

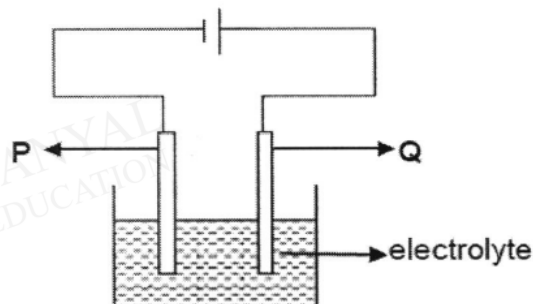
O Level Pure Chemistry MCQs

Electrolysis Test 2.0

Q1

An experiment is set up as shown in the diagram below. Both electrodes **P** and **Q** are made of graphite.

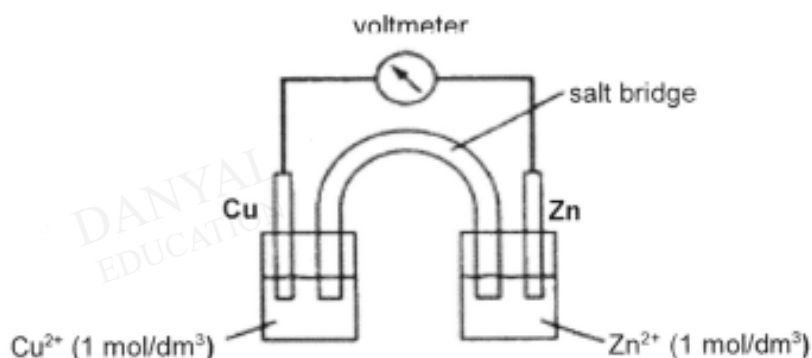
Which of the following gives the correct results as electrolysis proceeds?



	electrolytes	mass of P	mass of Q
A	aqueous sodium chloride	remains unchanged	increase
B	aqueous potassium chloride	increase	remains unchanged
C	aqueous copper (II) sulfate	remains unchanged	increase
D	aqueous silver nitrate	increase	remains unchanged

Q2

The figure below shows a galvanic cell in which the particles being oxidised is in one part of the cell; that being reduced is in the other.

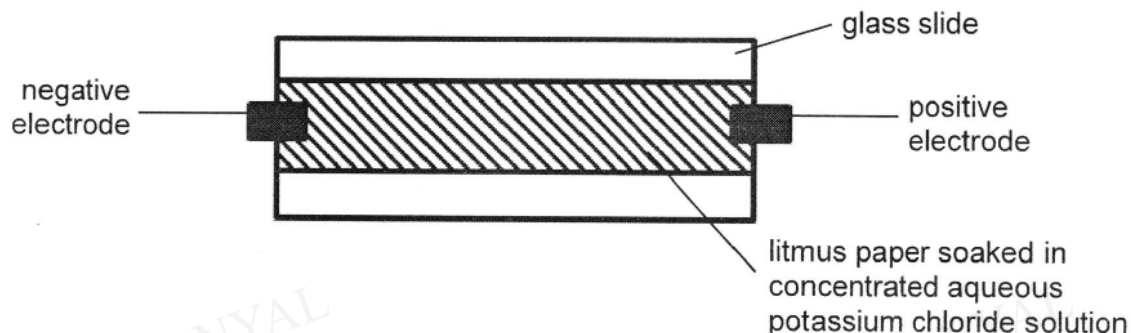


Which of the following is true?

- A Electrons flow through the voltmeter from Cu to Zn.
- B The reaction is $\text{Cu}^{2+}(\text{aq}) + \text{Zn}(\text{s}) \rightarrow \text{Cu}(\text{s}) + \text{Zn}^{2+}(\text{aq})$
- C Zn is reduced.
- D Cu is the anode.

Q3

A piece of litmus paper soaked in concentrated aqueous potassium chloride solution was placed on a glass slide. The paper was connected to a battery.

