Khed Taluka Shikshan Prasarak Mandal's

Hutatma Rajguru Mahavidyalaya, Rajgurunagar

Affiliated to S. P. Pune Universiry, Pune
NAAC Reaccredited "B++" Grade (CGPA 2.83), DST-FIST Recognized
college website: https://www.hrmrajgurunagar.ac.in, E-mail: hrmrajguru@yahoo.co.in, ph. No. 02135222099

Department of Chemistry

Syllabus Completion Report

Teacher Name: Prof. Dr. P. S. Kulkarni

Class: T. Y. B. Sc.

Sem.: VI

Paper No.: CH610A

Paper Name: Chemistry of Soil & Agrochemicals

Total No. of Lectures Allotted: 36

Total N. of Lectures Taken: 36

Sr. No.	Chapter No.	Chapter Name	No. of Lectures Taken	Month
1	1	Soil Chemistry	8	Jan
2	2	Problematic Soil and Soil Testing	6	Jan-Feb
3	3	Laboratory Methods of Soil Analysis	12	Feb-March
4	4	Fertilizers and Manures	7	March-April
5	5	Protection of Plants	6	April

Signature

Khed Taluka Shikshan Prasarak Mandal's

Hutatma Rajguru Mahavidyalaya, Rajgurunagar

Affiliated to S. P. Pune Universiry, Pune
NAAC Reaccredited "B++" Grade (CGPA 2.83), DST-FIST Recognized
college website: https://www.hrmrajgurunagar.ac.in, E-mail: hrmrajguru@yahoo.co.in, ph. No. 02135222099

Department of Chemistry

Syllabus Completion Report

Teacher Name: Prof. Dr. P. S. Kulkarni

Class: T. Y. B. Sc.

Sem.: VI

Paper No.: CH611A

Paper Name: Analytical Chemistry-II

Total No. of Lectures Allotted: 12

Total N. of Lectures Taken: 14

Sr. No.	Chapter No.	Chapter Name	No. of Lectures Taken	Month
1	1	Solvent Extraction	8	Feb-March
2	2	High Performance Liquid Chromatography	6	March-Apr

Khed Taluka Shikshan Prasarak Mandal's

Hutatma Rajguru Mahavidyalaya, Rajgurunagar

Affiliated to S. P. Pune Universiry, Pune
NAAC Reaccredited "B++" Grade (CGPA 2.83), DST-FIST Recognized
college website: https://www.hrmrajgurunagar.ac.in, E-mail: hrmrajguru@yahoo.co.in, ph. No. 02135222099

Department of Chemistry

Syllabus Completion Report

Teacher Name: Prof. Dr. P. S. Kulkarni

Class: T. Y. B. Sc.

Sem.: VI

Paper No.: 609

Paper Name: Organic Chemistry Practical

Total No. of Lectures Allotted: 73 L

Total N. of Lectures Taken: 73 L

Sr. No.	Practical No.	Practical Name	No. of Lectures Taken	Month
1	1	Estimation of glucose	5	Jan
2	2	Estimation of glycine	5	Jan
3	3	Estimation of Alkali content	5	Jan
4	4	Caffeine from tea leaves	5	Feb
5	5	Eugenol from cloves	5	Feb
6	6	Trimyristin from nutmeg	5	Feb
7	7	Interpretation of IR spectra of Benzoic acid	5	Mar
8	8	Interpretation of IR spectra of cis-2-butene & trans-2-butene	5	Mar
9	9	Interpretation of NMR spectra of Benzoic acid	5	Mar
10	10	Interpretation of NMR spectra of cis-2-butene & trans-2-butene	5	Apr
11	11	Separation of aldehyde and carboxylic acid by column chromatography	5	Apr
12	12	Separation of o-nitrophenol and p-nitrophenol by column chromatography	5	Apr
13	13	Journal certification	5	Apr
14	14	Oral	5	Apr

Khed Taluka Shikshan Prasarak Mandal's

Hutatma Rajguru Mahavidyalaya, Rajgurunagar

Affiliated to S. P. Pune Universiry, Pune
NAAC Reaccredited "B++" Grade (CGPA 2.83), DST-FIST Recognized
college website: https://www.hrmrajgurunagar.ac.in, E-mail: hrmrajguru@yahoo.co.in,
ph. No. 02135222099

Department of Chemistry

Syllabus Completion Report

Teacher Name: Prof. Dr. P. S. Kulkarni

Class: T. Y. B. Sc.

