Lecture Plan

Name of the College: Government College of Arts, Science and Commerce. Sanquelim - Goa

Name of Faculty: ASHOK MAHADEV CHODANKAR	**Subject:** CHEMISTRY	
Paper code: CHC 142	**Program: BSc**	**Division:**
Academic year: 2024 - 2025	**Semester: I**	**Total Lectures: 60**

Course Objectives: .

To understand the theoretical aspects of qualitative organic analysis

- **To explain mechanistically the chemical tests in qualitative organic analysis.**

Course Outcome:

1. Explain reactions involved in identifying the chemical nature of organic compounds.
2. Understand role of sodium fusion extract in detecting the presence of heteroelements.
3. Explain the reactions of various functional groups present in organic compounds.
4. Understand the need for purification techniques in organic analysis.

Student Learning Outcome:

At the end of the course students will be able to

1. Explain reactions involved in identifying the chemical nature of organic compounds.
2. Understand role of sodium fusion extract in detecting the presence of heteroelements.
3. Explain the reactions of various functional groups present in organic compounds.
4. Understand the need for purification techniques in organic analysis.

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
01 AUGUST 2024 TO 03 AUGUST 2024	8.45	12.45	4	I ISA			1. Vogel, A.I., Tatchell, A.R., Furnis, B.S., Hannaford, A.J. & Smith, P.W.G., Textbook of Practical Organic Chemistry, Prentice-Hall, 5th edition, 1996. 2. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry Orient-Longman, 1960. 3. Pandey, O.P., Bajpai D. N. & Giri S. Practical Chemistry, Revised Edition, (For BSc. I, II, III Year Students of All Indian Universities) S. Chand Company Pvt Limited, 2014. 4. N. K. Vishnoi, Advanced Practical Organic Chemistry, third edition, 2010
5 AUGUST TO 10 AUGUST 2024	8.45	12.45	4	1. Purification of organic compounds: i) Solids by recrystallization process using water and ethanol as solvent and determination of melting point.			
12 AUGUST TO 17 AUGUST 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) Water insoluble solids (Acid, Base, Phenol and Neutral) – Two compounds to be analysed of each category.			
19 AUGUST TO 24 AUGUST	8.45	12.45	4	2. Identification of unknown organic compounds based on			

2024				water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) ii) Water insoluble solids (Acid, Base, Phenol and Neutral) – Two compounds to be analysed of each category.		
26 AUGUST TO 31 AUGUST 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) ii) Water insoluble solids (Acid, Base, Phenol and Neutral) – Two compounds to be analysed of each category.		
2 SEPT TO 5 SEPT 2024 13 SEPT TO 14 SEPT 2024	8.45 8.45	12.45 12.45	4 4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) ii) Water insoluble solids		

				(Acid, Base, Phenol and Neutral) – Two compounds to be analysed of each category.		
16 SEPT TO 21 SEPT 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) ii) Water insoluble solids (Acid, Base, Phenol and Neutral) – Two compounds to be analysed of each category.		
23 SEPT TO 28 SEPT 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) i) Water soluble solids (Acid and Neutral) –		
30 SEPT TO 5 OCT 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis,		

				group test and physical constants (organic spotting) i) Water soluble solids (Acid and Neutral) –			
7 OCT TO 12 OCT 2024	8.45	12.45	4	2. Identification of unknown organic compounds based on water solubility, chemical type, elemental analysis, group test and physical constants (organic spotting) Liquids: Water miscible neutral, water immiscible (base/ neutral)			
14 OCT TO 19 OCT 2024	8.45	12.45	4	EXAM			
21 OCT AND 22 OCT 2024	8.45	12.45	4	EXAM			

Assessment Rubrics

Component	Max Marks
ISA 1	(5)
ISA 2	(5)
Practical	(20)
Project	------
Semester End Exam	(25)