

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

कक्षा : बी.एस-सी. भाग-एक			पाठ्यक्रम योजना : सत्र २०१८-२०१९		विषय : रसायन विज्ञान (Chemistry)
दिनांक	व्याख्यान	प्राध्यापक का नाम	प्रश्नपत्र	अध्याय	शीर्षक
01.08.2018	1	Dr.R.Sahay	I	Gaseous States	Postulates of kinetic theory of gases
02.08.2018	2	Dr.R.Sahay	I	Gaseous States	Deviation from ideal behaviour
03.08.2018	1	P.K.Verma	II	Atomic Structure & Periodic Table	Quantum numbers
04.08.2018	2	P.K.Verma	II	Atomic Structure & Periodic Table	Shapes of s,p,d Orbitals
06.08.2018	1	Dr. S.K.Vernwal	III	Structure and Reactivity	Hybridisation
07.08.2018		Dr. S.K.Vernwal		CLASS TEACHING	
08.08.2018	3	Dr.R.Sahay	I	Gaseous State	van der Waals equation of state, PV-Isotherm of real gases
09.08.2018	4	Dr.R.Sahay	I	Gaseous State	Continuity of states, Isotherm of vander waals equation
10.08.2018	3	P. K. Verma	II	Atomic Structures & Periodic Table	Pauli's exclusion principle; Hund's rule
11.08.2018	4	P. K. Verma	II	Atomic Structures & Periodic Table	Aufbau principle, Variation of Orbital Energies and
					energy level diagram
12.08.2018	2	Dr. S.K.Vernwal	III	Structure and Reactivity	Homolysis & Heterolysis
13.08.2018		Dr. S.K.Vernwal	III	CLASS TEACHING	
16.08.2018	5	Dr.R.Sahay	I	Gaseous State	Relationship between Critical Constant & van der
					Waals constant, Law of Corresponding state
17.08.2018	6	Dr.R.Sahay	I	Gaseous State	Reduced equation of state, root mean square,
					average & most probable velocities
18.08.2018	5	P.K. Verma	II	Atomic Structure & Periodic Table	Long form of periodic table
20.08.2018	6	P. K. Verma	II	Periodic properties of elements	Types of radii
21.08.2018	3	Dr.S.K.Vernwal	III	Structure and Reactivity	Free Radicals, Carbocations, & Carbonions
23.08.2018		Dr.S.K.Vernwal		CLASS TEACHING	
24.08.2018	7	Dr.R.Sahay	I	Gaseous State	Qualitative discussion of the Maxwell's
					distribution of molecular velocity, most probable
					Velocity
25.08.2018	8	Dr.R.Sahay	I	Gaseous State	Qualitative discussion of the Maxwell's
					distribution of molecular Velocities
27.08.2018	7	P.K.Verma	II	Preiodic Properties of Elements	Electron affinity & its variation
28.08.2018	8	P.K.Verma	II	Periodic properties of elements	Ionisation potential
29.08.2018	4	Dr.S.K.Vernwal	III	Structures and Reactivity	Polarity of Covalent bonds, Inductive Effect
30.08.2018		Dr. S.K.Vernwal		MONTHLY EVALUATION	

