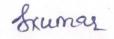
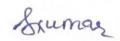
SMSD Govt. College Nangal Chaudhary (Mahendergarh) Lesson Plan- B.Sc. 6th Semester (Non Medical) Inorganic/ Physical Chemistry-Session 2023-24

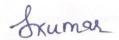
Date	Day	Topic
		Inorganic Chemistry
12-01-2024	Friday	Section-A Organometallic Chemistry Definition, nomenclature and classification of organometallic compounds.
13-01-2024	Saturday	Section-A Organometallic Chemistry Definition, nomenclature and classification of organometallic compounds.
18-01-2024	Thursday	Section-A Preparation, properties, and bonding of alkyls of Li, Al, Hg, and Sn a brief account of metal-ethylenic complexes,
19-01-2024	Friday	Section-A Preparation, properties, and bonding of alkyls of Li, Al, Hg, and Sn a brief account of metal-ethylenic complexes,
20-01-2024	Saturday	Section-A Mononuclear carbonyls and the nature of bonding in metal carbonyls.
25-01-2024	Thursday	Section-A Mononuclear carbonyls and the nature of bonding in metal carbonyls.
26-01-2024	Friday	Republic Day- Holiday
27-01-2024	Saturday	Section-B Acids and Bases, HSAB Concept, Arrhenius, Bronsted – Lowry, the Lux – Flood Solvent system and Lewis concepts of acids & base
01-02-2024	Thursday	Section-B Acids and Bases, HSAB Concept, Arrhenius, Bronsted – Lowry, the Lux – Flood Solvent system and Lewis concepts of acids & base
02-02-2024	Friday	Section-B Relative strength of acids & bases, Concept of Hard and Soft Acids & Bases. Symbiosis, electronegativity and hardness and softness
03-02-2024	Saturday	Section-B Electronegativity and hardness and softness
		Physical Chemistry
08-02-2024	Thursday	Section-A Spectroscopy-III - Electronic Spectrum- Concept of potential energy curves for bonding and antibonding molecular orbitals
09-02-2024	Friday	Section-A Qualitative description of selection rules and Franck- Condon principle
10-02-2024	Saturday	Section-A Qualitative description of sigma and pie and n molecular orbital (MO) their energy level and respective transitions
15-02-2024	Thursday	Section-B Photochemistry-Interaction of radiation with matter, difference between thermal and photochemical processes.
16-02-2024	Friday	Section-B Laws of photochemistry: Grotthus-Drapper law,



17-02-2024	Saturday	Stark- Einstein law (law of photochemical equivalence)
22-02-2024	Thursday	Section-B Jablonski diagram depiciting various processes occurring in the excited state,
23-02-2024	Friday	Section-B qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing)
24-02-2024	Saturday	Guru Ravidas Jayanti- Holiday
26-02-2024	Monday	Section-B quantum yield, photosensitized reactions-energy transfer processes (simple examples)
27-02-2024	Tuesday	Section-C Solutions: Dilute Solutions and Colligative Properties
28-02-2024	Wednesday	Section-C Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.
04-03-2024	Monday	Section-C Dilute solution, Colligative properties, Raolut's law, relative lowering of vapour pressure,
05-03-2024	Tuesday	Section-C molelcular weight determination, Osmosis law of osmotic pressure and its measurement,
06-03-2024	Wednesday	Section-C Osmosis law of osmotic pressure and its measurement,
11-03-2024	Monday	Section-C Determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point,
12-03-2024	Tuesday	Section-C Determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point,
13-03-2024	Wednesday	Section-C Thermodynamic derivation of relation between molecular weight and elevation in boiling point.
18-03-2024	Monday	Section-C Thermodynamic derivation of relation between molecular weight and depression in freezing point.
19-03-2024	Tuesday	Section-C Experimental methods for determining various colligative properties.
20-03-2024	Wednesday	Section-C Abnormal molar mass, degree of dissociation and association of solutes.
23-03-2024 To 31-03-2024		Holi Festival Holidays
01-01-2024	Monday	Section-D Phase Equillibrium-Statement and meaning of the terms – phase component
02-04-2024	Tuesday	Section-D Phase Equillibrium-Statement and meaning of the terms – phase component and degree of freedom, thermodynamic derivation of Gibbs phase rule,
03-04-2024	Wednesday	Section-D Phase Equillibrium-Statement and meaning of the terms – phase component and degree of freedom, thermodynamic derivation of Gibbs phase rule,



08-04-2024	Monday	Section-D Phase Equillibrium-Statement and meaning of the terms – phase component and degree of freedom, thermodynamic derivation of Gibbs phase rule,
09-04-2024	Tuesday	Holi festival Holidays
10-04-2024	Wednesday	Section-D Phase equilibria of one component system –Example – water and Sulpher systems
15-04-2024	Monday	Section-D Phase equilibria of two component systems solid-liquid equilibria, simple eutectic Example Pb-Ag system, desilerisation of lead.
16-04-2024	Tuesday	Section-D Phase equilibria of two component systems solid-liquid equilibria, simple eutectic Example Pb-Ag system, desilerisation of lead.
17-04-2024	Wednesday	Conceptual and Exam related Important Questions
22-04-2024	Monday	Conceptual and Exam related Important Questions
23-04-2024	Tuesday	Term End Semester Exam Preparation
24-04-2024	Wednesday	



NAME: DR RAJDEEP YADAV

EXTENSION LECTURER

DEPT. OF CHEMISTRY, SMSD GOVT COLLEGE NANGAL CHOUDHARY

DATE	CURICULUM (BSc VI SEM) session 2023-24
12-01-24 to 27-01-24	Section—C Bioinorganic Chemistry Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin.
29-01-24 to 03-02-24	Biological role of alkali and alkaline earth metal ions with special reference to Ca ₂₊ . Nitrogen fixation. Section—D
05-02-24 to 10-02-24	Sil icones and Phosphazenes Silicones and phosphazenes, their preparation, properties, structure and uses
12-02-24 to 17-02-24	Organic chemistry SECTION – A Heterocyclic Compounds-I Introduction: Molecular orbital picture and aromatic characteristics of pyrrole, furan, thiophene and pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution.
19-02-24 to 24-02-24	Mechanism of nucleophilic substitution reactions in pyridine derivatives. Comparison of basicity of pyridine, piperidine and pyrrole
26-02-24 to 02-03-24	SECTION – B 1. Heterocyclic Compounds-II Introduction to condensed five and six- membered heterocycles. Prepration and reactions of indole, quinoline and isoquinoline with special reference to
04-03-24 to 09-03-24	
	Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers,
18-03-24 to 22-03-24	detergents alkyl and aryl sulphonates.
	SECTION – C 1. Organic Synthesis <i>via</i> Enolates Acidity of -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate.

01-04-24 06-04-24	to	Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
08-04-24 13-04-24	to	2. Synthetic Polymers Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler-Natta polymerization and vinyl polymers. Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy re sins and polyurethanes. Natural and synthetic rubbers.
15-04-24 20-04-24	to	Section – D Amino Acids, Peptides& Proteins Classification, of amino acids. Acid-base behavior, isoelectric point and electrophoresis. Preparation of -amino acids. Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid—phase peptide synthesis. Structures of peptides and proteins: Primary & Secondary structure.
21/04/24 onward		Revision