

MAHARANA PRATAP P.G. COLLEGE JUNGLE DHUSAN GORAKHPUR

Class :B.Sc. III rd Year LESSON PLAN: 2022-23 Subject : Chemistry					
DATE	LECTUR E	TEACHER'S NAME	PAPER	CHAPTER	TOPIC
08/07/2022	1	Dr. R. Sahay	I	Photochemistry	Interaction of radiation with matter
09/07/2022	2	Dr. R. Sahay	I	Photochemistry	Difference between thermal and photochemical processes
11/07/2022	1	Dr. S. K. Vernwal	IV	Separation Techniques	Principle and analytical applications
11/07/2022	1	Abhinav Tripathi	II	Chemistry of Lanthanides	Introduction,electronic configuration of Lanthanides
12/07/2022	2	Dr. S. K. Vernwal	IV	Separation Techniques	Solvent extraction
12/07/2022	2	Abhinav Tripathi	II	Chemistry of Lanthanides	Atomic and ionic radii, Ionisation energy
13/07/2022	1	Priyanka Mishra	III	Molecular rearrangements and reactions	Pinacol- Pinacolone rearrangement
14/07/2022		Priyanka Mishra	CT		
15/07/2022	3	Dr. R. Sahay	I	Photochemistry	Grotthus-draper law, Stark-Einstein law, Jablonski diagram
16/07/2022	4	Dr. R. Sahay	I	Photochemistry	Qualitative description of fluorescence, phosphorescence
18/07/2022	3	Dr. S. K. Vernwal	IV	Separation Techniques	Paper Chromatography
18/07/2022	3	Abhinav Tripathi	II	Chemistry of Lanthanides	Calculation of magnetic moments and correlation with experimental data
19/07/2022	4	Dr. S. K. Vernwal	IV	Separation Techniques	Thin Layer Chromatography
19/07/2022	4	Abhinav Tripathi	II	Chemistry of Lanthanides	magnetic moments and correlation with experimental data
20/07/2022	2	Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
21/07/2022		Priyanka Mishra	CT		
22/07/2022	5	Dr. R. Sahay	I	Nuclear Chemistry	Fundamental particles and their classification, Nuclear forces
23/07/2022	6	Dr. R. Sahay	I	Nuclear Chemistry	Liquid drop and shell models of atomic nucleus, nuclear stability
25/07/2022	5	Dr. S. K. Vernwal	IV	Separation Techniques	Column Chromatography
25/07/2022	5	Abhinav Tripathi	II	Chemistry of Lanthanides	Colour and spectral behaviour of Lanthanides series
26/07/2022	6	Dr. S. K. Vernwal	IV	Separation Techniques	HPLC
26/07/2022	6	Abhinav Tripathi	II	Chemistry of Lanthanides	Colour and spectral behaviour of Lanthanides series
27/07/2022	3	Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
28/07/2022		Priyanka Mishra	ME		
29/07/2022	7	Dr. R. Sahay	I	Nuclear Chemistry	Energy changes in nuclear reaction, Fission, The atom bomb, spallation and fusion reaction
30/07/2022	8	Dr. R. Sahay	I	Nuclear Chemistry	Hydrogen bomb, concept of nuclear cross-section, Radioactive equilibrium
01/08/2022	7	Dr. S. K. Vernwal	IV	Separation Techniques	Ion-Exchange Chromatography
01/08/2022	7	Abhinav Tripathi	II	Chemistry of Lanthanides	Oxidation state and their stability, Ground state term symbols, Ability to form complexes and examples of complexes of different coordination number
03/08/2022	8	Abhinav Tripathi	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides

04/08/2022	4	Priyanka Mishra	III	Molecular rearrangements and reactions	Beckmann rearrangement
05/08/2022		Priyanka Mishra	CT		
06/08/2022	9	Dr. R. Sahay	I	Nuclear Chemistry	Kinetics of radioactive decay, Applications of radioactivity-radioactive dating
08/08/2022	8	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	General features of enzymes and their active sites
08/08/2022	10	Dr. R. Sahay	I	Nuclear Chemistry	Radioactive tracer technique, radioactivity in medicines, agriculture and research
