PHYSICAL CHEMISTRY LAB

Course Code: 15BC1106

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Course Outcomes:

At the end of the course, students will be able to:

CO 1 Apply distribution law for solvent extraction method.

CO 2 Determine the chemical reaction rates and water quality parameters.

CO 3 Determine the strength of acids, bases and salts by electro analytical techniques.

CO 4 Use spectrophotometry for the determination of metal ions.

CO 5 Determine the properties of heterogeneous systems

Any 12 of the following experiments shall be completed

LIST OF EXPERIMENTS:

1. Distribution of iodine between Carbon Tetrachloride or Chloroform and Water
2. Distribution of benzoic acid between benzene and water
3. Study of kinetics of hydrolysis of an ester
4. Determination of order of reaction between persulphate and iodide
5. Conductometric titration of strong acid versus strong base
6. Conductometric titration of weak acid versus strong base
7. P^H metric titration of strong acid versus strong base
8. Determination of CST of Phenol-Water system
9. Determination eutectic temperature of binary systems (Urea-Benzoic Acid)

10. Potentiometric determination of solubility of sparingly soluble salt (AgCl).
11. Colorimetric determination of Manganese in Steel
12. Determination of iron in cement by spectrophotometric method
13. Study of inversion of sucrose by polarimetry.
14. Potentiometric determination of Fe(II) using potassium dichromate.
15. Determination of total hardness of water sample.
16. Determination of dissolved oxygen.

REFERENCE:

A.I.Vogel, *"A Text book of quantitative chemical analysis"*, 6th Edition, Pearson Education Pvt. Ltd., 2002.