Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Dattaprasad D. Narulkar	**Subject: Chemistry**	
Paper code: CHC-203 Inorganic Chemistry - I	**Program: S.Y.BSc.**	**Division:**
Academic year: 2025 - 2026	**Semester: IV**	**Total Practical/Labs: 15 (30 hours)**
Credits: **1**		

Course Objectives:

- To apply the fundamental theoretical aspects of qualitative inorganic analysis.
- 2. To use various titrimetric techniques to estimate the analytes.
- 3. To use gravimetric methods to estimate metal ions.
- 4. To prepare inorganic coordination compounds.

Expected Course Outcome:

At the end of the course students will be able:

CO1: perform a qualitative analysis of inorganic mixtures.

CO2: prepare coordination compounds of transition elements.

CO3: determine unknown concentration of analytes using volumetric and gravimetric procedures.

Student Learning Outcome:

At the end of the course students will be able:

LO1: acquire knowledge and skill of basic volumetric and gravimetric estimations.

LO2: to get hands on experience on qualitative analysis of inorganic mixtures

LO3: to get hands on experience on preparation of coordination compounds of transition elements.

Month	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
December	2/12/2025	1	Estimate the amount of Ni as bis(dimethylglyoximato) nickel (II) in the given solution of nickel chloride using counter poise method.	Ref 1 and 2
	09/12/2025	1	Estimation of Fe (II) ions by titrating it with $K_2Cr_2O_7$ using the internal indicator.	Ref 1 and 2
	16/12/2025	1	Estimation of the amount of nickel in the given nickel sulphate solution (EDTA method).	Ref 1 and 2
	23/12/2025	1	Preparation of chrome red	Ref 1 and 2.
January	06/12/2025	1	Preparation of tris-(ethylenediamine)nickel (II)chloride	Ref 1 and 2
	13/01/2026	1	Estimation of Mn as manganese pyrophosphate present in the given manganese sulphate solution.	Ref 1 and 2
	20/01/2026	1	Semi-micro qualitative analysis - I	Ref 1 and 2
	27/01/2026	1	Semi-micro qualitative analysis - I	Ref 1 and 2
February	03/02/2026	1	Semi-micro qualitative analysis - II	Ref 1 and 2
	10/02/2026	1	Semi-micro qualitative analysis - II	Ref 1 and 2
	17/02/2026	1	Semi-micro qualitative analysis - III	Ref 1 and 2

	24/02/2026	1	Semi-micro qualitative analysis - III	Ref 1 and 2
March	03/02/2026	1	Semi-micro qualitative analysis - IV	Ref 1 and 2
	10/02/2026	1	Semi-micro qualitative analysis - IV	Ref 1 and 2
	17/02/2026	1 1	Repeat Practical	Ref 1 and 2
	24/03/2026	1	Repeat Practical	Ref 1 and 2
	31/03/2026	1	Practical exam	Ref 1 and 2

References

1. Vogel's Text book of Qualitative analysis
2. Vogel's Textbook of Quantitative Analysis

*** Assessment Rubrics**	
Component	**Max Marks**
ISA	15
Practical	25
Semester End Exam	60
Total	100