10/08/2022	9	Abhinav Tripathi	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
11/08/2022	10	Abhinav Tripathi	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
13/08/2022	5	Priyanka Mishra	III	Molecular rearrangements and reactions	Fries rearrangement
16/08/2022	9	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Ribozymes and Abzymes
16/08/2022		Priyanka Mishra	CT		
17/08/2022	11	Dr. R. Sahay	I	Surface Chemistry	Introduction, difference between Physical adsorption and chemisorptions
19/08/2022	12	Dr. R. Sahay	I	Surface Chemistry	Introduction, difference between Physical adsorption and chemisorptions
20/08/2022	11	Abhinav Tripathi	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
22/08/2022	12	Abhinav Tripathi	II	Chemistry of Actinides	Introduction, electronic configuration of Actinides
23/08/2022	10	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Enzyme nomenclature
23/08/2022	6	Priyanka Mishra	III	Molecular rearrangements and reactions	Dieckmann reaction
24/08/2022		Priyanka Mishra	ME		
25/08/2022	13	Dr. R. Sahay	I	Surface Chemistry	Adsorption isotherms Langmuir adsorption isotherm and Freundlich adsorption isotherm
26/08/2022	14	Dr. R. Sahay	I	Surface Chemistry	BET equation, Determination of surface area
27/08/2022	13	Abhinav Tripathi	II	Chemistry of Actinides	Introduction, electronic configuration of Actinides
01/09/2022	14	Abhinav Tripathi	II	Chemistry of Actinides	Atomic and ionic radii, Ionisation energy
02/09/2022	7	Priyanka Mishra	III	Molecular rearrangements and reactions	Claisen- Schmidt reaction
03/09/2022		Priyanka Mishra	CT		
05/09/2022	11	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Units of enzyme activity
05/09/2022	15	Dr. R. Sahay	I	Solution and Colligative properties	Thermodynamic derivation of relation between molecular weight and elevation in boiling point and freezing point,
06/09/2022	12	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Units of enzyme activity
06/09/2022	16	Dr. R. Sahay	I	Solution and Colligative properties	Experimental methods for determining various Colligative properties
07/09/2022	15	Abhinav Tripathi	II	Chemistry of Actinides	Atomic and ionic radii, Ionisation energy
10/09/2022	16	Abhinav Tripathi	II	Chemistry of Actinides	Oxidation state and their stability
12/09/2022	13	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Factors affecting the enzyme activity
12/09/2022	8	Priyanka Mishra	III	Polymers	Type of polymerisation
13/09/2022		Priyanka Mishra	CT		
13/09/2022	17	Dr. R. Sahay	I	Solution and Colligative	Abnormal molar mass, degree of dissociation and association

				properties	
15/09/2022	18	Dr. R. Sahay	I	Solution and Colligative properties	Abnormal molar mass, degree of dissociation and association
16/09/2022	17	Abhinav Tripathi	II	Chemistry of Actinides	Colour and absorption spectra of Actinides
19/09/2022	14	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Derivation of Michaelis-Menten equation
19/09/2022	18	Abhinav Tripathi	II	Chemistry of Actinides	Magnetic property of Actinides
20/09/2022	15	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Experimental determination of K_m and V_{max}
20/09/2022	19	Abhinav Tripathi	II	Chemistry of Actinides	Chemistry of separation of Actinides
21/09/2022	9	Priyanka Mishra	III	Polymers	Mechanism of polymerisation
