

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

Class : B.Sc. III rd		LESSION PLAN : 2019-20			Subject : Chemistry
DATE	LECTURE	TEACHER'S NAME	PAPER	CHAPTER	TOPIC
16.07.2019	1	Dr. S. K. Vernwal	IV	Separation Techniques	Principle and analytical applications
16.07.2019	1	Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Pinacol- Pinacolone rearrangement
17.07.2019	2	Mrs.Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
18.07.2019	1	Gaurav Tiwari	I	Photochemistry	Interaction of radiation with matter
19.07.2019	2	Gaurav Tiwari	I	Photochemistry	Difference between thermal and photochemical processes
20.07.2019	1	Sanjay Jaiswal	II	Chemistry of Lanthanides	Introduction, electronic configuration of Lanthanides
22.07.2019	2	Dr. S. K. Vernwal	IV	Separation Techniques	Solvent extraction
22.07.2019		Sanjay Jaiswal	CT		
23.07.2019	3	Dr. S. K. Vernwal	IV	Separation Techniques	Paper Chromatography
23.07.2019	3	Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Benzil-Benzilic acid rearrangement
24.07.2019	4	Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Beckmann rearrangement
25.07.2019	3	Gaurav Tiwari	I	Photochemistry	Grotthus-draper law, Stark –Einstein law, Jablonski diagram
26.07.2019	4	Gaurav Tiwari	I	Photochemistry	Qualitative description of fluorescence, phosphorescence
27.07.2019	2	Sanjay Jaiswal	II	Chemistry of Lanthanides	Atomic and ionic radii, Ionisation energy
29.07.2019	4	Dr. S. K. Vernwal	IV	Separation Techniques	Thin Layer Chromatography
29.07.2019		Sanjay Jaiswal	ME		
30.07.2019	5	Dr. S. K. Vernwal	IV	Separation Techniques	Column Chromatography
30.07.2019	5	Mrs. Priyanka Mishra	III	Molecular rearrangements and reactions	Fries rearrangement
31.07.2019	6	Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Dieckmann reaction
01.08.2019	5	Gaurav Tiwari	I	Photochemistry	Non- radiative processes, quantum yield, photosensitized reaction
02.08.2019	6	Gaurav Tiwari	I	Photochemistry	Energy transfer processes
03.08.2019	3	Sanjay Jaiswal	II	Chemistry of Lanthanides	Calculation of magnetic moments and correlation with experimental data
06.08.2019	6	Dr. S. K. Vernwal	IV	Separation Techniques	HPLC
06.08.2019		Sanjay Jaiswal	CT		
07.08.2019	7	Mrs.Priyanka Mishra	III	Molecular rearrangements and reactions	Claisen- Schmidt reaction
08.08.2019	8	Mrs.Priyanka Mishra	III	Polymers	Type of polymerisation
09.08.2019	7	Gaurav Tiwari	I	Nuclear Chemistry	Fundamental particles and their classification, Nuclear forces
10.08.2019	8	Gaurav Tiwari	I	Nuclear Chemistry	Liquid drop and shell models of atomic nucleus, nuclear stability

13.08.2019	7	Dr. S. K. Vernwal	IV	Separation Techniques	Ion-Exchange Chromatography
13.08.2019	4	Sanjay Jaiswal	II	Chemistry of Lanthanides	Colour and spectral behaviour of Lanthanides series
14.08.2019		Sanjay Jaiswal	CT		
16.08.2019	9	Mrs.Priyanka Mishra	III	Polymers	Mechanism of polymerisation
17.08.2019	10	Mrs.Priyanka Mishra	III	Polymers	Preparation and use of terylene , nylon and Dynel
19.08.2019	8	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	General features of enzymes and their active sites
19.08.2019	9	Gaurav Tiwari	I	Nuclear Chemistry	Energy changes in nuclear reaction, Fission, The atom bomb, spallation and fusion reaction
20.08.2019	9	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Ribozymes and Abzymes
20.08.2019	10	Gaurav Tiwari	I	Nuclear Chemistry	Hydrogen bomb, concept of nuclear cross-section, Radioactive equilibrium
21.08.2019	5	Sanjay Jaiswal	II	Chemistry of Lanthanides	Oxidation state and their stability, Ground state term symbols
22.08.2019		Sanjay Jaiswal	CT		
