

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

Class : B.Sc. III rd LESSON PLAN: 2021-22				Subject : Chemistry	
DATE	LECTURE	TEACHER'S NAME	PAPER	CHAPTER	TOPIC
16/07/2021	01	Priyanka Mishra	III	Molecular rearrangements and reactions	Pinacol- Pinacolone rearrangement
17/07/2021	02	Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
19/07/2021	01	Dr. S. K. Vernwal	IV	Separation Techniques	Principle and analytical applications
19/07/2021	01	Dr. R. Sahay	I	Photochemistry	Interaction of radiation with matter
20/07/2021	02	Dr. S. K. Vernwal	IV	Separation Techniques	Solvent extraction
20/07/2021	02	Dr. R. Sahay	I	Photochemistry	Difference between thermal and photochemical processes
22/07/2021	01	Sanjay Jaiswal	II	Chemistry of Lanthanides	Introduction, electronic configuration of Lanthanides
23/07/2021		Sanjay Jaiswal	CT		
24/07/2021	03	Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
26/07/2021	03	Dr. S. K. Vernwal	IV	Separation Techniques	Paper Chromatography
26/07/2021	04	Priyanka Mishra	III	Molecular rearrangements and reactions	Beckmann rearrangement
27/07/2021	04	Dr. S. K. Vernwal	IV	Separation Techniques	Thin Layer Chromatography
27/07/2021	03	Dr. R. Sahay	I	Photochemistry	Grotthus-draper law, Stark-Einstein law, Jablonski diagram
28/07/2021	04	Dr. R. Sahay	I	Photochemistry	Qualitative description of fluorescence, phosphorescence
29/07/2021	02	Sanjay Jaiswal	II	Chemistry of Lanthanides	Atomic and ionic radii, Ionisation energy
30/07/2021		Sanjay Jaiswal	ME		
31/07/2021	05	Priyanka Mishra	III	Molecular rearrangements and reactions	Fries rearrangement
02/08/2021	05	Dr. S. K. Vernwal	IV	Separation Techniques	Column Chromatography
02/08/2021	06	Priyanka Mishra	III	Molecular rearrangements and reactions	Dieckmann reaction
03/08/2021	06	Dr. S. K. Vernwal	IV	Separation Techniques	HPLC
03/08/2021	05	Dr. R. Sahay	I	Photochemistry	Non- radiative processes, quantum yield, photosensitized reaction
04/08/2021	06	Dr. R. Sahay	I	Photochemistry	Energy transfer processes
05/08/2021	03	Sanjay Jaiswal	II	Chemistry of Lanthanides	Calculation of magnetic moments and correlation with experimental data
06/08/2021		Sanjay Jaiswal	CT		
07/08/2021	07	Priyanka Mishra	III	Molecular rearrangements and reactions	Claisen- Schmidt reaction
09/08/2021	07	Dr. S. K. Vernwal	IV	Separation Techniques	Ion-Exchange Chromatography
09/08/2021	08	Priyanka Mishra	III	Polymers	Type of polymerisation
10/08/2021	08	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	General features of enzymes and their active sites

10/08/2021	07	Dr. R. Sahay	I	Nuclear Chemistry	Fundamental particles and their classification, Nuclear forces
11/08/2021	08	Dr. R. Sahay	I	Nuclear Chemistry	Liquid drop and shell models of atomic nucleus, nuclear stability
12/08/2021	04	Sanjay Jaiswal	II	Chemistry of Lanthanides	magnetic moments and correlation with experimental data
14/08/2021		Sanjay Jaiswal	CT		
16/08/2021	09	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Ribozymes and Abzymes
16/08/2021	09	Priyanka Mishra	III	Polymers	Mechanism of polymerisation
17/08/2021	10	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Enzyme nomenclature
17/08/2021	10	Priyanka Mishra	III	Polymers	Preparation and use of terylene , nylon and Dynel
18/08/2021	09	Dr. R. Sahay	I	Nuclear Chemistry	Energy changes in nuclear reaction, Fission, The atom bomb, spallation and fusion reaction