22/09/2022		Priyanka Mishra	CT		
23/09/2022	19	Dr. R. Sahay	I	Solution and Colligative properties	Abnormal molar mass, degree of dissociation and association
24/09/2022	20	Dr. R. Sahay	I	Statistical Thermodynamics	Energy levels, Microstates, the Boltzmann factor
26/09/2022	16	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Physical significance of K_m , V_{max} and K_{cat}/K_m
26/09/2022	20	Abhinav Tripathi	II	Chemistry of Actinides	One synthesis each of Np to Lr
27/09/2022	17	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Competitive, Uncompetitive and Noncompetitive&Suicidal inhibitors
27/09/2022	21	Abhinav Tripathi	II	Chemistry of Actinides	Complex formation in Actinides
28/09/2022	10	Priyanka Mishra	III	Polymers	Preparation and use of terylene , nylon and Dynel
29/09/2022		Priyanka Mishra	ME		
30/09/2022	11	Priyanka Mishra	III	Polymers	Natural and synthetic rubber
01/10/2022	12	Priyanka Mishra	III	Dyes	Colour and constitutions
07/10/2022	22	Abhinav Tripathi	II	Coordination Chemistry	Crystal Field Theory and its drawback
08/10/2022	23	Abhinav Tripathi	II	Coordination Chemistry	d- orbital splitting in Td complex
10/10/2022	18	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Brief description of Coenzymes
10/10/2022	21	Dr. R. Sahay	I	Statistical Thermodynamics	Translational, rotational and vibrational partition function
11/10/2022	19	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Function of Thiamine pyrophosphate (TPP)
11/10/2022		Dr. R. Sahay	CT		
12/10/2022	13	Priyanka Mishra	III	Dyes	Classification of dyes
13/10/2022	14	Priyanka Mishra	III	Dyes	Methyl orange and Congo red
14/10/2022	24	Abhinav Tripathi	II	Coordination Chemistry	d- orbital splitting in Oh complex
15/10/2022	25	Abhinav Tripathi	II	Coordination Chemistry	d- orbital splitting in Square planer complex
17/10/2022	20	Dr. R. Sahay	IV	Nucleic Acids	A general description of DNA and RNA
17/10/2022	22	Dr. R. Sahay	I	Quantum Mechanics	Black-body radiation, Planck's radiation law
18/10/2022	21	Dr. R. Sahay	IV	Acids	Salient features of DNA and RNA
18/10/2022		Dr. R. Sahay	ME		

19/10/2022	15	Priyanka Mishra	III	Dyes	Malachite green and Crystal violet
20/10/2022	16	Priyanka Mishra	III	Dyes	Phenolphthalein
28/10/2022	26	Abhinav Tripathi	II	Coordination Chemistry	Dq and factor affecting its magnitude
29/10/2022	27	Abhinav Tripathi	II	Coordination Chemistry	Calculation of CFSC for d^1 to d^9
01/11/2022	22	Dr. R. Sahay	IV	Nucleic Acids	DNA denaturation and renaturation, Effect of UV radiation on DNA
01/11/2022	23	Dr. R. Sahay	I	Quantum Mechanics	Photoelectric effect, Compton effect, concept of wave motion
02/11/2022		Dr. R. Sahay	CT		
03/11/2022	17	Priyanka Mishra	III	Dyes	Fluorescence
05/11/2022	18	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
07/11/2022	23	Dr. R. Sahay	IV	Nucleic Acids	Elementary ideas of genetic code and recombinant technology
07/11/2022	28	Abhinav Tripathi	II	Coordination Chemistry	Magnetic property on the basis of CFT
09/11/2022	29	Abhinav Tripathi	II	Coordination Chemistry	Type of electronic transition, Selection rule, charge transfer
10/11/2022	24	Dr. R. Sahay	I	Quantum Mechanics	De Broglie hypothesis, the Heisenberg's uncertainty principle
11/11/2022		Dr. R. Sahay	CT		
12/11/2022	19	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
