

महाराणा प्रताप पी.जी. कालेज, जंगल धूसड़, गोरखपुर

कक्षा : एम.एस.सी. प्रथम सेमेस्टर		पाठ्यक्रम योजना : सत्र २०१४-२०१५		विषय : रसायनशास्त्र	
दिनांक	व्याख्यान	प्राध्यापक का नाम	प्रश्नपत्र	अध्याय	शीर्षक
16.08.2014	1	Priyanka Mishra	IV	Elimination reaction	E ₁ mechanism
16.08.2014	1	Dr. Ram Sahay	I	Molecular symmetry	Symmetry elements
19.08.2014	1	Dr. Shalini Singh	II	Fundamental concepts	Introduction operators
19.08.2014	1	P. K. Verma	III	Stereochemistry of bonding in main group components	d π-p π bonds
20.08.2014	2	Dr. S. K. Vernwal	IV	Substitution reactions	Aromatic electrophilic substitution general view & energy profile diagram
20.08.2014	2	P. K. Verma	III	Stereochemistry of bonding in main group components	d π-p π bonds
21.08.2014	2	Dr. Shalini Singh	II	Fundamental concepts	Algebra of operators commutators, linear, vector operators
21.08.2014	2	Dr. Ram Sahay	I	Molecular symmetry	Symmetry operation
22.08.2014	3	Priyanka Mishra	IV	Elimination reaction	E ₁ mechanism
22.08.2014	3	P. K. Verma	III	Stereochemistry of bonding in main group components	Bents rule
23.08.2014	3	Dr. Shalini Singh	II	Fundamental concepts	Laplacian operator, hermition operators
23.08.2014	3	Dr. Ram Sahay	I	Molecular symmetry	Special reference to water
25.08.2014	4	Priyanka Mishra	IV	Elimination reaction	E ₁ mechanism
25.08.2014		Dr. Ram Sahay	I	Class Teaching	
26.08.2014	4	Dr. Shalini Singh	II	Fundamental concepts	Concept of normauzation & orthogonality in wave function
26.08.2014	4	P. K. Verma	III	Stereochemistry of bonding in main group components	Energetics of hybridization
27.08.2014	5	Dr. S. K. Vernwal	IV	Substitution reactions	Arenium ion mechanism (Ar SE)
27.08.2014	5	P. K. Verma	III	Stereochemistry of bonding in main group components	Energetics of hybridization
28.08.2014	5	Dr. Shalini Singh	II	Fundamental concepts	Postulates of quantum mechanics
28.08.2014	4	Dr. Ram Sahay	I	Molecular symmetry	Special reference to ethane
29.08.2014	6	Priyanka Mishra	IV	Elimination reaction	E ₂ mechanism

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29.08.2014	6	P. K. Verma	III	Preparation structure, bonding & technical applications	Polyether complexes of alkali metals
30.08.2014	6	Dr. Shalini Singh	II	Fundamental concepts	Schrodinger wave equation
30.08.2014	5	Dr. Ram Sahay	I	Molecular symmetry	Classifications of molecules
01.09.2014		Priyanka Mishra	IV	Class Teaching	
01.09.2014	6	Dr. Ram Sahay	I	Molecular symmetry	Classifications of molecules ions
02.09.2014	7	Dr. Shalini Singh	II	Fundamental concepts	Particle in one dimensional box
02.09.2014	7	P. K. Verma	III	Preparation, structure, bonding & Technical Applications	Polyether complexes of alkaline earth metals
03.09.2014	7	Dr. S.K. Vernwal	IV	Substitution Reactions	Mechanism of halogenation, nitration & sulphondtion
03.09.2014	8	P. K. Verma	III	Preparation, structure, bonding & technical applications	Polyphosphazenes
04.09.2014	8	Dr. Shalini Singh	II	Fundamental concepts	Particle in three dimensional box
04.09.2014	7	Dr. Ram Sahay	I	Molecular symmetry	Ions, based on their symmetry properties
05.09.2014	8	Priyanka Mishra	IV	Elimination reaction	E ₂ reaction
05.09.2014	9	P. K. Verma	III	Preparation, structure, bonding & technical application	Polyphosphazenes
06.09.2014	9	Dr. Shalini Singh	II	Quantum mechanical treatment	I-D harmonic oscillator classical treatment
06.09.2014	8	Dr. Ram Sahay	I	Molecular symmetry	Derivation of matrices for rotation, reflection
10.09.2014	9	Prihyanka Mishra	IV	Elimination reaction	E ₁ cb mechanism
10.09.2014		Dr. Ram Sahay	I	Class Teaching	
12.09.2014	10	Dr. Shalini Singh	II	Quantum mechanical treatment	Quantum mechanical treatment
12.09.2014	10	P. K. Verma	III	Preparation structure, bonding & technical applications	Polyphosphazenes
13.09.2014	10	Dr. S. K. Vernwal	IV	Substitution reactions	Mechanism of friendel-craft's reactions (Alkylation & Acylation)

