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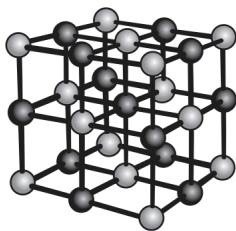
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The diagram shows the 'ball and stick' model for an ionic compound.



Which statement about the 'ball and stick' model is correct?

- A It shows all the forces between the ions.
- B It shows the arrangement of the ions.
- C It shows the charges on the ions.
- D It shows the sizes of the ions.

Your answer

☐

[1]

Q3.(2021)

Sodium chloride has a high melting point.

Explain why.

Use ideas about the structure and bonding in sodium chloride in your answer.

.....

.....

..... [2]

Q4.a(2021)

Topic [2]: [Bonding, structure, and the properties of matter]

- (d) A student investigates the electrical conductivity of sodium chloride when it is a solid and when it is a solution.

Fig. 15.3 shows the equipment the student uses.

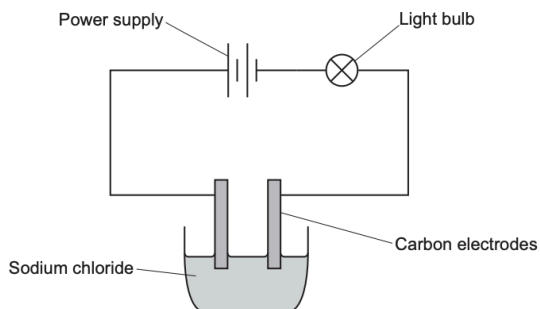


Fig. 15.3

The student produces a table for the results.

	Solid sodium chloride	Solution of sodium chloride
Formula and state symbol	NaCl(s)	NaCl(.....)
Does it conduct electricity?	Yes ☐ No ☐	Yes ☐ No ☐
Explanation		

- (i) Write in the table the **state symbol** for the solution of sodium chloride.

[1]

Q4.b(2021)

Tick (✓) **one** box in each column of the table to show if solid sodium chloride and a solution of sodium chloride conduct electricity.

[1]

Q4.c(2021)

Complete the table by writing in the explanation for the student's results.

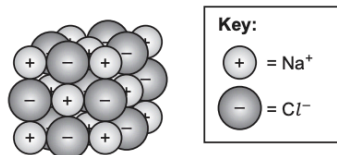
Use ideas about the structure and bonding in sodium chloride in your answer.

[2]

Q5.(2024)

It is made from sodium ions, Na^+ , and chloride ions, Cl^- ions.

The diagram shows the structure of sodium chloride.



The table show information about four materials.

Material	Appearance at room temperature	Melting point (°C)	Does it dissolve in water?	Does it conduct heat?	Does it conduct electricity?
A	a flexible white solid	120	no	no	no
B	a shiny silver solid	232	no	yes	yes
C	a white solid	801	yes	no	when melted into a liquid
D	a white solid	1713	no	no	no

Describe properties of material **C** that shows it is sodium chloride.

Explain these properties using ideas about the structure and bonding of sodium chloride.

[6]