

**INORGANIC AND ORGANIC CHEMISTRY-I**  
**PRACTICAL**

**Course Code: U20/CHE/DSC/201/P**  
**Course Type: DSC 2**  
**No. of Credits: 1**

**Max. Marks: 50**  
**Max. Hours: 30**  
**Hours per week: 3**

**COURSE OBJECTIVES**

- To develop analytical skills using the principles of quantitative analysis.

**COURSE OUTCOMES**

CO 1: Interpret and apply the principles of redox and complexometric titrations.

CO 2: Quantitative estimation of salts using gravimetric principles.

**PRACTICAL SESSIONS**

**Volumetric Analysis:**

1. Estimation of Fe (II) ions by titrating it with  $K_2Cr_2O_7$  using an internal indicator.
2. Estimation of Cu (II) ions using  $Na_2S_2O_3$  with  $K_2Cr_2O_7$  as primary standard.
3. Estimation of Iodine content in Iodized salt.
4. Estimation Nickel by back titration using  $MgSO_4$ .
5. Estimation of Zinc using EDTA.
6. Estimation of calcium or magnesium ions in milk.
7. Estimation of hardness of water.

**Gravimetric Analysis :**

8. Estimation of Barium as Barium Sulphate.

**Reference Books:**

1. Vogel's Qualitative Inorganic Analysis, *Svehla, G.* Pearson Education, 2012.
2. J. Vogel's Quantitative Chemical Analysis, *Mendham,* Pearson, 2009.