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13.09.2014	11	P. K. Verma	III	Preparation structure, bonding & technical applications	Thiazy & its polymar
16.09.2014	11	Dr. Shalini Singh	II	Quantum mechanical treatment	Energy levels of harmonic and anharmonic ossillator
16.09.2014	9	Dr. Ram Sahay	I	Molecular symmetry	Rotation and reflection & inversion operations
18.09.2014	11	Priyanka Mishra	IV	Elimination reaction	Orientation
18.09.2014	12	P. K. Verma	III	Preparation structure, bonding & technical applications	${}_4N_2$
19.09.2014	12	Dr. Shalini Singh	II	Quantum mechanical treatment	Rigid rotor model of a diatomic model, energy levels
19.09.2014	10	Dr. Ram Sahay	I	Molecular symmetry	Symmetry point groups
20.09.2014		Priyanka Mishra	IV	<i>Class Teaching</i>	
20.09.2014	11	Dr. Ram Sahay	I	Molecular symmetry	Applied to all type of molecules
22.09.2014	13	Dr. Shalini Singh	II	Quantum mechanical treatment	Rigid rotor selection rule non rigid rotor
22.09.2014	13	P. K. Verma	III	Structure & bonding of borane anions	Borane anions
24.09.2014	12	Dr. S. K. Vernwal	IV	Substitution reactions	Ortho para ratio & ipso-substitution
24.09.2014	14	P. K. Verma	III	Structure & bonding of borane anions	Structure relationship b/w different borane anions
26.09.2014	14	Dr. Shalini Singh	II	Schrodinger equation for H-atom	Transformations of co-ordinates
26.09.2014	12	Dr. Ram Sahay	I	Molecular symmetry	C_{nh}, D_{nh}, C_{nv}
27.09.2014	13	Priyanka Mishra	IV	Elimination reaction	Orientation
27.09.2014	15	P. K. Verma	III	Structure & bonding of borane anions	Bonding in borane anions
29.09.2014	15	Dr. Shalini Singh	II	Schrodinger equation for H-atom	Separation of variables
29.09.2014	13	Dr. Ram Sahay	I	Molecular symmetry	Td, Oh & In
30.09.2014	14	Priyanka Mishra	IV	Elimination reaction	Pyrolytic elimination

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30.09.2014		Dr. Ram Sahay	I	<i>Evaluation</i>	
01.10.2014	16	Dr. Shalini Singh	II	Schrodinger equation H-atom	Q, a and r equation and their solutions
01.10.2014	16	P. K. Verma	III	Structure & bonding of borane anions	Wade's rule
07.10.2014	15	Dr. S. K. Vernwal	IV	Substitution reactions	Aromatic nucleophilic substitution (ArSN)
07.10.2014	17	P. K. Verma	III	Structure & bonding of borane anions	Structures of different boranes
09.10.2014	17	Dr. Shalini Singh	II	Schrodinger equation for H-atom	Spherical harmonics electron spin
09.10.2014	14	Dr. Ram Sahay	I	Molecular symmetry	Group multiplication table
10.10.2014	16	Priyanka Mishra	IV	Elimination reaction	Stereochemistry of E ₂ reaction factors affecting E ₁ ; E ₂ & E ₁ cb
10.10.2014	18	P. K. Verma	III	Classification & structure of silicates	Silicates
11.10.2014	18	Dr. Shalini Singh	II	Many electron atoms	Antisymmetry wave functions slater determinant
11.10.2014	15	Dr. Ram Sahay	I	Molecular symmetry	Matrix representation
13.10.2014		Priyanka Mishra	IV	<i>Class Teaching</i>	
13.10.2014	16	Dr. Ram Sahay	I	Molecular symmetry	Character of an operation
14.10.2014	19	Dr. Shalini Singh	II	Many electron atom	Slater determinant
14.10.2014	19	P. K. Verma	III	Classification & structure of silicates	Classification of silicates
15.10.2014	17	Dr. S. K. Vernwal	IV	Substitution reactions	Addition-elimination and elimination-addition mechanisms
15.10.2014	20	P. K. Verma	III	Classification & structure of silicates	Classification of silicates
16.10.2014	20	Dr. Shalini Singh	II	Many electron atom	Self consistent field theory
16.10.2014	17	Dr. Ram Sahay	I	Molecular symmetry	Orthogonality
17.10.2014	18	Priyanka Mishra	IV	Elimination reaction	Factors affecting, E ₁ , E ₂ & E ₁ cb reaction
17.10.2014	21	P. K. Verma	III	Classification & structure of silicates	Structure of silicates

