Yakeen NEET 2.0 2026
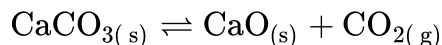
Physical Chemistry By Amit Mahajan Sir

DPP: 1

Chemical Equilibrium

Q1 In lime kiln, reversible reaction

$$CaCO_{3(s)} \rightleftharpoons CaO_{(s)} + CO_{2(g)}$$

Proceeds to completion because

(A) High temperature

(B) CO_2 escapes

(C) CaO removed

(D) Low temperature

Q2 Which is a reversible reaction?

(A) $H_2 + I_2 \rightarrow 2HI$

(B) $H_2SO_4 + Ba(OH)_2 \longrightarrow BaSO_4 \downarrow$
$+ 2H_2O$

(C) $NaCl + AgNO_3 \longrightarrow NaNO_3 + AgCl \downarrow$

(D) $2KClO_3 \longrightarrow 2KCl + 3O_2 \uparrow$

Q3 Which one is reversible process?

(A) Melting of ice at $10°C$

(B) Mixing of two gases by diffusion

(C) Evaporation of water at $100°C$ and 1 atm pressure

(D) None of these

Q4 The active mass of $64gm$ of HI in a two litre flask would be

(A) 2   (B) 1

(C) 5   (D) 0.25

Q5 A chemical reaction is at equilibrium when

(A) Equal amounts of reactants and products are present

(B) Formation of products is minimized

(C) Reactants are completely transformed into products

(D) Rates of forward and backward reactions are equal

Q6 For the system $3A + 2B \rightleftharpoons C$, the expression for equilibrium constant is

(A) $\frac{[3\,A][2\,B]}{[C]}$

(B) $\frac{[C]}{[3\,A][2\,B]}$

(C) $\frac{[A]^3[B]^2}{[C]}$

(D) $\frac{[C]}{[A]^3[B]^2}$

Q7 Which of the following graph correctly represents a relation between rate of reaction w.r.t. time

(A)

(B)


(C)

(D)

Rate vs Time
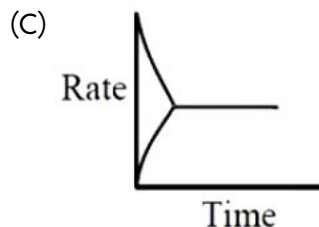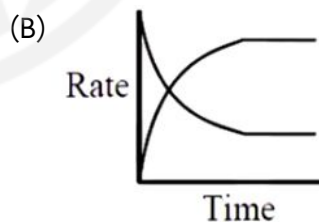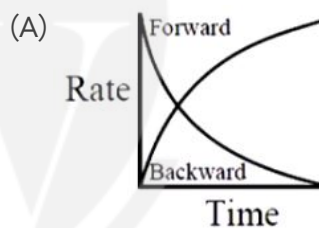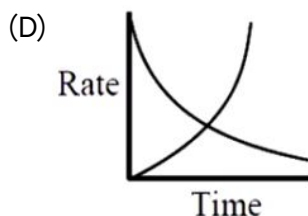
Q8 A reversible reaction having two reactants is in equilibrium, if the concentration of reactants are doubled, the equilibrium constant will:

(A) Become 4 times

(B) Become $\frac{1}{4}^{th}$ times

(C) Become $\frac{1}{16}^{th}$ times

(D) Remains the same

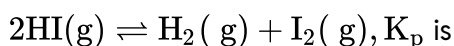**Q9** For the hypothetical reaction, the equilibrium constant (K) values are given

$$A \rightleftharpoons B, \quad K_1$$
$$B \rightleftharpoons C, \quad K_2$$
$$C \rightleftharpoons D, \quad K_3$$
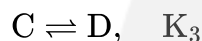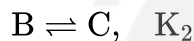
The equilibrium constant (K) for the reaction $A \rightleftharpoons D$ is
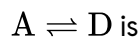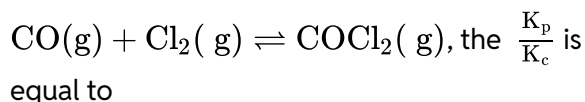
(A) $K_1 + K_2 + K_3$

(B) $K_1 \cdot K_2 \cdot K_3$

(C) $K_1 + K_2 - K_3$

(D) $\frac{K_1 + K_2}{K_3}$

Q10 In the reversible reaction

$2HI(g) \rightleftharpoons H_2(g) + I_2(g), K_p$ is

(A) Greater than K_C

(B) Less than K_C

(C) Equal to K_C

(D) Zero

Q11 For the reaction

$CO(g) + Cl_2(g) \rightleftharpoons COCl_2(g)$, the $\frac{K_p}{K_c}$ is equal to

(A) $\frac{1}{RT}$

(B) RT

(C) $\sqrt{RT}$

(D) 1

Q12 $NH_4 COONH_2(s) \rightleftharpoons 2NH_3(g) + CO_2(g)$.

If equilibrium pressure of gaseous mixture is 3 atm then K_p will be:

(A) 4

(B) 27

(C) $\frac{4}{27}$

(D) $\frac{1}{27}$

Answer Key

Q1	(B)	Q7	(C)
Q2	(A)	Q8	(D)
Q3	(C)	Q9	(B)
Q4	(D)	Q10	(C)
Q5	(D)	Q11	(A)
Q6	(D)	Q12	(A)

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