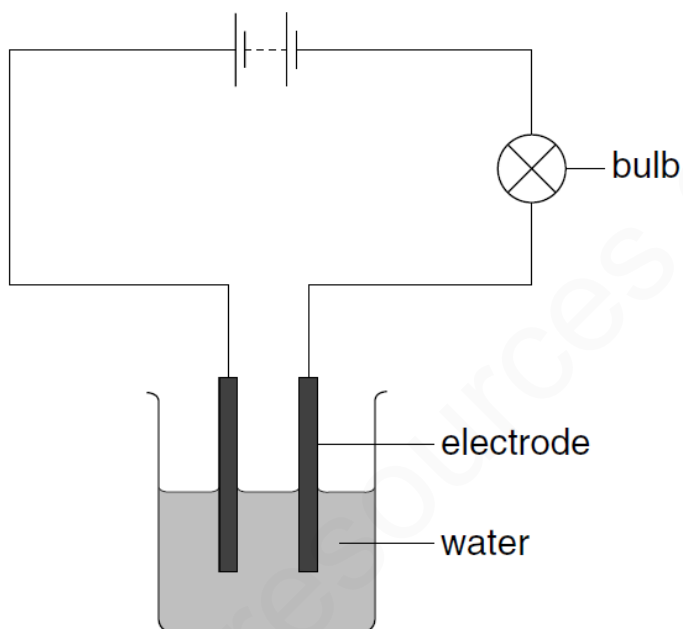


NO:

BASIC ELECTROLYSIS QUESTIONS-SET-1

1

A student sets up the apparatus shown. The bulb does not light.



After the student adds substance **X** to the water, the bulb lights.

What is **X**?

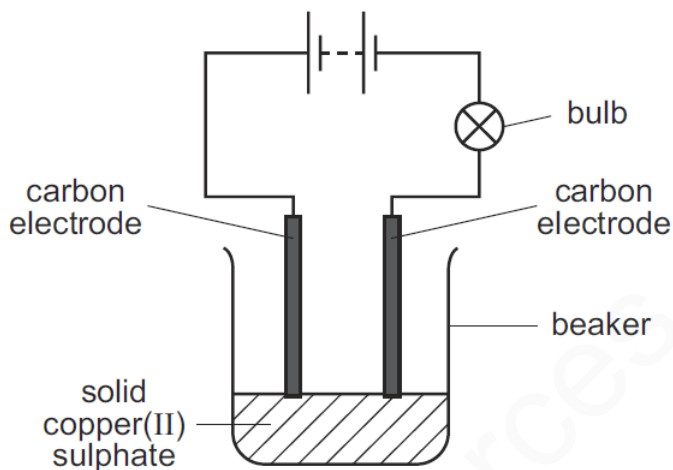
- A** calcium carbonate
- B** carbon
- C** copper(II) sulphate
- D** ethanol

Ms-1

C

2

In the circuit shown the bulb does not light.



Which change would cause the bulb to light?

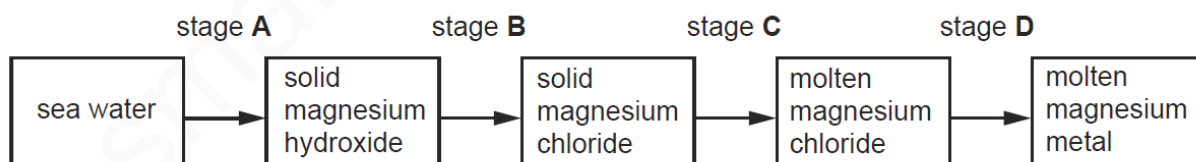
- A** add more solid copper(II) sulphate to the beaker
- B** add water to dissolve the copper(II) sulphate
- C** replace the carbon electrodes with copper electrodes
- D** reverse the connections to the electrodes

Ms-2

B

3

At which stage in the manufacture of magnesium from sea-water can electrolysis be used?



