

10 The escape speed of a nitrogen molecule at the Earth's surface is $1.1 \times 10^4 \text{ m s}^{-1}$.

What is the escape speed at a height of $2 R_E$ above the Earth's surface, where R_E is the radius of the Earth?

- A $6.4 \times 10^3 \text{ m s}^{-1}$
- B $7.8 \times 10^3 \text{ m s}^{-1}$
- C $1.6 \times 10^4 \text{ m s}^{-1}$
- D $1.9 \times 10^4 \text{ m s}^{-1}$

11 Which of the following is not a solid state of matter?