Arts, Science and Commerce College, Indapur, Dist. - Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B.

Subject: Organic Chemistry

Semester: I

Year: 2022-2023

Part I : Teaching Plan

CHO-350

Class: M.Sc.II

Part II : Evaluation of Plan

1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	July 2022	3&4	7	02	Carbanions-Formation, stability and related name reactions	02	Carbanions-Formation, stability and related name reactions	Nil	-
2	Aug 2022	1&2	10	02	Enamines –formation and applications, NGP	02	Enamines –formation and applications, NGP		
3	Aug 2022		11	02	Neighbouring group participation ,	02	Neighbouring group participation ,	Nil	-
4	Sept		11	02	. Reactions of carbenes and nitrenes	02	. Reactions of carbenes and nitrenes		
5	Sept 2022		11	02	Free radicals: Generation of radiacls,	02	Free radicals: Generation of radiacls,		
6	Oct 2022		10	02	Stable free radicals, Nucleophilic and electrophilic radicals	02	Stable free radicals, Nucleophilic and electrophilic radicals		
7	Oct 2022	3&4	10	02	Characteristics reactions, -Free radical substitution,	02	Characteristics reactions, -Free radical substitution,	Nil	-
8	Nov. 2022	1&2	11	02	addition to multiple bonds, Radicals in synthesis	02	addition to multiple bonds, Radicals in synthesis	Nil	-

Sign. of Teacher JBBho

Sign. of Head of Department JBBho

Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapur,Dist.Pune

Sign. of Faculty In-charge

Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

Sign. of the Principal

Scanned with OKEN Scanner

...ence and Commerce College, Indapur, Dist. - Pune

...ATION PLAN

Year: 2022-2023
Class: T.Y.B.Sc.
10

Arts, Science and Commerce College, Indapur, Dist. - Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B.

Subject: Organic Chemistry

Semester: I

CHO-350

Year: 2022-2023

Class: M.Sc.II

Part I : Teaching Plan

Part II : Evaluation of Plan

1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	July 2022	3&4	7	02	Carbanions-Formation, stability and related name reactions	02	Carbanions-Formation, stability and related name reactions	Nil	-
2	Aug 2022	1&2	10	02	Enamines –formation and applications, NGP	02	Enamines –formation and applications, NGP	Nil	-
3	Aug 2022		11	02	Neighbouring group participation , . Reactions of carbenes and nitrenes	02	Neighbouring group participation , . Reactions of carbenes and nitrenes	Nil	-
4	Sept		11	02	Free radicals: Generation of radiacls,	02	Free radicals: Generation of radiacls,	Nil	-
5	Sept 2022		11	02	Stable free radicals, Nucleophilic and electrophilic radicals	02	Stable free radicals, Nucleophilic and electrophilic radicals	Nil	-
6	Oct 2022		10	02	Characteristics reactions, -Free radical substitution,	02	Characteristics reactions, -Free radical substitution,	Nil	-
7	Oct 2022	3&4	10	02	addition to multiple bonds, Radicals in synthesis	02	addition to multiple bonds, Radicals in synthesis	Nil	-
8	Nov. 2022	1&2	11	02					

Sign. of Teacher JBBho

Sign. of Head of Department JBBho

Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapur,Dist.Pune

Sign. of Faculty In-charge

Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

Sign. of the Principal

Scanned with OKEN Scanner

Arts, Science and Commerce College, Indapur, Dist. Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Gound K.B **Year: 2022-2023**

