

**Khed Taluka Shikshan Prasarak Mandal's  
Mandal's Hutatma Rajguru Mahavidyalaya Rajgurunagar**

**Affiliated to S.P.Pune University, Pune**

*NAAC Reaccredited "B++" Grade (CGPA 2083), DST-FIST Recognized*

College website: <https://www.hrmrajgurunagar.ac.in>, E-mail: [hrmrajguru@yahoo.co.in](mailto:hrmrajguru@yahoo.co.in),

Ph.No. 02135222099

**Department of Chemistry**

---

**Teaching Plan Year 2024-25**

**Teacher Name :** Prof. Kolekar S.S.

**Class:** T.Y.B.Sc.

**Paper No :** CH-611(A)

**Sem:** II **Paper Name** CH-611(A): Analytical Chemistry-II

**Total No. of Lectures taken:** 36

Sr. No.	Chapter No.	Chapter name	No. of Lectures Taken	Month
1	1	Solvent extraction	08	Dec 2024
2	2	Instrumental Methods of Chromatographic Analysis	05	Dec 2024
3	3	High Performance Liquid Chromatography	05	Feb 2025
	4	Gas Chromatography	06	March 2025
4	5	Atomic Absorption Spectroscopy	08	Jan 2025
5	6	Flame Emission Spectroscopy	05	Jan 2025

**Subject Teacher  
Prof. Kolekar S.S.**

**Khed Taluka Shikshan Prasarak Mandal's  
Mandal's Hutatma Rajguru Mahavidyalaya Rajgurunagar**

**Affiliated to S.P.Pune University, Pune**

*NAAC Reaccredited "B++" Grade (CGPA 2083), DST-FIST Recognized*

Collge website: <https://www.hrmrajgurunagar.ac.in>, E-mail: [hrmrajguru@yahoo.co.in](mailto:hrmrajguru@yahoo.co.in),

Ph.No. 02135222099

**Department of Chemistry**

---

**Teaching Plan Year 2024-25**

**Teacher Name :** Prof. Kolekar S.S.

**Class:** S.Y.B.Sc.

**Paper No.:** I (CH-402)

**Sem: I Paper Name** Inorganic and organic chemistry

**Total No.:** of Lectures taken: 36

Sr. No.	Chapter No.	Chapter name	No. of Lectures Taken	Month
1	1	Isomerism in coordination complexes	02	Feb 2025
2	2	Valance Bond Theory of Coordination Compounds	04	March 2025
3	3	Crystal field Theory	10	March and April 2025
4	4	Aldehydes and ketones	05	Jan 2025
5	5	Carboxylic acids and their derivatives	05	Jan and Feb 2025
6	6	Amines and Diazonium Salts	04	Feb 2025
7	7	Stereochemistry of Cyclohexane	04	Feb 2025

**Subject Teacher  
Prof. Kolekar S.S.**

**K.T.S.P Mandal's**  
**HutatmaRajguruMahavidyala**  
**Rajgurunagar, Tal. Khed Dist. Pune**  
**Teaching Plan Year 2024-25**

**Class: S. Y. B. Sc., Sem.-II**

**Name of Paper: Chemistry Practical No. of Lectures allotted per week: 05**

**Name of Teacher: Prof. Kolekar S.S Batch –B<sub>4</sub>, B<sub>3</sub>, B<sub>5</sub>**

<b>Sr. No.</b>	<b>Name of Practical</b>	<b>Each Practical 05L</b>
1	To determine the cell constant of the given cell using 0.01 M KCl solution and determine dissociation constant of a given monobasic weak acid.	05 L
2	To investigate the conductometric titration of any one of the following a) Strong acid against strong base b	05L
3	To study the variation of mutual solubility temperature with % concentration for the phenol - water system	05L
4	To study the effect of added electrolyte on the critical solution temperature of phenol-water system and to determine the concentration of the given solution of electrolyte.	05L
5	Synthesis of potassium Tris(oxalate)aluminium(III) using Al metal powder(Scrap aluminium)	05L
6	Synthesis of Tris(ethylenediamine)nickel(II) from Ni(II) salt, ethylenediamine and sodium thiosulfate	05L
7	Prepare standard solutions of KMnO <sub>4</sub> / CuSO <sub>4</sub> , record their absorbance and Verify Beer's Law and determine unknown concentration	05L
8	Prepare solution of Fe(III) and SCN-of in different molar proportion, record their absorbance and calculate equilibrium constant of [Fe(SCN)] <sub>2+</sub> complex	05L
9	Estimation of Ethyl benzoate: To determine the amount of ethyl benzoate in given solution volumetrically	05L
10	Determination of molecular weight of organic acid by titration against standardized NaOH - a) monobasic acid or b) dibasic acid	05L

**Subject Teacher**  
**Prof. Kolekar S.S.**