The rms speeds of the molecules of Hydrogen, Oxygen and Carbon dioxide at the same temperature are V_H V_O and V_C respectively then :

A $V_H > V_O > V_C$

B $V_C > V_O > V_H$

C $V_H = V_O > V_C$

D $V_H = V_O = V_C$

RMS speed of a gas molecule is given by:-

$$v_{RMS} = \sqrt{\frac{3RT}{M}}$$

For given gas samples of hydrogen, oxygen and carbon dioxide, 'T' is same

$$\therefore v_{RMS} \propto \frac{1}{\sqrt{M}}$$

Also, $M_C > M_O > M_H \Rightarrow v_C < v_O < v_H$

i.e. $\boxed{v_H > v_O > v_C}$ ⟶ Option (a) is correct.