

JEE PREVIOUS YEARS QUESTION-4

At constant volume, for a fixed number of moles of a gas the pressure of the gas increases with rise in temperature due to
(1992 - 1 Mark)

- (a) Increase in average molecular speed
- (b) Increased rate of collisions amongst molecules
- (c) Increase in molecular attraction
- (d) Decrease in mean free path

Answer:

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- (a) Due to increase in the temperature, the kinetic energy of the gas molecules increases resulting in an increase in average molecular speed. The molecules are bombarded to the walls of the container with a greater velocity resulting in an increase in pressure.