

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

कक्षा : एम.एस-सी. प्रथम सेमेस्टर			पाठ्यक्रम योजना : सत्र २०१७-२०१८		विषय : रसायन विज्ञान
दिनांक	व्याख्यान	प्राध्यापक का नाम	प्रश्नपत्र	अध्याय	शीर्षक
17.07.17	1	Priyanka Mishra	IV	Elimination reaction	E1 reaction
17.07.17	1	Pradeep Kumar Verma	III	Stereo chemistry of bonding	d p - p p bonds
				in main group components	
18.07.17	2	Priyanka Mishra	IV	Elimination reaction	E1 mechanism
18.07.17	2	Pradeep Kumar Verma	III	Stereochemistry of bonding	d p - p p bonds
				in main group components	
19.07.17	1	Sanjay Jaiswal	I	Molecular Symmetry	Symmetry elements
19.07.17	1	Dr.R.Sahay	II	Fundamental Concepts	Introduction operators
20.07.17	2	Sanjay Jaiswal	I	Molecular Symmetry	Symmetry operations
20.07.17	2	Dr.R.Sahay	II	Fundamental Concepts	Aalgebra of operators, commutator linear
					operator, vector operators
21.07.17		Dr.S.K.Vernwal		CLASS TEACHING	
21.07.17	3	Pradeep Kumar Verma	III	Stereochemistry of bonding	Bents Rule
				in main group component	
22.07.17	3	Sanjay Jaiswal	I	Molecular Symmetry	Special refrence to water
22.07.17	3	Dr.R.Sahay	II	Fundamental concepts	Laplacian operators, Hermitition Operatorrs
24.07.17	3	Priyanka Mishra	IV	Elimination reaction	E1 Mechanism
24.07.17	4	Pradeep Kumar Verma	III	Stereochemistry of bonding	Energetics of Hybridisation
				in main group component	
25.07.17	4	Priyanka Mishra	IV	Elimination reaction	E2 reaction
25.07.17	5	Pradeep Kumar Verma	III	Stereochemistry of bonding	Energetics of hybridisation
				in main group component	
26.07.17	4	Sanjay Jaiswal	I	Molecular Symmetry	Special reference to ethane
26.07.17	4	Dr.R.Sahay	II	Fundamental concept	Laplacian Operators
27.07.17	5	Sanjay Jaiswal	I	Molecular Symmentry	Classifictaion of molecules
27.07.17	5	Dr.R.Sahay	II	Fundamentals Concepts	Concept of normalization & orthogonality
					wave function
29.07.17	6	Sanjay Jaiswal	I	Molecular Symmetry	Classification of molecules /ion
29.07.17	6	Dr.R.Sahay	II	Fundamental Concepts	Postulates of quantum, mechanics

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31.07.17		Priyanka Mishra		MONTHLY EVALUATION	
31.08.17	6	Pradeep Kumar Verma	III	Preparation, structure	Polyether complexes of alkali metals
				bonding & technical	
				applications of	
01.08.17	5	Priyanka Mishra	IV	Elimination reaction	E2 mechanism
01.08.17	7	Pradeep Kumar Verma	III	Preparation, Structure	Polyther complexes of alkali metals
				bonding & technical	
				applications of	
02.08.17	7	Sanjay Jaiswal	I	Molecular Symmetry	Ion based on their symmetry property
02.08.17	7	Dr.R.Sahay	II	Fundamentals Concepts	Schrodinger Wave equation
03.08.17	8	Sanjay Jaiswal	I	Molecular Symmetry	Derivation of matrices for rotation and
					reflaction
03.08.17	8	Dr.R.Sahay	II	Fundamental Concepts	Particle in one dimensional box
04.08.17	6	Dr.S.K.Vernwal	IV	Substitution reactions	General view, Arenium ion mechanism
					(ArSE)
04.08.17	8	Pradeep Kumar Verma	III	Preparation, structure	Polyether complexes of alkaline earth
				bonding & technical	metals
				applications of	
05.08.17	9	Sanjay Jaiswal	I	Molecular Symmetry	Derivation of matrices for rotation and
					reflaction
05.08.17	9	Dr.R.Sahay	II	Fundamental Concepts	Particle in one dimensional box
08.08.17		Priyanka Mishra		CLASS TEACHING	
08.08.17	9	Pradeep Kumar Verma	III	Preparation, structure	Polyether complexes of alkaline earth
				bonding & technical	metals
				applications of	
09.08.17	10	Sanjay Jaiswal	I	Molecular Symmetry	Rotation, reflaction and inversion operation
09.08.17	10	Dr.R.Sahay	II	Fundamentals Concepts	Particle in dimensional box
10.08.17	11	Sanjay Jaiswal	I	Molecular Symmetry	Symmetry point group
10.08.17	11	Dr.R.Sahay	I	Fundamental concepts	Particle in three dimensional box
11.08.17	7	Dr.S.K.Vernwal	IV	Substitution realtions	Mechanism of nitration and sulphonation

