

UNIVERSITY OF MADRAS
B.Sc. DEGREE COURSE IN CHEMISTRY
SYLLABUS WITH EFFECT FROM 2020-2021

BCY-DSC15

CORE-XV: MAJOR PRACTICAL-V

Learning determination of order of chemical reactions; potentiometric and conductometric titrations

Semester	Subject Title	Total Hours	Credit
V & VI	Physical Chemistry	90	4

Physical Chemistry Experiments

1. Critical Solution Temperature
2. Effect of impurity on critical solution temperature of phenol-water system [NaCl]
3. Rast method
4. Transition temperature
5. Heat of neutralization
6. Phase diagram (Simple Eutectic)
7. Kinetics of saponification
8. Kinetics of acid catalyzed ester hydrolysis
9. Kinetics of Persulphate- Iodide reaction.
10. Partition coefficient and Equilibrium constant of $KI + I_2 \rightarrow KI_3$
11. Determination of cell constant, specific conductance and equivalent conductance of strong electrolyte.
12. Estimation of HCl by conductometric titration
13. Estimation of acetic acid conductometric titration
14. Estimation of $BaCl_2$ by conductometric titration.
15. Estimation of HCl by potentiometric titration
16. Estimation of FAS by potentiometric titration

Books for Reference

1. Venkateswaran, V. Veeraswamy R., Kulandaivelu A.R., Basic Principles of Practical Chemistry, 2nd ed., Sultan Chand & Sons, 1997.
2. Daniels et al., Experimental Physical Chemistry, 7th ed., McGraw Hill, 1970.
3. Findlay, A., Practical Physical Chemistry, 7th ed., Longman, 1989.
4. Ahluwalia, V.K., Dingra, S. and Gulati, A. College Practical Chemistry, Orient Longman Pvt. Ltd., Hyderabad 2005.
5. Sharma, K.K. and Sharma, D.S. Introduction to Practical Chemistry, Vikas Publishing House, New Delhi, 2005).