24.08.2019	11	Mrs.Priyanka Mishra	III	Polymers	Natural and synthetic rubber
26.08.2019	10	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Enzyme nomenclature
26.08.2019	12	Mrs.Priyanka Mishra	III	Dyes	Colour and constitutions
27.08.2019	11	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Units of enzyme activity
27.08.2019	11	Gaurav Tiwari	I	Nuclear Chemistry	Kinetics of radioactive decay, Applications of radioactivity-radioactive dating
28.08.2019	12	Gaurav Tiwari	I	Nuclear Chemistry	Radioactive tracer technique, radioactivity in medicines, agriculture and research
29.08.2019	6	Sanjay Jaiswal	II	Chemistry of Lanthanides	Ability to form complexes and examples of complexes of different coordination number
30.08.2019		Sanjay Jaiswal	ME		
02.09.2019	12	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Factors affecting the enzyme activity
02.09.2019	13	Mrs.Priyanka Mishra	III	Dyes	Classification of dyes
03.09.2019	13	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Derivation of Michaelis-Menten equation
03.09.2019	14	Mrs.Priyanka Mishra	III	Dyes	Methyl orange and Congo red
04.09.2019	13	Gaurav Tiwari	I	Surface Chemistry	Introduction, difference between Physical adsorption and chemisorptions
05.09.2019	14	Gaurav Tiwari	I	Surface Chemistry	Adsorption isotherms Langmuir adsorption isotherm and Freundlich adsorption isotherm
06.09.2019	7	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
07.09.2019		Sanjay Jaiswal	CT		
09.09.2019	14	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Experimental determination of K_m and V_{max}
09.09.2019	15	Mrs.Priyanka Mishra	III	Dyes	Malachite green and Crystal violet
11.09.2019	16	Mrs.Priyanka Mishra	III	Dyes	Phenolphthalein
13.09.2019	15	Gaurav Tiwari	I	Surface Chemistry	BET equation, Determination of surface area
14.09.2019	16	Gaurav Tiwari	I	Solution and Colligative properties	Thermodynamic derivation of relation between molecular weight and elevation in boiling point and freezing point

16.09.2019	15	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Physical significance of K_m , V_{max} and K_{cat}/K_m
16.09.2019	8	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
17.09.2019	16	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Competitive, Uncompetitive and Noncompetitive and Suicidal inhibitors
17.09.2019		Sanjay Jaiswal	CT		
19.09.2019	17	Mrs.Priyanka Mishra	III	Dyes	Fluorescence
20.09.2019	18	Mrs.Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
21.09.2019	17	Gaurav Tiwari	I	Solution and Colligative properties	Experimental methods for determining various Colligative properties
23.09.2019	17	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Brief description of Coenzymes
23.09.2019	18	Gaurav Tiwari	I	Solution and Colligative properties	Abnormal molar mass, degree of dissociation and association
24.09.2019	18	Dr. S. K. Vernwal	IV	Enzymes and Coenzymes	Function of Thiamine pyrophosphate (TPP)
24.09.2019	9	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
25.09.2019		Sanjay Jaiswal	ME		
26.09.2019	19	Mrs.Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Anthracene
27.09.2019	20	Mrs.Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
30.09.2019	19	Sanjay Jaiswal	IV	Nucleic Acids	A general description of DNA and RNA
30.09.2019	19	Gaurav Tiwari	I	Statistical Thermodynamics	Energy levels, Microstates, the Boltzmann factor
01.10.2019	20	Sanjay Jaiswal	IV	Acids	Salient features of DNA and RNA
01.10.2019	20	Gaurav Tiwari	I	Statistical Thermodynamics	Partition function, Relation between partition functions and thermodynamic function