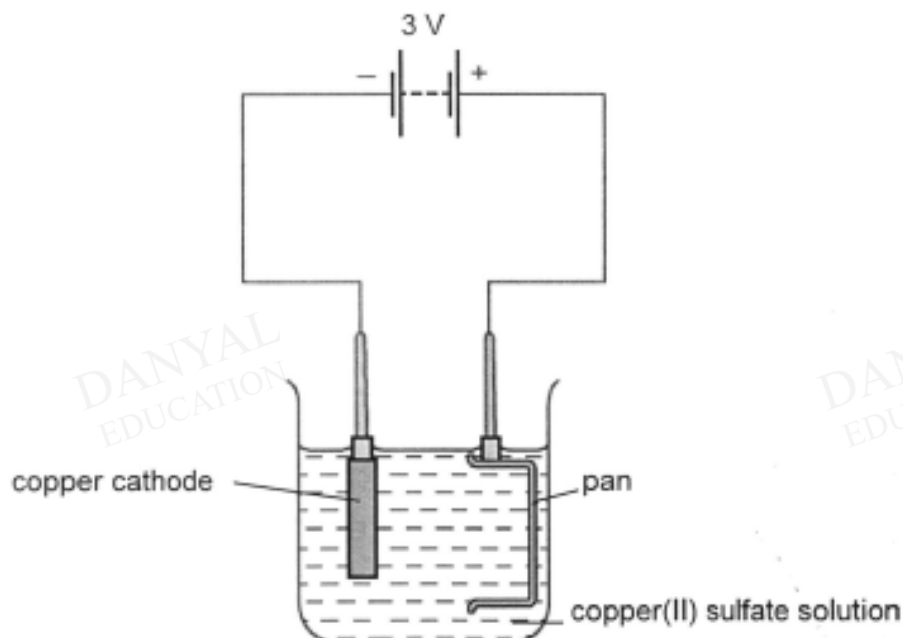


Which of the following shows the correct observations near the negative electrode and positive electrode after the current had flowed for some time?

	at negative electrode	at positive electrode
A	red	blue
B	red	bleached
C	bleached	blue
D	blue	bleached

Q4

The diagram shows a failed attempt to copper-plate a pan.



Which action will plate the pan with copper?

- A increasing the voltage from 3 V to 6 V
- B making the pan the cathode and the copper the anode
- C cooling the copper(II) sulfate solution in an ice bath
- D heating the copper(II) sulfate solution to boiling point

Q5

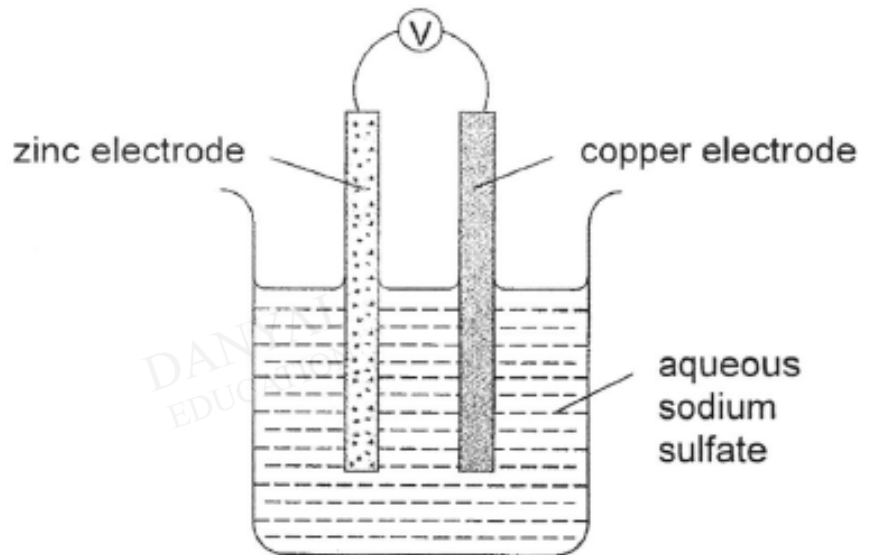
In an electrolysis experiment, the same amount of charge deposited 54.0 g of silver and 8.5 g of vanadium.

What is the charge on the vanadium ion?

- A +1
- B +2
- C +3
- D +4

Q6

The diagram shows a simple cell.

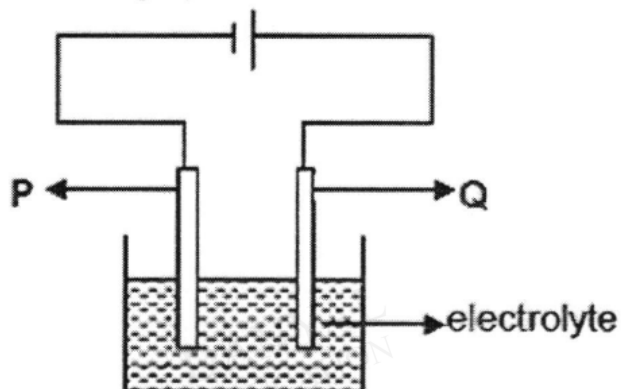


What happens when current flows through the circuit?

- A Copper dissolves to form copper(II) ions.
- B Electrons flow from the copper electrode to the zinc electrode.
- C Hydrogen gas is liberated at the zinc electrode.
- D Zinc dissolves to form zinc ions.

Q7

An experiment is set up as shown in the diagram below. Both electrodes P and Q are made of graphite.