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18.10.2014	21	Dr. Shalini Singh	II	Many electron atom	Hatree's theory
18.10.2014	18	Dr. Ram Sahay	I	Molecular symmetry	Character tables
27.10.2014	19	Priyanka Mishra	IV	Elimination reaction	Competition between substitution and elimination reactions
27.10.2014		Dr. Ram Sahay	I	Evaluation	
28.10.2014	22	Dr. Shalini Singh	II	Approximation methods	Introduction
28.10.2014	22	P. K. Verma	III	Classification & structure of silicates	3D-silicates
30.10.2014	20	Dr. S. K. Vernwal	IV	Substitution reactions	Effect of substrate, nucleophile and leaving group on arsn reaction
30.10.2014	23	P. K. Verma	III	Synthesis & structure	Carbides
31.10.2014	23	Dr. Shalini Singh	II	Approximation method	Variations method
31.10.2014	19	Dr. Ram Sahay	I	Molecular symmetry	Reducible and irreducible representation
01.11.2014	21	Priyanka Mishra	IV	Addition reaction	Mechanism & stereochemistry of addition of halogen & halogen acid
01.11.2014	24	P. K. Verrma	III	Synthesis & structure	Carbides
07.11.2014	24	Dr. Shalini Singh	II	Approximation methods	Variation methods
07.11.2014	20	Dr. Ram Sahay	I	Molecular symmetry	Group, Sub group & classes
08.11.2014		Priyanka Mishra	IV	Class Teaching	
08.11.2014	21	Dr. Ram Sahay	I	Molecular vibration	Symmetry of normal vibration
10.11.2014	25	Dr. Shalini Singh	II	Appromination methods	Perturbation method
10.11.2014	25	P. K. Verma	III	Synthesis and structure	Polyions of Ge
11.11.2014	22	Dr. S. K. Vernwal	IV	Substitution reactions	Aliphatic nucleophilic substitution mechanism & stereochemistry Snt.
11.11.2014	26	P. K. Verma	III	Synthesis & structure	Sn and Pb
12.11.2014	26	Dr. Shalini Singh	II	Approximation methods	First order correction for energy
12.11.2014	22	Dr. Ram Sahay	I	Molecular vibration	Determination of normal mode by internal
13.11.2014	23	Priyanka Mishra	IV	Addition reaction	1, 2-Hydroxilation, Epoxidation
13.11.2014	27	P. K. Verma	III	Synthesis & structure	Sb, Bi and Mg
14.11.2014	27	Dr. Shalini Singh	II	Approximation methods	First order correction for wave function

