TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

NAME/PERIOD (TEACHER ID)	9:00-10:00 I	10:00-11:00 II	11:00-12:00 III	12:00-1:00 IV	1:00-2:00 V	2:00-3:00 VI	3:00-4:00 VII	SIGNATURE
Dr. Anita Singal (11947)		**BSC 3rdTH.** SEC C (5,6)2C	←	**B.Sc 3rdPr.** (1-6) LAB 3C →	**B.SC II PR. MINOR Hons** (3-6) LAB 3C **B.SC III H.Sc.** (1) LAB 3C			
Dr.SONIKA (12685)	**B.Sc 2ndPr. Major** (3-4) 5C **BSC 3rdTH.** SEC A (1)5B **BSC 3rdTH.** SEC B(5,6)2C ←	→	←	**B.Sc 3rdPr.** (1-6) 6B →				
Dr. DEEPAK SANGWAN (12199)	**BSC 3rdTH.** SEC B(3,4)2C **BSC 3rdTH.** SEC A(2) 2C ←	**B.Sc. 2nd Pr. major** (5-6) LAB 6B →	←	**B.Sc 3rdPr.** (1-2,5-6)LAB 6B →	**B.SC II PR. MINOR**.(3-6)7B ←			
Ms.POOJA CHAHAL (13000)	**B.SC I PR. MINOR Hons**.(3-4) 3C **BSC 3rdTH.** SEC A(6)5B SEC B(1,2)2C ←	**B.SC I PR. MINOR Hons**.(1-2) 3C	←	**B.Sc 3rdPr.** (3-6) 5C →	**B.SC II PR. MINOR**.(3-6)7B ←			
Ms.Shammy	**B.Sc 2ndPr. Major** LAB 3C (6) **BSC 3rdTH.** SEC A(3,4,5)5B ←	→	**B.SC III PR.** (3-4) 5C (1-2,5-6) 7B ←	→	**B.SC II PR. MINOR Hons** (5-6) LAB 5C			

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

NAME/PERIOD (TEACHER ID)	9:00-10:00 I	10:00-11:00 II	11:00-12:00 III	12:00-1:00 IV	1:00-2:00 V	2:00-3:00 VI	3:00-4:00 VII	SIGNATURE
Dr. Aarti	**B.Sc 2nd Pr. Major** (5-6) 5C ←	→	**B.Sc 3rd Pr.** (3-4) 5C ←	**B.Sc1stTH Skill Sec A**(5,6) 5B →	**B.SC I PR. Skill** (5-6) 7B **B.SC II Th. MINOR** Sec B(1,2) 2C **Yoga** (3-4) history 2	←	**B.SC I PR. MAJOR**(3-4) 7B →	
Ms. Pooja Chaudhary	←	**B.Sc 2nd Pr. Major** (3-4) 7B **BSC 3rd TH.** SEC C (1,2)2C →	**B.Sc 3rd Pr.** (1-4) LAB- ←	→	**Yoga**(5,6) SEC-stats	←	**B.SC I PR. MAJOR**(5-6) 5C →	
Dr. Suman	←	**B.Sc 2nd Pr. Major** LAB 7B (1-2) LAB 5C (3-4) →	**B.Sc2nd TH Major Sec A.**(3,4)5B **Yoga** (5,6) Maths+hindi		**B.SC I PR. Skill** (5-6) 6B **Yoga** (3-4) socio	. ←	**B.SC I PR. MAJOR**(5-6) LAB →	
Ms. Seema	←	**B.Sc 2nd Pr. Major** 3C (1-4) →	**B.Sc2nd TH Major Sec B.**(3,4) 49B **Yoga** Eng 1 (1-2)	**B.Sc1st TH Skill** Sec B(5,6)2C	**B.SC I PR. Skill** (5-6) 7B		**B.SC I PR. MAJOR**(5-6) 5C →	

