

ACHARYA NAGARJUNA UNIVERSITY

DEPARTMENT OF CHEMISTRY

M.Sc. CHEMISTRY :: SEMESTER-I

PRACTICAL-I: INORGANIC & PHYSICAL CHEMISTRY (R22CH15)

(For the students admitted from the A.Y. 2022-2023 onwards)

Max. Marks: 100

(Internal-30M & External-70M)

A total Six (6) Experiments must be carryout taking minimum of '3' in each section

LIST OF EXPERIMENTS:

SECTION-I: INORGANIC CHEMISTRY


- 1) Determination of Zn^{2+} with potassium ferrocyanide (Volumetric).
- 2) Complexometric titrations: Determination of Mg^{2+} , Ni^{2+} and hardness of water using EDTA.
- 3) Determination of Fe^{3+} by photochemical reduction.
- 4) Argentometry: Determination of chloride by argentometric titration using.
 - a) K_2CrO_4
 - (b) Fluorescein as indicators.

SECTION-II: PHYSICAL CHEMISTRY

- 1) Relative strengths of acids by studying the hydrolysis of ethylacetate / methyl acetate.
- 2) Determination of equilibrium constant of $KI_3 \leftrightarrow KI + I_2$ by partition coefficient method and determination of unknown concentration of potassium iodide.
- 3) Distribution coefficient of Benzoic acid between Benzene and water.
- 4) Determination of critical solution temperature of phenol-water system Study of the effect of electrolyte on the miscibility of phenol-water system.

Reference Books:

- 1) Vogel's Text Books of Quantitative Analysis, Revised. J. Assheton, R.C. Denny, G.H. Jeffery and J. Mendham. ELBS.
- 2) Synthesis and Characterisation of Inorganic Compounds, W.L. Jolly. Prentice Hall.
- 3) Practical Inorganic Chemistry by G. Pass and H. Sutcliffe Chapman and Hall.
- 4) Practical Inorganic Chemistry by. K. Somasekhara Rao and K.N.K. Vani.


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