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11.08.17	10	Pradeep Kumar Verma	III	Preparation, structure	Polyphosphazene
				bonding & technical applications of	
12.08.17	12	Sanjay Jaiswal	I	Molecular symmetry	Symmetry Point group
12.08.17	12	Dr.R.Sahay	II	Quantum mechanical	One dimensional harmonic oscillator
				treatment	
13.08.17	08	Priyanka Mishra	IV	Elimination reaction	E2 Mechanism
13.08.17	11	Pradeep Kumar Verma	III	Preparation, structure	Polyphosphazenes
				bonding & technical applications of	
16.08.17		Sanjay Jaiswal		CLASS TEACHING	
16.08.17	13	Dr.R.Sahay	II	Quantum Mechanical	Classical quantum mechanical treatment
				treatment	
17.08.17	13	Sanjay Jaiswal	I	Molecular Symmetry	Point group of all type of molecules
17.08.17	14	Dr.R.Sahay	II	Quantum mechanical	Energy levels of harmonic & anharmonic
				treatment	oscillators
18.08.17	9	Dr.S..K.Vernwal	IV	Substitution reactions	Mechanism of halogenation
18.08.17	12	Pradeep Kumar Verma	III	Preparation, structure	Thiazyl & its polymers
				bonding & technical	
				applications of	
19.08.17	14	Sanjay Jaiswal	I	Molecular symmetry	Point group of all type of molecules
19.08.17	15	Dr.R Sahay	II	Quantum mechanical	Rigid rotor model of a diatomic molecule
				treatment	
21.08.17	10	Priyanka Mishra	IV	Elimination reaction	E1cb reaction
21.08.17	13	Pradeep Kumar Verma	III	Preparation, structure	S_N2
				bonding & technical	
				applications of	
22.08.17	11	Priyanka Mishra	IV	Elimination reaction	E1 cb reaction
22.08.17	14	Pradeep Kumar Verma	III	Structure & bonding of borane anions	Borane anions

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23.08.17	15	Sanjay Jaiswal	I	Molecular Symmetry	Cnh, Dnh, Cnv type point group
23.08.17		Dr.R.Sahay	II	CLASS TEACHING	
24.08.17	16	Sanjay Jaiswal	I	Molecular Symmetry	Td, oh , Ih
24.08.17	16	Dr.R Sahay	II	Quantum mechanical	Energy levels of a rigid rotor
				treatment	
25.08.17	12	Dr.S.K.Vernwal	IV	Substitution reactions	Orientation, ortho-para ratio
25.08.17	15	Pradeep Kumar Verma	III	Structure & bonding of	Relationship b/w different borane anions
				borane anions	
26.08.17	17	Sanjay Jaiswal	I	Molecular Symmetry	Group multiplication table
26.08.17	17	Dr.R.Sahay	II	Quantum mechanical	Rigid rotor, selection rule
				treatment	
28.08.17	13	Priyanka Mishra	IV	Elimination reactions	Orientation
28.08.17	16	Pradeep Kumar Verma	III	Structure & bonding of	Bonding in borane anions
				borane anions	
29.08.17	14	Priyanka Mishra	IV	Elimination reaction	Pyrolytic Elimination
29.08.17	17	Pradeep Kumar Verma	III	Structure & bonding of	Wade's rule
				borane anions	
31.08.17		Sanjay Jaiswal		MONTHLY EVALUATION	
31.08.17	18	Dr.R.Sahay	II	Quantum mechanical	A non rigid rotor
				treatment	
01.09.17	15	Dr.S.K.Vernwal	IV	Substitution reactions	Aromatic nucleophilic substitution (ArSN)
01.09.17	18	Pradeep Kumar Verma	III	Structures, bonding	Structure of borane anions
				of borane anions	
02.09.17	18	Sanjay Jaiswal	I	Molecular symmetry	Matrix representation
02.09.17	19	Dr.R.Sahay	II	Schrodinger equation for	Transformation of coordinates
				H-atoms	
05.09.17	16	Priyanka Mishra	IV	Elimination reaction	Stereochemistry of E2 reaction factors affect
					ing E1, E2 & E1 Cb
05.09.17	19	Pradeep Kumar Verma	III	Classification of structure	Silicates
				of silicate	

