TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Ms. MANITA .....

CLASS AND SECTION ..... B.Sc. Ist Major .....

SUBJECT ..... Chemistry .....

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Non-aq. solvent, types, characteristics, solvent concept
20-1-26	Liq. NH_3 and SO_2, Hard & Soft Acid & Bases.
21-1-26	
22-1-26	
24-1-26	
WEEK 4	
27-1-26	Application of HSAB Principle, Noble gases.
28-1-26	
29-1-26	
30-1-26	
31-1-26	
WEEK 5	
2-2-26	Clathrates, Prep. & properties, Chemistry of xenon
3-2-26	Str. & Bonding of xenon fluorides oxides, Nature of Bonding.
4-2-26	
5-2-26	
6-2-26	
7-2-26	
WEEK 6	

9-2-26	Valence bond treatment and MO treatment.
10-2-26	VSEPR Theory, 1st law of thermodynamics
11-2-26	
13-2-26	
14-2-26	
WEEK 7	
16-2-26	Heat capacity, Joules law, Joule Thomson coff.
17-2-26	Invession temp. Calculation of work & heat
18-2-26	
19-2-26	
20-2-26	
21-2-26	
WEEK 8	
23-2-26	dU & dH for the expension of ideal gases.
24-2-26	& real gases. Kirchoff's Eqn. Second law of thermodynamics
25-2-26	
26-2-26	
27-2-26	
28-2-26	
WEEK 9	
9-3-26	Carnot cycle and its theorm, Entropy.
10-3-26	Entropy as a criterion of spontaneity and eqm.
11-3-26	
12-3-26	
13-3-26	
14-3-26	
WEEK 10	
16-3-26	Hydrocarbons – Physical & Chemical Properties
17-3-26	free Radical substitution, Halogenation
18-3-26	
19-3-26	
20-3-26	
21-3-26	
WEEK 11	

24-3-26	Isomerism, E_1, E_2, E_1cb reactions, Saytzeff rule.
25-3-26	
27-3-26	
28-3-26	
WEEK 12	
30-3-26	Markownikoff rule, Syn and anti addition
31-3-26	addition of H_2, X_2, Hydroboration - oxidation.
1-4-26	
2-4-26	
3-4-26	

4-4-26	
WEEK 13	
6-4-26	General methods of prep: electrophilic and nucleophilic
7-4-26	alkylation of terminal alkynes.
8-4-26	
9-4-26	
10-4-26	
11-4-26	
WEEK 14	
13-4-26	Concept of aromaticity, cyclic carbocations.
15-4-26	
16-4-26	
17-4-26	
18-4-26	
WEEK 15	
20-4-26	Halogenation, Nitration, Sulphonation, Acylation.
21-4-26	Classification of dienes. Diels alder rea^n.
22-4-26	
23-4-26	
24-4-26	
25-4-26	
WEEK 16	
27-4-26	Revision
28-4-26	Revision.
29-4-26	
30-4-26	
1-5-26	
2-5-26	

WEEK 17

4-5-26	
5-5-26	
6-5-26	

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

(2025-26)

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ...Dr. Mamta Duhan...

CLASS AND SECTION ...B.Sc. II (Major) 4th Sem

SUBJECT ...Chemistry...

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	Co-ordination Compd, Ligands, C.N., O.S. C.F. IUPAC
16-1-26	Isomerism, C.N. 4 & 6, Chelate effect, VBT & Application
17-1-26	
WEEK 3	
19-1-26	
20-1-26	
21-1-26	
22-1-26	
24-1-26	Inner & Outer orbital complex, limitation of VBT
WEEK 4	
27-1-26	
28-1-26	
29-1-26	
30-1-26	CFT, Types of mag. behaviour, magnetic susceptibility
31-1-26	Spin only Formula, L-S coupling, correlation of μ_s & μ_{eff}.
WEEK 5	
2-2-26	
3-2-26	
4-2-26	
5-2-26	
6-2-26	Orbital Contrib", Applic" to μ, Thermodynamic stability
7-2-26	classes of Unit - I
WEEK 6	