20/08/2021	10	Dr. R. Sahay	I	Nuclear Chemistry	Hydrogen bomb, concept of nuclear cross-section, Radioactive equilibrium
21/08/2021	05	Sanjay Jaiswal	II	Chemistry of Lanthanides	Colour and spectral behaviour of Lanthanides series
23/08/2021	11	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Units of enzyme activity
23/08/2021		Sanjay Jaiswal	ME		
24/08/2021	12	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Factors affecting the enzyme activity
24/08/2021	11	Priyanka Mishra	III	Polymers	Natural and synthetic rubber
25/08/2021	12	Priyanka Mishra	III	Dyes	Colour and constitutions
26/08/2021	11	Dr. R. Sahay	I	Nuclear Chemistry	Kinetics of radioactive decay, Applications of radioactivity-radioactive dating
27/08/2021	12	Dr. R. Sahay	I	Nuclear Chemistry	Radioactive tracer technique, radioactivity in medicines, agriculture and research
31/08/2021	13	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Derivation of Michaelis-Menten equation
31/08/2021	06	Sanjay Jaiswal	II	Chemistry of Lanthanides	Oxidation state and their stability, Ground state term symbols
01/09/2021		Sanjay Jaiswal	CT		
02/09/2021	13	Priyanka Mishra	III	Dyes	Classification of dyes
03/09/2021	14	Priyanka Mishra	III	Dyes	Methyl orange and Congo red
04/09/2021	13	Dr. R. Sahay	I	Surface Chemistry	Introduction, difference between Physical adsorption and chemisorptions
06/09/2021	14	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Experimental determination of K_m and V_{max}
06/09/2021	13	Dr. R. Sahay	I	Surface Chemistry	Introduction, difference between Physical adsorption and chemisorptions
07/09/2021	15	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Physical significance of K_m , V_{max} and K_{cat}/K_m
07/09/2021	07	Sanjay Jaiswal	II	Chemistry of Lanthanides	Ability to form complexes and examples of complexes of different coordination number
08/09/2021		Sanjay Jaiswal	CT		
09/09/2021	15	Priyanka Mishra	III	Dyes	Malachite green and Crystal violate
10/09/2021	16	Priyanka Mishra	III	Dyes	Malachite green and Crystal violate
11/09/2021	14	Dr. R. Sahay	I	Surface Chemistry	Adsorption isotherms Langmuir adsorption isotherm and Freundlich adsorption isotherm

13/09/2021	16	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Competitive, Uncompetitive and Noncompetitive & Suicidal inhibitors
13/09/2021	15	Dr. R. Sahay	I	Surface Chemistry	BET equation, Determination of surface area
14/09/2021	17	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Brief description of Coenzymes
14/09/2021	08	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
15/09/2021		Sanjay Jaiswal	CT		
16/09/2021	17	Priyanka Mishra	III	Dyes	Phenolphthalein
18/09/2021	18	Priyanka Mishra	III	Dyes	Fluorescence
20/09/2021	18	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Function of Thiamine pyrophosphate (TPP)
20/09/2021	16	Dr. R. Sahay	I	Solution and Colligative properties	Thermodynamic derivation of relation between molecular weight and elevation in boiling point and freezing point
21/09/2021	19	Dr. R. Sahay	IV	Nucleic Acids	A general description of DNA and RNA
21/09/2021	17	Dr. R. Sahay	I	Solution and Colligative properties	Experimental methods for determining various Colligative properties
22/09/2021	09	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
23/09/2021		Sanjay Jaiswal	ME		
25/09/2021	19	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
27/09/2021	20	Dr. R. Sahay	IV	Acids	Salient features of DNA and RNA