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14.11.2014	23	Dr. Ram Sahay	I	Molecular vibration	Cartesian coordinates methods
15.11.2014		Dr. S. K. Vernwal	IV	<i>Class Teaching</i>	
15.11.2014	24	Dr. Ram Sahay	I	Molecular vibration	Cartesian coordinates methods
17.11.2014	28	Dr. Shalini Singh	II	Approximation method	An example of perturbation method
17.11.2014	28	P. K. Verma	III	Definition & classification of organometallic compounds	Definition of organometallic compounds
18.11.2014	24	Dr. S. K. Vernwal	IV	Substitution reactions	Mechanism and stereochemistry of SN2 reaction
18.11.2014	29	P. K. Verma	III	Organometallic compounds	Classification of organometallic compounds
19.11.2014	29	Dr. Shalini Singh	II	Approximation methods	Example of variation method
19.11.2014	25	Dr. Ram Sahay	I	Molecular vibration	Mixing of internal coordinate in normal modes
20.11.2014	25	Priyanka Mishra	IV	Addition reaction	Hydroboration, oxymercuration demercuration
20.11.2014	30	P. K. Verma	III	Organometallic compounds	Organometallic compounds, metal-carbon bonds
21.11.2014	30	Dr. Shalini Singh	II	Problem based on eigen	Functions
21.11.2014	26	Dr. Ram Sahay	I	Molecular vibration	IR spectroscopy
22.11.2014	26	Dr. S. K. Vernwal	IV	Substitution reactions	Mechanism of SN i reaction
22.11.2014		Dr. Ram Sahay	I	Evaluation	
25.11.2014	31	Dr. Shalini Singh	II	Problem solving	Session
25.11.2014	31	P. K. Verma	III	Alkyl & aryls	General method of preparation
26.11.2014	27	Dr. S. K. Vernwal	IV	Substitution reactions	Role of substrate structure, nucleophiles, leaving, group & solvent on SN reaction
26.11.2014	32	P. K. Verma	III	Alkyls & aryls	Organolithium compounds
27.11.2014	32	Dr. Shalini Singh	II	Problem solving	Session
27.11.2014	27	Dr. Ram Sahay	I	Molecular vibration	Selection rule for raman spectroscopy
28.11.2014	28	Priyanka Mishra	IV	Addition reaction	Hydrogenation alkynes & sharpless asymmetric epoxidation
28.11.2014	33	P. K. Verma	III	Alkyls & aryls	Organolithium compounds
29.11.2014	29	Priyanka Mishra	IV	Addition reaction	Mechanism of addition of grignard reagent
29.11.2014	28	Dr. Ram Sahay	I	Vibration	Normal coordinate analysis of water
01.12.2014	30	Dr. S. K. Vernwal	IV	Substitution reactions	Nucleophilic substitution at bridged head carbon atom

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01.12.2014		Dr. Ram Sahay	I	<i>Class Teaching</i>	
02.02.2014	31	Priyanka Mishra	IV	Addition reaction	Organo-Zn and OR Gand-UTO saturati & unsaturated carbonyl compounyl compound & nitriles
02.12.2014	34	P. K. Verma	III	Alkyl & Aryls	Organs aluminium compounds
03.12.2014	32	Dr. S. K. Vernwal	IV	Substitution reaction	Neighbouring group participation (NGP)
03.12.2014	35	P. K. Verma	III	Alkyl & Aryls	Propertion of organoaluminium
06.12.2014	33	Dr. S. K. Vernwal	IV	Substitution reactons	Evidence for NGP
06.12.2014	29	Dr. Ram Sahay	I	Molecular vibration	Normal coordinates analysis of water molecules
08.12.2014	34	Priyanka Mishra	IV	Addition reaction	Mechanism of hydrolysis ester & amide, crame's rule
08.12.2014	36	P. K. Verma	III	Alkyl & aryls	Organomagnislum
09.12.2014	35	Dr. S. K. Vernwal	IV	Substitution reactions	σ and π bonds as NGP
09.12.2014	30	Dr. Ram Sahay	I	Molecular vibration	Normal coordiantes and alysis of ammonia
11.12.2014		Dr. S. K. Vernwal	IV	<i>Class Teaching</i>	
11.12.2014	31	Dr. Ram Sahay	I	Molecular vibration	Normal coodinates analysis of ammonia molecules
12.12.2014	36	Dr. S. K. Vernwal	IV	Substitution reactions	Halogen, N-atom and phenyl ring as NGP
12.12.2014	37	P. K. Verma	III	Alkyl & Anyls	Organo beryllium compounds
15.12.2014	34	Dr. S. K. Vernwal	IV	Basic principle of organic reaction mechanism	Potential energy diagram transition state and intermediates
15.12.2014	37	Dr. S. K. Vernwal	IV	Basic principle of organic reaction mechanism	Methods of determination of organic reaction mechanism
16.12.2014	38	Dr. S. K. Vernwal	IV	Basic principle of organic reaction mechanism	Methods of determination of organic reaction mechanism
16.12.2014	39	Dr. S. K. Vernwal	IV	Basic principle of organic reaction mechanism	Methods of determination of organic reaction mechanism
				reaction mechanism	mechanism
17.12.2014	40	Priyanka Mishra	IV	Addition reaction	Condensation reacton involving cannizzaro, claisen & kndvenagel
17.12.2014	38	P. K. Verma	III	Alkyls & aryls	Hg and Sn compounds

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18.12.2014	41	Dr. S. K. Verwal	IV	Basic principle of organic reaction mechanism	Kinetic isotop effect and its importance
18.12.2014	33	Dr. Ram Sahay	I	Molecular vibration	Infrared and spectral activity