9-2-26	
10-2-26	
11-2-26	
13-2-26	Factors affecting stability, SubstRxn, Sq: planar complex.
14-2-26	Class test of Unit - II
WEEK 7	
16-2-26	
17-2-26	
18-2-26	
19-2-26	
20-2-26	Int. rate for 1st, 2nd & 3rd order Rxn. Half period.
21-2-26	Methods to det order, Arrhenius equation.
WEEK 8	
23-2-26	
24-2-26	
25-2-26	
26-2-26	
27-2-26	Simple collision theory for unimolecular & bimolecular collision
28-2-26	T.S.T. Eq. const & free energy.
WEEK 9	
9-3-26	
10-3-26	
11-3-26	
12-3-26	
13-3-26	Concept of chemical pot. Derivn of law of Chemical eqm.
14-3-26	Temp dependence of Keq, Van't Hoff Rxn isochore, isotherm
WEEK 10	
16-3-26	
17-3-26	
18-3-26	
19-3-26	
20-3-26	Le-Chatlier's principle & application clapeyron eqn
21-3-26	Clausius - Clapeyron eqn & its application.
WEEK 11	

24-3-26	
25-3-26	
27-3-26	Class Test of Unit - III
28-3-26	Alcohols - preparation, Rxn & NO, HX, esterification,
WEEK 12	
30-3-26	
31-3-26	
1-4-26	
2-4-26	
3-4-26	Oxidation, Oppenauer oxidation.

4-4-26	Pinacol - Pinacolon rearr. Dienol prep^{n}.
WEEK 13	
6-4-26	
7-4-26	
8-4-26	
9-4-26	
10-4-26	Acidic character of phenol, Reas of Hydroxyl grp & its effect
11-4-26	Sub^{n} & Kolbe Reimer Tiemer Reas, Gattermann
WEEK 14	
13-4-26	
15-4-26	
16-4-26	
17-4-26	Houben - Hoesch cond^{n}, Schotten - Baumann Rxn.
18-4-26	Cleavage of Ethers with HI
WEEK 15	
20-4-26	
21-4-26	
22-4-26	
23-4-26	
24-4-26	Revision
25-4-26	Class Test of Unit - IV
WEEK 16	
27-4-26	
28-4-26	
29-4-26	
30-4-26	
1-5-26	Revision
2-5-26	doubt session.

WEEK 17

4-5-26
5-5-26
6-5-26

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

(2025-26)

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Dr. Monika Dubas

CLASS AND SECTION B.Sc. II (Minor) 4th sem

SUBJECT Chemistry

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Valence e⁻, ionic bond, covalent bond, bond parameters,
20-1-26	Lewis str, polar character, VBT & limitations
21-1-26	
22-1-26	
24-1-26	
WEEK 4	
27-1-26	Resonance, Geometry of covalent bond, VSEPR theory.
28-1-26	
29-1-26	
30-1-26	
31-1-26	
WEEK 5	
2-2-26	Hybridisation, s, p, d, f orbitals & shape of simple molecules
3-2-26	MOT of homonuclear diatomic molecule, H-bond & types.
4-2-26	
5-2-26	
6-2-26	
7-2-26	
WEEK 6	

9-2-26	Vander waal forces, system, typ^ns, surroundi
10-2-26	Test of Unit - I
11-2-26	
13-2-26	
14-2-26	
WEEK 7	
16-2-26	Extensive & intensive properties, state functio
17-2-26	variables, Laws of thermo - U, H, Cp, Cv, S,
18-2-26	
19-2-26	
20-2-26	
21-2-26	
WEEK 8	
23-2-26	Cv, Cp measurement of ΔU & ΔH, Hess's law
24-2-26	Enthalpy of bond disscn, combustion, formatio
25-2-26	
26-2-26	
27-2-26	
28-2-26	
WEEK 9	
9-3-26	Atomisation, sublimation, phase transn, ionisn
10-3-26	Test of Unit - II
11-3-26	
12-3-26	
13-3-26	
14-3-26	
WEEK 10	
16-3-26	Dynamic nature of eqm, law of mass action,
17-3-26	Keq, factors, Le-chatlier principle, Acid-base theor
18-3-26	
19-3-26	
20-3-26	
21-3-26	
WEEK 11	
24-3-26	Ionisn of acids & bases, strong & weak electrolytes.
25-3-26	
27-3-26	
28-3-26	
WEEK 12	
30-3-26	Degree of ionisation, acidic & basic strengths
31-3-26	pH, salt hydrolysis, buffer, Ksp, common ion effe
1-4-26	
2-4-26	
3-4-26	

4-4-26	
WEEK 13	
6-4-26	Test of Unit - III
7-4-26	Stc of haloalkanes, 1°, 2°, 3°, preparation, Rxn.
8-4-26	
9-4-26	
10-4-26	
11-4-26	
WEEK 14	
13-4-26	Nu sub^n with mech. & types, SN^1, SN^2, E^1, E^2, E^1cb
15-4-26	
16-4-26	
17-4-26	
18-4-26	
WEEK 15	
20-4-26	Hydrolysis, nitrite, nitro, Form?
21-4-26	Williamson's ether synthesis.
22-4-26	
23-4-26	
24-4-26	
25-4-26	
WEEK 16	
27-4-26	Revision
28-4-26	class test of Unit - IV
29-4-26	
30-4-26	
1-5-26	
2-5-26	