27/09/2021	20	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
29/09/2021	18	Dr. R. Sahay	I	Solution and Colligative properties	Abnormal molar mass, degree of dissociation and association
30/09/2021	19	Dr. R. Sahay	I	Statistical Thermodynamics	Energy levels, Microstates, the Boltzmann factor
01/10/2021	21	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
04/10/2021	21	Dr. R. Sahay	IV	Nucleic Acids	DNA denaturation and renaturation, Effect of UV radiation on DNA
04/10/2021		Priyanka Mishra	CT		
05/10/2021	22	Dr. R. Sahay	IV	Nucleic Acids	Elementary ideas of genetic code and recombinant technology
05/10/2021	20	Dr. R. Sahay	I	Statistical Thermodynamics	Partition function, Relation between partition functions and thermodynamic function
07/10/2021	21	Dr. R. Sahay	I	Statistical Thermodynamics	Translational, rotational and vibrational partition function
08/10/2021	10	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
09/10/2021	11	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
11/10/2021	23	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Introduction
11/10/2021	22	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
18/10/2021	24	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Fe in myoglobin and haemoglobin
18/10/2021		Priyanka Mishra	CT		
20/10/2021	22	Dr. R. Sahay	I	Quantum Mechanics	Black-body radiation, Planck's radiation law

21/10/2021	23	Dr. R. Sahay	I	Quantum Mechanics	Photoelectric effect, Compton effect, concept of wave motion
22/10/2021	12	Sanjay Jaiswal	II	Chemistry of Actinides	Introduction, electronic configuration of Actinides
23/10/2021	13	Sanjay Jaiswal	II	Chemistry of Actinides	Atomic and ionic radii, Ionisation energy
25/10/2021	25	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Zn in Carboxypeptidase and Carbonicanhydrase
25/10/2021	23	Priyanka Mishra	III	Polynuclear hydrocarbons	Carcinogenic hydrocarbon
26/10/2021	26	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Cu in Plastocyanin and Hemocyanin
26/10/2021		Priyanka Mishra	ME		
27/10/2021	24	Dr. R. Sahay	I	Quantum Mechanics	De Broglie hypothesis, the Heisenberg's uncertainty principle
28/10/2021	25	Dr. R. Sahay	I	Quantum Mechanics	Difference between classical and quantum mechanics
29/10/2021	14	Sanjay Jaiswal	II	Chemistry of Actinides	Oxidation state and their stability
30/10/2021	15	Sanjay Jaiswal	II	Chemistry of Actinides	Colour and absorption spectra of Actinides
08/11/2021	27	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Mg in Chlorophyll
08/11/2021	24	Priyanka Mishra	III	Heterocycles	Chemistry of Indole
09/11/2021	28	Sanjay Jaiswal	IV	Errors and Evaluation	Introduction, Definition of terms mean and median
09/11/2021		Priyanka Mishra	CT		
11/11/2021	26	Dr. R. Sahay	I	Quantum Mechanics	Schrodinger wave equation for H-atom, Quantum number and their importance
12/11/2021	27	Dr. R. Sahay	I	Quantum Mechanics	Hydrogen like wave function , angular wave function
13/11/2021	16	Sanjay Jaiswal	II	Chemistry of Actinides	Magnetic property of Actinides
16/11/2021	29	Sanjay Jaiswal	IV	Errors and Evaluation	Precision, standard deviation, relative standard deviation, and accuracy
16/11/2021	17	Sanjay Jaiswal	II	Chemistry of Actinides	Complex formation in Actinides
17/11/2021	25	Priyanka Mishra	III	Heterocyclic	Chemistry of Quinoline
18/11/2021		Priyanka Mishra	CT		
20/11/2021	28	Dr. R. Sahay	I	Quantum Mechanics	Molecular orbital theory, basic ideas-criteria for forming M.O. from A.O.