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01.09.2018	9	Dr. R Sahay	I	Gaseous State	Collision number, Mean free path and collision diameter, Liquefaction of gases
04.09.2018	10	Dr. R Sahay	I	Liquid State	Intermolecular forces, Structures of liquid
05.09.2018	9	P.K.Verma	II	Periodic Properties of Elements	Concept of effective nuclear charge and shielding effect
06.09.2018	10	P.K.Verma	II	Periodic Properties of Elements	Electronegativity, Pauling Scale
07.09.2018	5	Dr.S.K.Vernwal	III	Structures & Reactivity	Electromeric effect, Resonance
08.09.2018		Dr.S.K.Vernwal		CLASS TEACHING	
10.09.2018	11	Dr. Ram Sahay	I	Liquid State	Structural differences between solids, liquids and gases
11.09.2018	12	Dr.R.Sahay	I	Liquid State	Structural differences between liquid Crystal, Solid & liquid
12.09.2018	11	P. K. Verma	II	Period Properties Of Elements	Mulliken & Allred Rochow Scale & its Variation
13.09.2018	12	S.Jaiswal	II	Chemical Bonding	Ionic bonds, Radius ratio in ionic solids
14.09.2018	6	Dr. S.K.Vernwal	III	Structure and Reactivity	Hyperconjugation
15.09.2018		Dr. S.K.Vernwal		CLASS TEACHING	
17.09.2018	13	Dr. R Sahay	I	Liquid State	Classification, Structure of Nematic, Smectic & Cholesteric Phase & Application
18.09.2018	14	Dr. R Sahay	I	Solid State	Definition of space lattice & unit cell, law of constancy of interfacial angles
19.09.2018	13	S.Jaiswal	II	Chemical Bonding	Lattice energy and born-haber cycle
20.09.2018	14	S.Jaiswal	II	Chemical Bonding	Polarisation of ions and Fajan's rule
22.09.2018	7	Dr.S.K.Vernwal	III	Structure & Reactivity	Hydrogen bonding
24.09.2018		Dr.S.K.Vernwal		MONTHLY EVALUATION	
25.09.2018	15	Dr. R Sahay	I	Solid State	Law of symmetry, symmetry elements in Crystals
26.09.2018	16	Dr. Ram Sahay	I	Solid State	Derivation of Bragg's equation
27.09.2018	15	S.Jaiswal	II	Chemical Bonding	Covalent bonds
28.09.2018	16	S.Jaiswal	II	Chemical Bonding	Covalent bond, sp, sp ² , sp ³ , sp ³ d, sp ³ d ² -Hybridisation
01.10.2018	8	Dr.S.K.Vernwal	III	Stereochemistry	Chirality, elements of symmetry
03.10.2018		Dr.S.K.Vernwal		CLASS TEACHING	
04.10.2018	17	S.Jaiswal	III	Chemical Bonding	Determination of shape of molecules NH ₃ , H ₂ O, H ₃ O ⁺ , ICl ₂ ⁻ , I ³⁻ by VSEPR concept
05.10.2018	18	S.Jaiswal	II	Chemical Bonding	Determination of shape of molecules NH ₃ , H ₂ O, H ₃ O ⁺

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					ICl_2 , I^3 by vesper concept
06.10.2018	9	Dr.S.K.Vernwal	III	Stereochemistry	Optical isomerism of lactic acid & tartaric acid
09.10.2018	10	Dr.S.K.Vernwal	III	Stereochemistry	Racemisation & resolution
10.10.2018	17	Dr. R Sahay	I	Solidstate	Determination of crystal structure of NaCl, & KCl
11.10.2018		Dr. R Sahay		CLASS TEACHING	
12.10.2018	19	Sanjay Jaiswal	II	Chemical Bonding	Odd electron bond, maximum covalency
13.10.2018	20	Sanjay Jaiswal	II	Chemical Bonding	Hydrogen bonding, metallic bonding
15.10.2018	11	Dr.S.K.Vernwal	III	Stereochemistry	Newmann & Sawhorse projection formula
16.10.2018	12	Dr.S.K.Vernwal	III	Stereochemistry	D,L & R,S nomenclature
17.10.2018	18	Dr. R Sahay	I	Colloidal State & Macromolecules	Defination of collodis & classification of Colloids,
					macromolecules kinetic, optical & electrical, stability of
					colloids
22.10.2018		Dr. R Sahay		CLASS TEACHING	
24.10.2018	21	P. K. Verma	II	General studies of S & P block	Discussion on I & II group element
25.10.2018	22	P. K. Verma	II	General studies of S & P block	Discussion on 13 & 14 group elements
26.10.2018	13	Dr.S.K.Vernwal	III	Stereochemistry	Geometrical isomerism, E-Z nomenclature
27.10.2018	14	Dr.S.K.Vernwal	III	Stereochemistry	Conformations of ethane & n-butane
29.10.2018	19	Dr. R Sahay	I	Colloidal State & Macromolecules	Protactive action, Hardy-Schulz law, gold
					number, types of emulsion, prepration of emulsified
31.10.2018		Dr. R Sahay		MONTHLY EVALUATION	
01.11.2018	23	P. K. Verma	II	General studie s of p-block elements	Discussion of 15 th group elements
02.11.2018	24	P. K. Verma	II	General studie s of p-block elements	Discussion of 16 th group elements
03.11.2018	15	Miss Priyanka Mishra	III	Alkyl Halides and grignard reagents	Mechanism of nucleophilic substitution reaction of alkyl halides
12.11.2018	16	Miss Priyanka Mishra	III	Alkyl Halides and grignard reagents	Prepration of Gignard reagent & synthetic application
13.11.2018	20	Dr. R Sahay	I	Colloidal State & Macromolecules	Liquid in solids (Gels) Classification prepration & properties,
					inhibition general application of colliods
14.11.2018		Dr. R Sahay		CLASS TEACHING	
15.11.2018	25	Sanjay Jaiswal	II	Occuring, Extraction, Isolation of metals	Ores & Metallurgy of Li
16.11.2018	26	Sanjay Jaiswal	II	Occuring, Extraction, Isolation of metals	Be & F_2
17.11.2018	17	Miss Priyanka Mishra	III	Alkyl Halides and Grignard reagents	Synthetic application of Grignard reagent

