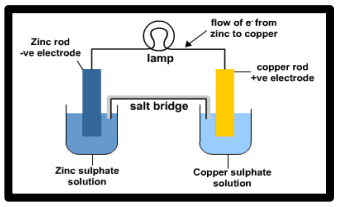


National Institute of Open Schooling
Senior Secondary Course: Chemistry
Chapter- 13 (Electrochemistry)
Worksheet-13

1. When acidulated water (dil. H_2SO_4 solution) is electrolyzed, will the pH of the solution be affected? Justify your answer.

2. Solutions of two electrolytes 'A' and 'B' are diluted. The Λ_m of 'B' increases 1.5 times while that of 'A' increases 2.5 times. Which of the two is a strong electrolyte? Justify your answer.

3. Why is alternating current used for measuring the resistance of an electrolytic solution?

4. Unlike dry cells, the mercury cell has a constant cell potential throughout its useful life. Why?

5. How will the pH of brine (aq. NaCl solution) be affected when it is electrolyzed?

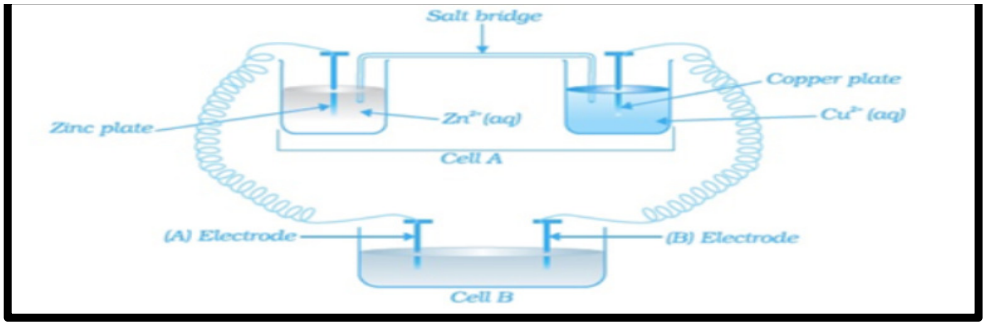
6. In an aqueous solution how does the specific conductivity of electrolytes change with the addition of Water?

7. What advantage do the fuel cells have over primary and secondary batteries?

8. Write the cell reaction of the lead storage battery when it is discharged? How does the density of the electrolyte change when the battery is discharged?

9. During winters corrosion of motor cars is of a greater problem when salts are spread on roads to Melt ice and snow. Why?

10. Consider the figure and answer the following questions.



(i). Cell 'A' has E_{cell}=2V and Cell 'B' has E_{cell}=1.1V which of the two cells 'A' or 'B' will act as an electrolytic cell. Which electrode reactions will occur in this cell?

(ii). If cell 'A' has E_{cell}=0.5V and cell 'B' has E_{cell}=1.1V then what will be the reactions at the anode and cathode?