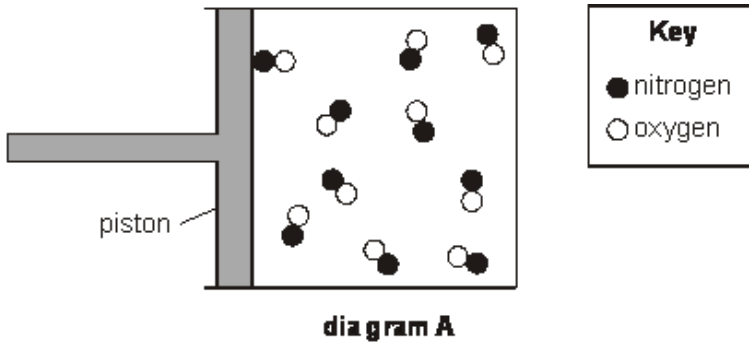


**Q1.** Diagram A represents a gas in a container.  
The gas can be compressed by moving the piston to the right.



(a) (i) How can you tell that the substance in the container is a gas?

.....  
 .....

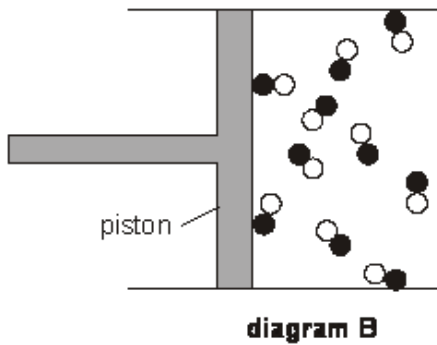
1 mark

(ii) How can you tell from the diagram that the gas is pure?

.....  
 .....

1 mark

(b) The piston is moved to the right as shown in diagram B.

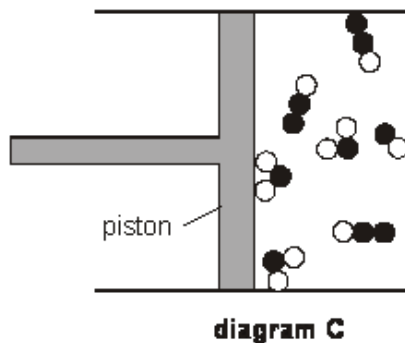


How can you tell, from diagram B, that the pressure of the gas has increased?

.....  
 .....

1 mark

- (c) Diagram **C** shows what happened to the molecules after the gas was compressed more.



- (i) How can you tell that a chemical reaction happened when the gas was compressed?

.....  
 .....

1 mark

- (ii) The mass of the gas in both diagrams **B** and **C** was 0.3 g.

Why did the mass of the gas **not** change when it was compressed?

.....  
 .....

1 mark

- (iii) Complete the table below with the correct chemical formula of each substance. Use the key to help you.

substance	formula

Key	
	nitrogen
	oxygen

1 mark

- (iv) What is the **name** of the substance represented by the symbol ?

.....

1 mark  
 maximum 7 marks

