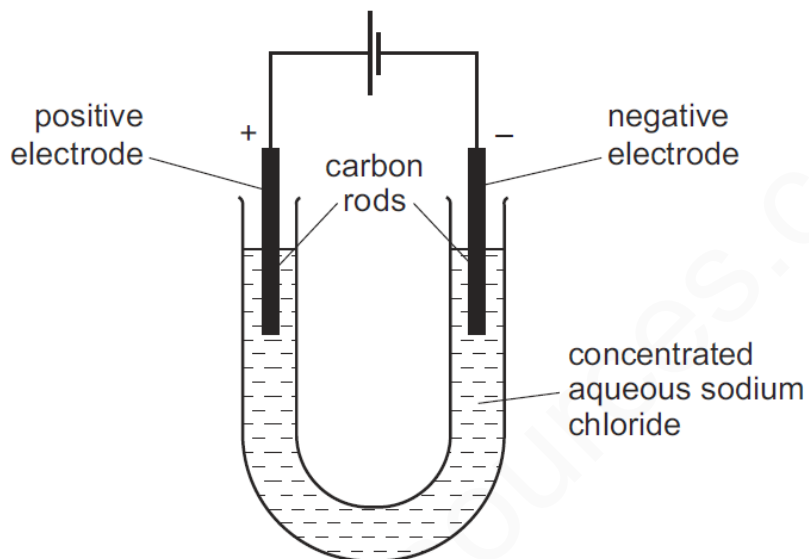


NO:

ELECTROLYSIS-CONC NaCl-SET-1

1

Electricity is passed through concentrated aqueous sodium chloride, as shown.



What is the test for the gas formed at the positive electrode?

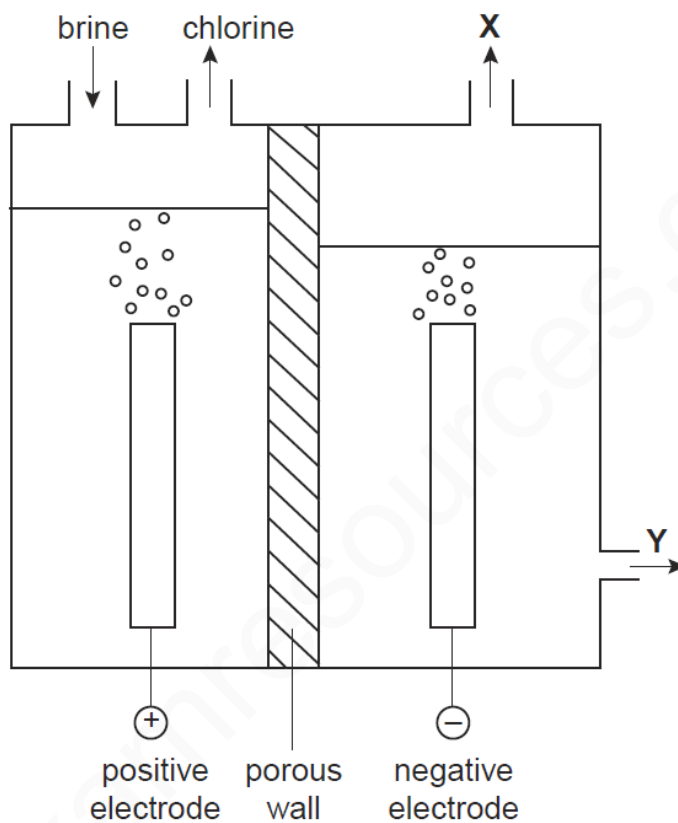
- A** bleaches damp litmus paper
- B** 'pops' with a lighted splint
- C** relights a glowing splint
- D** turns damp red litmus paper blue

Ms-1

A

2

The diagram represents the electrolysis of brine (aqueous sodium chloride).



What are products **X** and **Y**?

|          | <b>X</b> | <b>Y</b>                 |
|----------|----------|--------------------------|
| <b>A</b> | hydrogen | aqueous sodium hydroxide |
| <b>B</b> | hydrogen | hydrochloric acid        |
| <b>C</b> | oxygen   | aqueous sodium hydroxide |
| <b>D</b> | oxygen   | hydrochloric acid        |

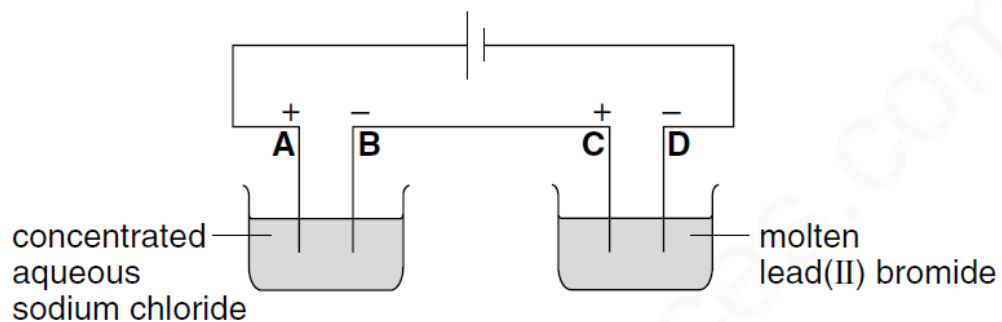
Ms-2

A

3

The following electrolysis circuit is set up, using inert electrodes.

