

Koyana Education Society's
Balasaheb Desai College, Patan
Department of Chemistry
Monthly Teaching Plan-Year-2023-2024
December – 2023 Semester –II, IV & VI

Name of the Teacher- Mr. Shivhar Balaji Ambegave

Dates	Unit	Sub unit	Teaching Method Aids
B.Sc.-II			
06/12/2023	Unit 1: Carboxylic Acids and Their Derivatives	Monocarboxylic acid: Introduction, Methods of Formation from Alcohols, Aldehydes, Ketones, Nitriles and Alkyl benzenes.	Inductive & Deductive
13/12/2023		1.2 Halo acids: a) Synthesis of halo acids- Mono, Di, Tri- chloro acetic acid by HVZ reaction b) Reactions - Substitution reaction of Monochloro acetic acid by Nucleophile OH ⁻ , I ⁻ , CN ⁻ and NH ₃	Lecture
20/12/2023		1.3 Hydroxy acids: Citric acid a) Methods of formation of Citric acid from glycerol.	Lecture
27/12/2023		b) Chemical Reactions: Reaction of citric acid: acetylation by acetic anhydride, reduction by HI, action of heat.	Lecture
B.Sc.-III			
07/12/2023	Unit 1. Reagents and Reactions in Organic Synthesis	I] Reagents Preparation and Applications of following reagents.	Inductive & Deductive
14/12/2023		A) Oxidizing reagents a) Osmium tetroxide. b) Selenium dioxide (SeO ₂).	Lecture using ICT
21/12/2023		B) Reducing reagents a) Lithium Aluminum Hydride LiAlH ₄ .	Lecture
28/12/2023		b) Raney Nickel.	Lecture
M.Sc.-I			
1/12/2023	UNIT-II: A) Hydroboration	Various hydroborating agents their mechanism and synthetic applications	Lecture
05/12/2023		viz 9-borabicyclo- [3.3.1]nonane (9-BBN),	Lecture
08/12/2023		thexylborane, H B diisoamylborane.	Lecture
12/12/2023		(Sia ₂ BH) BH ₃ •SMe ₂ . (BMS)	Lecture
15/12/2023		Borane as reducing agent.	Lecture using ICT

19/12/2023	B) Enamins	Formation, reactivity and synthetic applications of enamines	Lecture
22/12/2023	C) Oxidation	Applications of oxidizing agents like chromium trioxide,	Lecture
26/12/2023		manganese dioxide,	Lecture
29/12/2023		Woodward- Prevost hydroxylation,	Lecture
M.Sc.-II			
04/12/2023	UNIT-II: Advanced Liquid Chromatographic Techniques	High Performance Liquid Chromatography (HPLC)	Inductive & Deductive
05/12/2023		Ultra Performance Liquid Chromatography (UPLC)-Principle	Lecture
11/12/2023		instrumentation, mobile phase	Lecture
12/12/2023		Stationary support in HPLC	Lecture
18/12/2023		detectors and applications	Lecture
19/12/2023		Super critical fluid chromatography (SCFC),	Lecture using ICT
25/12/2023		characteristics, instrumentation and applications.	Lecture
26/12/2023		Comparison of HPLC and GLC with SCFC.	Lecture