

Dtd: 17.10.2023

SGGSJ GC PAONTA SAHIB
DEPARTMENT OF CHEMISTRY

NOTICE

All the students of M.Sc. I Sem (Chemistry) are hereby notified that they have to prepare Power point presentations in the subjects of CHEM 101, 102 and 103 each as per the topics allotted to them and submit their ppts on email id: chemistrygcp@gmail.com till 15th November, 2023. The online presentations of the same will be carried out after the Diwali break. The details of the roll no. of the students along with the topics assigned are attached herewith for reference.

Ms. Amita Joshi (H.O.D.)

Amita Joshi
17.10.23

Dr. Pooja Bhati

Pooja Bhati
17/10/23

For P.H. 19-10-23
Principal
S.G.S. Jee, G.D.
Paonta Sahib (H.P.)

Inorganic Chemistry - UNIT I

Group Theory & Supramolecular Chemistry

Organic Chemistry

Unit - IV Aliphatic Electrophilic Substitution

Physical Chemistry

Unit - II Molecular Spectroscopy

Sign.

Roll No.

1700

Unit - I

2.	Introduction	Bimolecular mechanisms - S _E 2	Rotational spectra of non-rigid diatomic molecules	Pooja
4.	Some important Concepts	S _E 2 mechanism	Symmetric top molecules	Pehal
5.	Introduction to Recognition	electrophilic substitution accompanied by double bond shifts.	Anharmonic oscillator.	Shikha
7.	information & Complementarity	halogenation of aldehydes	Overtones	Radhika
9.	Principles of molecular receptor designs	Ketones	hot bands	Tajinder Singh
10.	Spherical recognition (Cryptands of metal cations)	acids	Diatomic vibrator-rotator (P ₂ , R - branch)	Arvid
13.	Tetrahedral recognition by macrocyclic cryptands	acyl halides.	Rotational-Vibrational spectra of symm. top molecules	Rhythm
14.	Recognition of ammonium ions	effect of substrates on reactivity	Raman Spectroscopy	Arast
16.	Recognition of neutral molecules & anionic substrates (anionic coordination)	leaving group on reactivity.	Rotn & Vib ⁿ Raman Spectra of linear & symm top molecules	Shikha
3.	Character & character tables for G _v point groups	solvent system on reactivity	Overtones	Kiranvri
21.	Character & character tables for G _v pt. groups	Aliphatic diazonium coupling	Mutual exclusion Principle	Arviya
23.	symmetries of molecular orbitals in BF ₃ , C ₂ H ₄ and BeH ₂	Acylation at aliphatic carbon	Unit - I. Resonance Spectroscopy	Shikha
24.	Application of gp theory to Chemical bonding	Alkylation of alkanes	Principle & Theory of NMR	Shelly
	Group Theory	Stork - Enamine reactions	Chemical shift	
		Supramolecular	Spin - Spin Coupling	
6	Concept of group	Introduction	Spin - Spin Coupling	Kanika
15	Symmetry elements	Bonding other than covalent bond	Factors influencing chemical shift & Spin Spin Coupling of ¹ H-NMR	Arviya
17	Symmetry operations	Addition compounds	Spin - Spin relaxation process	Arviya
25	Assignment of point groups to Inorganic molecules.	Crown ether complexes	Spin - Lattice relaxation process	Arviya
26.	Some general rules for multiplication of Symmetry operations	Cryptands	1st Line width	Arviya
28	Multiplication table for water	Inclusion Compounds	rate processes	Arviya
29	Multiplication table for Ammonia	Cyclodextrins	1st order ¹ H - NMR spectra	Arviya
30	Matrices representation	Catenanes & their application	2nd order ¹ H - NMR spectra	Arviya
31.	Matrix representation for C _{2v} & C _{3v} pt. groups. irreducible representations	Rotaxanes & their application	Principle & theory of ESR	Arviya
01	Chemical Methods of Analysis	Application of Catenanes & Rotaxanes	Hyper fine structure of ESR	Arviya
18	TITRIMETRIC & GRAVIMETRIC	Refluxing, solvent extraction	MC Connell relation	Arviya
08	Iodometric, Bismatometric Titrations	Crystallisation & Distillation	MSDS & CAS NUMBER	Arviya
	Acid Base & Complexometric Titrations	Steam Distillation	VERIFICATION OF SURFACTENSION THROUGH GIBBS THOMSON RULE	Arviya
		Vacuum Distillation sublimation	PRINCIPLE & WORKING OF ABBE REFRACTOMETER	Arviya