



ARSD College, University of Delhi

Model Course Handout/Lesson Plan

Course Name : B.Sc. (Hons) Chemistry						
Semester	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
VI	CHEMISTRY-CIX: Organic Chemistry-III	Course Title: Nitrogen containing functional groups, Polynuclear Hydrocarbons, Heterocyclic Chemistry, Alkaloids and Terpenes.	0	0	4	2
Teacher/Instructor(s)		Dr. Snehlata, Dr. Ramswaroop Maharia				
Session		2021-22				

Course Description:

The Core Course Organic Chemistry III is infused with the details of Nitrogen containing functional groups and introduction of polynuclear hydrocarbons, heterocyclic systems and natural compounds viz. terpenes and alkaloids. A comprehensive understanding of these topics will be developed by taking examples of representative members of each class. The chemical synthesis, properties and reactions of these compounds will be discussed in detail. This course will also discuss some of the key applications of each class of compounds in diverse fields

List of Experiments:

1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters).
2. Isolation of caffeine from tea leaves.
3. Estimation of aniline by any one of the following methods: a) Acetylation b) Bromate-bromide method

Details of the Lab Course		
Session	Name of Experiment	Contact Hours
1	Estimation of aniline by Bromate-bromide method.	4
2	Isolation of caffeine from tea leaves.	4
3	Systematic qualitative analysis of organic compounds possessing ester functional groups including derivative preparation.	4
4	Systematic qualitative analysis of organic compounds possessing alcohol functional groups including derivative preparation.	4
5	Systematic qualitative analysis of organic compounds possessing phenolic functional groups including derivative preparation.	4
6	Systematic qualitative analysis of organic compounds possessing monocarboxylic acid functional groups including derivative preparation.	4
7	Systematic qualitative analysis of organic compounds possessing dicarboxylic acid functional groups including derivative preparation.	4
8	Systematic qualitative analysis of organic compounds possessing aldehydic carbonyl groups including derivative preparation.	4

9	Systematic qualitative analysis of organic compounds possessing ketonic carbonyl functional groups including derivative preparation.	4
10	Systematic qualitative analysis of organic compounds possessing unknown functional groups including derivative preparation.	4
11	Systematic qualitative analysis of organic compounds possessing unknown functional groups including derivative preparation.	4
12	Systematic qualitative analysis of organic compounds possessing unknown functional groups including derivative preparation.	4
13	Systematic qualitative analysis of organic compounds possessing unknown functional groups including derivative preparation.	4
14	Systematic qualitative analysis of organic compounds possessing unknown functional groups including derivative preparation.	4
15	Mock test	4
	Total	60

Suggested Books:

Sl. No.	Name of Authors/Books/Publishers	Year of Publication/Reprint
1.	Mann, F. G.; Saunders, B. C., Practical Organic Chemistry , Pearson Education.	2009
2.	Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry , Pearson.	2012
3.	Ahluwalia, V.K.; Aggarwal, R., Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis , University Press.	2004

Evaluation Scheme:

No.	Component	Duration	Marks
1.	Internal Assessment		25
	• Quiz/Viva		
	• Observation & Record		
	• Attendance		
	• Model Exam		
2.	End Semester Examination	5 hrs	25