

Lecture Plan							
Name of the college: Government College of Arts, Science and Commerce, Sanquelim- Goa							
Name of Faculty: Ms. Varsha K. Sail				Subject: Chemistry			
Paper code: CHC-306 (Inorganic Chemistry-III)		Program: T.Y.B.Sc.			Division: A		
Academic year: 2026- 2027		Semester: IV			Total Lectures: 15		
Course Objectives:To study the preparations, chemical properties, structure and bonding of halogen compounds. 2. To understand fundam of the metal ligand bond in accordance with VBT and CFT. 3. To learn the fundamentals of solid-state chemistry, superconductivity and to their applications. 4. To comprehend the concepts of acid bases and non-aqueous solvents.							
Expected Course Outcome: To study the preparations, chemical properties, structure and bonding of halogen compounds. 2. To understand fundamentals of the metal ligand bond in accordance with VBT and CFT. 3. To learn the fundamentals of solid-state chemistry, superconductivity and to study their applications. 4. To comprehend the concepts of acid bases and non-aqueous solvents.							
Student Learning Outcome:							
Student will be able to recollect preparations, chemical properties, structure and bonding of halogen compounds. 2. To understand fundamentals of the metal ligand bond in accordance with VBT and CFT. 3. To learn the fundamentals of solid-state chemistry, superconductivity and to study their applications. 4. To comprehend the concepts of acid bases and non-aqueous solvents.							
Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books

June	19 th	27 th	1	Topic 1 <u>Chemistry of halogens-Prsession</u> – halogen and its properties, Introduction to compounds of halogen. Interhalogen classification and types.		
July	29 th June	4 th July	1	General methods of preparation and chemical properties of Interhalogens,		
	6 th	11 th	1	structure, bonding of interhalogen	Give reason Question given	
	13 th	18 th	1	iii) Oxyacids of halogens in different oxidation states: General methods of preparation and,		
	20 th	25 th	1	chemical properties		
	27 th	1 st Aug	1	chemical properties		
August	3 rd	8 th	1	Structure bonding and acid strength	Draw structure of all	
	10 th	14 th 15 th Holiday	1	ii) Polyhalide ions General methods of preparation and		
	17 th	22 nd	1	chemical properties structure, bonding		
	24 th 26 th holiday	29 th	1	iv) Pseudohalogens; General methods of preparation and chemical properties	Draw structure	
September	31 st Aug	5 th	1	structure, bonding and acid strength		
	7 th	12 th	1	Superconductivity Discovery of Superconductivity. Explanation of terms: Superconductivity,	Watch link shared and make observations	
	14 th	19 th	Holiday			
	21 st	26 th	1	Transition temperature and Meissner effect.,		
	28 th	3 rd oct	1	Different types of Pedagogy superconductors viz, conventional superconductors, organic		

1. P.L. Soni and Mohan Katyal, Textbook of Inorganic Chemistry by, Sultan Chand and Sons, 20th Edition (1997) 2. Puri, Sharma and Kalia, Principles of Inorganic Chemistry, 33rd Edition, Vishal Publishing Co. (2018). 3. J.D. Lee, Concise Inorganic Chemistry by Chaman and Hall, 5th ed. (1996). 4. J.C. Kotz, Paul M. Treichel, Gabriela C. Weaver, Chemistry and Chemical Reactivity, 6th Edn. Thomson Books/Cole (2006). 5. F. A. Cotton, G. Wilkinson, P. L. Gauss, Basic Inorganic Chemistry, 3rd Ed.; Wiley, (Reprint 2008). 6. N. Greenwood, A. Earnshaw, Chemistry of the Elements, Pergamon Press, 1st Ed.; (1984). 7. Glen E. Rodgers, Inorganic Chemistry, 3rd Edn. Brooks/Cole (2012). 8. F. A. Cotton and G. Wilkinson, Advanced Inorganic Chemistry, 3rd Edn. 9. P. W. Atkins, T. Overton, J. Rourke, M. Weller, F. Armstrong, Shriver & Atkins, Inorganic Chemistry, 5th Ed.; Oxford Publications, (2009). 10. J.E. Huheey, E.A. Keiter, R.L. Keiter, U.K. Medhi, Inorganic Chemistry – Principles of structure and reactivity by, 1st impression (2006) Pearson Education Publishers. 11. K. V. S. Laxmi Devi, N. C. Patel, S.S. Dhume, A. Venkatachalam, S. P. Turakhia, Chhaya Dixit and R. A. Mirji, College Inorganic Chemistry for T.Y. B. Sc. 21st Edn, Himalaya Publishing House 12. Sharpe, Inorganic Chemistry, 3rd Edn. Pearson Education (2009). 13. Lesley E. Smart, Elaine A. Moore, Solid State

				superconductors alkali metal fullerenes and high temperature superconductors.			Chemistry- An Introduction, 3rd Edn. Taylor and Francis, (2005)
Oct	5 th	10 th	1	Tetrahedral and octahedral interstitial voids in ccp lattice, limiting radius ratios of different coordination numbers and their significance.			
	12 th	14 th	1	Calculation of limiting radius ratio for coordination number. Revision			

*Assessment Rubrics

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
ISA 3	7.5
Practical	-
Project	-
Semester End Exam	60

