Practical Plan

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

Name of Faculty: Dr. Sagar Narayan Patil	**Subject:** Chemistry	
Paper code: CHC-202; Organic Chemistry I	**Program: SYBSc**	**Division: - Batch 2**
Academic year: DEC 2024- 2025	**Semester: IV**	**Total Lectures: 30h**

Course Objectives:

1. To apply theoretical concepts to experiments.
2. To acquire hands on training in organic preparation.
3. To acquire hands on training in organic qualitative analysis.

Student Learning Outcome:

At the end of the course, students will be able to

5. Estimate the organic compounds.
6. Acquire hands on training in organic chemistry preparation methods.
7. Analyse and identify organic compounds using classical qualitative analysis.
8. Apply theoretical knowledge in understanding laboratory skills.

Month	Lecture From	Lecture To	No. of Practical allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
December	09/12/2024	21/12/24	1	**I Preparation of organic derivatives.** List of organic preparations to be	Osazone derivative from Glucose	Board	Kemp, W., *Organic spectroscopy*, 3ed., Palgrave Macmillan, New York, USA, 1991.

				performed. Purification by recrystallization, calculation of % yield and determination of melting point. (**Any 4)** a) Osazone derivative from Glucose b) Benzoyl derivative of *β*-Naphthol c) Azo dye from Aniline and *β*-Naphthol d) Acid derivative of benzamide e) Anhydride derivative of phthalic acid. f) Amino derivative of *m*-dinitrobenzene.			2. Pavia, D. L., Lampman, G. M. and Kriz, G. S., *Introduction to Spectroscopy*, 3rded., Thomson Learning, Fort Worth, USA, 2001. 3. Silverstein, R. M. and Webster, F., *Spectrometric Identification of Organic Compounds*, 5thed., John Wiley & Sons, New York, USA, 1991.
January	03/01/2025	31/01/2025	4	c) Azo dye from Aniline and *β*-Naphthol d) Acid derivative of benzamide e) Anhydride derivative of phthalic acid.	Mechanism, theory, principle, applications	Board, mechanism drawing, arrows and meaning of the notation.	7. Finar,I. L., *Organic Chemistry*(Vol. II), 3rded., Longmans, London, UK, 1964. 8. Morrison, R.T., Boyd, R.N. and Bhattacharjee, S. K., *Organic Chemistry*, 7thed., Pearson, Bangalore, India, 2010. 9. Bahl, A. and Bahl, B.S., *Advanced Organic Chemistry*, S. Chand, New Delhi, India, 2012. 10. Carey, F., *Organic Chemistry*, 4thed., McGraw Hill, New York, USA, 2000.
February	01/02/2025	28/02/2025	4	**III Organic Estimation (Any 2)** a) Estimation of Acetamide b) Estimation of Glucose	**14** Mechanism, theory,	Board	Listed as above

				II Organic qualitative analysis Preliminary tests, chemical nature, detection of elements, functional group determination and physical constant.	principle, applications		
March	01/03/2025	31/03/2025	4	**II Organic qualitative analysis** Preliminary tests, chemical nature, detection of elements, functional group determination and physical constant. a) Water insoluble Acids: cinnamic acid,*p*-nitrobenzoic acid. b) Water insoluble Phenol: *o*-nitrophenol, *p*-nitrophenol. c) Water insoluble Base: *p*-nitroaniline, *o*-nitroaniline. d) Water insoluble Neutral: benzophenone, benzamide. e) Water soluble solids: succinic acid, thiourea. f) Liquids: methyl acetate, nitrobenzene, *N*-methylaniline, cyclohexanol.	Mechanism, theory, principle, applications		Listed as above
April	01/04/2025	11/04/2025	1	Revision, practice, VIVA preparations etc.	revisions problems therein	Board	