

MDCAT Chemistry Chapter 20 Macromolecules Online Test

Sr	Questions	Answers Choice
1	The solubility product of AgCl is $2.0 \times 10^{-10} \text{ mol}^2 \text{ dm}^{-6}$. The maximum concentration Ag^+ ions in the solution is:	A. $1.41 \times 10^{-5} \text{ mol. dm}^{-3}$ B. $1.41 \times 10^{-10} \text{ mol. dm}^{-3}$ C. $2.0 \times 10^{-10} \text{ mol. dm}^{-3}$ D. $4.0 \times 10^{-20} \text{ mol. dm}^{-3}$
2	In a given system, water and ice are in equilibrium, if the pressure is applied to the above system then	A. More ice is formed B. Amount of ice and water will remain the same C. more ice is melted D. both A and B
3	The decomposition of N_2O_4 to NO_2 is carried out at 280°C in chloroform. When equilibrium is reached. 0.2 moles of N_2O_4 and 0.02 mole of NO_2 are present in 1:1 ratio The equilibrium constant for the reaction $\text{N}_2\text{O}_4 \rightleftharpoons 2\text{NO}_2$ is	A. 0.01 B. 0.001 C. 0.02 D. 0.002
4	For the reaction $\text{H}_2(\text{g}) + \text{I}_2(\text{g}) \rightleftharpoons 2\text{HI}(\text{g})$. The equilibrium constant changes with	A. Total pressure B. Catalyst C. Concentration of H_2 and I_2 D. Temperature
5	The solubility of $\text{Fe}(\text{OH})_3$ is 'x' mole per dm^3 . Its K_{sp} would be	A. $9x^3$ B. $3x^4$ C. $27x^4$ D. $9x^4$
6	In a saturated solution of AgCl, the molar concentration of Ag^+ and Cl^- is $1.0 \times 10^{-5} \text{ M}$ each. What is the value of K_{sp}	A. 1.0×10^{-5} B. 1.0×10^{-15} C. 0.1×10^{-5} D. 1.0×10^{-10}
7	If the concentration of salt is greater than the acid in buffer solution, then the	A. $\text{pH} = \text{pK}_a$ B. $\text{pH} = \text{pK}_b$ C. $\text{pH} > \text{pK}_a$ D. $\text{pH} < \text{pK}_b$
8	The oxidation of SO_2 to SO_3 is exothermic reaction. The yield of SO_3 will be maximum if	A. Temperature is increased and pressure is kept constant B. Temperature is reduced and pressure is increased C. Both temperature and pressure are increased D. Both temperature and pressure are increased
9	Consider the reaction $\text{PCl}_5(\text{g}) \rightleftharpoons \text{PCl}_3(\text{g}) + \text{Cl}_2(\text{g})$ in a closed container at equilibrium. At a fixed temperature, what will be the effect of adding more PCl_5 on the equilibrium constant	A. It increases B. It remains unaffected C. It decreases D. Can't be predicted without K_i
10	In the reaction $\text{A}_2(\text{g}) + 4\text{B}_2(\text{g}) \rightleftharpoons 2\text{AB}_4(\text{g})$ such that $\Delta H < 0$, the formation of $\text{AB}_4(\text{g})$ will be favoured at	A. Low temperature and high pressure B. Low temperature and low pressure C. High temperature and low pressure D. High temperature and high pressure
11	In the reaction $\text{A}_2(\text{g}) + 4\text{B}_2(\text{g}) \rightleftharpoons 2\text{AB}_4(\text{g})$ such that $\Delta H < 0$, the formation of $\text{AB}_4(\text{g})$ will be favoured at	A. Low temperature and high pressure B. Low temperature and low pressure C. High temperature and low pressure D. High temperature and high pressure