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

NAME/PERIOD (TEACHER ID)	**9:00-10:00 I**	**10:00-11:00 II**	**11:00-12:00 III**	**12:00-1:00 IV**	**1:00-2:00 V**	**2:00-3:00 VI**	**3:00-4:00 VII**	**SIGNATURE**
Sangeeta	←	B.Sc 2nd Pr. Major 6B (5-6) →	**B.Sc2nd TH Major Sec D.**(3,4) ROOM	**B.Sc. Ist TH Major Sec C**(1,2) 5B	**B.SC I PR. Skill** (5-6) 6B **Yoga** POL SC(3,4)	**B.SC I PR. MAJOR** (1-4) 7B ←	→	
Ms. Manu Kumari	**On Maternity leave**							
Ms. Monika				Yoga SKT+eng skill(5,6)	**B.SC III Th H.Sc.** (3-5) 2C **B.SC III Pr. H.Sc**. (1,2,6) Lab 3C	**B.SC I PR. MAJOR** (1-6) 3C ←	→	

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

NAME/PERIOD (TEACHER ID)	9:00-10:00 I	10:00-11:00 II	11:00-12:00 III	12:00-1:00 IV	1:00-2:00 V	2:00-3:00 VI	3:00-4:00 VII	SIGNATURE
Dr. Nidhi	←	**B.Sc 2nd Pr. Major** (1-2,5-6) 3C →		**B.Sc1stTH Major Sec A**(1-2) 2C **B.SC II Th. MINOR Hons** Sec A(3-4)2B	**B.SC I PR. Skill** (5-6) LAB **B.SC II PR. MINOR Hon.** (3-4)LAB	**B.SC I PR. MAJOR**(3-4) 7B ←	→	
Ms. Preeti	←	**B.Sc 2nd Pr. Major** 3C (3,4) →	**YOGA SEC 2 ENG** (1-2)	**B.Sc1stTH Major Sec B**(1,2) 23B **B.Sc1stTH Minor Hons. Sec B**(3,4) 49B →	**B.SC I PR. Skill** (5-6) 7B **B.SC II PR. MINOR**(3-4)	**B.SC I PR. MAJOR**(5-6) 6B **B.SC II PR. MINOR**(1-2)6B ←	→	
Dr. Vijaita		**BSC 3rd TH.** SEC C(3-4)5B →		**Yoga** Sec B (1-2) HSc	**Yoga** Sec I History(3,4) **B.SC I PR. Skill** (5-6) 6B	**B.SC I PR. MAJOR**(1-6) ←	→	
Ms. Meena	**B.SC I PR. MINOR Hons**.(3-4) 6B **B.Sc 2nd Pr. Major 5 (7B)** ←	**B.SC I PR. MINOR Hons**.(1-2) 6B →	**B.Sc2nd TH Major Sec C** (3,4)2C **B.SC III PR**. (5-6) 3C ←	**B.Sc1stTH Major Sec D**(1,2) 2B	**B.SC I PR. Skill** (5-6)	**B.SC I PR. MAJOR**(1-2) 7B ←	→	

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Government College for Women, Rohtak

Department of Chemistry

Lesson Plan, Even Semester (Session 2025-26)

POOJA CHAHAL

B.Sc.6th Sem Sec – A, C (**Physical Chemistry)**

January, 2026

Second Week -- **Electronic Spectrum** Concept of potential energy curves for bonding and antibonding molecular orbitals

Third Week -- qualitative description of selection rules and Franck- Condon principle.

Fourth Week – Qualitative description of sigma and pie and n molecular orbital (MO) their energy level and respective transitions.

February, 2026

First Week –**Photochemistry** Interaction of radiation with matter, difference between thermal and photochemical processes.

Second Week – Laws of photochemistry: Grotthus-Drapper law, Stark- Einstein law (law of photochemical equivalence) Jablonski diagram depiciting various processes

occurring in the excited state,

Third Week – qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions-energy transfer processes (simple examples).

