

SECTION A

Answer ALL the questions in this section.

For questions 1-10, in Section A, select one answer from A to D and put a cross in the box ☐.

If you change your mind, put a line through the box ☒ and then mark your new answer with a cross ☐.

- 1 A mixture of oxygen gas and nitrogen gas is kept at room temperature. Oxygen molecules are more massive than nitrogen molecules.

Which of the following is correct?

- ☐ A The mean velocity of the oxygen molecules is greater than the mean velocity of the nitrogen molecules.
- ☐ B The mean speed of the oxygen molecules is the same as the mean speed of the nitrogen molecules.
- ☐ C The mean kinetic energy of the oxygen molecules is greater than the mean kinetic energy of the nitrogen molecules.
- ☐ D The mean kinetic energy of the oxygen molecules is the same as the mean kinetic energy of the nitrogen molecules.

(Total for Question 1 = 1 mark)