Semester: III

Subject: Analytical Chemistry **CHA-393** **Class: M.Sc II**

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Oct 2022	1&2	11	8	1) Capillary Electrophoresis (10L) Basic Principle b) Instrumentation and theory	8	1) Capillary Electrophoresis (10L) Basic Principle b) Instrumentation c) theory.	Nil	--
2	Oct 2022	3&4	10	9	2) Introduction to electrophoresis (6L) Introduction, theory and Applications 3)HPTLC and Dectors for HPTLC (8L) TLC ,mass spectrometry detection in TLC,MALDI Technique	8	2) Introduction to electrophoresis (6L) Introduction, theory and Applications 3)HPTLC and Dectors for HPTLC (8L) TLC ,mass spectrometry detection in TLC,MALDI Technique	Nil	--
3	Nov 2022	1&2	10	9	HPTLC the kubelka munk equation 1) Analysis of Blood and Urine (12L) a) collection of specimen b) Analysis of Blood and Urine	8	HPTLC the kubelka munk equation 1) Analysis of Blood and Urine (12L) a) collection of specimen b) Analysis of Blood and Urine	Nil	--
4	Nov 2022	3	6	6	2) Immunological method of analysis (10L) a) Basic of Immunology	8	C) Determination of vitamin in body fluids 2) Immunological method of analysis (10L) a) Basic of Immunology	Nil	--
5	Dec 2022	1&2	9	9	b) Basic Principle OfELISA c) Stages in ELISA 3) Radioimmunoassay (2L) Principle , Reagents, steps.	7	b) Basic Principle OfELISA c) Stages in ELISA 3) Radioimmunoassay (2L) Principle , Reagents, steps.	Nil	--
6	Dec 2022	3&4	8	8	C) Determination of vitamin in body fluids c) Qualitative and Quantitative analysis and Applicatio	8	C) Determination of vitamin in body fluids c) Qualitative and Quantitative analysis and Applicatio	Nil	

Scanned with CamScanner

Semester Iv CIIA -491 Year : 2022-2023

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Feb 2023	3&4	6	8	1) Microbiological assay of Pharmaceutical (8L) a)Agar diffusion assay b)the theory and practice of tube assay growth promoting substance c) the theory and practice of tube assay growth inhibition substance d) General practical Aspects of microbiologial assay	8	1) Microbiological assay of Pharmaceutical (8L) a)Agar diffusion assay b)the theory and practice of tube assay growth promoting substance c) the theory and practice of tube assay growth inhibition substance d) General practical Aspects of microbiologial assay	Nil	–
2	March 2023	1&2	10	8	2) Chemical analysis of Pharmaceutical ingredients (12L) PharmaceuticalIngredients,ProductionandControl,Pharmacopoeia Monographs, Melting point capillary method, (monograph on paracetamol and acepromazine malate tablet, acetaminophen, acetaminophen capsules, caster oil virgin, cefaclor), Impurities in PharmaceuticalIngredients: Impurities in Pure Chemical Ingredients, Impurities in OrganicMultiChemicalIngredients;Identificationof Pharmaceutical Ingredients:IRSpectrophotometry (identification of ibuprofen, Identification of spironolactone) , UV-VisSpectrophotometry (Identification of mianserin hydrochloride),	8	2) Chemical analysis of Pharmaceutical ingredients (12L) PharmaceuticalIngredients,ProductionandControl,Pharmacopoeia Monographs, Melting point capillary method, (monograph on paracetamol and acepromazine malate tablet, acetaminophen, acetaminophen capsules, caster oil virgin, cefaclor), Impurities in PharmaceuticalIngredients: Impurities in Pure Chemical Ingredients, Impurities in OrganicMultiChemicalIngredients;Identificationof Pharmaceutical Ingredients:IRSpectrophotometry (identification of ibuprofen, Identification of spironolactone) , UV-VisSpectrophotometry (Identification of mianserin hydrochloride),	Nil	–
3	March 2023	3&4	11	8	and Sulfate,Identification,Impurity Testing of Pharmaceutical Ingredients (Pure Chemical Ingredients): Appearance of Solution (Appearance of solution for ibuprofen), Absorbance (Absorbance and color of solution of esomeprazole magnesium) pH and Acidity or Alkalinity (pH of esmolol hydrochloride, Acidity or alkalinity of dopamine hydroch . 2. Chemical Test, Limit Test and Assay [6 L] Important Note: Write the chemical reaction and explain theoretical basis of the limit tests and assay though it is not given in reference book. a) Limit Tests: Aluminium, Aluminium in Adsorbed Vaccines, Arsenic, Calcium in Adsorbed Vaccines, Chlorides, Heavy metals, Iron, Lead, Potassium, Sulphates, Sulphated Ash, Total Ash, Free Formaldehyde, N-N-Dimethylaniline b) Assays: Acetyl Value, Acid Value, Cineole, Ester, Ester Value, Hydroxyl Value, Iodine value, Nitrogen, Methoxyl, Nitrite Titration, Peroxide Value, Saponification Value, Assay Shel life of pharmaceutical preparation	8	and Sulfate,Identification,Impurity Testing of Pharmaceutical Ingredients (Pure Chemical Ingredients): Appearance of Solution (Appearance of solution for ibuprofen), Absorbance (Absorbance and color of solution of esomeprazole magnesium) pH and Acidity or Alkalinity (pH of esmolol hydrochloride, Acidity or alkalinity of dopamine hydroch . 2. Chemical Test, Limit Test and Assay [6 L] Important Note: Write the chemical reaction and explain theoretical basis of the limit tests and assay though it is not given in reference book. a) Limit Tests: Aluminium, Aluminium in Adsorbed Vaccines, Arsenic, Calcium in Adsorbed Vaccines, Chlorides, Heavy metals, Iron, Lead, Potassium, Sulphates, Sulphated Ash, Total Ash, Free Formaldehyde, N-N-Dimethylaniline b) Assays: Acetyl Value, Acid Value, Cineole, Ester, Ester Value, Hydroxyl Value, Iodine value, Nitrogen, Methoxyl, Nitrite Titration, Peroxide Value, Saponification Value, Assay Shel life of pharmaceutical preparation	Nil	–