14/11/2022	24	Abhinav Tripathi	IV	Role of Metals in Biological systems	Introduction
14/11/2022	20	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
15/11/2022	25	Abhinav Tripathi	IV	Role of Metals in Biological systems	Fe in myoglobin and haemoglobin
15/11/2022	30	Abhinav Tripathi	II	Coordination Chemistry	Electronic spectra of $(Ti(H_2O)_6)^{3+}$ and $(Cu(H_2O)_6)^{2+}$
16/11/2022	31	Abhinav Tripathi	II	Metal Carbonyls	Introduction of Ligands behaviour of Carbonyl
17/11/2022	25	Dr. R. Sahay	I	Quantum Mechanics	Schrodinger wave equation for H- atom, Quantum number and their importance
18/11/2022		Dr. R. Sahay	CT		
19/11/2022	21	Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
21/11/2022	26	Abhinav Tripathi	IV	Role of Metals in Biological systems	Zn in Carboxypeptidase and Carbonic anhydrase
21/11/2022	22	Priyanka Mishra	III	Polynuclear hydrocarbons	Carcinogenic hydrocarbon
22/11/2022	27	Abhinav Tripathi	IV	Role of Metals in Biological systems	Cu in Plastocyanin and Hemocyanin
22/11/2022	32	Abhinav Tripathi	II	Metal Carbonyls	General method of preparation
23/11/2022	33	Abhinav Tripathi	II	Metal Carbonyls	Preparation and structure of binary carbonyls of V, Cr and Mn
25/11/2022	26	Dr. R. Sahay	I	Quantum Mechanics	Hydrogen like wave function, angular wave function
26/11/2022		Dr. R. Sahay	ME		
28/11/2022	28	Abhinav Tripathi	IV	Role of Metals in Biological systems	Mg in Chlorophyll
28/11/2022	27	Dr. R. Sahay	I	Quantum Mechanics	Molecular orbital theory, basic ideas- criteria for forming M.O. from A.O.

29/11/2022	29	Abhinav Tripathi	IV	Errors and Evaluation	Introduction, Definition of terms mean and median
29/11/2022	28	Dr. R. Sahay	I	Quantum Mechanics	Construction of M.O's by LCAO, H^{2+} ion, calculation of energy levels from wave function
30/11/2022	23	Priyanka Mishra	III	Heterocycles	Chemistry of Indole
01/12/2022	24	Priyanka Mishra	III	Heterocyclic	Chemistry of Quinoline
02/12/2022	34	Abhinav Tripathi	II	Metal Carbonyls	Structure of Fe, Co and Ni carbonyls
03/12/2022		Abhinav Tripathi	CT		
07/12/2022	29	Dr. R. Sahay	I	Quantum Mechanics	Physical picture of bonding and antibonding wave function
08/12/2022	30	Dr. R. Sahay	I	Quantum Mechanics	Concept of sigma and pi orbitals
09/12/2022	25	Priyanka Mishra	III	Heterocycles	Chemistry of Isoquinoline
12/12/2022	30	Abhinav Tripathi	IV	Errors and Evaluation	Precision, standard deviation, relative standard deviation, and accuracy
12/12/2022	26	Priyanka Mishra	III	Heterocycles	Chemistry of Isoquinoline
13/12/2022	31	Abhinav Tripathi	IV	Errors and Evaluation	Absolute error, and relative error
13/12/2022	35	Abhinav Tripathi	II	Metal Nitrosyls	Ligands behaviour of $NO(NO^+, NO^-)$ and bridging ligands
14/12/2022		Abhinav Tripathi	ME		
15/12/2022	31	Dr. R. Sahay	I	Quantum Mechanics	Valence bond model of H_2 ,
02/01/2023	32	Abhinav Tripathi	IV	Errors and Evaluation	type of error in experimental data, determinate, indeterminate and gross
02/01/2023	32	Dr. R. Sahay	I	Spectroscopy	Comparison of molecular orbital
03/01/2023	33	Abhinav Tripathi	IV	Errors and Evaluation	Sources of errors and effect upon the analytical results
03/01/2023	27	Priyanka Mishra	III	Amino acids, peptides and proteins	Classification of amino acid
04/01/2023	28	Priyanka Mishra	III	Amino acids, peptides and proteins	Synthesis of amino acids
