. Lower the value of K_c D. No change in reaction
7	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
8	The optimum conditions of temperature and pressure to get maximum NH_3 form N_2 and H_2 gases is	A. 2000°C and 10 atmosphere B. 0°C and 1 atmosphere C. 400°C and 200-300 atmosphere D. 200°C and 100 atmosphere
9	Question Image	A. Forward B. Backward C. Already in equilibrium D. K_c is never less
10	Question Image	A. 4 mole per dm³ B. 2 mole per dm³ C. 0.33 mole per dm³ D. 0.67 mole per dm³
11	Question Image	A. Le-chatlier's principle B. Only adding catalyst C. Decreasing pressure D. Decreasing temperature
12	Question Image	A. Temperature is increased B. Pressure is increased C. HCl is added D. HCl is removed
13	Question Image	A. KC = KP B. Kp = KcRT C. Kp = kc(RT)⁻² D. Kp = Kc(RT)⁻¹
14	Question Image	A. The value of K_p falls with rise in temperature B. The value of K_p falls with increasing pressure C. Addition of

		V₂O₅catalyst increase the concentration of SO₃ D. The value of K_pis equal to K_c
15	The value of $K_p$is greater than $K_c$for a gaseous reaction when	A. Number of molecules of products is greater than the reactants B. Number of molecules of reactants is greater than those of products C. Number of molecules of reactants and products equal D. Catalyst is added
16	Question Image	
17	Question Image	A. Moles per dm³ B. Partial pressures C. Number of moles D. Mole fractions
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	An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate	
20	Question Image	A. Initial concentration of acetic acid B. Initial concentration of ethyl acetate C. Equilibrium concentration of acetic acid D. Equilibrium concentration of ethyl acetate
21	Law of mass action states that rate of chemical reaction is directly proportional to the product of active masses of the reactants. The term active mass means	A. Mass in grams converted to products B. Number of moles C. Number of moles per dm³of reactants D. Total pressures of the reactants
22	Which one of the following has no units of its $K_c$value	
23	Question Image	A. Moles⁻²dm⁺⁶ B. No units C. Mole dm⁻³ D. Mole⁻¹dm⁻³
24	Hydrogen gas and iodine vapours combine to form HI at 425°C, the same composition of mixture is present if we start with decomposition of HI. It suggests	A. A static equilibrium B. Law of mass action C. A dynamic equlibrium D. Irreversible reaction
25	The solubility product of AgCl is 2.0 x $10^{-10}$$mol^2$$dm^{-6}$The maximum concentration of Ag^+ions in the solution is	A. 2.0 x 10⁻¹⁰mol dm⁻³ B. 1.41 x 10⁻⁵mol dm⁻³ C. 1.0 x 10⁻¹⁰mol dm⁻³ D. 4.0 x 10⁻²⁰mol dm⁻³
26	The pH of 10^{-3}mole $dm^{-3}$of an aqueous solution of $H_2SO_4$is	A. 3.0 B. 2.7 C. 2.0 D. 1.5
27	Question Image	A. The value of K_pfalls with a rise in temperature B. The value of K_pfalls with increasing pressure C. Adding V₂O₅catalyst increase the equilibrium yield of sulphur trioxide equilibrium yield of sulphur trioxide D. The value of K_pis equal to K_c
28	For which system does the equilibrium constant. K_c has units of	
		A. HF is stable and does not decompose even at 2000°C B. HF is stable and slowly decomposes

29	Question Image	B. HF is stable and slowly decomposes at 2000°C C. HF is strong acid D. HF produces equal moles of hydrogen and fluorine
30	Chemical equilibrium involving reactants and products in more than one phase is called	A. Static B. Dynamic C. Homogeneous D. Heterogeneous