



बिरसा मुंडा ट्रायबल युनिवर्सिटी Birsā Mūṇḍā Drāyabala Yūnīvārsīṭī

राजपिपला, जि० नर्मदा Rajpipla, Dist. Narmda

Established by Tribal Development Department, Govt. of Gujarat

School of Science

B.Sc. (Chemistry) Programme

Subject Code & Name: - BS05MJCHE3 & Organic & Inorganic Chemistry Practicals

Teaching and Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
-	-	4	4	-	50	-	50

Programme Name	B.Sc.
Semester	V
Course Code	BS05MJCHE3
Course Title	Organic & Inorganic Chemistry Practicals
Course Content Type (Th./Pr.)	Practicals
Course Credit	4
Sessions+ Lab. Per Week	8
Total Teaching/Lab. Hours	60 Hours
* 2 Laboratory = 1 Session	

Learning Objectives

1. Identify cations (including rare elements) and anions in a given salt or mixture using semi-micro methods and systematic analysis.
2. To estimate exact proportion of different types of organic compound using different methods.
3. To find out percentage of unknown organic compounds

Prerequisites (if any)

Learning Outcomes

On the Completion of this course, students will able to:

1. Students learn to quantify elements (C, H, N, S, Halogens) using methods like Dumas, Kjeldahl, or Carius, and estimate functional groups (hydroxyl, amino, carbonyl, carboxylic acid) using titrimetric techniques.





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2. Gain proficiency in preparing standard solutions, performing back-titrations, and using specific reagents to estimate compounds like aniline, phenol, or glucose.
3. Students acquire the ability to identify acid (anions) and basic (cations) radicals in a mixture systematically, including separating interfering ions.
4. Students apply theoretical concepts to practical work, including solubility product rules, the common ion effect, complexation, and redox reactions.

Detailed Contents

UNIT	TOPIC/SUB-TOPIC	TEACHING HOURS
I	Practical Based on Organic Chemistry Estimation of : Acetamide, Esters, Amines, Phenols, Glucose and Acids	30
II	Practical Based on Inorganic Chemistry Inorganic qualitative analysis (Six radicals) Semi-micro Inorganic Qualitative Analysis Of Mixture Containing Three Positive & Three Negative Radicals.	30

Text Book(s)

Reference Books

1. Principles of Inorganic chemistry- B. R. Puri, L. R. Sharma and K. C. Kalia; Vallabh publications, Delhi.
2. Concise Inorganic Chemistry - J. D. Lee
3. Selected Topic in Inorganic Chemistry, 8th -edition, by Wahid U. Malik, G.D. Tuli and R.D. Madan
4. Basic Inorganic Chemistry by Ajai Kumar, Aaryush Education
5. Advanced Inorganic Chemistry by F. Albert Cotton, Geoffrey Wilkinson, An Indian Adaptation Willey.

Web Resources

1. Google books, INFLIBNET, Google Web

Required Software(s) (if any)

Practical(s) (if any)





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L:: Lecture, **T::** Tutorial , **P::**Practical

CCE:: Continuous and Comprehensive Evaluation

(CCE Theory includes Mid Semester Examination, Assignment, MCQ quizzes, Seminar, Reflective notes, class participation, case analysis and presentation, slip tests (announced/surprised), attendance etc. or any combination of these)

PWE:: Practical Work Examination

(PWE includes Laboratory practical work, project work, viva simulation exercise work etc.)

SEE:: Semester End Evaluation