Fourth Week –**Solutions:**

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Dilute Solutions and Colligative Properties Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

March, 2026

First Week –**Holi Vacation**

Second Week -Dilute solution,Colligative properties, Raolut's law, relative lowering of vapour pressure, molelcular weight determination, Osmosis law of osmotic pressure and its measurement,

Third Week --determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression in freezing point

Fourth Week – Experimental methods for determining various colligative properties. Abnormal molar mass, degree of dissociation and association of solutes.

April, 2026

First Week – **Phase Equillibrium** Statement and meaning of the terms – phase component and degree of freedom

Second Week – thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system – Example – water and Sulpher systems.

Third Week --Phase equilibria of two component systems solid-liquid equilibria, simple eutectic Example Pb-Ag system, desilerisation of lead

Fourth Week – Revision and test

May 2026

Test and assignment submission

Government College for Women, Rohtak
Department of Chemistry
Lesson Plan, Even Semester (Session 2025-26)
Name of Extension Lecturer: Dr. VIJAITA
B.Sc.6th Sem Sec – A

Subject - **Physical Chemistry, Organic chemistry**

(Teaching Term-7thJan- 30thApril, 2025)

January, 2025

Second Week -- Electronic Spectrum

Concept of potential energy curves for bonding and antibonding molecular

Orbitals

***U*nit- 1 Introduction to Yoga**

 History and Philosophy of Yoga

Third Week -- qualitative description of selection rules and Franck- Condon principle.

***U*nit- 1 Introduction to Yoga ,** Ashtanga Yoga & Hatha Yoga

Fourth Week – Qualitative description of sigma and pie and n molecular orbital (MO) their energy

***U*nit- 1 Introduction to Yoga,**Importance of Yoga

level and respective transitions.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

February, 2025

First Week –Photochemistry

Interaction of radiation with matter, difference between thermal and photochemical

processes.

BSc.(Med) 3rd: Organic synthesis via Enolates, Acidity of alpha hydrogen.

Unit- 2 Physical Wellbeing through Asanas Basics of human physiology & anatomy. Benefits of Asanas in Physical Health

Second Week – Laws of photochemistry: Grotthus-Drapper law, Stark- Einstein law (law of photochemical equivalence) Jablonski diagram depiciting various processes

occurring in the excited state,

Alkylation of diethyl malonate and ethyl acetoacetate.

Yoga,Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana

Mandukasana, Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana, Bhujangasana, Shalabhasana, Dhanurasana,

Makarasana, Shavasana)

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Third Week – qualitative description of fluorescence,

phosphorescence, non-radiative processes (internal conversion, intersystem crossing),

quantum yield, photosensitized reactions-energy transfer processes (simple

examples).

BSc.(Med) 3rd: Synthesis of ethyl acetoacetate , the claisen condensation. .

Unit 3: Physical Wellbeing through Pranayama and Bandhas □ Introduction to Pranayama and its Benefits

Fourth Week –**Solutions:**

Dilute Solutions and Colligative Properties

Ideal and non-ideal solutions, methods of expressing concentrations of solutions,

Unit 3: Physical Wellbeing through Pranayama and Bandhas □□ Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati)

□ Introduction to Bandhas and their practical procedure

activity and activity coefficient.

Keto enol tatutomerism of ethylacetoacetate.

March, 2025 (9th -16th Holi Vacation)

First Week –Dilute solution,Colligative properties, Raolut's

law, relative lowering of vapour pressure, molelcular weight determination,

Osmosis law of osmotic pressure and its measurement,

Free radical vinyl polymerization, ionic vinyl polymerization,

Unit- 4 Mental Wellbeing through Meditationand Mudras

 Connection between Mind, Body, and Spirit

Second Week -- Holi Vacation

Third Week --determination of molecular

weight from osmotic pressure. Elevation of boiling point and depression of

freezing point, Thermodynamic derivation of relation between molecular weight

and elevation in boiling point and depression in freezing point

Condensation or step growth polymerization.