WEEK 17

4-5-26	Revision
5-5-26	Revision.
6-5-26	

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Ms. MAMTA & Ms. MONIKA

CLASS AND SECTION B.Sc. IIIrd

SUBJECT Chemistry

WEEK 1	DESCRIPTION
5-1-26	Organic chemistry – organometallic chemistry Prep^n
6-1-26	properties and bonding of alkyles of Li, Al's, Hg.
7-1-26	Mononuclear Carbonyls and the nature of bonding
8-1-26	Metal Carbonyls & Acids and Bases.
9-1-26	Arrhenius, Bronsted - Lowry and Lux-flood concept.
10-1-26	Relative strength of acid and Buses, electronegativity.
WEEK 2	
12-1-26	Symbiosis, Electronegativity and hardness and Softness
13-1-26	Essential and trace elements in biological Proces.
14-1-26	Biological role of alkali and alkaline earth
15-1-26	metals ions., Nitrogen fixation
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Silicones and Phosphazenes, their preparation,
20-1-26	properties, str. and uses.
21-1-26	Revision
22-1-26	Revision.
24-1-26	Introduction of spectroscopy.
WEEK 4	
27-1-26	Concept of pot. energy curves for bonding and antibonding.
28-1-26	qualitative description of selection rules FRC
29-1-26	Frank - Condon principles.
30-1-26	Qualitative description of Sigma and Pic. H.O.
31-1-26	M.O. Theory
WEEK 5	
2-2-26	Introduction of Photochemistry
3-2-26	Interaction of radiation with matter
4-2-26	Diff. b/w thermal & photochemical process.
5-2-26	Laws of photochemistry - Grotthus - Draper law
6-2-26	Stark - Einstein law. Jablonski diagram
7-2-26	Description of flurescence, phosphorescence.
WEEK 6	

9-2-26	Qualitative description of fluorescence
10-2-26	Phosphorescence & Non-Radiative Processes
11-2-26	Transfer process.
13-2-26	Dilute solutions.
14-2-26	Ideal solutions and Non-ideal solutions.
WEEK 7	
16-2-26	Methods of expressing conc. of solutions
17-2-26	Activity Coefficient, Colligative properties.
18-2-26	Relative lowering of vapour pressure.
19-2-26	Mole. wt. determinations. mol. wt.
20-2-26	Osmosis law of osmotic press.
21-2-26	Determination of mol. wt.
WEEK 8	
23-2-26	Freezing pt. Thermodynamic derivation of mol. wt
24-2-26	Depression in freezing pt.
25-2-26	Experimental methods of determining of colligative property.
26-2-26	Abnormal molar mass & Degree of Dissociation.
27-2-26	Association of solutes
28-2-26	Phase, Component and degree of freedom
WEEK 9	
9-3-26	Thermodynamic derivation of Gibb's phase rule.
10-3-26	Water & sulphur system
11-3-26	Eutectic pont: Pb-Ag System
12-3-26	Revision.
13-3-26	Revision.
14-3-26	Heterocyclic comps. Mol. orbital picture
WEEK 10	
16-3-26	Aromatic characteristic of Pyrrole, furan
17-3-26	Thiophene and Pyridine
18-3-26	Methods of synthesis and chemical reac. Electrophilic substitution.
19-3-26	
20-3-26	Introduction of condensed five & six membered rings.
21-3-26	Prep. & reac. of Indole, quinoline and Isoquinoline.
WEEK 11	

24-3-26	Organosulphur - Structural features.
25-3-26	Methods of formation and chemical reac.
27-3-26	Synthetic detergents.
28-3-26	Alkyl and aryl sulphonates.
WEEK 12	
30-3-26	Acidity of hydrogens. alkylation
31-3-26	Claisen Condensation.
1-4-26	Keto enol tautomerism.
2-4-26	Synthetic polymers.
3-4-26	Free radical polymerization.