At which electrode is a metal deposited?



Ms-3

D

4

The electrolysis of concentrated aqueous sodium chloride makes three products.

Which products are shown at the correct electrodes?

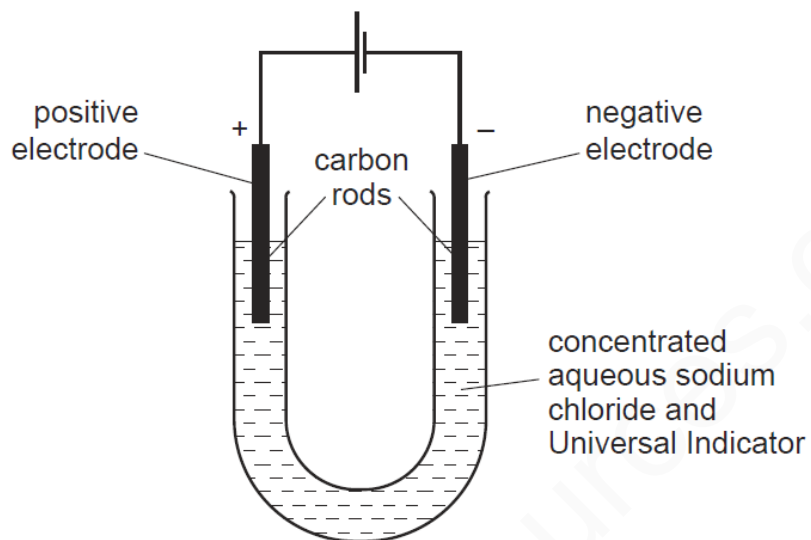
|          | anode (+ve)      | cathode (-ve)    |
|----------|------------------|------------------|
| <b>A</b> | chlorine         | sodium hydroxide |
| <b>B</b> | sodium hydroxide | chlorine         |
| <b>C</b> | hydrogen         | sodium           |
| <b>D</b> | sodium           | hydrogen         |

Ms-4

A

5

The diagram shows the electrolysis of concentrated aqueous sodium chloride.



What is the colour of the Universal Indicator at each electrode after five minutes?

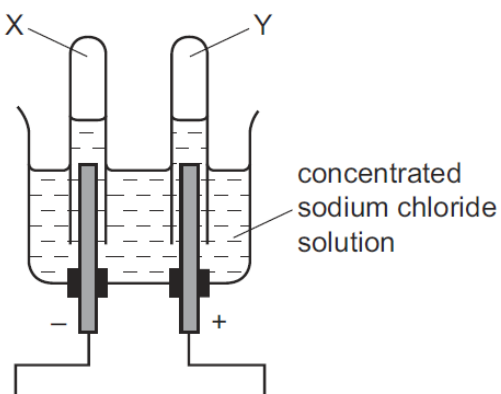
|          | colour at anode<br>(+ electrode) | colour at cathode<br>(- electrode) |
|----------|----------------------------------|------------------------------------|
| <b>A</b> | blue/purple                      | red                                |
| <b>B</b> | red                              | blue/purple                        |
| <b>C</b> | red                              | colourless                         |
| <b>D</b> | colourless                       | blue/purple                        |

Ms-5

D

6

When concentrated sodium chloride solution is electrolysed, elements X and Y are formed.



What are X and Y?

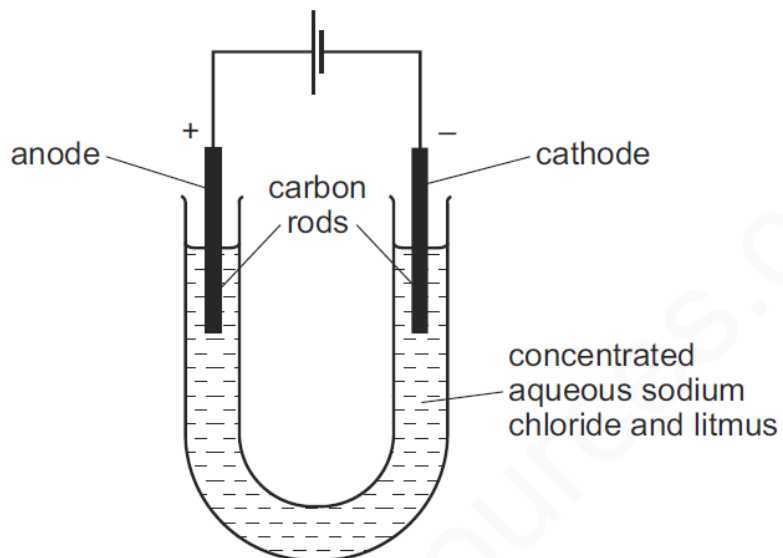
|          | X        | Y        |
|----------|----------|----------|
| <b>A</b> | chlorine | hydrogen |
| <b>B</b> | hydrogen | chlorine |
| <b>C</b> | hydrogen | oxygen   |
| <b>D</b> | oxygen   | hydrogen |

Ms-6

B

7

The diagram shows the electrolysis of concentrated aqueous sodium chloride.



What is the colour of the litmus at each electrode after five minutes?

|          | colour at anode | colour at cathode |
|----------|-----------------|-------------------|
| <b>A</b> | blue            | red               |
| <b>B</b> | red             | blue              |
| <b>C</b> | red             | colourless        |
| <b>D</b> | colourless      | blue              |

Ms-7

D