SNS COLLEGE OF TECHNOLOGY

(AnAutonomousInstitution)

Question Bank

PART A

01. Define an Electrochemical cell. Give one example
02. What do you mean by redox reaction?
03. State single electrode potential
04. State standard electrode potential
05. Define an origin of electrode potential.
06. Write the limitations of hydrogen electrode
07. Define oxidation potential and reduction potential.
08. How an electrochemical is measured? Define EMF of an electrochemical cell.
09. What are the applications of electrochemical cell?
10. Define electrochemical series.
11. Write the significance of electrochemical series.
12. Write the mathematical form of Nernst equation and give one application.
13. Define Electro plating and Electroless plating
14. What are the types of electrolytes? Give an example for each type.
15. How will you predict the spontaneity of a reaction using emf series?
16. Zinc displaces H_2 from HCl but Cu does not. Why?
17. What is galvanic series? What are the significance of it?
18. Discuss the rules to be followed while representing a cell.
19. What are single and Std. Electrode potentials?
20. Calculate the electrode potential of Zinc electrode dipped in 0.1M zinc sulphate solution at 25^0 C
21. Bring out the symbolic representation of SHE. What are its limitations?

PART B

1. What is electrochemical cell? Explain with example of Daniel cell.

2. How electrochemical cell is measured by potentiometrically? Or What is emf?

3. What are electrochemical series? Give its applications.

4. Derive Nernst equation

5. Explain the electroplating of Gold

6. How will you measure pH of a solution using ion selective glass electrodes?

7. With a neat sketch explain the principle, working of SHE.

8. Explain the concept of secondary reference electrode, taking calomel electrode as example. Calculate the emf of the cell Zn/Zn^{2+} (0.1M) $//Ag^{+}$ (0.1M)/Ag ; $E°_{cell}$=1.56 v

9.Consider the cell reaction $Zn(s)+Fe^{2+}(0.005M)\leftrightarrow Zn^{2+}(0.01M)+Fe(s)$