22/11/2021	30	Sanjay Jaiswal	IV	Errors and Evaluation	Absolute error, and relative error
22/11/2021	29	Dr. R. Sahay	I	Quantum Mechanics	Construction of M.O's by LCAO, H ₂ ⁺ ion , calculation of energy levels from wave function
23/11/2021	31	Sanjay Jaiswal	IV	Errors and Evaluation	type of error in experimental data, determinate, indeterminate and gross
23/11/2021	18	Sanjay Jaiswal	II	Chemistry of Actinides	Chemistry of separation of Actinides
25/11/2021	19	Sanjay Jaiswal	II	Chemistry of Actinides	One synthesis each of Np to Lr
26/11/2021	26	Priyanka Mishra	III	Heterocycles	Chemistry of Isoquinoline
27/11/2021		Priyanka Mishra	ME		
29/11/2021	32	Sanjay Jaiswal	IV	Errors and Evaluation	Sources of errors and effect upon the analytical results
29/11/2021	30	Dr. R. Sahay	I	Quantum Mechanics	Physical picture of bonding and antibonding wave function

30/11/2021	33	Sanjay Jaiswal	IV	Errors and Evaluation	Methods of for reporting analytical data
30/11/2021	31	Dr. R. Sahay	I	Quantum Mechanics	Concept of sigma and pi orbitals
01/12/2021	20	Sanjay Jaiswal	II	Coordination Chemistry	Crystal Field Theory and its drawback
02/12/2021	21	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Td complex
03/12/2021	32	Dr. R. Sahay	I	Quantum Mechanics	Valence bond model of H ₂ , comparison of M.O. and V.B. models
07/12/2021	34	Sanjay Jaiswal	IV	Errors and Evaluation	Statistical evaluation of data
07/12/2021		Priyanka Mishra	CT		
08/12/2021	22	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Oh complex
09/12/2021	23	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Square planer complex
11/12/2021	27	Priyanka Mishra	III	Heterocycles	Chemistry of Isoquinoline
13/12/2021	35	Sanjay Jaiswal	IV	Errors and Evaluation	indeterminate errors, uses of Statistics
13/12/2021	28	Priyanka Mishra	III	Amino acids, peptides and proteins	Classification of amino acid
14/12/2021	36	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Introduction of Gravimetric Analysis
14/12/2021	33	Dr. R. Sahay	I	Spectroscopy	Introduction , Electromagnetic radiation , regions of the spectrums
15/12/2021		Dr. R. Sahay	CT		
16/12/2021	24	Sanjay Jaiswal	II	Coordination Chemistry	Dq and factor affecting its magnitude
17/12/2021	25	Sanjay Jaiswal	II	Coordination Chemistry	Calculation of CFSC for d1 to d9
18/12/2021	29	Priyanka Mishra	III	Amino acids, peptides and proteins	Synthesis of amino acids
20/12/2021	37	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Precipitation from homogeneous medium and purity of precipitate
20/12/2021	30	Priyanka Mishra	III	Amino acids, peptides & proteins	Synthesis of polypeptide
21/12/2021	38	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Co-precipitation and Post-precipitation
21/12/2021	34	Dr. R. Sahay	I	Spectroscopy	Basic features of different spectrometers
22/12/2021		Dr. R. Sahay	CT		
23/12/2021	26	Sanjay Jaiswal	II	Coordination Chemistry	Magnetic property on the basis of CFT
24/12/2021	27	Sanjay Jaiswal	II	Coordination Chemistry	Type of electronic transition ,Selection rule, charge transfer
27/12/2021	39	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Washing, ignition, contamination and their removal
27/12/2021	31	Priyanka Mishra	III	Amino acids, peptides & proteins	Determination of structure of polypeptide
28/12/2021	40	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Estimation of Ba as BaSO ₄
28/12/2021	32	Priyanka Mishra	III	Amino acids, peptides & proteins	Classification of protein
29/12/2021	35	Dr. R. Sahay	I	Spectroscopy	Statement of the Born- Oppenheimer approximation, degrees of freedom
30/12/2021		Dr. R. Sahay	ME		
31/12/2021	28	Sanjay Jaiswal	II	Coordination Chemistry	Electronic spectra of (Ti(H ₂ O) ₆) ³⁺ and (Cu(H ₂ O) ₆) ²⁺

01/01/2022	29	Sanjay Jaiswal	II	Metal Carbonyls	Introduction of Ligands behaviour of Carbonyl
