ECAT Chemistry Chapter 8 Chemical Equilibrium

Sr	Questions	Answers Choice
1	The solubility product of AgCl is 2.0 x $10^{-10}$$mol^2dm^{-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
2	Question Image	A. High temperature and low pressure B. Low temperature and high pressure C. Low temperature and low pressure D. High temperature and high pressure
3	Question Image	
4	Question Image	A. Temperature is increased B. Pressure is increased C. HCl is added D. HCl is removed
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	Extent to $H_2 + L_2 \rightarrow 2HI$ can be increased by :	A. Increasing temperature.<o:p></o:p> B. Increasing product. <o:p></o:p> C. Increasing pressure. <o:p></o:p> D. Adding a catalyst.<o:p></o:p>
7	For which system does the equilibrium constant. K_c has units of	
8	Question Image	A. High temperature B. Low temperature C. Low pressure D. High pressure
9	In exothermic reversible reaction increase in temperature shift the equilibrium to :	A. Remains unchanged. B. Product side. C. Reactant side. D. None of above.
10	The rate of reaction :	A. Remain same as reaction proceeds. B. May decrease or increase as reaction proceeds . C. Increase as reaction proceeds. D. Decreases as reaction proceeds.
11	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
12	Question Image	A. Favour the formation of N₂O₄ B. Favour the decomposition of N₂O₄ C. Not alter the equilibrium D. Stop the reaction
13	The state of equilibrium refers to	A. State of rest B. Dynamic state C. Stationary state D. State of inertness
		A. Increase in pH of the solution

14	On passing HCl gas through a saturated solution of commercial sodium chloride, pure crystals of NaCl are precipitated due to	B. Decrease in pH of the solution C. Common ion effect D. Increase in ionization of NaCl
15	Which of the following favours the reverse reaction in chemical equilibrium?	A. Increasing the concentration of the reactant B. Removal of the least one of the products at regular intervals C. Increasing the concentration of one or more of the products D. None of these
16	The rate of a chemical reaction is directly;y proportional to product of molar concentration of reaction substance it is called :	A. Low of conservation of energy. B. Law of mass action. C. Rate law . D. Active mass rule.
17	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
18	$2SO_2 + O_2 \rightleftharpoons 2SO_2$ H= 188KJ $mole^{-1}$ Which statement about following equilibrium is correct :	A. The value of<span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:"Times New Roman";mso-bidi-theme-font:minor-bidi; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">K_pfalls with arise in temperature. B. The value ofK_pis equal to<span style="font-size:11.0pt;line-height:107%; font-family:"Calibri",sans-serif;mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:"Times New Roman";mso-bidi-theme-font:minor-bidi; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">k_{c.} C. The value ofK_pfalls with the increase pressure. D. Adding V₂O₅ catalyst increase the equilibrium yield of Sulphur trioxide. <o:p></o:p>
19	The best buffer is prepared when molar concentrations of the salt and acid are equal, then its pH and pKa value are related	A. pH = pKa B. pH < pKa C. pH > pKa D. pH x pKa = 14
20	Addition of solid $NaHCO_3$in water causes ionization of $NaCHO_3$its K_a= 4.7 x 10^{-1}. Then this solution has character	A. Acidic B. Very weakly basic C. Alkaline D. Neutral