

P.B.SIDDHARTHA COLLEGE OF ARTS & SCIENCE
DEPARTMENT OF CHEMISTRY
M.Sc – CHEMISTRY (ORGANIC CHEMISTRY)
II SEMESTER
W.E.F 2022-23 (R22 Regulations)

Title of the Paper: Practical – II - Physical Chemistry (22CH2L2)

S.No	COURSE OUTCOMES	PO'S
	After completion of the course, the student will be able to :	
1	Develop skills in problem solving, critical thinking and analytical reasoning in finding the CST of phenol water system and partition coefficient of benzoic acid between benzene and water, potentiometric titrations of Fe(II) with $K_2Cr_2O_7$.	1,2,5
2	Determine the rate constants of first and second order reactions, P^H and conductance of strong & weak acids and bases.	1,2,5
3	Understand the practical knowledge on Beer's law	3,5
4	Communicate the results of analysis with ethics and responsibility	1,2,4

List of experiments:

1. Separation of Binary mixtures of Carboxylic acid + Neutral organic compounds (Solvent extraction method). (CO – 3, L - 3)
2. Separation of Binary mixtures of Basic nature + Neutral organic compounds (Solvent Extraction method). (CO – 3, L - 3)
3. Separation of Binary mixtures of Phenolic compounds + Neutral organic compounds (Solvent extraction method). (CO – 3, L - 3)
4. Preparation of Phthalimide from Phthalic anhydride – High Temperature. (CO – 3, L - 3)
5. Preparation of p-nitro acetanilide – Low temperature. (CO – 3, L - 3)
6. Preparation of Iodoform – Room temperature. (CO – 3, L - 3)
7. Paper chromatography - separate the given mixture of sugars. (CO – 4, L - 4)
8. Paper chromatography - separate the given mixture of amino acids. (CO – 4, L - 4)
9. Thin layer chromatography - separate the given mixture of phenols (CO – 4, L - 4)
10. Thin layer chromatography - separate the given mixture of 2,4-DNP derivatives of carbonyls compounds. (CO – 4, L - 4)

Text books/ Reference books:

1. A.I. Vogel, "A Text Book of Practical Organic Chemistry", Longman
2. A.I. Vogel, "Elementary Practical Organic Chemistry", Longman
3. F.G. Mann and B.C. Saunders, "Practical Organic Chemistry", Longman
4. Reaction and Synthesis in Organic Laboratory, B.S. Furniss, A.J. Hannaford, Tatchell, University Science Books mills valley.
5. Purification of Laboratory chemicals, manual, W.L.F. Armarego EDD Perrin
6. Reaction and Synthesis in Organic Chemistry Laboratory, Lutz-Friedjan- Tietze, Theophil Eicher, University Science Book.