

## Chemical Equilibrium

Sr	Questions	Answers Choice
1	Le Chatelier's Principle applies to.	A. Irreversible reactions B. Static equilibrium C. Dynamic equilibrium D. Precipitation reactions
2	$\text{Na}_2\text{CO}_3$ in water gives.	A. Acidic solution B. Basic Solution C. Neutral solution D. Buffer
3	Which statement is true at dynamic equilibrium.	A. No reaction is occurring B. Concentrations are changing C. Rates of forward and reverse reactions are equal D. Rate forward reaction < reverse
4	Lowering temperature in an exothermic reaction.	A. Favors reverse B. Favors forward C. No effect D. Stop the reaction
5	For a specific reaction the value of the equilibrium constant, $K_c$ ?	A. Always remains the same at different reaction conditions B. Increases if the concentration of one of the products is increased C. Changes with changes in the temperature D. Increases if the concentration of one of the reactants is increased
6	Units of $K_c$ depend on	A. Catalyst B. Reaction stoichiometry C. Activation energy D. $\Delta H$
7	At equilibrium the observable properties.	A. Keep changing B. Fluctuate randomly C. Remain constant D. Oscillate
8	At equilibrium	A. Products dominate B. Reactants dominate C. Forward and reverse rates are zero D. Forward rate = reverse rate
9	Catalyst used in contact process	A. Fe B. $\text{V}_2\text{O}_5$ C. Ni D. $\text{Al}_2\text{O}_3$
10	Optimum temperature in Haber process is	A. 50 °C B. 450 °C C. 200 °C D. 1000 °C
11	According to law of mass action rate of reaction is proportional to.	A. Temperature B. Pressure C. Product of active masses D. Atomic mass
12	Active mass means	A. Moles B. Volume C. Mass D. Molar concentration
13	Reaction in Haber process is	A. Endothermic B. Exothermic C. Irreversible D. Neutral
14	A large $K$ value indicates.	A. Products are favored B. Reactants are favored C. No reaction D. ...

		D. Slow reaction
15	Kc is expressed in terms of.	A. Pressure B. Mole fraction C. Concentration D. Volume
16	Consider the gas phase equilibrium system represented by the equation $2\text{H}_2 + \text{O}_2 \rightleftharpoons 2\text{H}_2\text{O}$ . Given that the forward reaction is endothermic, which of the following changes will decrease the equilibrium amount of $\text{H}_2\text{O}$ .	A. Adding more oxygen B. Adding a solid phase catalyst C. Decreasing the volume of the container D. Increasing the temperature at constant pressure
17	Which is NOT a feature of dynamic equilibrium.	A. Closed system B. Constant Temperature C. Unequal reaction rates D. No net change
18	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
19	Law of mass action was proposed by	A. Le Chatelier B. Arrhenius C. Guldberg and Waage D. Dalton
20	Addition of inert gas at constant volume	A. Affects equilibrium B. Shifts reaction left C. Shifts reaction right D. No effect