Scanned with CamScanner

4	April 2023	1&2	10	8	3. Pharmaceutical Methods of Determination [6L] Disintegration Test, Dissolution Test, Uniformity of Weight of Single-Dose Preparation Uniformity of Content of Single-Dose Preparations, Friability of Uncoated Tablets, Contents of Packaged Dosage Forms, Powder Fineness, Particle SizebyMicroscopy,ParticulateContamin 4. Chemical Analysis of Pharmaceutical Preparations [10 L]	8	3. Pharmaceutical Methods of Determination [6L] Disintegration Test, Dissolution Test, Uniformity of Weight of Single-Dose Preparation Uniformity of Content of Single-Dose Preparations, Friability of Uncoated Tablets, Contents of Packaged Dosage Forms, Powder Fineness, Particle SizebyMicroscopy,ParticulateContamin 4. Chemical Analysis of Pharmaceutical Preparations [10 L]	Nil	–
5	April 2023	3&4	11	8	Chemical Analysis of Pharmaceutical Preparations [10 L]Chemical Analysis of Pharmaceutical Preparations, Monographs and Chemical Analysis (BP monograph for paracetamol tablets), Identification of the API: Identification by IR Spectrophotometry (Identification of aspirin, fluoxetine in fluoxetine hydrochloride oral solution, Identification of mupirocin inmupirocin calcium nasal ointment), Identification by Liquid Chromatography (Identification of fluoxetine in fluoxetine hydrochloride,	8	Chemical Analysis of Pharmaceutical Preparations [10 L]Chemical Analysis of Pharmaceutical Preparations, Monographs and Chemical Analysis (BP monograph for paracetamol tablets), Identification of the API: Identification by IR Spectrophotometry (Identification of aspirin, fluoxetine in fluoxetine hydrochloride oral solution, Identification of mupirocin inmupirocin calcium nasal ointment), Identification by Liquid Chromatography (Identification of fluoxetine	Nil	–
6	May 2023	1&2	8	8	in fluoxetine hydrochloride, droperidol in droperidol injection, Beclomethasone Dipropionate in Beclomethasone Dipropionate Ointment), Identification	8	in fluoxetine hydrochloride, droperidol in droperidol injection, Beclomethasone Dipropionate in Beclomethasone Dipropionate Ointment), Identification	Nil	

1 The plan should be prepared in duplicate.

2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.

