

Chemical Equilibrium

| Sr | Questions | Answers Choice |
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| 1 | Equilibrium constant depends on | A. Pressure B. Temperature C. Volume D. Concentration |
| 2 | Le Chatelier's Principle applies to. | A. Irreversible reactions B. Static equilibrium C. Dynamic equilibrium D. Precipitation reactions |
| 3 | Dynamic equilibrium is attained when | A. Forward reaction stops B. Reverse reaction stops C. Forward and reverse reactions continue at equal rates D. Concentration of products become zero |
| 4 | 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 |
| 5 | Dynamic equilibrium occurs. | A. In open systems B. Only in gases C. In closed systems D. Only at low temperature |
| 6 | 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 |
| 7 | Catalyst used in Haber process is | A. Fe B. Pt C. Cu D. Zn |
| 8 | Law of mass action was proposed by | A. Le Chatelier B. Arrhenius C. Guldberg and Waage D. Dalton |
| 9 | K _c is expressed in terms of. | A. Pressure B. Mole fraction C. Concentration D. Volume |
| 10 | 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 |
| 11 | Decreasing pressure shifts equilibrium towards. | A. Sides with more gas molecules B. Side with fewer gas molecules C. Liquids D. Solids |
| 12 | Active mass means | A. Moles B. Volume C. Mass D. Molar concentration |
| 13 | NH ₄ Cl in water makes solution | A. Neutral B. Acidic C. Basic D. amphoteric |

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| 14 | Lowering temperatur ein an exothermic reaction. | <ul style="list-style-type: none"> A. Favors reverse B. Favors forward C. No effect D. Stop the reaction |
| 15 | Kp is used for. | <ul style="list-style-type: none"> A. Solid state reactions B. Gaseous reactions C. Aqueous reactions D. Liquid reactions |
| 16 | In a reversible reaction. | <ul style="list-style-type: none"> A. Products do not reform reactants B. Rate of forward reaction is always higher C. Both forward and reverse reactions occur D. Products are in excess |
| 17 | Increasing temperatur efavors | <ul style="list-style-type: none"> A. Exothermic reaction B. Endothermic reaction C. Formation of solid D. Reverse in all cases |
| 18 | Consider the gas phase equilibrium sysem represented by teh equation $2\text{H}_2 + \text{O}_2 \rightleftharpoons 2\text{H}_2\text{O}$. Given that the forward reactio is endothermic, which of the following chagnes will decrease the equilibrium amount of H_2O . | <ul style="list-style-type: none"> A. Adding more oxygen B. Adding a solid phase catalyst C. Decreasing the volume of the container D. Increaseing the temperature at constant pressure |
| 19 | Consider the equilibrium $2\text{H}_2 + \text{O}_2 \rightleftharpoons 2\text{H}_2\text{O}$. If the concentration of H_2O is increased, the concentrations of H_2 and O_2 will | <ul style="list-style-type: none"> A. Increses B. Decrease C. Remain the same D. Change irregularly |
| 20 | Which one of the following is not an example of reversible reaction. | <ul style="list-style-type: none"> A. Formation of ammonia B. Foramtion ow water C. Decomposition of PCl_5 D. Decomposition of NO_2 |