03/01/2022	41	Dr. R. Sahay	IV	Volumetric analysis	General term used in Volumetric analysis
03/01/2022	33	Priyanka Mishra	III	Amino acids, peptides & proteins	Structure of protein
04/01/2022	42	Dr. R. Sahay	IV	Volumetric analysis	Principles of Acid –Base titration
04/01/2022	34	Priyanka Mishra	III	Elimination reaction	E1 reaction
05/01/2022	36	Dr. R. Sahay	I	Rotational Spectrum	Diatomic molecules, Energy levels of a rigid rotor, selection rules
06/01/2022		Dr. R. Sahay	CT		
07/01/2022	30	Sanjay Jaiswal	II	Metal Carbonyls	General method of preparation
08/01/2022	31	Sanjay Jaiswal	II	Metal Carbonyls	Preparation and structure of binary carbonyls of V, Cr and Mn
10/01/2022	43	Dr. R. Sahay	IV	Volumetric analysis	Redox titration, Precipitation titration
10/01/2022	35	Priyanka Mishra	III	Elimination Reactions	E1 reaction
11/01/2022	44	Dr. R. Sahay	IV	Volumetric analysis	Iodimetry and iodometry, complexometric titration
11/01/2022	36	Priyanka Mishra	III	Elimination Reactions	E2 reaction
12/01/2022	37	Dr. R. Sahay	I	Spectral Intensity	Maxwell- Boltzmann distribution, determination of bond length, qualitative description of non rigid rotor, isotope effect
13/01/2022		Dr. R. Sahay	CT		
17/01/2022	45	Dr. R. Sahay	IV	Volumetric analysis	Use of EDTA for the determination of Ca^{2+} and Mg^{2+} , Hardness of water, Metal ion indicators
17/01/2022	32	Sanjay Jaiswal	II	Metal Carbonyls	Structure of Fe, Co and Ni carbonyls
18/01/2022	46	Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
18/01/2022	33	Sanjay Jaiswal	II	Metal Nitrosyls	Ligands behaviour of $\text{NO}(\text{NO}^+, \text{NO}^-)$ and bridging ligands
19/01/2022	37	Priyanka Mishra	III	Elimination Reactions	E2 reaction
20/01/2022	38	Priyanka Mishra	III	Elimination Reactions	E1CB reaction
21/01/2022	38	Dr. R. Sahay	I	Vibrational Spectrum	Infrared spectrum: Energy levels of simple harmonic oscillation, selection rules, pure vibrational spectrum
22/01/2022		Dr. R. Sahay	ME		
24/01/2022	47	Priyanka Mishra	IV	Biological membranes	Diffusion and facilitated diffusion
24/01/2022	34	Sanjay Jaiswal	II	Metal Nitrosyls	Preparation and structure of nitrosyls of Cr, Fe and Ru
27/01/2022	35	Sanjay Jaiswal	II	Metal Nitrosyls	Carbonylnitrosyls and cyanonitrosyls
28/01/2022	36	Sanjay Jaiswal	II	Environmental Chemistry	Earth atmosphere and its components
29/01/2022	39	Priyanka Mishra	III	Elimination Reactions	Distinction between E1, E2 and E1CB reaction
31/01/2022	39	Dr. R. Sahay	I	Vibrational Spectrum	Intensity, determination of force constant and qualitative relation of force constant and bond energies
Extra*	48	Priyanka Mishra	IV	Biological membranes	Active transport and Donnan membrane equilibria
*	40	Dr. R. Sahay	I	Vibrational Spectrum	Effect of anharmonic motion and isotope on the spectrum, Idea of vibrational frequencies of different

					functional groups.
*	41	Dr. R. Sahay	I	Vibrational Spectrum	Effect of anharmonicity motion and isotopes on the spectrum
*	42	Dr. R. Sahay	I	Vibrational Spectrum	Idea of vibrational frequencies of Raman spectrum
*	43	Dr. R. Sahay	I	Vibrational Spectrum	Concept of polarisability, condition of Raman active vibrations
*	44	Dr. R. Sahay	I	Vibrational Spectrum	Mutual exclusion principle
*	37	Sanjay Jaiswal	II	Environmental Chemistry	Type of pollutants and their sources
*	38	Sanjay Jaiswal	II	Environmental Chemistry	Green house effect and Global warming
*	40	Priyanka Mishra	III	Reaction Intermediate	Carbocation (classical and non classical carbocation)
*	41	Priyanka Mishra	III	Reaction intermediates	Carbanions and free radicals
*	42	Priyanka Mishra	III	Reaction intermediates	Carbene and nitrene
*	43	Priyanka Mishra	III	Reaction intermediates	Benzyne
*	44	Priyanka Mishra	III	Reaction intermediates	Benzyne