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06.09.17	19	Sanjay Jaiswal	I	Molecular symmetry	Matric representation
06.09.17	20	Dr.R Sahay	II	Schrodinger equation for	Separation of variables
				H- atom	
07.09.17	20	Sanjay Jaiswal	I	Molecular Symmetry	Character of an operation
07.09.17	21	Dr.R.Sahay	II	Schrodinger equation for	Separation of variables
				for H-atom	
08.09.17	17	Dr.S.K.Vernwal	IV	Substitution reactions	Adotion - elimination & elimination- addition
					mechanism
08.09.17		Pradeep Kumar Verma		CLASS TEACHING	
09.09.17	21	Sanjay Jaiswal	I	Molecular Symmetry	Character table
09.09.17	22	Dr.R.Sahay	II	Schrodinger equation for	Separation of variables
				H-atom	
11.09.17	18	Priyanka Mishra	IV	Elimination -reaction	Factors affecting E1,E2 & E1 cb reaction
11.09.17	20	Pradeep Kumar Verma	III	Classification of structure	Classification of silicates
				of silicates	
12.09.17	19	Priyanka Mishra	IV	Elimination reaction	Competition between substitution &
					Elimination reaction
12.09.17	21	Pradeep Kumar Verma	III	Classification & structure	Classification of silicates
				of silicates	
13.09.17	22	Sanjay Jaiswal	I	Molecular Symmetry	Or thogonality
13.09.17	23	Dr.R.Sahay	II	Schrodinger equation for	Sepration of q, f, R
				for H-atom	
14.10.17	23	Sanjay Jaiswal	I	Molecular symmetry	Reducible representation
14.09.17	24	Dr.R.Sahay	II	Schrodinger equation for	Sepration of q, f, R
				H-atom	
15.09.17	20	Dr.S.K.Vernwal	IV	Substitution recations	Effect of substrate, nucleophie and leaving
					group on ArSN reactions
15.09.17		Pradeep Kumar verma		CLASS TEACHING	
16.09.17	24	Sanjay Jaiswal	I	Molecular Symmetry	Irreducible representation
16.09.17	25	Dr.R.Sahay	II	Schrodinger equation for	spericals harmonics electron spin

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				H-atom	
18.09.17	21	Priyanka Mishra	IV	Addition reaction	Mechanism & stereochemistry of addition of
					Haloogen & haloogen acid
18.09.17	22	Pradeep Kumar Verma	III	Preparation & structures of	Structures of silicates
				silicates	
19.09.17	22	Dr.S.K.Vermawal	IV	Substitution reactions	Aliphatic nucleophilic substitution
19.09.17	23	Pradeep Kumar Verma	III	Classification of silicates	3D silicates
21.09.17	25	Sanjay Jaiswal	I	Molecular Symmetry	Group, subgroup and classes
21.09.17	26	Dr.Sahay	II	Many-electrons atoms	Antisymmetry
22.09.17	23	Dr.S.K.Vermwal	IV	Substitution reactions	Mechanism and stereochemistry
22.09.17	24	Pradeep Kumar Verma	III	Synthesis & structure of	Carbides
23.09.17	26	Sanjay Jaiswal	I	Molecular vibration	Symmetry of normal vibration
23.09.17		Dr.R.Sahay		MONTHLY EVALUATION	
25.09.17	24	Priyanka Mishra	IV	Addition reactions	Additions of halogen acid
25.09.17	25	Pradeep Kumar Verma	III	Synthesis & structure of	Carbides
26.09.17	25	Dr.S.K.Vermwal	IV	Substitution reactions	Mechanism and stereochemistry of SN1
					reactions
26.09.17	26	Pradeep Kumar Verma	III	Synthesis and structure of	Polyions of Ge
27.09.17	27	Sanjay Jaiswal	I	Molecular Vibration	Determination of normal mode by internal
					method
27.09.17	27	Dr.R.Sahay	II	Many electrons atoms	Antisymmetry & Slater determination
03.10.17	26	Dr.S.K.Vermwal	IV	Substitution reactions	Mechanism and stereochemistry of SN2
					reactions
03.10.17	27	Pradeep Kumar Verma	III	Synthesis & structure of	Polyions Sn
04.10.17	28	Sanjay Jaiswal	I	Molecular Vibrations	Determination of normal mode by internal
					methods
04.10.17	28	Dr.R.Sahay	II	Many electron atoms	Slater determination for the wave function
06.10.17		Dr.S.K.Vermwal		CLASS TEACHING	
06.10.17	28	Pradeep kumar Verma	III	Synthesis & structure of	Polyions of Pb
07.10.17	29	Sanjay Jaiswal	I	Molecular vibration	Cartesian co-ordinate method

