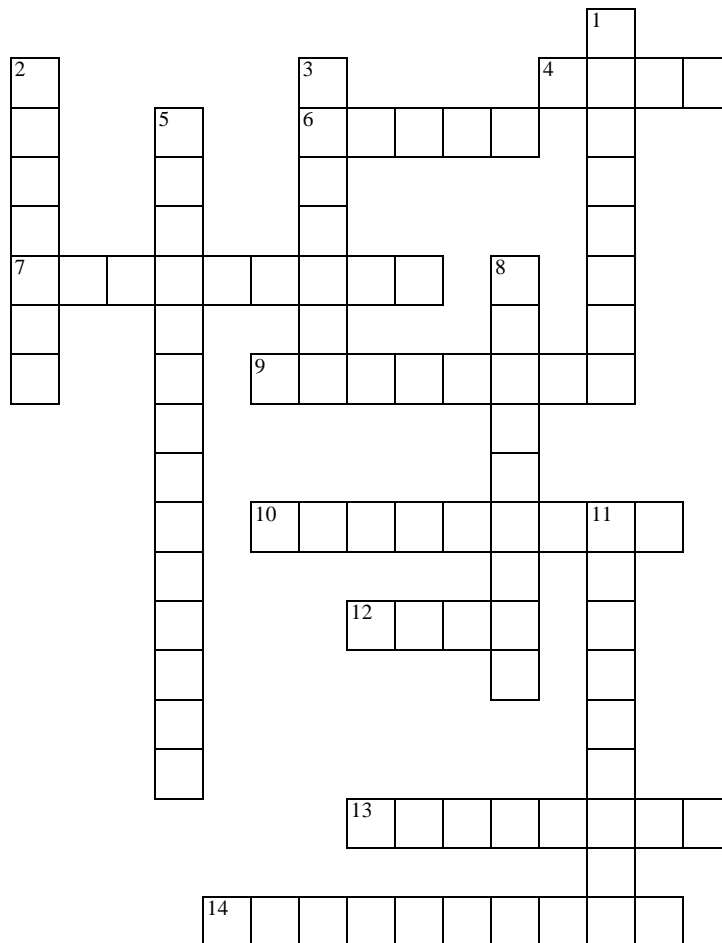




Electrochemistry Crossword



Across

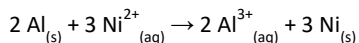
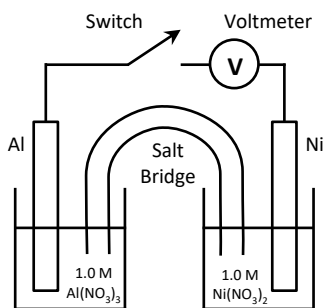
- 4. Unit of electrical potential
- 6. Electrode where oxidation takes place
- 7. Both atoms and ____ must be balanced in a redox equation.
- 9. The anode in a voltaic cell has this charge
- 10. Gain of electrons
- 12. Voltage of an electrochemical cell when it reaches equilibrium
- 13. A substance that is oxidized is the ____ agent
- 14. Allows the flow of ions in an electrochemical cell

Down

- 1. The anode in an electrolytic cell has this charge
- 2. A word for multiple electrochemical cells
- 3. Electrode where reduction takes place
- 5. Process of layering a metal onto a surface in an electrolytic cell
- 8. Loss of electrons
- 11. A substance that is reduced is the ____ agent

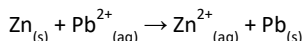
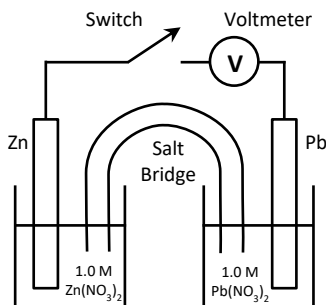
Answer the following questions.

- 1 The diagram below represents a voltaic cell.



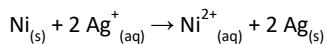
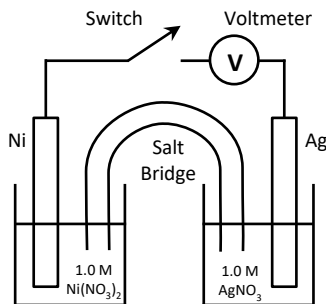
When the switch is closed, electrons flow from

- 2 The diagram below represents a voltaic cell. The reaction occurs at 1 atm and 298 K.



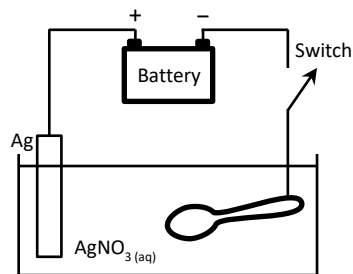
What happens at the Zn electrode when the switch is closed?

- 3 The diagram below represents a voltaic cell.



When the switch is closed, which particles undergo reduction?

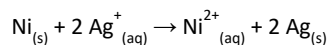
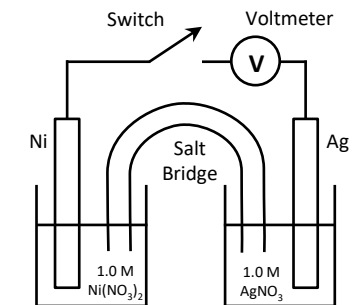
The diagram below represents the electroplating of a metal spoon with Ag_(s).



- 4 Write the equation that represents the half-reaction that takes place at the spoon.

- 5 Which electrode is represented by the spoon?

The diagram below represents a voltaic cell.



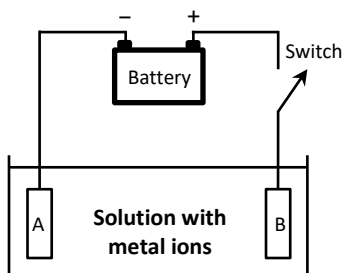
- 6 Explain the reaction that occurs at the Ag electrode.

- 7 As the reaction in this cell takes place, the concentration of the Ni²⁺ ions will

- 8 When operating, electrons will flow from

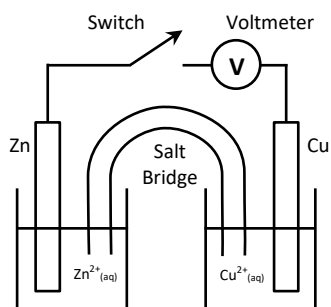
- 9 Which metal represents the cathode?

10 The diagram below represents an electroplating arrangement



Should the object to be plated be placed at A or B?

The diagram below represents a voltaic cell.

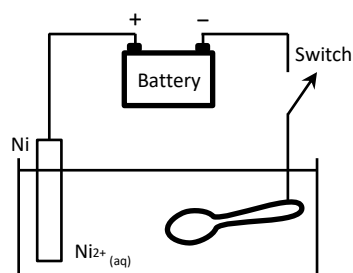


11 Which particles will be reduced when the switch is closed

12 When operating, electrons will flow from

13 When operating, positive ions will flow from

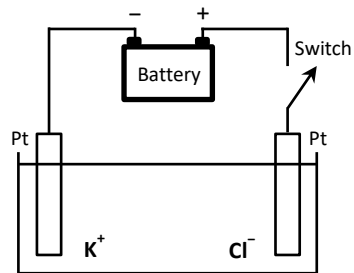
The diagram below represents a spoon that will be electroplated with nickel metal.



14 Will nickel ions be reduced or oxidized?

15 What will happen to the spoon?

16 The diagram below shows the electrolysis of fused KCl.



What occurs when the switch is closed?
