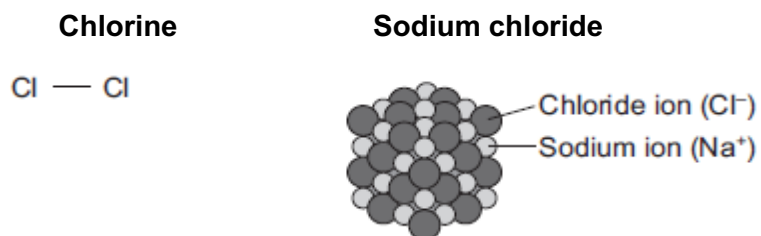


Level 2 Question – Everyone should have a go at this one.

Explain why chlorine (Cl_2) is a gas at room temperature, but sodium chloride (NaCl) is a solid at room temperature.



Include a description of the bonding and structure of chlorine and sodium chloride in your answer.

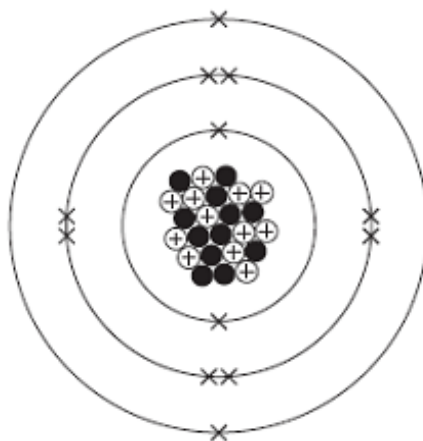
[illegible]

Extra space _____

(Total 6 marks)

Level 1 Question – If the first question is too hard.

The diagram represents a magnesium atom.



- (a) Use words from the box to answer these questions.

electron	neutron	nucleus	proton
----------	---------	---------	--------

- (i) What is the name of the central part of the atom? _____ (1)
- (ii) What is the name of the particle with no charge? _____ (1)
- (iii) What is the name of the particle with a negative charge? _____ (1)

- (b) Use the diagram above to help you answer these questions.

- (i) Draw a ring around the atomic (proton) number of this magnesium atom.

12 **24** **36**

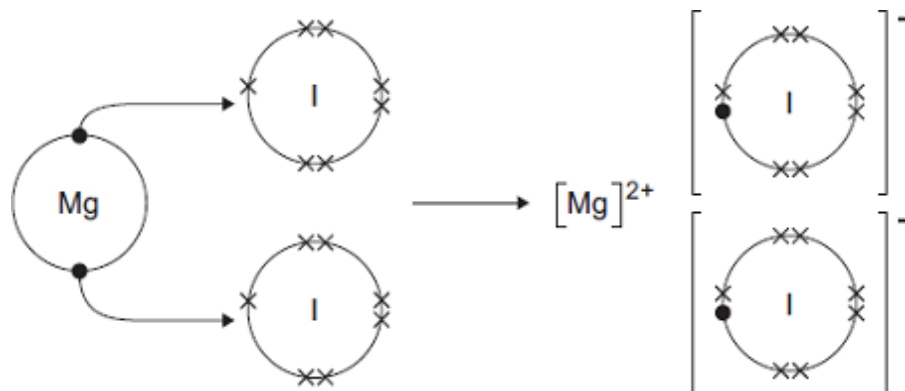
- (ii) Draw a ring around the mass number of this magnesium atom.

12 **24** **36**

- (c) The diagram shows how magnesium and iodine atoms form magnesium iodide.

Only the outer electrons are shown.

The dots (●) and crosses (×) are used to represent electrons.



Use the diagram to help you to answer this question.

Describe, as fully as you can, what happens when magnesium reacts with iodine to make magnesium iodide.

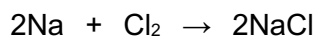
To gain full marks you should use the words atom, electron and ion in your answer.

(4)
(Total 9 marks)

)

Level 3 Question – If the first question is too easy.

Sodium reacts with chlorine to form the compound sodium chloride.



Describe, in terms of electron arrangement, the type of bonding in:

- (i) a molecule of chlorine;

(3)

- (ii) the compound sodium chloride.

(4)

(Total 7 marks)