4-4-26	Step growth polymerisation.
WEEK 13	
6-4-26	Polyester, phenol formaldehyde.
7-4-26	Natural & Synthetic rubber.
8-4-26	Revision.
9-4-26	Amino acids, isoelectric point.
10-4-26	Electrophesis.
11-4-26	Prep^n of amino acids.
WEEK 14	
13-4-26	Nomenclature of peptides and proteins
15-4-26	Classification of Proteins.
16-4-26	peptide str. determination.
17-4-26	Selective hydrolysis of peptides.
18-4-26	Classification.
WEEK 15	
20-4-26	Solid phase peptide Synthesis.
21-4-26	Str. of peptides and proteins.
22-4-26	primary str.
23-4-26	Secondary str.
24-4-26	Revision.
25-4-26	Revision.
WEEK 16	
27-4-26	Prep^n of amino acids.
28-4-26	Acid Base Behaviour
29-4-26	Revision
30-4-26	Revision
1-5-26	Revision.
2-5-26	Revision

WEEK 17

4-5-26	Revision
5-5-26	Revision
6-5-26	Revision.

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Ms. Manik A

CLASS AND SECTION M.Sc (I)

SUBJECT Inorganic chemistry

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	Energy level in Diatomic molecule. Introduction to electronic transition.
13-1-26	Selection Rules for EAS, P-d Intermixing.
14-1-26	Quantum concept of NMR, Larmor frequency.
15-1-26	
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Coupling const. app. of spin-spin coupling in st. det. of Inorganic compound
20-1-26	Population excess and type of Relaxation. Standard Reference for Inorganic
21-1-26	Calculation of Rate for NMR, B_2H_6, $Al(BH_4)_3$.
22-1-26	
24-1-26	
WEEK 4	
27-1-26	Characteristic of Metal hydrides complex.
28-1-26	Range principal Region of IR spectra. Hooke's Law and its application.
29-1-26	
30-1-26	
31-1-26	
WEEK 5	
2-2-26	Applic. of Inorganic compound.
3-2-26	Organometal compound and its related with hapticity.
4-2-26	Introduction of clusters. LNCC and HNCC of clusters having atoms
5-2-26	
6-2-26	
7-2-26	
WEEK 6	

9-2-26	Polyhedral Skeleton electron pair approach. Wades Rule.
10-2-26	Carboranes, applicat of wades Rule, 2 intl ion.
11-2-26	Isolobal analogy, dinuclear cluster
13-2-26	
14-2-26	
WEEK 7	
16-2-26	Elementary theory of magneto chemistry dia, para, ferro and antiferro.
17-2-26	Concept of magnetic susceptibility, method of det. of magnetic susceptibility
18-2-26	curie and curie weiss law. Calculation of magnetic moments of Cr^{3+} and Co^{2+}.
19-2-26	
20-2-26	
21-2-26	
WEEK 8	
23-2-26	Lindel facts of dij and diagg. orbital contribution to the Mag. moment
24-2-26	quenching of magnetic moment by crystal field. app. of magnetochemistry
25-2-26	Magnetic moment of crystal field, app. of magnetochemistry.
26-2-26	
27-2-26	
28-2-26	
WEEK 9	
9-3-26	Magnetic exchang coupling and spin state crossover in co-ordination
10-3-26	spectroscopic ground state, spin orbit coupling in free metal ion.
11-3-26	free metal ion in 3d series of transition metal.
12-3-26	
13-3-26	
14-3-26	
WEEK 10	
16-3-26	Ground state term of transition metal. Racah Parameter and nephelauxetic
17-3-26	orgel diagram (d^1 to d^{10}) and T.S diagram of transition metal.
18-3-26	elementary concept of Dq of B and β Parameter.
19-3-26	
20-3-26	
21-3-26	
WEEK 11	

24-3-26	effect of John teller distortion of electronic spectra
25-3-26	Revision
27-3-26	
28-3-26	
WEEK 12	
30-3-26	orgel diagram of d^1 to d^{10} transition metal complexes
31-3-26	T.S diagram Revision
1-4-26	Presentation in class.
2-4-26	
3-4-26	

4-4-26	
WEEK 13	
6-4-26	Hooke's law in the application of determination of stretching
7-4-26	Applications of IR spectroscopy of Inorganic compounds.
8-4-26	Determination of coordination site.
9-4-26	
10-4-26	
11-4-26	
WEEK 14	
13-4-26	Identification of cis and trans isomers, st. Elucidation of covalent
15-4-26	H-Bonding of IR Spectroscopy.
16-4-26	
17-4-26	
18-4-26	
WEEK 15	
20-4-26	Dinuclear cluster (Metal cluster containing M-M Bond.
21-4-26	Elementary concept of Dq, racah B and β parameters
22-4-26	effect of Jahn-Teller distortion of electronic spectra
23-4-26	
24-4-26	
25-4-26	
WEEK 16	
27-4-26	Charge transfer spectra. Electronic spectra of molecular addition
28-4-26	molecular addition compound of iodine.
29-4-26	Revision
30-4-26	
1-5-26	
2-5-26	