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07.10.17	29	Dr.R.Sahay	II	Many electrons atoms	Wave function of ground state of
					multielectron atom
09.10.17	27	Priyanka Mishra	IV	Addition reaction	1,2-Hydroxylation, epoxidation
09.10.17	27	Pradeep Kumar Verma	III	Synthesis & structure of	Polyions Sb
10.10.17	28	Dr.S.K.Vernwal	IV	Substitution reactions	Role of substrate structure, nucleophile, Leaving group and solvent on SN reaction
10.10.17	30	Pradeep Kumar Verma	III	Synthesis & Structure of	Polyions of Bi
11.10.17	30	Sanjay Jaiswal	II	Molecular vibration	Cartesian co-ordinate method
11.10.17	30	Dr.R.Sahay	II	Many Electron atom	Wave function of ground state of
					multielectron atom
12.10.17	31	Sanjay Jaiswal	I	Molecular Vibration	Mixing of internal co-ordinate in normal
12.10.17	31	Dr.R.Sahay	II	Many electron atoms	Self consistent field
					Approximation (Hartree's Theory)
13.10.17	29	Dr.S.K.Vernwal	IV	Substitution reactions	Nucleophilic substitution at bridged head
					carbon atom
13.10.17		Pradeep Kumar verma		CLASS TEACHING	
14.10.17	32	Sanjay Jaiswal	I	Molecular vibration	Selection rule for IR spectroscopy
14.10.17	32	Dr.R.Sahay	II	Many electron atom	Self consistent field approximation (Hartree's)
					Theory
16.10.17	30	Priyanka Mishra	IV	Addition reaction	Hydroboration Oxymercuration-de -
					mercuration
16.10.17	31	Pradeep Kumar Verma	III	Synthesis & structure of	Polyions of Mg
23.10.17	31	Priyanka Mishra	IV	Addition reaction	Hydrogenation of alkene & Sharpless asym
					metric epoxidation
23.10.17	32	Pradeep Kumar Verma	III	Organometallic compounds	Definitions & classification of organometal
					lic compounds
24.10.17	32	Dr.S.K.Vernwal	IV	Substitution reactions	Neighbouring group participation (NGP)
24.10.17	33	Pradeep Kumar Verma	III	Organometallic compounds	Classification of organometallic compounds
25.10.17	33	Sanjay Jaiswal	I	Molecular Vibration	Selection rule for Raman spectroscopy
25.10.17	33	Dr.R.Sahay	II	Approximation methods	Variation method