Unit- 4 Mental Wellbeing through Meditationand Mudras

 Benefits of Meditation on Mental Health of Mudras for Meditation

Fourth Week – Experimental

methods for determining various colligative properties. Abnormal molar mass,

degree of dissociation and association of solutes.

Unit- 4 Mental Wellbeing through Meditationand Mudras

 IntrBenefit oduction to Mudras and their practical procedure

 Guided Meditation Sessions (Mindfulness, Loving-kindness)

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

April, 2025

First Week – Phase Equillibrium

Statement and meaning of the terms – phase component and degree of freedom

Natural and synthetic rubbers

Second Week – thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system – Example – water and Sulpher systems.

Third Week --Phase equilibria of two component systems solid-liquid equilibria, simple eutectic

Example Pb-Ag system, desilerisation of lead

Fourth Week – Revision and test

Test and assignment submission

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

LESSION PLAN-2025-26(Even Sem.)

Name of the teacher… PREETI

Class and Section:… B. Sc. I Section(Phy Hons) and B.Sc. Ist sec B

Subject: B.Sc. 1st Chemistry in Major Physics

Discipline Specific Course- Chemistry (B.Sc. 1st- Section B)

Feb 2026

First week

Second week BSc 1st Unit 1 Non-aqueous Solvents Physical properties of a solvent, types of solvents and their general characteristics, solvent system concept, reactions in non-aqueous solvents with reference to liquid NH3 and liquid SO2

B. **Sc 1(Phy Hons) –** Occurance of elements in nature, physical and chemical properties of metals and non metals, minerals and ores, metallurgical processes(benefaction, roasting, calcination and reduction of metal oxides process)

*U*nit- 1 Introduction to Yoga

 History and Philosophy of Yoga

Third week BSc 1st Hard and soft acids and bases (HSAB concept), applications of HSAB principle. Noble Gases 27 Occurrence and uses,

B. **Sc 1st(Phy Hons)**- Refining of metals, metallurgy of Fe, Zn, Al and Cu, types of solutions, expression of conc of solutions of solids in liquids.

*U*nit- 1 Introduction to Yoga , Ashtanga Yoga & Hatha Yoga

Fourth week BSc 1st rationalization of inertness of noble gases, clathrates, preparation and properties, chemical properties of the noble gases,

*U*nit- 1 Introduction to Yoga,Importance of Yoga

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

March 2026

SECOND week BSc 1st chemistry of xenon: structure and bonding in xenon fluorides, oxides and oxyfluorides (XeF2, XeF4, XeF6, XeO3, XeO4, XeOF2, XeO2F2, XeOF4, XeF5 + , XeF5

C. **Sc. 1st(Phy Hons)**- Solubility of gases in liquids and solid solutions, Raoult's Law, colligative properties.

Unit- 2 Physical Wellbeing through Asanas Basics of human physiology & anatomy. Benefits of Asanas in Physical Health

Third week BSc 1st nature of bonding in noble gas compounds (valence bond treatment and MO treatment for XeF2 and XeF4), molecular shapes of noble gas compounds (VSEPR theory).

B.Sc.1st (Phy Hons)- Alkanes: method of preparation and reactions

Alkenes: method of preparation and reactions.

Yoga,Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana

Mandukasana, Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana, Bhujangasana, Shalabhasana, Dhanurasana,

Makarasana, Shavasana)

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Fourth week BSc 1st Unit–II Thermodynamics Brief discussion upto first law of thermodynamics, heat capacity, heat capacities at constant volume and pressure and their relationship

C. **Sc. 1st (Phy Hons)**-Alkynes: Method of preparations and reactions.

Unit 3: Physical Wellbeing through Pranayama and Bandhas □ Introduction to Pranayama and its Benefits

April 2026

First week BSc 1st Joule's law, Joule–Thomson coefficient for ideal gases and real gases and inversion temperature, calculation of work and heat, dU & dH for the expansion of ideal gases and real gases under isothermal and adiabatic conditions for reversible and irreversible processes,

B. **Sc 1st (Phy Hons)- Alkynes:** Addition of bromine and alkline KMnO4, ozonolysis and oxidation with hot alk KMn4, hydration to form carbonyl compounds.

