B.Sc. I Year

Paper-VII (CH-107) Practical

M.Marks:60 **Time: 7 Hrs.**

(One day in two sessions i.e. 9:00AM-12:30PM and 1:30PM-5:00PM)

Section-A (Inorganic)

Volumetric Analysis

1. Preparation of reference solutions.
2. **Redox titrations**: Determination of Fe^{2+} , $C_2O_4^{2-}$ (using $KMnO_4$, $K_2Cr_2O_7$)
3. **Iodometic titrations:** Determination of Cu^{2+} (using standard hypo solution).
4. **Complexometric titrations:** Determination of Mg^{2+} , Zn^{2+} by EDTA.

Paper Chromatography

Qualitative Analysis of any one of the following Inorganic cations and anions by paper chromatography (Pb^{2+} , Cu^{2+} , Ca^{2+} , Ni^{2+} , Cl^- , Br^- , I^- and PO_4^{3-} and NO_3^-).

Section-B (Physical)

1. To determine the surface tension of at least two liquids using stalagmometer by drop no. and drop weight methods (Use of organic solvents excluded).
2. To study the effect of surfactant on surface tension of water.
3. To determine the viscosity of at least two liquids by using Ostwald's viscometer (Use of organic solvents excluded)**.**
4. To determine the specific refractivity of at least two liquids.

Section– C (Organic)

1. . Preparation and purification through crystallization or distillation and ascertaining their purity through melting point or boiling point
   (i)) Iodoform from ethanol (or acetone)
   (ii) i) *m*-Dinitrobenzne from nitrobenzene (use 1:2 conc. HNO_3 - H_2SO_4 mixture if fuming HNO_3 is not available)
   iii) i) p- Bromoacetanilide from acetanilide
   iv) Dibenzalacetone from acetone and benzaldehyde
   v) 2,4-DNP derivative of Benzophenone/ Acetophenone.
2. . To study the process of (i) sublimation (i i) Crystallization of camphor and phthalic acid

Distribution of marks

1.	.Section- A	15 marks
2.	.Section- B	15 marks
3.	.Section- C	15 marks
4.	.Viva- voce	05 marks
5.	.Lab Record	10 marks