



Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S.R. Sapre Commerce and
Vid. Dadasaheb Pitre Science College
(Autonomous)

Late Kakasaheb Pandit Educational Campus,
Devrukh, Dist: Ratnagiri- 415 804, Maharashtra

NAAC Accredited 'A' Grade (Third Cycle), Mumbai University Best College Award 2009-10

Syllabus

Programme: T. Y. B. Sc.

Course- Chemistry Practical-I

w.e.f. Academic Year 2021-22

Choice Based Credit System
T. Y. B. Sc.
Chemistry Syllabus
To be implemented from the Academic year 2021-22

Course Content

Semester VI

Course Code	Unit	Topics	Credits	L/Week
USCHT61	I	Chemical Thermodynamics & Chemical Kinetics		
	II	Polymers & Renewable Sources		
	III	Quantum Chemistry & Applied Electrochemistry		
	IV	NMR & ESR Spectroscopy		
USCHT62	I	Coordination Chemistry		
	II	Properties of Coordination Compounds		
	III	Organometallic Chemistry		
	IV	Some Selected Topics		
USCHT63	I	Stereochemistry & Biomolecules		
	II	Molecular Rearrangements & Carbohydrates		
	III	Spectroscopy-II		
	IV	Polymers; Catalysts & Reagents		
USCHT64	I	Electro Analytical Techniques		
	II	Methods of Separation-II & Introduction to Quality		
	III	Food and Cosmetics Analysis		
	IV	Thermal Methods and Analytical Method Validation		
USCHP61		Chemistry Practicals I		
USCHP62		Chemistry Practicals II		
USCHP63		Chemistry Practicals III		
USCHP64		Chemistry Practicals IV		

Chemistry Practicals

Semester VI

Paper I: Physical Chemistry

Non-Instrumental

1. Chemical Kinetics

To determine the energy of activation for the acid catalyzed hydrolysis of methyl acetate.

2. Viscosity

To determine the molecular weight of high polymer polyvinyl alcohol (PVA) by viscosity measurement.

Instrumental

1. Potentiometry

To determine the solubility product and solubility of AgCl potentiometrically using chemical cell.

2. Conductometry

To titrate a mixture of weak acid and strong acid against strong base and estimate the amount of each acid in the mixture conductometrically.

3. pH-metry

To determine acidic and basic dissociation constant of amino acid and hence calculate isoelectric point.

Reference Books for Practicals:

Physical Chemistry

1. Practical Physical Chemistry 3rd edition A.M.James and F.E. Prichard , Longman publication
2. Experiments in Physical Chemistry R.C. Das and B. Behra, Tata Mc Graw Hill
3. Advanced Practical Physical Chemistry J.B.Yadav, Goel Publishing House
4. Advanced Experimental Chemistry. Vol-I J.N.Gurtu and R Kapoor, S.Chand and Co.
5. Experimental Physical Chemistry By V.D.Athawale.
6. Senior Practical Physical Chemistry By: B. D. Khosla, V. C. Garg and A. Gulati, R Chand and Co. 2011