Unit 3: Physical Wellbeing through Pranayama and Bandhas □□ Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati)

□ Introduction to Bandhas and their practical procedure

Second week BSc 1st . Enthalpy and internal energy change at constant P, V &T, Kirchhoff's equation. Second law of thermodynamics and its limitations

C. **Sc. 1st(Phy hons)**- Class Test Unit 1st.

Unit- 4 Mental Wellbeing through Meditationand Mudras

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

 Connection between Mind, Body, and Spirit

Third week BSc 1st different statements of the law, Carnot's cycle and its efficiency, Carnot's theorem, thermodynamics scale of temperature. Concept of entropy– entropy as a state function, entropy change in ideal gases, entropy as a function of V & T

B. **Sc 1st(phy Hons)- Aromatic Hydrocarbons-** Benezene- structure and preparation, class Test Unit 2nd.

Unit- 4 Mental Wellbeing through Meditationand Mudras

 Benefits of Meditation on Mental Health of Mudras for Meditation

Fourth week BSc 1st entropy as a function of P & T, entropy as a function of P & V, entropy as a criterion of spontaneity and equilibrium. Unit–III Hydrocarbons Alkanes: Physical and chemical properties of alkanes, free radical substitutions, halogenation, concept of relative reactivity v/s selectivity

C. **Sc. 1st(Phy Hons)**- Benezene- Electrophilic and substitution reactions.

Unit- 4 Mental Wellbeing through Meditationand Mudras

 IntrBenefit oduction to Mudras and their practical procedure

 Guided Meditation Sessions (Mindfulness, Loving-kindness)

May 2026

First week BSc 1st ,. Alkenes: Structure and isomerism, general methods of preparation, physical and chemical properties. Mechanism of E1, E2, E1cb reactions, Saytzeff and Hoffmann elimination, electrophilic addition (mechanism with suitable examples)

B. **Sc 1st (Phy Hons)-** benezene-reaction, class Test Unit 3rd.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Second week BSc 1st Markownikoff rule, syn and anti-addition, addition of H2, X2 oxymercuration-demercuration, hydroboration- oxidation, ozonolysis, hydroxylation. Alkynes: General methods of preparation, reactions of alkynes: acidity, electrophilic and nucleophilic additions, hydration to form carbonyl compounds, alkylation of terminal alkynes, Class Test

B.Sc 1st(Phy Hons)- Class Test Unit 4th, Revision.

Third week Unit–IV Aromatic Hydrocarbons and Dienes Concept of aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples and heterocyclic compounds with suitable examples, electrophilic aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism, directing effects of groups in electrophilic substitution**,** Class Test.

B.Sc.1st (Phy Hons)- Revision

Fourth week nomenclature and classification of dienes: isolated, conjugated and cumulated dienes. Structure of butadiene, chemical reactions-1, 2 and 1, 4 additions (electrophilic and free radical mechanism), Diels – Alder reaction

B.Sc. 1st(Phy Hons)- Revision

Government College for Women, Rohtak
Department of Chemistry
Lesson Plan, Even Semester (Session 2025-26)

Name of Extension Lecturer: **MONIKA (E-3043)**
B.Sc.6th Sem (H.Sci Biochem.) ,BA 2nd sem (Skill-Sanskrit+English)
Subject - **Bio-Chemistry /Wellbeing through Yoga**
(Teaching Term-5 thJan- , 6th May 2026)

January, 2026:

Second Week -B. Sc.H.Sc.-Biochem3rd:Nucleic acids,types,composition,replication

Third Week -- B.Sc.H.Sc.-Biochem3rd:transcription,genetic code

Unit- 1 Introduction to Yoga : History and Philosophy of Yoga

Fourth Week -B.Sc.H.Sc.-Biochem3rd:,structure of DNA& RNA

Unit- 1 Introduction to Yoga , Ashtanga Yoga & Hatha Yoga

.