3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. coumns 7 to 10 must be filled up progressively at the end of every week.

Signature of Teacher | Signature of Head of Department | Signature of Faculty In-charge | Signature of the Principal

Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapur,Dist.Pune

Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Scanned with CamScanner

Arts, Science and Commerce College, Indapur, Dist. Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof. Gound K.B	**Year: 2022-2023**	**Semester: III**
Subject: Analytical Chemistry	**CHA 391**	**Class: M. Sc_II**

Part I : Teaching Plan						**Part II : Evaluation of Plan**			
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Sr. No.	**Month**	**Week**	**No. of working days**	**No. of periods available**	**Topics to be taught**	**No. of periods engaged**	**Topics taught**	**Deviation in periods**	**Remarks**
1	Oct 2022	1&2	11	4	**2. Classical Approach for Aqueous Extraction [6 L]** **Introduc**tion, Liquid-Liquid extraction (LLE), Theory of LLE: distribution ratio and coefficient, solute remaining unextracted, percent extraction, separation factor, factors favoring solvent extraction, quantitative treatment to solvent extraction equilibria, synergic extraction, extraction reagents for metals, selection of solvents, solvent **extraction,**	4	2. Classical Approach for Aqueous Extraction [6 L] Introduction, Liquid-Liquid extraction (LLE), Theory of LLE: distribution ratio and coefficient, solute remaining unextracted, percent extraction, separation factor, factors favoring solvent extraction, quantitative treatment to solvent extraction equilibria, synergic extraction, extraction reagents for metals, selection of solvents, solvent extraction,	Nil	--
2	Oct2022	,3&4	10	4	problems with LLE process),purge andtrapforvolatileorganicsinaqueous samples, Examples of Solvent Extraction-estimation **Solid Phase extraction (SPE) [6 L]** Introduction, Types of SPE media, SPE formats and apparatus, method for SPE operation, solvent selection, factors	4	problems with LLE process),purge andtrapforvolatileorganicsinaqueous samples, Examples of Solvent Extraction-estimation Solid Phase extraction (SPE) [6 L] Introduction, Types of SPE media, SPE formats and apparatus, method for SPE operation, solvent selection, factors	Nil	--

Scanned with CamScanner

					affecting SPE, selected methods of analysis for SPE: application of normal phase SPE, application .		affecting SPE, selected methods of analysis for SPE: application of normal phase SPE, application .		
3	nov2022	1&2	10	4	SPE, application of reversed phase SPE, application of ion exchange SPE, applications of molecularly impaired polymers, Automation and On-Line SPE **4. Solid phase micro-extraction [6** L] Introduction,theoreticalconsiderations, experimental,Methodsofanalysis: SPME-GC: direct immersion SPME, headspace SPME, analysis of compounds from solid matrix, other	4	SPE, application of reversed phase SPE, application of ion exchange SPE, applications of molecularly impaired polymers, Automation and On-Line SPE 4. Solid phase micro-extraction [6 L] Introduction,theoreticalconsiderations, experimental,Methodsofanalysis: SPME-GC: direct immersion SPME, headspace SPME, analysis of compounds from solid matrix, other	Nil	
4	nov2022	3	6	4	analysis of fungicide in water. Automation of SPMEand its application, New development in micro extraction (Introduction, stirbas sorptive extraction, liquid phase micro-extraction, , membrane microextraction, micro extraction **5. Solid -Liquid Extraction, Microwave extraction [6 L]** Classical Approach: Introduction, Soxhlet extraction, Automated Soxhlet extraction**, other**	4	analysis of fungicide in water. Automation of SPMEand its application, New development in micro extraction (Introduction, stirbas sorptive extraction, liquid phase micro-extraction, , membrane microextraction, micro extraction 5. Solid -Liquid Extraction, Microwave extraction [6 L] Classical Approach: Introduction, Soxhlet extraction, Automated Soxhlet extraction, other	Nil	--
5	Dec 2022	1&2	9	4	**1. Pre and Post Extraction Consideration [1 L]** Organic compounds of interest, pre-sampling issues, sampling strategies-	4	1. Pre and Post Extraction Consideration [1 L] Organic compounds of interest, pre-sampling issues, sampling strategies-	Nil	--

Scanned with CamScanner

					solid, aqueous and air samples, chromatographic method of analysis, sample preconcentration methods.		solid, aqueous and air samples, chromatographic method of analysis, sample preconcentration methods.		

