

PYQSide

NEET EQUILIBRIUM — DEGREE OF DISSOCIATION PROBLEMS AND VAPOUR DENSITY — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ)

- Q.1** Consider the following reaction in a sealed vessel at equilibrium with concentrations of $N_2 = 3.0 \times 10^{-3} \text{ M}$, $O_2 = 4.2 \times 10^{-3} \text{ M}$ and $NO = 2.8 \times 10^{-3} \text{ M}$.
- $$2NO_{(g)} \rightleftharpoons N_{2(g)} + O_{2(g)}$$
- If 0.1 mol L^{-1} of $NO_{(g)}$ is taken in a closed vessel, what will be degree of dissociation (α) of $NO_{(g)}$ at equilibrium? [NEET (UG) 2024]
- (1) 0.00889 (2) 0.0889 (3) 0.8889 (4) 0.717

Scan or tap for the full solution



- Q.2** The dissociation equilibrium of a gas AB_2 can be represented as:
- $$2AB_2(g) \rightleftharpoons 2AB(g) + B_2(g)$$
- The degree of dissociation is x and is small compared to 1. The expression relating the degree of dissociation (x) with equilibrium constant K_p and total pressure P is [AIPMT 2008]
- (1) $(2K_p/P)^{1/2}$ (2) (K_p/P)
 (3) $(2K_p/P)$ (4) $(2K_p/P)^{1/3}$

Scan or tap for the full solution



- Q.3** The values of K_p for the reactions,
- $$X \rightleftharpoons Y + Z \quad \dots(i)$$
- $$A \rightleftharpoons 2B \quad \dots(ii)$$
- are in the ratio 9 : 1. If degree of dissociation of X and A be equal, then total pressure at equilibrium (i) and (ii) are in the ratio [AIPMT 2008]
- (1) 36 : 1 (2) 1 : 1 (3) 3 : 1 (4) 1 : 9

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	4	4	1								