Sem.: V

Paper No.: 509

Paper Name: Organic Chemistry Practical

Total No. of Lectures Allotted: 73 L

Total N. of Lectures Taken: 73 L

Sr. No.	Practical No.	Practical Name	No. of Lectures Taken	Month
1	1	Solid-Solid Mixture No. 1	5	July
2	2	Solid-Solid Mixture No. 2	5	July
3	3	Solid-Solid Mixture No. 3	5	Aug
4	4	Liquid-Liquid Mixture No.4	5	Aug
5	5	Solid-Liquid Mixture No. 5	5	Aug
6	6	Solid-Liquid Mixture No. 6	5	Sep
7	7	Preparation of dibenzalpropanone from benzaldehyde and acetone using $LiOH.H_2O$/NaOH	5	Sep
8	8	Nitration of phenol or substituted phenols using $CaNO_3$	5	Sep
9	9	Amide derivative of Carboxylic acid	5	Sep
10	10	Glucosazone derivative of Glucose	5	Oct
11	11	Preparation p-Iodonitrobenzene from p-Nitroaniline by Sandmeyer Reaction	5	Oct
12	12	Preparation P-chloro benzoic acid and p-chloro benzyl alcohol from p-chloro benzaldehyde	5	Oct
13	13	Journal certification	5	Nov
14	14	Oral	5	Nov

K.T.S.P. Mandal's

Hutatma Rajguru Mahavidyalaya

Rajgurunagar, Tal. Khed Dist. Pune

Syllabus Completion Report 2023-24 Class: T. Y. B. Sc. Chemistry, **Sem**.-V

Name of Paper: Introduction of Medicinal Chemistry **No. of Lectures allotted per week**: 03

Name of Teacher: Prof. P. S. Kulkarni

Sr. No.	Month	Name of Chapter	Topic Covered
1	Aug-23 8 L	An Introduction to Drugs, their Action and Immunobiologicals	Introduction, need of new drugs, Historical background of drug discovery and design, Sources of drugs, Classification of drugs, Introduction to drug action B. Immunobiologicals: Vaccines: Introduction, Methods of vaccine production: Inactivated pathogens, Live/Attenuated Pathogens and Cellular Antigen from a pathogen, SARS-CoV-19
2	Aug-23 2 L Sept-23 6 L	Bio-physicochemical Properties in Drug Action and Design	Introduction, Acidity/Basicity, Solubility, Ionization, Hydrophobic and hydrophilic properties, Lipinski Rule, Terminology in Medicinal Chemistry: Pharmacology, Pharmacophore, Pharmacodynamics, Pharmacokinetics, metabolites, antimetabolites and therapeutic index. Importance of stereochemistry in drug action (Example: Ibuprofen), Concept of rational drug design: Structure activity relationship, Drug-receptor understanding
3.	Sep-23 4 L Oct-23 8 L	Drugs for Infectious Diseases	ntroduction, Structures, Mode of Action and Applications: A. Antimicrobial Agents: Classification on i) Type of action: Bacteriostatic and Bactericidal ii) Source (Natural, Synthetic and Semisynthetic) iii) Spectrum of activity: Narrow and Broad Spectrum iv) Chemical structure: β-lactams (Penicillin), Macrolides (Azithromycin), Sulphonamides (Sulfadiazine), and Tetracyclins (Chlortetracycline) B. Anti-fungal and anti-viral agents: Example: Amphotericin-B, Acyclovir
4.	Oct-23 2 L	Drugs for Non-infectious diseases	Introduction, Structures, Mode of Action, and Applications: A. i) Anti-inflammatory and Analgesic Agents: Example: Aspirin, Paracetamol, and Ibuprofen, ii) Psychoactive Agents: Sedatives and Hypnotics: Example: Benzodiazepines, B. Metallodrugs as Chemotherapeutic Agents: Examples: Aluminium based antacids, Salvarsan, Cis Platin, and Transition Metal Complexes