

NEET KINETIC THEORY — MEAN FREE PATH — PYQs

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

Q.1 The mean free path of molecules in an ideal gas A is half that of another ideal gas B. The diameter of the spherical molecules of gas A is twice the diameter of the molecules of B. If number densities of the gases A and B are n_A and n_B , respectively, the correct option is: [RE-NEET (UG) 2026]

- (1) $n_A = \frac{1}{2}n_B$ (2) $n_A = n_B$
 (3) $n_A = 2n_B$ (4) $n_A = \frac{1}{4}n_B$

Scan or tap for the
full solution



Q.2 The mean free path for a gas, with molecular diameter d and number density n can be expressed as : [NEET (UG) 2020]

- (1) $\frac{1}{\sqrt{2}n\pi d^2}$ (2) $\frac{1}{\sqrt{2}n^2\pi d^2}$
 (3) $\frac{1}{\sqrt{2}n^2\pi^2 d^2}$ (4) $\frac{1}{\sqrt{2}n\pi d}$

Scan or tap for the
full solution



Q.3 The mean free path of molecules of a gas, (radius r) is inversely proportional to [AIPMT 2014]

- (1) r^3 (2) r^2 (3) r (4) $\sqrt{r}$

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	1	1	2								