Ms-3

D

4	<p>Metallic and non-metallic elements can both be extracted by electrolysis.</p> <p>Which element is produced at the negative electrode (cathode)?</p> <p>A bromine</p> <p>B chlorine</p> <p>C hydrogen</p> <p>D oxygen</p>
Ms-4	C
5	<p>Which change can take place during electrolysis?</p> <p>A lead(IV) oxide → lead(II) oxide + oxygen</p> <p>B concentrated hydrochloric acid → hydrogen + chlorine</p> <p>C sodium hydroxide + nitric acid → sodium nitrate + water</p> <p>D lead(II) nitrate + sulphuric acid → lead(II) sulphate + nitric acid</p>
Ms-5	B

6

Copper and hydrogen can each be formed by electrolysis.

At which electrodes are these elements formed?

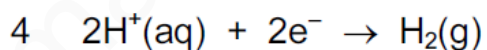
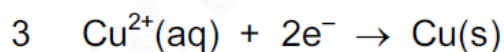
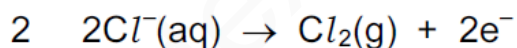
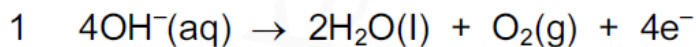
	copper	hydrogen
A	anode	anode
B	anode	cathode
C	cathode	anode
D	cathode	cathode

Ms-6

D

7

Which reactions could take place at the anode during electrolysis?

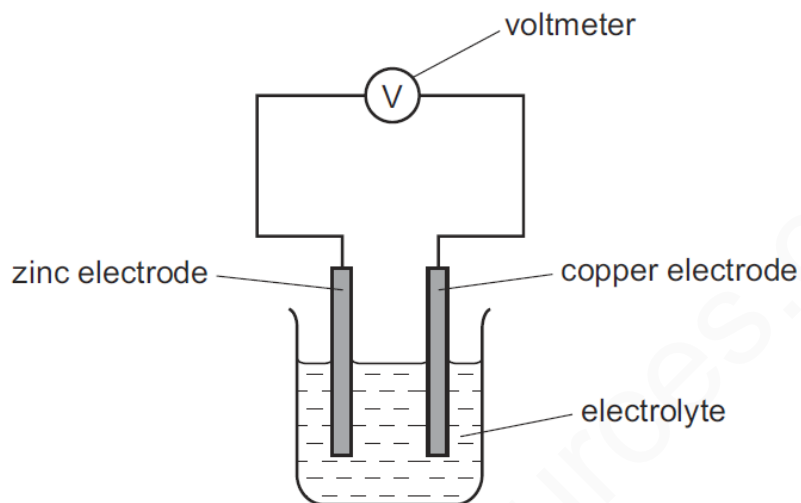
**A** 1 and 2**B** 1 and 4**C** 2 and 4**D** 3 and 4

Ms-7

A

8

The diagram shows a simple cell.



Which statement about the process occurring when the cell is in operation is correct?

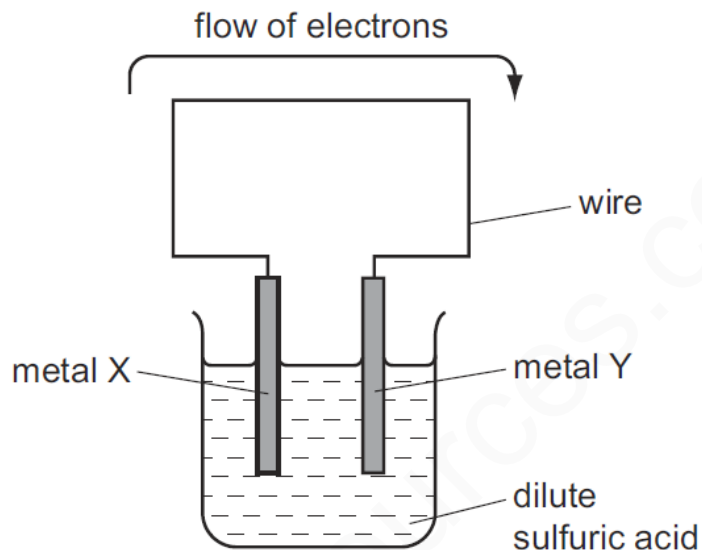
- A** Cu^{2+} ions are formed in solution.
- B** Electrons travel through the solution.
- C** The reaction $\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$ occurs.
- D** The zinc electrode increases in mass.

