

## Chemical Equilibrium

Sr	Questions	Answers Choice
1	Decreasing pressure shifts equilibrium towards.	A. Sides with more gas molecules B. Side with fewer gas molecules C. Liquids D. Solids
2	Law of mass action applies to	A. Closed systems only B. Open systems C. Irreversible systems D. Combustion reactions
3	Na <sub>2</sub> CO <sub>3</sub> in water gives.	A. Acidic solution B. Basic Solution C. Neutral solution D. Buffer
4	Le Chatelier's Principle applies to.	A. Irreversible reactions B. Static equilibrium C. Dynamic equilibrium D. Precipitation reactions
5	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
6	Which of the following reactions reaches equilibrium	A. Reversible B. Irreversible C. Combustion D. Neutralization
7	Equilibrium constant depends on	A. Pressure B. Temperature C. Volume D. Concentration
8	NH <sub>4</sub> Cl in water makes solution	A. Neutral B. Acidic C. Basic D. amphoteric
9	Pressure used in Haber Process.	A. 2 atm B. 300 atm C. 200 atm D. 5 atm
10	At equilibrium the observable properties.	A. Keep changing B. Fluctuate randomly C. Remain constant D. Oscillate
11	$Q < K$ implies.	A. Reaction proceeds forward B. equilibrium is established C. System stops D. Reaction shifts in reverse
12	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
13	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
14	If $K_c > 1$ , the reaction.	A. Favors products B. Favors reactants C. Is at equilibrium D. Does not occur

15 In a reversible reaction.

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

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16 Increase in pressure shifts equilibrium to.

A. Side with more moles of gas  
**B. Sides with fewer moles of gas**  
C. Liquid phase  
D. Solid phase

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17 Law of mass action is applicable to.

A. Reversible reaction  
B. Combustion reactions  
C. Irreversible reactions  
D. Endothermic reactions only

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18 Which of the following is an irreversible reaction.

A. Haber process  
B. Precipitation of Ag Cl  
C. Synthesis of ammonia  
D. Esterification

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19 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

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20 Combustion of methane is.

A. Reversible  
B. Endothermic  
**C. Irreversible**  
D. Equilibrium process