WEEK 17

4-5-26	Revision
5-5-26	Revision
6-5-26	Revision

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR: Dr. Monika Duhan & Ms. Manita

CLASS AND SECTION: M.Sc. (P) Sem - III (2025-26)

SUBJECT: Physical chemistry - III

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	Sym elementary & operations, point grps & properties
13-1-26	Group multiplication table, schonflies symbol.
14-1-26	Representation of Groups by matrics
15-1-26	
16-1-26	
17-1-26	Point grps of H_2O, NH_3, CH_4, SF_6, CHU_3, BF_3, C_6H_6
WEEK 3	
19-1-26	Point grps of C_5H_5, NSF_3, C_2H_2, HCl, HCN, CO_2 etc.
20-1-26	Irreducible representation of groups
21-1-26	The Great Orthogonality theorem (without Proof)
22-1-26	
24-1-26	Importance of Great Orthogonality theorem
WEEK 4	
27-1-26	character tables and its applications
28-1-26	Test of Unit - I
29-1-26	
30-1-26	
31-1-26	Spectroscopy - Electromagnetic radiations,
WEEK 5	
2-2-26	Interaction of electromagnetic radiation with matter.
3-2-26	Regions of spectrum, widths & intensity of transition.
4-2-26	Resolving Power, Transition probability
5-2-26	
6-2-26	
7-2-26	Rotational spectra - Diatomic molecule, non-rigid rotor
WEEK 6	

9-2-26	Effect of isotopic substitutions.
10-2-26	Linear & symmetri top polyatomic molecules
11-2-26	Vib. Vib. Rotational — Vibrating diatomic molecule
13-2-26	
14-2-26	Anharmonicity, diatomic vibrating rotor.
WEEK 7	
16-2-26	Interaction of rotation and vibrations
17-2-26	Vibrational spectra of polyatomic molecules
18-2-26	Analysis by infrared techniques
19-2-26	
20-2-26	
21-2-26	Electronics Spectra - Electronic spectra of diatomic
WEEK 8	
23-2-26	Vib coarse str. and rot fine str. of electronic band.
24-2-26	Frank-condon principle. Total diagram.
25-2-26	Photochemistry - Basic Concepts of photochemistry
26-2-26	
27-2-26	
28-2-26	Rate const & life time of excited electronic states
WEEK 9	
9-3-26	Charge transfer transition, frank-condon principle
10-3-26	Emission spectra, env. effect on abs. & emission spectra.
11-3-26	Wigner's spin conservation rule, Modes of decay
12-3-26	
13-3-26	
14-3-26	Quenching of flourescence, delayed flourescence
WEEK 10	
16-3-26	Kinetics of collisional quenching
17-3-26	stern-Volmer equation, Excimer & exciplex form & decay
18-3-26	Tech for the study of transient species in photochem.
19-3-26	
20-3-26	
21-3-26	Applications of Lasers in photochemical kinetics.
WEEK 11	

24-3-26	Electro - Analytical & Potentiometric method :- Polarisation
25-3-26	Test of Unit - II
27-3-26	
28-3-26	Concept of liq. Junction potential, reference electrode
WEEK 12	
30-3-26	Metallic redox indicator electrode.
31-3-26	Membrane and ion-selective electrode
1-4-26	electrical properties of the membrane
2-4-26	
3-4-26	

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CTION

4-4-26	Glass electrode with special reference to H^+
WEEK 13	
6-4-26	
7-4-26	ISE, K^+ ions, operation of solid membrane electrode
8-4-26	Liq. membrane electrode & Coat-ed type ion electrode
9-4-26	Applications of ion selective electrode in
10-4-26	
11-4-26	Determination of some toxic metals
WEEK 14	
13-4-26	Det. of some anions (F^-, I^-, Br^-, I^-, NO_3^-)
15-4-26	Revision
16-4-26	
17-4-26	
18-4-26	class Test of Unit - IV
WEEK 15	
20-4-26	Doubt session
21-4-26	Revision
22-4-26	Revision
23-4-26	
24-4-26	
25-4-26	class Test of Unit - IV
WEEK 16	
27-4-26	Revision
28-4-26	Revision
29-4-26	Revision
30-4-26	
1-5-26	
2-5-26	Revision

WEEK 17

4-5-26	Revision
5-5-26	Revision
6-5-26	Revision

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Ms. MANITA & Ms. Monika.

CLASS AND SECTION ..... M.Sc. (P.) .....

SUBJECT ..... Organic Chemistry .....