Which of the following gives the correct results as electrolysis proceeds?

	electrolytes	mass of P	mass of Q
A	aqueous copper(II) sulfate	increases	remains unchanged
B	aqueous copper(II) sulfate	remains unchanged	increases
C	aqueous sodium chloride	increases	remains unchanged
D	aqueous sodium chloride	remains unchanged	increases

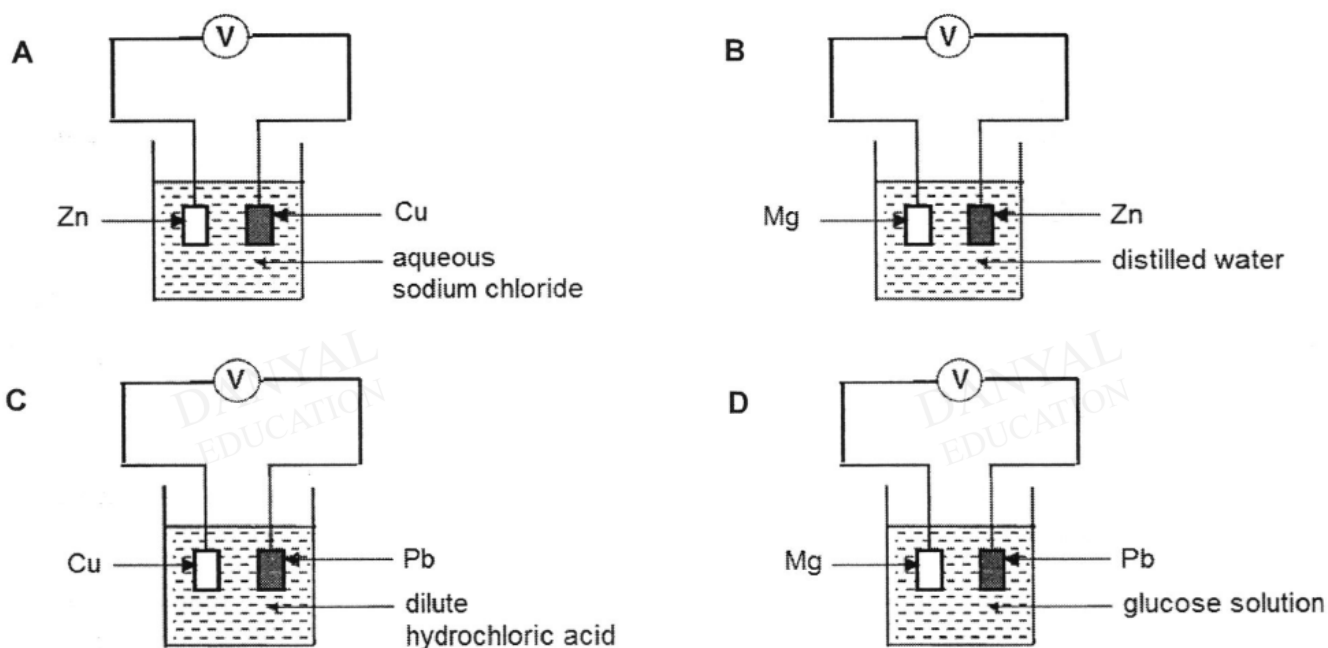
Q8

The heat-reflecting shields of some space rockets are gold-plated, using electrolysis. Which electrodes and electrolyte would be used to gold-plate the heat shield?

	negative electrode (-)	positive electrode (+)	electrolyte
A	carbon	heat shield	gold compound
B	heat shield	gold	gold compound
C	gold	heat shield	copper compound
D	heat shield	carbon	copper compound

Q9

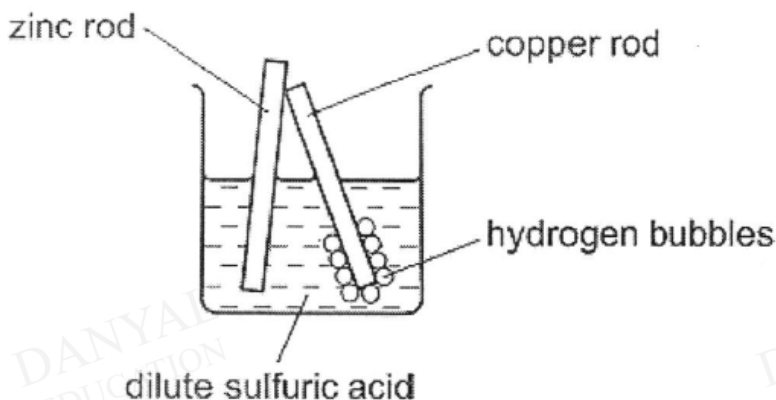
Which set-up would produce the greatest reading on the voltmeter?



Q10

In an experiment, rods of copper and zinc are dipped into dilute sulfuric acid with their top ends touching.

Hydrogen bubbles collect around the copper rod.



Which statement about the experiment is correct?

- A Copper reacts with the acid.
- B Electrons flow from zinc to copper.
- C The zinc becomes coated with copper.
- D The copper becomes smaller.

Answers

Electrolysis Test 2.0

Q1 D

Q2 B

Q3 B

Q4 B

Q5 C

Q6 D

Q7 A

Q8 B

Q9 A

Q10 B

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