

Chemical Equilibrium

Sr	Questions	Answers Choice
1	$K_c = 0.040$ at 450°C for the following reaction, evaluate K_p for the reaction. $\text{PCl}_5 \rightleftharpoons \text{PCl}_3 + \text{Cl}_2$	A. 0.40 B. 2.4 C. 0.64 D. 0.052
2	Law of mass action applies to	A. Closed systems only B. Open systems C. Irreversible systems D. Combustion reactions
3	According to law of mass action rate of reaction is proportional to.	A. Temperature B. Pressure C. Product of active masses D. Atomic mass
4	Which of the following statements correctly describes the effect of temperature on the equilibrium constant.	A. K_c is directly proportional to temperature B. K_c is inversely proportional to temperature. C. K_c depends on the enthalpy change of the reaction D. Temperature has no effect on the value of K_c
5	If Δn is positive, then K_p is	A. Greater than K_c B. Less than K_c C. equal K_c D. Zero
6	Catalyst affects	A. Value of K B. Equilibrium position C. Activation energy D. Final concentrations
7	A reversible reaction is one which	A. Proceeds to completion B. Occurs only in one direction C. Proceeds in both directions D. Has no products
8	Increasing temperature favors	A. Exothermic reaction B. Endothermic reaction C. Formation of solid D. Reverse in all cases
9	Reaction in Haber process is	A. Endothermic B. Exothermic C. Irreversible D. Neutral
10	Optimum temperature in Haber process is	A. 50°C B. 450°C C. 200°C D. 1000°C
11	Active mass means	A. Moles B. Volume C. Mass D. Molar concentration
12	CH_3COONa in water forms	A. Acidic solution B. Basic Solution C. Neutral Solution D. Salt bridge
13	Removing product from equilibrium	A. Shifts equilibrium left B. Stops reaction C. Shifts equilibrium right D. Has no effect
14	Contact process is used for	A. Sulfuric acid production B. Ammonia Synthesis C. Nitric Acid production D. Hydrogenation

15	Dynamic equilibrium occurs.	A. In open systems B. Only in gases C. In closed systems D. Only at low temperature
16	NH ₄ Cl in water makes solution	A. Neutral B. Acidic C. Basic D. amphoteric
17	Salts of weak acid + strong base are.	A. Basic B. Acidic C. Amphoteric D. Neutral
18	The reversibel reation cannot be achieved in	A. Open system B. Closed system C. Both a and b D. None of these
19	Lowering temperatur ein an exothermic reaction.	A. Favors reverse B. Favors forward C. No effect D. Stop the reaction
20	If $Q > K$, the reaction	A. Shift left B. Moves forward C. At equilirbium D. Stops