

Chemical Equilibrium

Sr	Questions	Answers Choice
1	Law of mass action is applicable to.	A. Reversible reaction B. Combustion reactions C. Irreversible reactions D. Endothermic reactions only
2	$Q < K$ implies.	A. Reaction proceeds forward B. equilibrium is established C. System stops D. Reaction shifts in reverse
3	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
4	Catalyst affects	A. Value of K B. Equilibrium position C. Activation energy D. Final concentrations
5	Unit of K_c depend on	A. Change in concentration B. Change in number of moles of gas C. Change in pressure D. Change in Entropy
6	Removing product from equilibrium	A. Shifts equilibrium left B. Stops reaction C. Shifts equilibrium right D. Has no effect
7	Which of the following reactions reaches equilibrium	A. Reversible B. Irreversible C. Combustion D. Neutralization
8	Equilibrium constant depends on	A. Pressure B. Temperature C. Volume D. Concentration
9	$K_c = 0.040$ at 450°C for the following reaction, evaluate K_p for the reaction. $\text{PCl}_5 \rightleftharpoons \text{PCl}_2 + \text{Cl}_2$	A. 0.40 B. 2.4 C. 0.64 D. 0.052
10	Increase in concentration of reactants	A. Increase K B. Decrease K C. Shifts equilibrium forward D. Stops reverse reaction
11	A saturated solution represents a dynamic equilibrium. Macroscopically, the concentration of dissolved solute is constant, Microscopically this occurs because.	A. No more solute particles are dissolving B. The rate of dissolution of solute is zero C. Solute particles are dissolving and precipitating at the same rate D. All solute particles have dissolved
12	Addition of inert gas at constant volume	A. Affects equilibrium B. Shifts reaction left C. Shifts reaction right D. No effect
13	Increase in pressure shifts equilibrium to.	A. Side with more moles of gas B. Side with fewer moles of gas C. Liquid phase D. Solid phase
14	In a reversible reaction.	A. Products do not reform reactants B. Rate of forward reaction is always higher C. Rate of reverse reaction is always higher D. Rate of forward reaction is always lower than rate of reverse reaction

		<p>C. Both forward and reverse reactions occur</p> <p>D. Products are in excess</p>
15	Position of equilibrium is affected by	<p>A. Temperature</p> <p>B. Catalyst</p> <p>C. Inert gas</p> <p>D. Surface area</p>
16	Active mass means	<p>A. Moles</p> <p>B. Volume</p> <p>C. Mass</p> <p>D. Molar concentration</p>
17	NH ₄ Cl in water makes solution	<p>A. Neutral</p> <p>B. Acidic</p> <p>C. Basic</p> <p>D. amphoteric</p>
18	Which does not alter equilibrium constant.	<p>A. Catalyst</p> <p>B. Temperature</p> <p>C. Pressure</p> <p>D. Both a and c</p>
19	Which is NOT a feature of dynamic equilibrium.	<p>A. Closed system</p> <p>B. Constant Temperature</p> <p>C. Unequal reaction rates</p> <p>D. No net change</p>
20	If $Q=K$, then	<p>A. Reaction is irreversible</p> <p>B. System is at equilibrium</p> <p>C. Forward reaction dominates</p> <p>D. Reverse reaction dominates</p>