03.10.2019	21	Mrs.Priyanka Mishra	III	Polynuclear hydrocarbons	Chemistry of Phenanthrene
04.10.2019		Mrs.Priyanka Mishra	CT		
05.10.2019	10	Sanjay Jaiswal	II	Chemistry of Lanthanides	Occurrence and principle of separation of lanthanides
12.10.2019	11	Sanjay Jaiswal	II	Chemistry of Nucleic Actinides	Introduction, electronic configuration of Actinides
14.10.2019	21	Sanjay Jaiswal	IV	Nucleic Acids	DNA denaturation and renaturation, Effect of UV radiation on DNA
14.10.2019	21	Gaurav Tiwari	I	Statistical Thermodynamics	Translational, rotational and vibrational partition function
15.10.2019	22	Sanjay Jaiswal	IV	Nucleic Acids	Elementary ideas of genetic code and recombinant technology
15.10.2019	22	Gaurav Tiwari	I	Quantum Mechanics	Black-body radiation, Planck's radiation law
16.10.2019	22	Mrs.Priyanka Mishra	III	Polynuclear hydrocarbons	Carcinogenic hydrocarbon
17.10.2019		Mrs.Priyanka Mishra	CT		
18.10.2019	12	Sanjay Jaiswal	II	Chemistry of Actinides	Atomic and ionic radii, Ionisation energy
21.10.2019	13	Sanjay Jaiswal	II	Chemistry of Actinides	Oxidation state and their stability

21.10.2019	23	Sanjay Jaiswal	IV	Role of Metals in Biological systems	Introduction
22.10.2019	23	Gaurav Tiwari	I	Quantum Mechanics	Photoelectric effect, Compton effect, concept of wave motion
22.10.2019	24	Gaurav Tiwari	IV	Role of Metals in Biological systems	Fe in myoglobin and haemoglobin
23.10.2019	24	Gaurav Tiwari	I	Quantum Mechanics	De Broglie hypothesis, the Heisenberg's uncertainty principle
30.10.2019	23	Mrs.Priyanka Mishra	III	Heterocycles	Chemistry of Indole
31.10.2019		Mrs.Priyanka Mishra	ME		
01.11.2019	14	Sanjay Jaiswal	II	Chemistry of Actinides	Colour and absorption spectra of Actinides
04.11.2019	15	Sanjay Jaiswal	II	Chemistry of Actinides	Magnetic property of Actinides
04.11.2019	25	Gaurav Tiwari	IV	Role of Metals in Biological systems	Zn in Carboxypeptidase and Carbonicanhydrase
05.11.2019	25	Gaurav Tiwari	I	Quantum Mechanics	Difference between classical and quantum mechanics
05.11.2019	26	Gaurav Tiwari	IV	Role of Metals in Biological systems	Cu in Plastocyanin and Hemocyanin
06.11.2019	26	Gaurav Tiwari	I	Quantum Mechanics	Schrodinger wave equation for H-atom, Quantum number and their importance
07.11.2019	24	Mrs.Priyanka Mishra	III	Heterocyclic	Chemistry of Quinoline
09.11.2019		Mrs.Priyanka Mishra	CT		
11.11.2019	27	Gaurav Tiwari	IV	Role of Metals in Biological systems	Mg in Chlorophyll
11.11.2019	16	Sanjay Jaiswal	II	Chemistry of Actinides	Complex formation in Actinides
13.11.2019	17	Sanjay Jaiswal	II	Chemistry of Actinides	Chemistry of separation of Actinides
14.11.2019	25	Mrs.Priyanka Mishra	III	Heterocycles	Chemistry of Isoquinoline
15.11.2019	26	Mrs.Priyanka Mishra	III	Amino acids, peptides and proteins	Classification of amino acid
16.11.2019	27	Gaurav Tiwari	I	Quantum Mechanics	Hydrogen like wave function , angular wave function
18.11.2019	28	P.K. Verma	IV	Errors and Evaluation	Introduction, Definition of terms mean and median
18.11.2019		Gaurav Tiwari	CT		
19.11.2019	29	P.K. Verma	IV	Errors and Evaluation	Precision, standard deviation, relative standard deviation, and accuracy
19.11.2019	18	Sanjay Jaiswal	II	Chemistry of Actinides	One synthesis each of Np to Lr
20.11.2019	19	Sanjay Jaiswal	II	Coordination Chemistry	Crystal Field Theory and its drawback
21.11.2019	27	Mrs.Priyanka Mishra	III	Amino acids, peptides and proteins	Classification of amino acid
22.11.2019	28	Mrs.Priyanka Mishra	III	Amino acids, peptides and proteins	Synthesis of amino acids
23.11.2019	28	Gaurav Tiwari	I	Quantum Mechanics	Molecular orbital theory, basic ideas- criteria for forming M.O. from A.O.