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	Ultraviolet and visible spectroscopy principle, Energy level transition.
13-1-26	
14-1-26	
15-1-26	
16-1-26	Chromophores, auxochromes, Bathochromic Shift.
17-1-26	Hypochromic shift. IR spectroscopic.
WEEK 3	
19-1-26	Principle, fingerprint region, stretching.
20-1-26	NMR spectroscopy, Chemical shift
21-1-26	
22-1-26	
24-1-26	Shielding and deshielding
WEEK 4	
27-1-26	Internal standards, Spin coupling
28-1-26	
29-1-26	
30-1-26	Equivalent and Non- equivalent
31-1-26	Hydrogen bonding, Chemical shift.
WEEK 5	
2-2-26	Application of U.V. IR & NMR
3-2-26	St. elucidation of organic comps.
4-2-26	
5-2-26	
6-2-26	S_N1, S_N2 Reaⁿ.
7-2-26	S_Ni & SET Mixed Reaⁿ.
WEEK 6	

9-2-26	Effect of Substrate, NGP.
10-2-26	anchimeric assistance
11-2-26		
13-2-26	Ar SN1, Ar SN2, Benzyne, SRN1
14-2-26	Effects of substrate, leaving gp.
WEEK 7	
16-2-26	Von Richter and Smiles Rearrangement.
17-2-26	SE_1, SE_2 & SE_i mechanism.
18-2-26	
19-2-26	
20-2-26	Effect of substrate, L.G., Solvent, Reactivity.
21-2-26	Reactivity in substrate, Vilsmeier Rea^n.
WEEK 8	
23-2-26	Pericyclic Rea^n, frontier orbital of ethylene,
24-2-26	1-3 butadiene, classification.
25-2-26	
26-2-26	
27-2-26	$4n, 4n+2$ System., Sigmatropic Rearrangement
28-2-26	3,3', 5-5, Sigmatopic Rearrangement
WEEK 9	
9-3-26	Suprafacial and antafacial shift.
10-3-26	Revision.
11-3-26	
12-3-26	
13-3-26	Mech. of metal hydride reduction.
14-3-26	Saturated and unsaturated Carbonyl Comps.
WEEK 10	
16-3-26	Addition of grignard Reagents.
17-3-26	Organozinc and organolithium Reagents.
18-3-26	
19-3-26	
20-3-26	Unsaturated Carbonyl Comps.
21-3-26	Revision.
WEEK 11	

24-3-26	Wittig Rea^n. & Mech.
25-3-26	
27-3-26	Aldol Condensation, Knoevenagel
28-3-26	Claisen, Mannich Rea^n.
WEEK 12	
30-3-26	Revision
31-3-26	Revision.
1-4-26	
2-4-26	
3-4-26	Perkin & Stobbe Rea^n.

4-4-26	Perkin Reaction.
WEEK 13	
6-4-26	Revision
7-4-26	Revision.
8-4-26	
9-4-26	
10-4-26	Hydrolysis of esters.
11-4-26	" " Amides.
WEEK 14	
13-4-26	Revision.
15-4-26	
16-4-26	
17-4-26	Ammonolysis of esters.
18-4-26	Revision.
WEEK 15	
20-4-26	Revision
21-4-26	Revision
22-4-26	
23-4-26	
24-4-26	Assignments.
25-4-26	Revision.
WEEK 16	
27-4-26	Revision
28-4-26	Revision
29-4-26	
30-4-26	
1-5-26	
2-5-26	

WEEK 17

4-5-26	Revision
5-5-26	Revision.
6-5-26	

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TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Ms. Manital Ass. .....

CLASS AND SECTION ..... M.sc (F.) .....

SUBJECT ..... Inorganic - VI .....

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	Introduction and Explanation of synthesis reaction and application of butyl Lithium
10-1-26	Grignard Reagent, organo aluminium, Organo Zinc agent.
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	
16-1-26	Organo copper in organic synthesis : Explanation of Diff. type of Bond
17-1-26	Alkyl and Aryls of Transition metal in stability of Synthesis
WEEK 3	
19-1-26	
20-1-26	
21-1-26	
22-1-26	Explanation of Reaction oxidative addition, C-H activation and cyclometalation
24-1-26	M-Bond metathesis, Reductive Elimination Reaction modification of ligand / alkels.
	hydrogen migration.
WEEK 4	
27-1-26	
28-1-26	
29-1-26	
30-1-26	α- hydrogen elimination, α, β - Hydrogen abstraction
31-1-26	ligand Substitution Rxn, Associate and dissociate Mech.
WEEK 5	
2-2-26	
3-2-26	
4-2-26	
5-2-26	
6-2-26	Hapticity change in multidendate ligand.
7-2-26	Homogeneous catalysis - Alkene hydrogenation - Wilkinson catalyst
WEEK 6	