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26.10.17		Sanjay Jaiswal		CLASS TEACHING	
26.10.17	34	Dr.R.Sahay	II	Approximation methods	Variation method
27.10.17	33	Dr.S.K.Vernwal	IV	Substitution reaction	Evidence of NGP, participation of halogen and
					N atom
27.10.17	34	Pradeep Kumar Verma	III	Organometallic compounds	Organometallic compounds metal - carbon
					bonds
28.10.17	34	Sanjay Jaiswal	I	Molecular Vibration	Normal co-ordinate analysis of water
28.10.17	35	Dr.R Sahay	II	Approximation methods	Perturbation method
30.10.17	34	Priyanka Mishra	IV	Addition reaction	Mechanism of addition of grignard reagent
30.10.17	35	Pradeep Kumar Verma	III	Organometallic compounds	Organometallic compounds metal -carbon
					bonds
31.10.17	35	Dr.S.K.Vernwal	IV	Substitutions reactions	Perticipation of S-bond as NGP
31.10.17	35	Pradeep Kumar Verma	III	Organometallic compounds	Organometallic compounds metal-carbon
				S	bonds
01.11.17	35	Sanjay Jaiswal	I	Molecular Vibration	Normal co-ordinate analysis of water molecues
01.11.17	36	Dr.R.Sahay	II	Approximation method	Perturbation method
02.11.17	36	Sanjay Jaiswal	I	Moleculra Vibration	Normal Co-ordinate analysis of ammonia
					molecules
02.11.17		Dr.R.Sahay		CLASS TEACHING	
03.11.17	36	Dr.S.K.Vernawal	IV	Substitution reactions	Participation of p -bond and phenyl ring as
					NGP
03.11.17	37	Pradeep Kumar Verma	III	Alkyl & Aryls	General method of prepration
06.11.17	37	Priyanka Mishra	IV	Addition reaction	Organo-Zn and Organo-Li saturated and
					unsaturated carbonyl compounds
06.11.17	38	Pradeep Kumar verma	III	Alkyl and Aryls	Organolithium compounds
07.11.17	38	Dr.S.K.Vernwal	IV	Basic principles of organic	Potential energy diagram transition state
				reaction mechanism	and intermediates
07.11.17	39	Pradeep Kumar Verma	III	Alkyl and Aryls	Organolithium compounds
08.11.17	37	Sanjay Jaiswal	I	Molecular vibrat-ion	Normal Co-ordinate analysis of ammonia
08.11.17	37	Dr.R.Sahay	II	Approximation method	First order perturbation theory

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10.11.17	39	Dr.S.K.Vernwal	IV	Basic principles of organic	Methods of determination of organic reaction
				reaction mechanism	mechanism
10.11.17	40	Pradeep Kumar Verma	III	Alkyl and Aryls	Organoberyllium compounds
11.11.17		Sanjay Jaiswal		CLASS TEACHING	
11.11.17	38	Dr.R.Sahay	II	Approximation methods	First order perturbation theory
13.11.17	40	Priyanaka Mishra	IV	Addition Reaction	Organo Li saturated and unsaturated
					Carbonyl compound and nitrites
13.11.17	41	Pradeep Kumar Verma	III	Alkyl and Aryls	Organoberyllium compounds
14.11.17	41	Dr.S.K.Vernwal	IV	Basic principles of organic	Methods of determination of organic reaction
				reaction mechanism	mechanism
14.11.17	42	Pradeep Kumar Verma	III	Alkyl and Aryls	Organoaluminium compounds
15.11.17	38	Sanjay Jaiswal	I	Molecular Vibration	Infrared special activity
15.11.17	39	Dr.R.Sahay	II	Approximation methods	First order perturbation theory
16.11.17	39	Sanjay Jaiswal	I	Molecular vibration	Infraed special activity
16.11.17	40	Dr.R.Sahay	II	Approximation Method	First order perturbation theory
17.11.17	42	Dr.S.K.Vernwal	IV	Basic principles of organic	Methods of determination of organic reaction
				reaction mechanism	mechanism
17.11.17	43	Pradeep Kumar Verma	III	Alkyl and Aryls	Organoaluminium compounds
18.11.17	40	Sanjay Jaiswal	I	Molecular vibration	Numerical problem
18.11.17		Dr.R.Sahay		CLASS TEACHING	
20.11.17	43	Priyanka Mishra	IV	Addition reaction	Cannizzaro reaction
20.11.17	44	Pradeep Kumar Verma	III	Alkyl and Aryls	Organomercury compound
21.11.17	44	Dr.S.K.Vernwal	IV	Basic principles of organic	Methods of determination of organic
				Organic reaction	reaction mechanism
				mechanism	
21.11.17	45	Pradeep Kumar Verma	III	Alkyl and Aryls	Organo tin compounds
22.11.17	41	Sanjay Jaiswal	I	Molecular Vibration	Numerical problem
22.11.17	41	Dr.R.Sahay	II	Problems solving session	
23.11.17	42	Sanjay Jaiswal	I	Molecular vibration	Numerical problem
23.11.17	42	Dr.R.Sahay	II	Problems solving session	

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