PRACTICALS (202201)

OBJECTIVES : -

1. To conduct chemical analyses by qualitative and quantitative analysis of metal complexes.
2. To Perform/demonstrate the techniques involved in organic binary mixture separation specially solid- liquid mixture.
3. To interpret the experimental results obtained by potentiometer, pH meter, conductometer.
4. To conduct the experiment on various instrumental techniques.
5. To describe the principles behind the experiment performed in the laboratory.
6. To develop skills in chromatographic techniques for analysis.

Code : 202201	**PRACTICAL**	**4 CREDITS**
Inorganic Chemistry	**Semi micro qualitative inorganic analysis:-** Identification of three acidic and three basic radicals including one rare earth from the given mixture.	8 Hours/ Week
Organic Chemistry	**Qualitative Organic Analysis:-** Separation, purification and identification of binary (Solid-Liquid) mixtures. The separation should be carried out using Chemical method. The two components are solid-liquid mixtures. Student should submit the purified samples of the separated compounds and prepare a suitable derivative of the two compounds separated out.	
Physical Chemistry	**Instrumentation:-** 1. Determination of strengths of halides in a mixture potentiometrically. 2. Determination of the strength of strong and weak acid in a given mixture conductometrically. 3. Determination of solubility and solubility product of sparingly soluble salt $BaSO_4$.	
Analytical Chemistry	**Chromatography:**- Ion- exchange chromatography, Thin layer chromatography.	

Reference Books :

1. A Text book of Micro and Semi micro Qualitative Inorganic Analysis, IV edn, A. I. Vogel
2. A Text book of Quantitative Inorganic Analysis; A. I. Vogel
3. Practical Inorganic Chemistry- Pass Geoffrey and Haydn Sutcliffe.
4. Advanced Practical Inorganic Chemistry- Gurudeep Raj.
5. Vogel's Qualitative Inorganic Analysis, VII Edn. Orient Longman Ltd. D. Svehla.
6. Systematic experimental physical chemistry – T. K. Chondhekar & S.W. Rajbhoj
7. Experiments in chemistry – D.V. Jahagirdar