

NO:	ELECTROLYSIS-AQUEOUS COMPOUNDS-SET-1																
1	<p>In which electrolyses are chlorine, hydrogen and sodium hydroxide all produced?</p> <table border="1" data-bbox="277 359 1214 674"> <thead> <tr> <th></th> <th>aqueous sodium chloride</th> <th>molten sodium chloride</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>B</td> <td>✓</td> <td>✗</td> </tr> <tr> <td>C</td> <td>✗</td> <td>✓</td> </tr> <tr> <td>D</td> <td>✗</td> <td>✗</td> </tr> </tbody> </table>			aqueous sodium chloride	molten sodium chloride	A	✓	✓	B	✓	✗	C	✗	✓	D	✗	✗
	aqueous sodium chloride	molten sodium chloride															
A	✓	✓															
B	✓	✗															
C	✗	✓															
D	✗	✗															
2	<p>Aqueous copper(II) sulfate solution is electrolysed using inert electrodes.</p> <p>Copper(II) ions (Cu^{2+}), hydrogen ions (H^+), hydroxide ions (OH^-) and sulfate ions (SO_4^{2-}) are present in the solution.</p> <p>To which electrodes are the ions attracted during this electrolysis?</p> <table border="1" data-bbox="277 1031 911 1289"> <thead> <tr> <th></th> <th>attracted to anode</th> <th>attracted to cathode</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Cu^{2+} and H^+</td> <td>OH^- and SO_4^{2-}</td> </tr> <tr> <td>B</td> <td>Cu^{2+} and SO_4^{2-}</td> <td>H^+ and OH^-</td> </tr> <tr> <td>C</td> <td>H^+ and OH^-</td> <td>Cu^{2+} and SO_4^{2-}</td> </tr> <tr> <td>D</td> <td>OH^- and SO_4^{2-}</td> <td>Cu^{2+} and H^+</td> </tr> </tbody> </table>			attracted to anode	attracted to cathode	A	Cu^{2+} and H^+	OH^- and SO_4^{2-}	B	Cu^{2+} and SO_4^{2-}	H^+ and OH^-	C	H^+ and OH^-	Cu^{2+} and SO_4^{2-}	D	OH^- and SO_4^{2-}	Cu^{2+} and H^+
	attracted to anode	attracted to cathode															
A	Cu^{2+} and H^+	OH^- and SO_4^{2-}															
B	Cu^{2+} and SO_4^{2-}	H^+ and OH^-															
C	H^+ and OH^-	Cu^{2+} and SO_4^{2-}															
D	OH^- and SO_4^{2-}	Cu^{2+} and H^+															

3

Three electrolysis cells are set up. Each cell has inert electrodes.

The electrolytes are listed below.

- | | |
|--------|--------------------------------|
| cell 1 | aqueous sodium chloride |
| cell 2 | concentrated hydrochloric acid |
| cell 3 | molten lead(II) bromide |

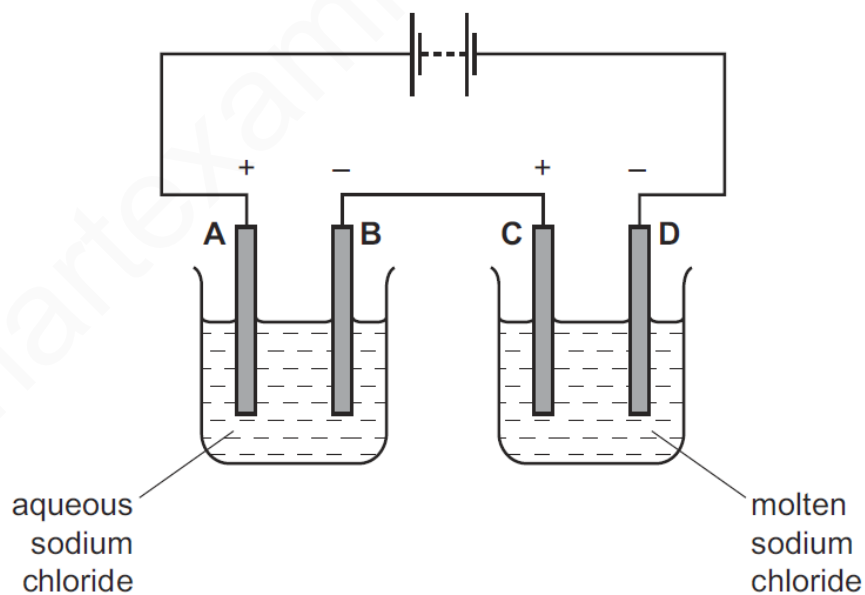
In which cells is a gas formed at **both** electrodes?