25.11.2019	30	P.K. Verma	IV	Errors and Evaluation	Absolute error, and relative error
25.11.2019		Gaurav Tiwari	ME		
26.11.2019	31	P.K. Verma	IV	Errors and Evaluation	type of error in experimental data, determinate, indeterminate and gross

26.11.2019	20	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Td complex
27.11.2019	21	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Oh complex
28.11.2019	29	Mrs.Priyanka Mishra	III	Amino acids, peptides & proteins	Synthesis of polypeptide
29.11.2019	30	Mrs.Priyanka Mishra	III	Amino acids, peptides & proteins	Determination of structure of polypeptide
30.11.2019	29	Gaurav Tiwari	I	Quantum Mechanics	Construction of M.O's by LCAO, H^{2+} ion , calculation of energy levels from wave function
02.12.2019	32	P.K. Verma	IV	Errors and Evaluation	Sources of errors and effect upon the analytical results
02.12.2019		Gaurav Tiwari	CT		
03.12.2019	33	P.K. Verma	IV	Errors and Evaluation	Methods of for reporting analytical data
03.12.2019	22	Sanjay Jaiswal	II	Coordination Chemistry	d- orbital splitting in Square planer complex
07.12.2019	23	Sanjay Jaiswal	II	Coordination Chemistry	Dq and factor affecting its magnitude
09.12.2019	34	P.K. Verma	IV	Errors and Evaluation	Statistical evaluation of data
09.12.2019	31	Mrs.Priyanka Mishra	III	Amino acids, peptides & proteins	Classification of protein
11.12.2019	32	Mrs.Priyanka Mishra	III	Amino acids, peptides & proteins	Structure of protein
12.12.2019	30	Gaurav Tiwari	I	Quantum Mechanics	Physical picture of bonding and antibonding wave function
13.12.2019		Gaurav Tiwari	CT		
14.12.2019	24	Sanjay Jaiswal	II	Coordination Chemistry	Calculation of CFSC for d1 to d9
16.12.2019	35	P.K. Verma	IV	Errors and Evaluation	indeterminate errors, uses of Statistics
16.12.2019	25	Sanjay Jaiswal	II	Coordination Chemistry	Magnetic property on the basis of CFT
17.12.2019	36	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Estimation of Ba as BaSO ₄ , co-precipitation, post precipitation
17.12.2019	33	Mrs.Priyanka Mishra	III	Elimination reaction	E1 reaction
18.12.2019	34	Mrs.Priyanka Mishra	III	Elimination Reactions	E1 reaction
19.12.2019	31	Gaurav Tiwari	I	Quantum Mechanics	Concept of sigma and pi orbitals
20.12.2019		Gaurav Tiwari	CT		
21.12.2019	26	Sanjay Jaiswal	II	Coordination Chemistry	Type of electronic transition ,Selection rule, charge transfer
23.12.2019	37	Mrs.Priyanka Mishra	IV	Gravimetric analysis	Post precipitation, washing and ignition
23.12.2019	27	Sanjay Jaiswal	II	Coordination Chemistry	Electronic spectra of $[Ti(H_2O)_6]^{3+}$ and $[Cu(H_2O)_6]^{2+}$
24.12.2019	38	Mrs.Priyanka Mishra	IV	Volumetric analysis	General term used in Volumetric analysis
24.12.2019	35	Mrs.Priyanka Mishra	III	Elimination Reactions	E2 reaction
26.12.2019	36	Mrs.Priyanka Mishra	III	Elimination Reactions	E2 reaction
27.12.2019	32	Gaurav Tiwari	I	Quantum Mechanics	Valence bond model of H ₂ , comparison of M.O. and V.B. models
28.12.2019		Gaurav Tiwari	ME		
30.12.2019	39	Mrs.Priyanka Mishra	IV	Volumetric analysis	Principles of Acid –Base titration

30.12.2019	28	Sanjay Jaiswal	II	Metal Carbonyls	Introduction of Ligands behaviour of Carbonyl
31.12.2019	40	Mrs.Priyanka Mishra	IV	Volumetric analysis	Redox titration, Precipitation titration
31.12.2019	29	Sanjay Jaiswal	II	Metal Carbonyls	General method of preparation
01.01.2020	37	Mrs.Priyanka Mishra	III	Elimination Reactions	E1CB reaction