Ms-8

C

9

The diagram shows a simple cell.



For which pair of metals would electrons flow from metal X to metal Y?

	X	Y
A	copper	iron
B	copper	zinc
C	iron	zinc
D	zinc	iron

Ms-9

D

10

Which statement about electrolysis is correct?

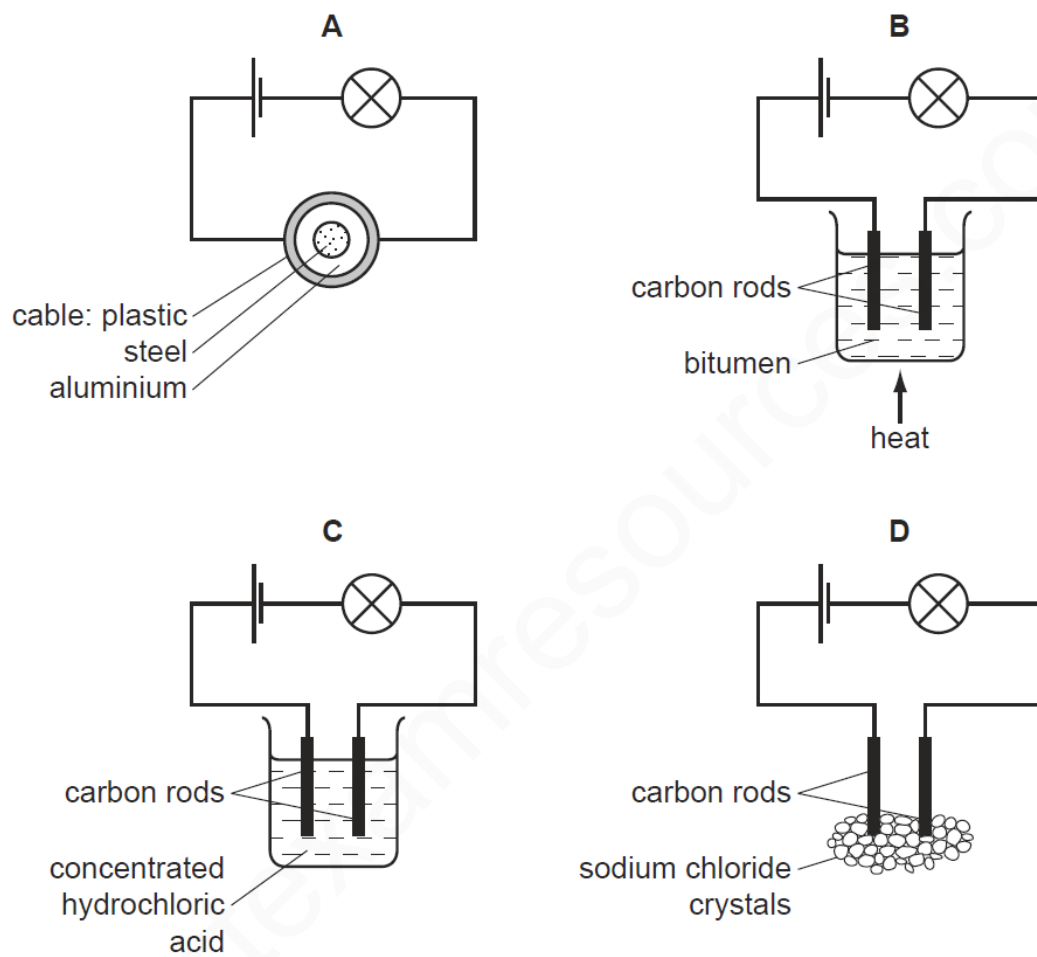
- A** Electrons move through the electrolyte from the cathode to the anode.
- B** Electrons move towards the cathode in the external circuit.
- C** Negative ions move towards the anode in the external circuit.
- D** Positive ions move through the electrolyte towards the anode during electrolysis.

Ms-10

B

11

Which diagram shows an experiment in which the bulb lights?



Ms-11

C