05/01/2023	36	Abhinav Tripathi	II	Metal Nitrosyls	Preparation and structure of nitrosyls of Cr, Fe and Ru
06/01/2023		Abhinav Tripathi	CT		
07/01/2023	33	Dr. R. Sahay	I	Spectroscopy	Valence Bond models
09/01/2023	34	Abhinav Tripathi	IV	Errors and Evaluation	Statistical evaluation of data, Methods of for reporting analytical data
09/01/2023	34	Dr. R. Sahay	I	Spectroscopy	Introduction, Electromagnetic radiation
10/01/2023	35	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Precipitation from homogeneous medium and purity of precipitate
10/01/2023	29	Priyanka Mishra	III	Amino acids, peptides & proteins	Synthesis of polypeptide
11/01/2023	30	Priyanka Mishra	III	Amino acids, peptides & proteins	Determination of structure of polypeptide
12/01/2023	37	Abhinav Tripathi	II	Metal Nitrosyls	Carbonylnitrosyls and cyanonitrosyls
13/01/2023		Abhinav Tripathi	CT		
16/01/2023	36	Mrs.Priyanka Mishra	IV	Volumetric analysis	Washing, ignition, contamination and their removal
16/01/2023	35	Dr. R. Sahay	I	Spectroscopy	Introduction, Electromagnetic radiation, regions of the spectrums
17/01/2023	37	Mrs.Priyanka Mishra	IV	Volumetric analysis	Co-precipitation and Post-precipitation

17/01/2023	36	Dr. R. Sahay	I	Spectroscopy	Electromagnetic radiation , regions of the spectrums
18/01/2023	31	Priyanka Mishra	III	Amino acids, peptides & proteins	Classification of protein
19/01/2023	32	Priyanka Mishra	III	Amino acids, peptides & proteins	Structure of protein
20/01/2023	38	Abhinav Tripathi	II	Environmental Chemistry	Earth atmosphere and its components
21/01/2023		Abhinav Tripathi	CT		
23/01/2023	38	Mrs.Priyanka Mishra	IV	Volumetric analysis	Estimation of Ba as BaSO ₄
23/01/2023	37	Dr. R. Sahay	I	Spectroscopy	Electromagnetic radiation
24/01/2023	38	Dr. R. Sahay	I	Spectroscopy	Electromagnetic radiation
25/01/2023	33	Priyanka Mishra	III	Elimination reaction	E1 reaction
27/01/2023	34	Priyanka Mishra	III	Elimination Reactions	E2 reaction
28/01/2023	39	Abhinav Tripathi	II	Environmental Chemistry	Earth atmosphere and its components
30/01/2023	39	Dr. R. Sahay	IV	Volumetric analysis	General term used in Volumetric analysis
30/01/2023		Abhinav Tripathi	ME		
Extra*					
*		Abhinav Tripathi	II	Environmental Chemistry	Earth atmosphere and its components
*		Abhinav Tripathi	II	Environmental Chemistry	Earth atmosphere and its components
*		Abhinav Tripathi	II	Environmental Chemistry	Earth atmosphere and its components
*		Priyanka Mishra	III	Reaction intermediates	Carbanions and free radicals
*		Priyanka Mishra	III	Reaction intermediates	Carbene and nitrene
*		Priyanka Mishra	III	Reaction intermediates	Benzyne
*		Priyanka Mishra	III	Reaction intermediates	Benzyne
*		Priyanka Mishra	III	Reaction intermediates	Carbene and nitrene
*		Priyanka Mishra	III	Reaction intermediates	Benzyne
*		Dr. R. Sahay	IV	Volumetric analysis	Principles of Acid-Base titration
*		Dr. R. Sahay	IV	Volumetric analysis	Redox titration, Precipitation titration
*		Dr. R. Sahay	IV	Volumetric analysis	Iodimetry and iodometry, complexometric titration
*		Dr. R. Sahay	IV	Volumetric analysis	Use of EDTA for the determination of Ca ²⁺ and Mg ²⁺ , Hardness of water, Metal ion indicators
*		Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
*		Priyanka Mishra	IV	Biological membranes	Diffusion and facilitated diffusion
*		Priyanka Mishra	IV	Biological membranes	Active transport and Donnan membrane equilibria