

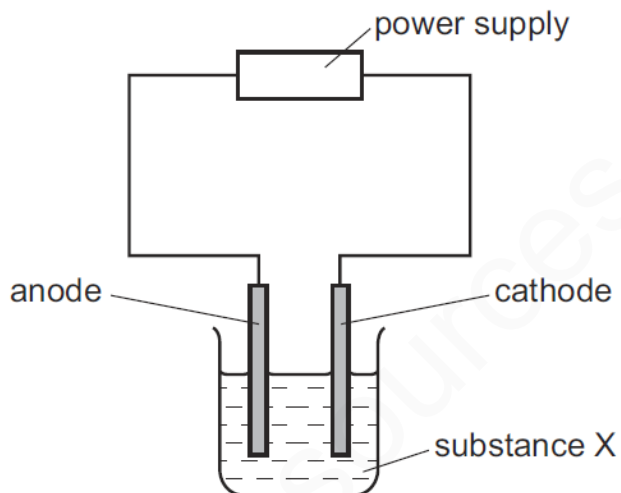
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**ELECTROLYSIS OF MOLTEN IONIC COMPOUNDS-SET-2**

1

Substance X was electrolysed in an electrolytic cell.

A coloured gas was formed at the anode and a metal was formed at the cathode.



What is substance X?

- A** aqueous sodium chloride
- B** molten lead bromide
- C** molten zinc oxide
- D** solid sodium chloride

2

Metals could be extracted from their molten chlorides using electrolysis.

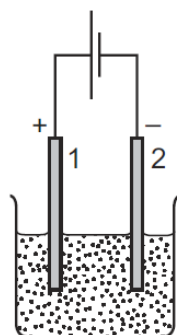
Which substances are formed at each electrode?

	anode	cathode
<b>A</b>	chlorine	hydrogen
<b>B</b>	chlorine	metal
<b>C</b>	hydrogen	metal
<b>D</b>	metal	chlorine

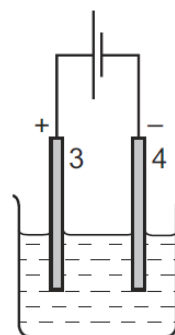
3

Two electrolysis experiments were carried out as shown in the diagram below.

The graphite electrodes are labelled 1-4.



molten  
sodium chloride



concentrated aqueous  
sodium chloride

Which row describes the products at the electrodes in these experiments?

	electrode 1	electrode 2	electrode 3	electrode 4
<b>A</b>	chlorine	hydrogen	chlorine	hydrogen
<b>B</b>	chlorine	sodium	chlorine	hydrogen
<b>C</b>	chlorine	sodium	hydrogen	chlorine
<b>D</b>	sodium	chlorine	sodium	chlorine

4

**I** One molten compound and two aqueous solutions were electrolysed.

The table gives the compounds electrolysed and the electrodes used.

	substance electrolysed	electrodes
1	concentrated hydrochloric acid	carbon
2	concentrated sodium chloride	platinum
3	molten lead bromide	platinum

In which experiments is a gas evolved at the cathode?

**A** 1, 2 and 3      **B** 1 and 2 only      **C** 1 only      **D** 3 only

5

Which row describes the electrolysis of molten potassium bromide?

	product at anode	product at cathode
<b>A</b>	bromine	hydrogen
<b>B</b>	bromine	potassium
<b>C</b>	hydrogen	bromine
<b>D</b>	potassium	bromine