Semester IV **CHA 492** **Year : 2022-2023**

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	**Month**	**Week**	**No. of working days**	**No. of periods available**	**Topics to be taught**	**No. of periods engaged**	**Topics taught**	**Deviation in periods**	**Remarks**
1	Feb 2023	3&4	6	4	**Analysis of soil[10 L]** a)Sampling of soil, sample preparation, Pre-treatment of Samples and Contamination, Trace Element Analysis, Sub-sampling, Drying Techniques, Milling, Grinding and homogenization, b) Weighing and Dispensing: Weighing Errors, Dispensing Errors, c) Acid-digestion, Ashing and Extraction Procedure: Acid-digestion and Washing: Aciddigestion of soils, Total soil nitrogen; Microwave acid-digestion, Dry ashing, Nitrate and water-soluble carbohydrate;Extraction Procedures for soils: pH extractants, Phosphate extractants, Potassium extractants, Trace element extractants, d) Analysis of Soil:	4	Analysis of soil[10 L] a)Sampling of soil, sample preparation, Pre-treatment of Samples and Contamination, Trace Element Analysis, Sub-sampling, Drying Techniques, Milling, Grinding and homogenization, b) Weighing and Dispensing: Weighing Errors, Dispensing Errors, c) Acid-digestion, Ashing and Extraction Procedure: Acid-digestion and Washing: Aciddigestion of soils, Total soil nitrogen; Microwave acid-digestion, Dry ashing, Nitrate and water-soluble carbohydrate;Extraction Procedures for soils: pH extractants, Phosphate extractants, Potassium extractants, Trace element extractants, d) Analysis of Soil:	Nil	--

Scanned with CamScanner

					Soil Analytical Procedures - Determination of extractable boron, Cation exchange capacity, exchangeable bases and base Saturation, Determination of CEC and exchangeable cations, Measurement of calcium and magnesium by AAS, Measurement of potassium and		Soil Analytical Procedures - Determination of extractable boron, Cation exchange capacity, exchangeable bases and base Saturation, Determination of CEC and exchangeable cations, Measurement of calcium and magnesium by AAS, Measurement of potassium and		
2	March 2023	1 &2	10	4	Determination of cation exchange capacity (CEC), Determination of effective cation exchange capacity (ECEC), Determination of fulvic and humic acids, Discussion - Determination of available nitrogen, Method-a: Determination of nitrate by selective ion electrode, Discussion - Determination of total mineralized nitrogen, Methodb: Determination of extractable ammonium-N, Method-b: Determination of extractable nitrate-N, Discussion, Determination of organic plus ammonium nitrogen, Method-a: Determination of soil nitrogen by autoanalysis, Method-a: Reduction of nitrate before digestion and colorimetric auto analysis, Method-b: Determination of organic plus ammonium-N by digestion and distillation, Discussion, Determination of soil organicmatter, Method-a: Determination of soil organic matter by loss on ignition, Method-b: Determination of easily oxidizable organic C by Tinsley's wet combustion, Discussion 5.8.	4	Determination of cation exchange capacity (CEC), Determination of effective cation exchange capacity (ECEC), Determination of fulvic and humic acids, Discussion - Determination of available nitrogen, Method-a: Determination of nitrate by selective ion electrode, Discussion - Determination of total mineralized nitrogen, Methodb: Determination of extractable ammonium-N, Method-b: Determination of extractable nitrate-N, Discussion, Determination of organic plus ammonium nitrogen, Method-a: Determination of soil nitrogen by autoanalysis, Method-a: Reduction of nitrate before digestion and colorimetric auto analysis, Method-b: Determination of organic plus ammonium-N by digestion and distillation, Discussion, Determination of soil organicmatter, Method-a: Determination of soil organic matter by loss on ignition, Method-b: Determination of easily oxidizable organic C by Tinsley's wet combustion, Discussion 5.8.	Nil	