9-2-26	
10-2-26	
11-2-26	
13-2-26	hydroformylation or oxo process, oxidation of olefins, wacker process,
14-2-26	Monsanto acetic acid Synthesis, ziegler process, olefin metathesis.
WEEK 7	
16-2-26	
17-2-26	
18-2-26	
19-2-26	
20-2-26	Revision.
21-2-26	Introduction of Heterogeneous catalysis.
WEEK 8	
23-2-26	
24-2-26	
25-2-26	
26-2-26	
27-2-26	Ziegler Natta Polymerization Syn gas and explanation.
28-2-26	Fischer Tropsch process. Zeolites as catalysts
WEEK 9	
9-3-26	
10-3-26	
11-3-26	
12-3-26	
13-3-26	Hapticity change in Indenyl, fluorenyl, allyl explanation
14-3-26	Introduction of Metal π-complexes.
WEEK 10	
16-3-26	
17-3-26	
18-3-26	
19-3-26	
20-3-26	Transition of metal π complexes of unsaturated molecule
21-3-26	Nature of Bonding and structural features, preparation and properties
WEEK 11	
24-3-26	SI
25-3-26	
27-3-26	St. and Prop of MCp_2 complexes ferrocene Rx^n of Metal Sandwich
28-3-26	ferrocene Rx^n of metal Sandwitch Compounds.
WEEK 12	
30-3-26	
31-3-26	
1-4-26	
2-4-26	
3-4-26	Bent Sandwitch compound and Important Rx^n Nucleophilic and electrophilic attack on ligands.

4-4-26	Electrophilic attack in alkene, alkynes, allyl organo syste
WEEK 13	
6-4-26	
7-4-26	
8-4-26	
9-4-26	
10-4-26	Fluxionality and dynamic equilibria in Compound
11-4-26	acyclic alkenes
WEEK 14	
13-4-26	
15-4-26	
16-4-26	
17-4-26	σ-bonded and π-Bonded Cyclic alkenes.
18-4-26	Revision.
WEEK 15	
20-4-26	
21-4-26	
22-4-26	
23-4-26	
24-4-26	Rotation of ligand on Metals.
25-4-26	Test of unit I and II.
WEEK 16	
27-4-26	
28-4-26	
29-4-26	
30-4-26	
1-5-26	ligand scrambling on Metal.
2-5-26	Revision.

WEEK 17

4-5-26
5-5-26
6-5-26

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TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Dr. Mamta (Ass. Prof.)

CLASS AND SECTION M.Sc (F)

SUBJECT Inorganic IV

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	Electrochemical and chemical Rxn of Saturated Calomel electrode.
9-1-26	DME and Nernst equation. Basic Principle of Polarography
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	Introduction and concept Ilkovic equation. and explanation.
16-1-26	Polarographic wave and their mathematical expression.
17-1-26	
WEEK 3	
19-1-26	
20-1-26	
21-1-26	
22-1-26	Half wave potential and its application, Determination of electron in Redox Rxn.
24-1-26	
WEEK 4	
27-1-26	
28-1-26	
29-1-26	factor affecting $E_{\frac{1}{2}}$, oxygen Interference, maxima and its type.
30-1-26	Determination of s^t constant of complex by Polarographic
31-1-26	catalytic hydrogen wave. Amperometric Titration.
WEEK 5	
2-2-26	
3-2-26	
4-2-26	
5-2-26	App. and tech. of Amperometry titration.
6-2-26	Superimposed A.c polarography.
7-2-26	
WEEK 6	

9-2-26	
10-2-26	
11-2-26	
13-2-26	Explanation of chronopotentiometry, Chronoamperometry.
14-2-26	
WEEK 7	
16-2-26	
17-2-26	
18-2-26	
19-2-26	Introduction and Explanation of coulometry
20-2-26	Volumetry and give add stirred solution with an electrode.
21-2-26	
WEEK 8	
23-2-26	
24-2-26	
25-2-26	
26-2-26	Explain of HMDE and Rotating Platinum electrode, gold electrode
27-2-26	Carbon paste, glassy carbon electrode and graphite electrode.
28-2-26	
WEEK 9	
9-3-26	
10-3-26	
11-3-26	
12-3-26	Introduction of DTA and general Principle, different thermogram
13-3-26	TG. DTA Application.
14-3-26	
WEEK 10	
16-3-26	
17-3-26	
18-3-26	
19-3-26	Revision.
20-3-26	Atomic absorption spectroscopy. and this principle.
21-3-26	
WEEK 11	

24-3-26	
25-3-26	
27-3-26	Atomic Absorption Sensitivity and detection limit.
28-3-26	
WEEK 12	
30-3-26	
31-3-26	
1-4-26	
2-4-26	Interferences in AAS and this limitation.
3-4-26	Revision.

