

# NORTHERN INDIA ENGINEERING COLLEGE

## DEPARTMENT OF CHEMISTRY

### LIST OF EXPERIMENTS – FIRST SEMESTER

1. Determination of the percentage composition of a given mixture of sodium chloride and sodium hydroxide, 10gm of which is dissolved per litre of the solution.
  2. Determination of the amount of  $\text{Na}_2\text{CO}_3$  and  $\text{NaHCO}_3$  in the given mixture of  $\text{Na}_2\text{CO}_3$  and  $\text{NaHCO}_3$ .
  3. Determination of alkalinity of the given water sample.
  4. Determination of calcium ions in a given solution by complexometric titration.
  5. To determine the strength in grams per litre of  $\text{AgNO}_3$  solution being provided  $\text{NaCl}$  solution by Mohr's method.
  6. Determine the coefficient of viscosity of the given liquid by Ostwald's viscometer method.
  7. To determine the strength of  $\text{Cu}$  in copper ore solution provided hypo solution.
  8. Determine the surface tension of the given liquid by drop number method.
  9. To verify Beer's law and apply it to find the concentration of the given unknown sample.
  - \*10. Determination of reaction rate constant for a 1<sup>st</sup> order reaction.
  - \*11. Determination of heat of neutralization of  $\text{HCl}$  with  $\text{NaOH}$ .
- \*Beyond syllabus