Scanned with CamScanner

					Determination of pH and lime requirement,Method-a:Measurement of pH, Method-b: Determination of lime requirement, Method-c: Determination of pH in soils with soluble salts, Discussion - Determination of phosphorus, Mextractableethot		Determination of pH and lime requirement,Method-a:Measurement of pH, Method-b: Determination of lime requirement, Method-c: Determination of pH in soils with soluble salts, Discussion - Determination of phosphorus, Mextractableethot		
3	March 2023	3&4	11	4	**2. Fertilizer Analysis: [6 L]** Discussion -Determination of total nitrogen in presence of nitrate and organic, Method-a:Determination of total nitrogen in presence of nitrateandorganicN,withfinaldetermination by distillation, Method-b: Determination of total nitrogen	4	2. Fertilizer Analysis: [6 L] Discussion -Determination of total nitrogen in presence of nitrate and organic, Method-a:Determination of total nitrogen in presence of nitrateandorganicN,withfinaldetermination by distillation, Method-b: Determination of total nitrogen	Nil	--
4	April 2023	1&2	10	4	fnitrate and organic N, with final determination by auto-analysis, Discussion -Determination of phosphorus in fertilizers, Method-a. Determination of water-soluble phosphorus(extraction), Method-a: Determination of water-soluble phosphorus, (autoanalysis), Method-a: Determination of water-soluble phosphorus(manual method), Methodb. Determination of 2% citric acid-soluble phosphorus Determinationofextractablephosphorus, Method-a: Determination of extractable phosphorus (manual method), Method-b: Determination of extractable phosphorus (automated method), Method-c: Determination of resin extractable	4	fnitrate and organic N, with final determination by auto-analysis, Discussion -Determination of phosphorus in fertilizers, Method-a. Determination of water-soluble phosphorus(extraction), Method-a: Determination of water-soluble phosphorus, (autoanalysis), Method-a: Determination of water-soluble phosphorus(manual method), Methodb. Determination of 2% citric acid-soluble phosphorus Determinationofextractablephosphorus, Method-a: Determination of extractable phosphorus (manual method), Method-b: Determination of extractable phosphorus (automated method), Method-c: Determination of resin extractable		--

Scanned with CamScanner

					phosphorus (automated method), Determination of extractable magnesium, potassium and Sodium, Determination of extractable trace elements, Discussion-Determination of extractable sulphur, Method-a. Determination of extractable sulphur (manualmethod),Methodb.Determination of extractable sulphur (automated met		phosphorus (automated method), Determination of extractable magnesium, potassium and Sodium, Determination of extractable trace elements, Discussion-Determination of extractable sulphur, Method-a. Determination of extractable sulphur (manualmethod),Methodb.Determination of extractable sulphur (automated met		
5	April 2023	3&4	11	4	**Analysis of Pesticide Residues [8 L]** Preparation of Samples, Collection and Preparation of Soil Samples, Collection and Preparation of Water Samples, Individual Pesticide Residue Analytical Methods:Aldicarb(GC), Captafol (GC Method), Captafol (HPLC), Captan (HPLC), Chlorothiophos (GC), Ethyle	4	Analysis of Pesticide Residues [8 L] Preparation of Samples, Collection and Preparation of Soil Samples, Collection and Preparation of Water Samples, Individual Pesticide Residue Analytical Methods:Aldicarb(GC), Captafol (GC Method), Captafol (HPLC), Captan (HPLC), Chlorothiophos (GC), Ethyle	Nil	

1 The plan should be prepared in duplicate.
2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. coumns 7 to 10 must be filled up progressively at the end of every week.