4-4-26	
WEEK 13	
6-4-26	
7-4-26	
8-4-26	
9-4-26	Atomic emission spectroscopy and their principle.
10-4-26	Source of excitation of A.C.S.
11-4-26	
WEEK 14	
13-4-26	
15-4-26	
16-4-26	Explanation of qualitative and quantitative analysis
17-4-26	Revision.
18-4-26	
WEEK 15	
20-4-26	
21-4-26	
22-4-26	
23-4-26	Amperometry titration & their techniques.
24-4-26	Chronoamperometry of diff Rxn.
25-4-26	
WEEK 16	
27-4-26	
28-4-26	
29-4-26	
30-4-26	Revision. Presentation of diff Rxn.
1-5-26	Test. and Revision. & discussion of Rxn.
2-5-26	

WEEK 17

4-5-26	
5-5-26	
6-5-26	

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TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..Ms. Manika (Ass. Prof.).....

CLASS AND SECTION ....M.sc (F) Inorganic Sem IV

SUBJECT .....

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	Introduction of Medicinal chemistry and Deficiency diseases
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	carcinogens and carcinostatic, Zinc in tumor growth and inhibition
13-1-26	Anticancer activity and Mech. of Platinum complexes.
14-1-26	
15-1-26	
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Anticancer activity of Rhodium, Copper and Gold complexes and Selenium complexes
20-1-26	Drugs in hypo or hyper activity of thyroid, Inorganic in dental caries
21-1-26	
22-1-26	
24-1-26	
WEEK 4	
27-1-26	clinical disorder of alkali and alkaline earth metal and lithium drugs in Psychiatry
28-1-26	
29-1-26	
30-1-26	
31-1-26	
WEEK 5	
2-2-26	Toxicity of heavy and their detoxification, Role of selenium, Poliglid system.
3-2-26	Mech. of metal ion-Induced toxicity Interrelationship orally.
4-2-26	
5-2-26	
6-2-26	
7-2-26	
WEEK 6	

9-2-26	Revision and test of unit I. Metal in gut.
10-2-26	Ligand Induced toxicity, Interference with Hemoglobin
11-2-26	
13-2-26	
14-2-26	
WEEK 7	
16-2-26	Interfere with metalloenzymes, Beneficial effect of ligand chelation.
17-2-26	Carcinogenic ligand, carcinostatic ligand.
18-2-26	
19-2-26	
20-2-26	
21-2-26	
WEEK 8	
23-2-26	Alkylating agent as anticancer drugs.
24-2-26	Thiosemicarbazones as anticancer drugs.
25-2-26	
26-2-26	
27-2-26	
28-2-26	
WEEK 9	
9-3-26	Revision. Lithium drugs in Psychiatry.
10-3-26	Introduction of Ligand therapy
11-3-26	
12-3-26	
13-3-26	
14-3-26	
WEEK 10	
16-3-26	Macrocyclic antibiotic ligands and Revision
17-3-26	Mechanism of probable of the drugs.
18-3-26	
19-3-26	
20-3-26	
21-3-26	
WEEK 11	

24-3-26	Antibacterial and antiviral activity of chelating Agents.
25-3-26	
27-3-26	
28-3-26	
WEEK 12	
30-3-26	Chelating agents of the Metal complexes.
31-3-26	Mechanism of the aspirin chelation theory.
1-4-26	
2-4-26	
3-4-26	

4-4-26	
WEEK 13	
6-4-26	Revision test 1 Application of Inorganic Compounds
7-4-26	Explanation of Polyaminocarboxylic acid.
8-4-26	
9-4-26	
10-4-26	
11-4-26	
WEEK 14	
13-4-26	Interference of Hemoglobin in oxygen transport.
15-4-26	
16-4-26	
17-4-26	
18-4-26	
WEEK 15	
20-4-26	Revision of the Polyethylene amines.
21-4-26	Theory of Chelating agent.
22-4-26	
23-4-26	
24-4-26	
25-4-26	
WEEK 16	
27-4-26	Thiosemicarbazones of anticancer drugs.
28-4-26	Alkali and Alkaline earth metal. Phy amines and Chelating drugs
29-4-26	
30-4-26	
1-5-26	
2-5-26	

WEEK 17

4-5-26	Class Discussion.
5-5-26	Revision.
6-5-26	