

19BSC704P					Inorganic Chemistry Lab-2					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs/Week				Practical		Total Marks
								LW	LE/Viva	
0	0	2	1	2				50	50	100

COURSE OBJECTIVES

- Knowledge on safety rule while working in the laboratory
- Developed scientific methodology for industrial and domestic use
- Apply the knowledge for the solutions of a problems encountered in an experiment
- Experience for the synthesis of the different inorganic complexes

LIST OF EXPERIMENTS

1. Potassium tris-oxalatoferrate(III): synthesis and spectral analysis.
2. Paper chromatographic separation of Cu^{2+} , Fe^{3+} and Ni^{2+}
3. Spectrophotometric determination of phosphate: estimation of phosphate in cola drinks.
4. Preparation of $\text{K}_2[\text{Cu}(\text{C}_2\text{O}_4)_2] \cdot 2\text{H}_2\text{O}$:Synthesis and spectral analysis
5. Preparation of hexamminenickel(II) chloride: estimation of ammonia and nickel by titrimetric and gravimetric methods Determination of complex composition using simple techniques.
6. Preparation of $\text{K}_3[\text{Cr}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$:Synthesis and spectral analysis
7. Synthesis and characterization of ferrocene and acetylferrocene.
8. Estimation of Zinc in brass by complexometric titration.
9. Estimation of Iron(III) and Zinc(II) in a mixture by dichromatometry.
10. Estimation of Iron(III) and Cu(II) in a mixture by titration procedure (dichromatometry and iodometry).

COURSE OUTCOMES

On completion of the course, students will be able to

CO1– Capable of designing new sets of experiment.

CO2– Summarize findings in writing in a clear and concise manner.

CO3– Critically evaluate data collected to determine the identity, purity, and yield of products.

CO4– Evaluate scientific method to create, tests, and evaluate a hypothesis.

CO5– Apply the column chromatography technique to separate inorganic compounds.

CO6– Create a new scientific method to be use in the industrial purpose.

TEXT/REFERENCE BOOKS

1. Mendham, J., A. I. Vogel's *Quantitative Chemical Analysis 6th Ed.*, Pearson, 2009.
2. 1. A. I. Vogel, A text book of quantitative Inorganic Analysis, ELBS.
3. 2. A. K. Nad, B. Mahapatra & A. Ghosal, An Advanced Course in Practical Chemistry, New Central, 2007. Vogel's Text Book of Practical Organic Chemistry (5th Edn).
4. Finar, I. L. Organic Chemistry (volume 1), Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).

SEMESTER EXAMINATION PATTERN**Max. Marks: 100**

LW(Daily lab performance plus journal write up maintain each 25 marks)

LE (Viva-voce plus Lab examination each 25 marks)

Exam Duration: 3 Hrs

50 Marks

50 Marks