K.B.Gaune
Signature of Teacher

Signature of Head of Department
Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapur,Dist.Pune

Signature of Faculty In-charge
Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

Signature of the Principal
PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Scanned with CamScanner

Arts, Science and Commerce College, Indapur, Dist. Pune

TEACHING AND EVALUATION PLAN

Name of the Teacher : Mr. Nanaware R. M. Year: 2022-23

Subject: Inorganic Chemistry Semester: I

Class: M.Sc.(I) Paper: CIII – 130 (Section I Molecular Symmetry)

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Sept.	1&2	9	4	1. Molecular symmetry and symmetry operations	4	1. Molecular symmetry and symmetry operations	Nil	
		3,4 & 5	16	5	Symmetry point groups and its classification	5	Symmetry point groups and its classification	Nil	
2	Oct.	1&2	7	4	Representation of groups	4	Representation of groups	Nil	
		3,4&5	16	6	Orthogonally theorem and Character tables	6	Orthogonally theorem and Character tables	Nil	
3	Nov.	1&2	10	4	Symmetry adopted linear combinations	4	Symmetry adopted linear combinations	Nil	
		3&4	11	4	Applications of group theory to infra-red spectroscopy	4	Applications of group theory to infra-red spectroscopy	Nil	

1 The plan should be prepared in duplicate.

2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.

3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.

Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapur,Dist.Pune

Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

PRINCIPAL
ARTS, SCIENCE AND
COLLEGE
INDAPUR-413106 DIST.PUNE

Scanned with OKEN Scanner

Arts, Science and Commerce College, Indapur, Dist. Pune

TEACHING AND EVALUATION PLAN

Name of the Teacher : Mr. Nanaware R. M. Year: 2022-223 Semester: II

Subject: Inorganic Chemistry Paper: CHI – 230 (Section I Coordination Chemistry)

Class: M.Sc.(I)

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	march.	1&2	9	4	Concept and scope of ligand field theory	4	Concept and scope of ligand field theory	Nil	
		3,4 & 5	16	5	Ligand field theory of coordination compounds	5	Ligand field theory of coordination compounds	Nil	
2	April.	1&2	7	4	Orgel diagrams, correlation diagrams, Tanabe- Sugano diagrams	4	Orgel diagrams, correlation diagrams, Tanabe- Sugano diagrams	Nil	
		3,4&5	16	6	Electronic spectra of transition metal complexes	6	Electronic spectra of transition metal complexes	Nil	
3	May	1&2	10	4	Nephelauxetic effect and calculations based on it.	4	Nephelauxetic effect and calculations based on it.	Nil	
		3&4	11	4	Magnetic properties of coordination compounds	4	Magnetic properties of coordination compounds	Nil	

1 The plan should be prepared in duplicate.

2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.

3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.

Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapue,Dist.Pune

Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

PRINCIPAL
ARTS, SCIENCE AND
COLLEGE
INDAPUR-413106 DIST-PUNE

Scanned with OKEN Scanner

Indapur Taluka Shikshan Prasarak Mandal's
Arts, Science and Commerce College, Indapur, Dist. Pune
TEACHING AND EVALUATION PLAN

Department of Chemistry

Name of The Teacher : Kharat Sachin Dattu Year: 2022-23 Semester: I

Class: M.Sc-II org. Division: — Subject: CHO-351 Spectroscopy Paper: —

Part I : Teaching Plan						Part II : Evaluation of Plan			
1 Sr. No.	2 Month	3 Week	4 No. of Workeng Days	5 No. of Periods available	6 Topics to be taught	7 No. of periods engaged	8 Topics taught	9 Deviation in periods	10 Remarks
	Sept	1	3	1+1	CHO-351 - spectroscopic Introduction	1	Introduction of spectroscopy subject	—	—
	Sept	4	6	4	^{1}H NMR spectroscopy	2	^{1}H NMR Spectroscopy	2	—
	Sept	5	6	3+1	^{1}H NMR Theory part	3	^{1}H NMR Theory part	1	
	Oct	1	5	3	Problems based on ^{1}H NMR	3	Problems based on ^{1}H NMR	—	
	Oct	2	6	4	Homotopic, enantiotopic diastereotopic protons identifi	2	Homotopic, enantiotopic diastereotopic protons identification	2	
	Oct	3	6	4	HETCOR, COSY	3	HETCOR, COSY	1	
	Oct	4	3	2	^{13}C - NMR spectroscopy Chapter-2	1	^{13}C NMR Introduction	1	