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19.11.2018	18	Miss Priyanka Mishra	III	Alkyl Halides and Grignard reagents	Synthetic application of Grignard reagent
20.11.2018	21	Dr. Ram Sahay	I	Colloidal state & macromolecule	Determination of molecular weight of macro
					molecules by osmotic pressure & viscosity
					method concept of miscelles & critical
					concentration
21.11.2018		Dr. R Sahay		CLASS TEACHING	
22.11.2018	27	Sanjay Jaiswal	II	Preparation, Properties & Structure	Diborane
23.11.2018	28	Sanjay Jaiswal	II	Preparation, Properties & Structure	Borazine
24.11.2018	19	Miss Priyanka Mishra	III	Alcohols & ethers	Classification & distinction of primary, secondary
					& tertiary alcohols
26.12.2018	20	Miss Priyanka Mishra	III	Alcohols & ethers	Mechanism of dehydration of alcohols
27.11.2018	22	Dr. Ram Sahay	I	Colloidal state & macromolecule	A brief introduction to conducting & light
28.11.2018		Dr. R Sahay		MONTHLY EVALUATION	
29.11.2018	21	Miss Priyanka Mishra	III	Alcohols & ethers	Isomerism of propanols, butanols, & pentanols
30.11.2018	22	Miss Priyanka Mishra	III	Alcohols & ethers	Industrial preparation and reaction of glycerol
01.12.2018	29	Sanjay Jaiswal	II	Preparation, structure & properties	Hydrazine
03.12.2018		Sanjay Jaiswal		CLASS TEACHING	
06.12.2018	23	Miss Priyanka Mishra	III	Alcohols & ethers	Williamson's synthesis, formation & cleavage
					of oxonium salts
07.12.2018	24	Miss Priyanka Mishra	III	Alcohols & ethers	Crown ethers
08.12.2018	23	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Concentration, dependence of rates
					mathematical characteristics
11.12.2018	24	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Simple chemical reaction, zero order reaction
12.12.2018	30	Sanjay Jaiswal	II	Structure & properties	Interhalogens, Polyhalides
13.12.2018		Sanjay Jaiswal		CLASS TEACHING	
14.12.2018	25	Dr.S.K.Vernwal	III	Carboxylic acids	Structure of Carboxyl Group
15.12.2018	26	Dr.S.K.Vernwal	III	Carboxylic acids	Mechanism of esterification & acetylation
17.12.2018	25	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	First, second order reaction
18.12.2018	26	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Pseudo order reaction, determination of the