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

4

The diagram shows an electrolysis circuit.

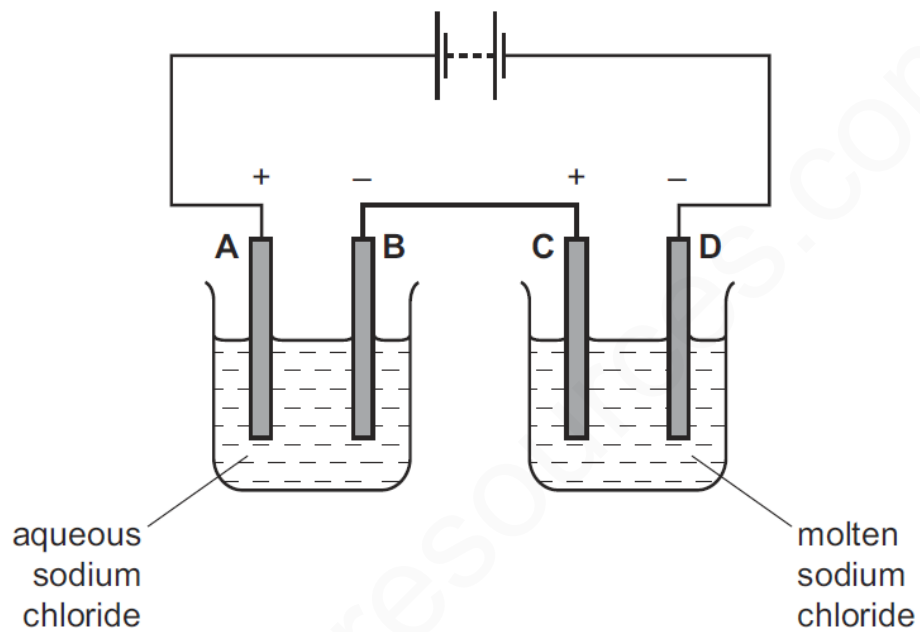
At which electrode is hydrogen formed?



5

The diagram shows an electrolysis circuit.

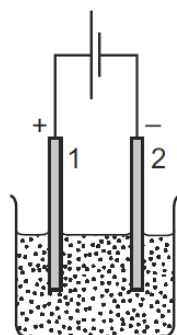
At which electrode is hydrogen formed?



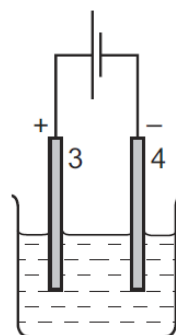
6

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
A	chlorine	hydrogen	chlorine	hydrogen
B	chlorine	sodium	chlorine	hydrogen
C	chlorine	sodium	hydrogen	chlorine
D	sodium	chlorine	sodium	chlorine

7

I One molten compound and two aqueous solutions were electrolysed.

The table gives the compounds electrolysed and the electrodes used.

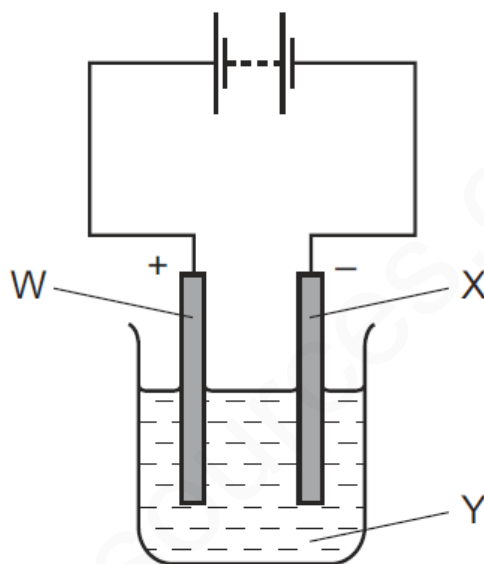
	substance electrolysed	electrodes
1	concentrated hydrochloric acid	carbon
2	concentrated sodium chloride	platinum
3	molten lead bromide	platinum

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

8

In the electrolysis shown, chlorine is produced at W and sodium at X.



Which labels are correct?

	W	X	Y
A	anode	cathode	$\text{NaCl}(\text{l})$
B	anode	cathode	$\text{NaCl}(\text{aq})$
C	cathode	anode	$\text{NaCl}(\text{l})$
D	cathode	anode	$\text{NaCl}(\text{aq})$