Department of Chemistry
Arts, Science & Commerce
College, Indapur, Dist. Pune

Scanned with OKEN Scanner

Part I : Teaching Plan						Part II : Evaluation of Plan			
1 Sr. No.	2 Month	3 Week	4 No. of Working Days	5 No. of Periods available	6 Topics to be taught	7 No. of periods engaged	8 Topics taught	9 Deviation in periods	10 Remarks
1	Nov.	1	5	4	^{13}C NMR problems	4	^{13}C NMR problems	—	—
	NOV	2	5	3	^{13}C NMR, DEPT, NOE	3	DEPT, NOE	—	
	NOV	3	6	4	2D NMR NOESY INADEQUATE	4	2D NMR, NOESY INADEQUATE	—	
	NOV	4	6	4	Mass Spectrometry	4	Mass spectrometry	—	
	NOV	5	3	2	Mass spectrometry problems	2	MS problems	—	
	DEC	4	4	4	Application of mass & problems	4	Applications of mass & problems		

N. B.

1. The plan shouls be prepared in duplicate.
2. One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
3. The second copy must be retained by the teacher and submitted at the end of the term Part second of the plan i. e. coumns 7 to 10 must be filled up progressively at the end of every week.

Teacher

Head of Department
Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapue,Dist.Pune

Faculty in - charge
Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

Principal
PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Scanned with OKEN Scanner

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof. Yogesh Vilas Zagade **Year:** 2022-23
Semester: I
Subject: Basic organic chemistry **Paper:** CHO-150 **Class:** M.Sc.- I

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Sep2022	1 & 2	10	8	Structure, Stability & Reaction of Reactive Intermediates	8	Structure, Stability & Reaction of Reactive Intermediates	Nil	--
2	sep 2022	3 & 4	12	10	Oxidation & Reduction Reactions	10	Oxidation & Reduction Reactions	Nil	--
4	Oct 2022	3&4	11	8	Rearrangement Reactions	8	Rearrangement Reactions	Nil	--
5	Nov 2022	1&2	12	8	Ylides: Phosphorus & Sulphur	8	Ylides: Phosphorus & Sulphur	Nil	--

Scanned with OKEN Scanner

Semester IV **Paper: IV CH0- 452 medicinal Chemistry & It's Applications** **Year : 2022-23**

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Dec 2022	4	6	2	Introduction to medicinal chemistry	2	Introduction to medicinal chemistry	Nil	--
2	Jan 2023	1 &2	12	5	Introduction to Biomolecules, Pharmacodynamics of drug molecules	9	Introduction to Biomolecules, Pharmacodynamics of drug molecules	4	Extra lecture was conducted
3	Jan2023	3 & 4	12	8	Absorption, Distribution, Metabolism and Excretion study of drug molecules	11	Absorption, Distribution, Metabolism and Excretion study of drug molecules	3	Extra lecture was conducted
4	Feb 2023	1 & 2	12	8	Study of coenzyme, Solid phase peptide Synthesis	9	Study of coenzyme, Solid phase peptide Synthesis	1	lecture was conducted
5	Feb 2023	3 & 4	12	6	Active & Passive Transport	6	Active & Passive Transport	Nil	-

1 The plan should be prepared in duplicate.
2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. coumns 7 to 10 must be filled up progressively at the end of every week.

Signature of Teacher

Signature of Head of Department
Head
Department Of Chemistry
Arts,Science & Commerce
College,Indapue,Dist.Pune

Signature of Faculty In-charge
Incharge
Science Faculty
Arts,Science & Commerce
College,Indapur, Dist.Pune

Signature of the Principal
PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Scanned with OKEN Scanner