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					order of reaction, differential method, method of
					integration
19.12.2018	31	Sanjay Jaiswal	II	Structure & basicities	Fluorides of xenon
20.12.2018		Sanjay Jaiswal		MONTHLY EVALUATION	
21.12.2018	27	Dr.S.K.Vernwal	III	Carboxylic acids	A_{AC}^2 & B_{AC}^2 Mechanism of ester hydrolysis
22.12.2018	28	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Addition of hydrogen, halogen & halogen acids
				& Cycloalkanes	
31.12.2018	27	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Method of integration, Half life period & isolation Method
01.01.2019	28	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Radioactive decay as a first order phenomenon
01.01.2019	32	Sanjay Jaiswal	II	Structure & basicities	Oxyacids of B
03.01.2019		Sanjay Jaiswal		CLASS TEACHING	
04.01.2019	29	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Addition of sulphuric acids & water
				& Cycloalkanes	
05.01.2019	30	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Hydroboration, Epoxidation, Ozonolysis & Hydroxylation
				& Cycloalkanes	
07.01.2019	29	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Experimental method for the studies of chemical kinetics
09.01.2019	30	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Effect of Temperature on rate of reaction
10.01.2019	33	Sanjay Jaiswal	II	Structure & basicities	Oxyacids of P
11.01.2019		Sanjay Jaiswal		CLASS TEACHING	
12.01.2019	31	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Acetylene as carbon acid, addition reactions
				& Cycloalkanes	of acetylene
17.01.2019	32	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Stability & addition reactions of 1,3 butadiene
				& Cycloalkanes	
18.01.2019	31	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Arrhenius equation, concept of activation energy
19.01.2019	32	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Simple collision theory based on hard sphere
					model, transition state theory
21.01.2019	33	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Expression for the rate constant based on equilibrium
23.01.2019		Sanjay Jaiswal		CLASS TEACHING	
24.01.2019	34	Sanjay Jaiswal	II	Structure & basicities	Oxyacids of S
25.01.2019	33	Dr.S.K.Vernwal	III	Alkenes, Alkynes, Alkadienes	Preparation & properties of small ring cycloalkanes

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				& Cycloalkanes	
28.01.2019	34	Miss Priyanka Mishra	III	General reactions of carbonyl compounds	Mechanism of addition of sodium bisulphite & HCN
29.01.2019	34	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Charateristics of catalysed Reaction, Classification of catalysis
30.01.2019	35	Dr. Ram Sahay	I	Chemical Kinetic & catalysis	Industrial catalysis & enzyme kinetics
31.01.2019		Sanjay Jaiswal		MONTHLY EVALUATION	
Extra	35	Sanjay Jaiswal	II	Structure & basicities	Oxyacids of S
	35	Miss Priyanka Mishra	III	General reactions of carbonyl compounds	Aldol, Cannizzaro reaction
	36	Miss Priyanka Mishra	III	General reactions of carbonyl compounds	Wolf-Kishner reduction Clemmensen reduction
	36	Dr. Ram Sahay	I	Mathematical Concept	Logarithm relations sketching linear graphs
	37	Dr. Ram Sahay	I	Mathematical Concept	Calculation of slopes, differentiation of functions of $f(x)$, x^n , e^x , $\sin x$, $\log x$
	36	Sanjay Jaiswal	II	Structure & basicities	Numerical Problems
	37	Miss Priyanka Mishra	III	General reactions of carbonyl compounds	Catalytic reduction, LiAlH_4 , Meerwein- Ponndorf-Verely reduction
	38	Miss Priyanka Mishra	III	General reactions of carbonyl compounds	Preparation & synthetic uses of acetoacetic ester
	38	Dr. Ram Sahay	I	Mathematical Concept	Partial difference & Integration, Integration of some relevent function
	39	Dr. Ram Sahay	I	Mathematical Concept	Permutation, Combination, Factorial & Probability
	37	Sanjay Jaiswal	II	Problems & Solutions	Problems & Solutions
	39	Miss Priyanka Mishra	III	Compound containing reactive methylene group	Keto-enol Ttautomism, preparation of malonic ester
	40	Miss Priyanka Mishra	III	Compound containing reactive methylene group	Synthetic uses of malonic ester
	40	Dr. Ram Sahay	I	Computery	General introduction to computer & component computer

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