



Code	Subject Title	Cr. Hrs	Semester
CHEM-316	Inorganic Chemistry Lab	2	VI
Year	Discipline		
3	Chemistry-I, II		

SYLLABUS OUTLINE:

1. Complexometric Titrations:

- Estimation of Mg^{+2} Zn^{+2} with EDTA (Direct titration).
- Estimation of Ni^{+2} with EDTA (Back titration).
- Determination of Ca^{+2} and Zn^{+2} in mixture (Masking)
- Determination of Cd^{2+} and Zn^{+2} in a mixture (Demasking).
- Determination of SO_4^{2-} and PO_4^{-3} with EDTA (Indirect titration).

2. Redox Titrations:

- Use of Ceric sulphate solution for the estimation of the following:-
 - Determination of iron in an iron ore.
 - Determination of nitrites.
- Use of potassium iodate for the determination of the followings:
 - Copper(ii) H_2O_2
 - Commercial Hypochlorite

3. Preparations:

- Tris (ethylenediamine) nickle (II) Chloride 2-hydrate.
- Sodium Cobaltinitrite.
- Pot. Trioxalato Aluminate.
- Ammonium sulphate Nickel (II) Sulphate.
- Hexa aqua Chromium (III) Chloride.
- Ammonium Sulphate Copper (II) Sulphate Pentahydrate.

RECOMMENDED BOOKS:

- J. Bassett, R. C. Denny, G. H. Jeffery and J. Mendham, Vogel's Text Book of qualitative Inorganic Analysis, the English Language Book Society and Longman, New York, (2008)
- Quantitative Analysis Chemistry, James S. Pritz, George H. Sehenk, 2001 Alby and Becon Inc. London.
- Theory and practice of chromatography by Prof. Dr. Javed Iqbal (2002).
- Instrumental analysis by Gary D. Christian and James E.O., Reilly, 2007, Allyn and bacon Inc., London.
- Hand Book of Organic reagents in Inorganic Analysis by ZAVIX Holzbecher and other 1976 Ellis Hurwod Limited, London.
- Experimental Inorganic Chemistry - W. G. Palmer, 2005.
- The analysis of minerals and ores of the rarer elements – W. R. Schoeller, and A. R. Powell, Charles, Griffin and Company Limited, 2004.