

Subject Code:2SC1030303

Subject Title: Chemistry Practical

Teaching scheme (hours) per week		Credit		Theory Marks		Practical Marks		Total
pTheory	Practical	Theory	Practical	University Assessment	Cont. Assessment	University Assessment	Cont. Assessment	
-	6	-	3	-	-	60	40	100

List of Experiments:

Note: This syllabus is to be completed by assigning two laboratory Sessions per week, each of two hours. Total laboratory work is 60 hrs/semester (4 hrs/week) or 15 weeks. The number of students in the laboratory batch should not exceed fifteen (15). The medium of instruction should be English in laboratory course.

Sr.No	Practical Exercise
1.	Organic Chemistry (4 hours per practical) Separation of Organic Mixture. (Any 7 out of 10) Mixture Containing Two Compounds (Only Water Insoluble Solid Compounds taken)
2.	Physical Chemistry. (Any 7 out of 10) (4 hours per practical) 1) Conductometric titration:- HCl / CH ₃ COOH Vs NaOH 2) Conductometric titration:- HCl Vs NH ₄ OH 3) pH- metric titration:- a. Calibration of pH - meter by 4 - pH buffer b. HCl Vs NaOH 4) Determine the Dissociation constant of the acid of mixtures of CH ₃ COONa and CH ₃ COOH by determine the PH 5) Determine the specific refraction and molar refraction of the given liquid A, B and mixture C (A+B) and calculate the percentage composition of A and B in the mixture C by Abbe's Refractrometer. 6) Determine the molar refraction CH ₃ COOC ₂ H ₅ , CH ₃ COOC ₃ H ₇ and CH ₃ COOC ₄ H ₉ and show the constancy of reaction equivalent of -CH ₂ – Group by Abbe's Refractrometer. 7) To determine the viscosity of a different mixture of liquid A and B and determine the percentage composition of unknown mixture by graphical method. 8) To determine the surface tension and compare cleaning-efficiency of two samples of a detergent or soap with stalagmo meter. 9) To study kinetic reaction of decomposition of H ₂ O ₂ catalysis by iodine ion (Clock reaction) 10) Find the solubility and heat of solution of the given organic acid at two different temperatures

Scheme of Practical Examination

Exam: - 5 Hrs

University exam pattern:- two days per batch

Marks:- 100

Ex.	Framework for Practical Examination	Marks
Ex.-1	organic Qualitative Analysis of Binary mixture (water insoluble) (Any One) Mixture Containing Two Compounds (Only Water Insoluble Solid Compounds taken)	30
Ex.-2	(Any One) 1) Conductometric titration:- HCl / CH ₃ COOH Vs NaOH 2) Conductometric titration:- HCl Vs NH ₄ OH 3) pH- metric titration:- a. Calibration of pH - meter by 4 - pH buffer b. HCl Vs NaOH 4) Determine the Dissociation constant of the acid of mixtures of CH ₃ COONa and CH ₃ COOH by determine the PH 5) Determine the specific refraction and molar refraction of the given liquid A, B and mixture C (A+B) and calculate the percentage composition of A and B in the mixture C by Abbe's Refractrometer. 6) Determine the molar refraction CH ₃ COOC ₂ H ₅ , CH ₃ COOC ₃ H ₇ and CH ₃ COOC ₄ H ₉ and show the constancy of reaction equivalent of -CH ₂ – Group by Abbe's Refractrometer. 7) To determine the viscosity of a different mixture of liquid A and B and determine the percentage composition of unknown mixture by graphical method. 8) To determine the surface tension and compare cleaning-efficiency of two samples of a detergent or soap with stalagmo meter. 9) To study kinetic reaction of decomposition of H ₂ O ₂ catalysis by iodine ion (Clock reaction) 10) Find the solubility and heat of solution of the given organic acid at two different temperatures	30
Ex.-3	Viva – voce	20
Ex.-4	Journals, Assignment and Routine Performance	20
	Total marks	100