02.01.2020	38	Mrs.Priyanka Mishra	III	Elimination Reactions	Distinction between E1, E2 and E1CB reaction
03.01.2020	33	Gaurav Tiwari	I	Spectroscopy	Introduction , Electromagnetic radiation , regions of the spectrums
04.01.2020		Gaurav Tiwari	CT		
06.01.2020	41	Mrs.Priyanka Mishra	IV	Volumetric analysis	Iodimetry and iodometry, complexometric titration
06.01.2020	30	Sanjay Jaiswal	II	Metal Carbonyls	Preparation of structure of binary carbonyls of V , Cr and Mn
07.01.2020	42	Mrs.Priyanka Mishra	IV	Volumetric analysis	Use of EDTA for the determination of Ca^{2+} and Mg^{2+} , Hardness of water, Metal ion indicators
07.01.2020	31	Sanjay Jaiswal	II	Metal Carbonyls	Structure of Fe, Co and Ni carbonyls
08.01.2020	39	Mrs.Priyanka Mishra	III	Reaction Intermediate	Carbocation (classical and non classical carbocation)
09.01.2020	40	Mrs.Priyanka Mishra	III	Reaction intermediates	Carbanions and free radicals
10.01.2020	34	Gaurav Tiwari	I	Spectroscopy	Statement of the Born- Oppenheimer approximation, degrees of freedom
11.01.2020		Gaurav Tiwari	CT		
13.01.2020	43	Mrs.Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
13.01.2020	32	Sanjay Jaiswal	II	Metal Nitrosyls	Ligands behaviour of $\text{NO}(\text{NO}^+, \text{NO}^-)$ and bridging ligands
16.01.2020	33	Sanjay Jaiswal	II	Metal Nitrosyl	Preparation and structure of Nitrosyls of Cr, Fe and Ru
17.01.2020	41	Mrs.Priyanka Mishra	III	Reaction intermediates	Carbene and nitrene
18.01.2020	42	Mrs.Priyanka Mishra	III	Reaction intermediates	Benzyne
20.01.2020	44	Mrs.Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
20.01.2020	35	Gaurav Tiwari	I	Rotational Spectrum	Diatomic molecules, Energy levels of a rigid rotor, selection rules
22.01.2020		Gaurav Tiwari	CT		
23.01.2020	34	Sanjay Jaiswal	II	Metal Nitrosyls	Carbonylnitrosyls and Cyanonitrosyls
24.01.2020	35	Sanjay Jaiswal	II	Environmental Chemistry	Earth atmosphere and its components
25.01.2020	43	Mrs.Priyanka Mishra	III	Reaction intermediates	Benzyne
27.01.2020	45	Mrs.Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
27.01.2020	44	Mrs.Priyanka Mishra	III	Reaction intermediates	Benzyne
28.01.2020	46	Mrs.Priyanka Mishra	IV	Biological membranes	General features and fluid mosaic model
28.01.2020	36	Gaurav Tiwari	I	Vibrational Spectrum	Infrared spectrum: Energy levels of simple harmonic oscillation , selection rules, pure vibrational spectrum
29.01.2020		Gaurav Tiwari	ME		
30.01.2020	36	Sanjay Jaiswal	II	Environmental Chemistry	Type of pollutants and their sources
31.01.2020	37	Sanjay Jaiswal	II	Environmental Chemistry	Green house effect and Global warming

Extra*		Gaurav Tiwari	I	Vibrational Spectrum	Intensity, determination of force constant and qualitative relation of force constant and bond energies
*		Gaurav Tiwari	I	Vibrational Spectrum	Effect of anharmonic motion and isotope on the spectrum, Idea of vibrational frequencies of different functional groups.
*		Gaurav Tiwari	I	Vibrational Spectrum	Effect of anharmonic motion and isotopes on the spectrum
*		Gaurav Tiwari	I	Vibrational Spectrum	Idea of vibrational frequencies of Raman spectrum
*		Gaurav Tiwari	I	Vibrational Spectrum	Concept of polarisability, condition of Raman active vibrations
*		Gaurav Tiwari	I	Vibrational Spectrum	Mutual exclusion principle
*		Sanjay Jaiswal	II	Environmental Chemistry	Acid rain, Ozone layer depletion