February, 2026 :

First Week -B.Sc.H.Sc.-Biochem3rd:LIPIDS:definition,classification

Unit- 1 Introduction to Yoga,Importance of Yoga

Second Week -B.Sc.H.Sc.-Biochem3rd:properties of fatty acids
Unit- 2 Physical Wellbeing through Asanas Basics of human physiology & anatomy. Benefits of Asanas in Physical Health

Third Week -B.Sc.H.Sc.-Biochem3rd:acid value,iodine value,saponification value
Yoga,Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana

Mandukasana, Uttanmandukasana, Pashimottanasana,

Fourth Week - B.Sc.H.Sc.-Biochem3rd:Rivision and Test of nucleic acids

Yoga: Practice of some important Asanas: Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana, Bhujangasana, Shalabhasana, Dhanurasana,

Makarasana, Shavasana)

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March, 2026 (1st -8th Mar 2026 Holi Vacation)

First Week – HOLI BREAK

Second Week – **B.Sc.H.Sc**.-Biochem3rd:beta oxidation of lipids

Unit 3: Physical Wellbeing through Pranayama and Bandhas · Introduction to Pranayama and its Benefits

Third Week -B.Sc.H.Sc.-Biochem3rd:biosynthesis of fatty acids
Unit 3: Physical Wellbeing through Pranayama and Bandhas ·· Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati) Introduction to Bandhas and their practical procedure

Fourth Week -B.Sc.H.Sc.-Biochem3rd:ketone body formation
Unit- 4 Mental Wellbeing through Meditationand Mudras : Connection between Mind, Body, and Spirit

April, 2026

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

First Week – B.Sc.H.Sc:Assignment and revision B.Sc.H.Sc

Unit- 4 Mental Wellbeing through Meditationand Mudras

Benefits of Meditation on Mental Health of Mudras for Meditation

Second Week -B.Sc.H.Sc.-Biochem3rd:biological oxidation of lipids

Guided Meditation Sessions (Mindfulness, Loving-kindness)

Third Week -- B.Sc.H.Sc.-Biochem3rd:TCA cycle,E.T.C Oxadative phosphorylation theories
Unit- 4 Mental Wellbeing through Meditationand Mudras :IntrBenefit oduction to Mudras and their practical procedure

Fourth Week – B.Sc.H.Sc.-Biochem3rd:Rivision and test

Guided Meditation Sessions (Mindfulness, Loving-kindness)

May, 2026

First Week: Test and assignments

Government College for Women, Rohtak
Department of Chemistry
Lesson Plan, Even Semester (Session 2025-26)

Name of Assisstant professor: Dr. Deepak
B.Sc.6th Sem Sec – A,B
Subject -**Organic Chemistry**

(Teaching Term 5 thJan- 6th May, 2026)

January, 2026

Second Week:**Heterocyclic Compounds-I**
Introduction: Molecular orbital picture and aromatic characteristics of pyrrole, furan, thiophene and pyridine.
Third Week -Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution.
Fourth Week-Mechanism of nucleophilic
substitution reactions in pyridine derivatives. Comparison of basicity of pyridine, piperidine and pyrrole

February, 2026

First Week: **Hetero cyclic Compounds-II**
Introduction to condensed five and six- membered heterocycles. Prepration and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis,
Second Week – Skraup synthesis and Bischler-Napieralski synthesis. Mechanism of electrophilic substitution reactions of, quinoline and isoquinoline
Third Week-Organosulphur Compounds
Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers,
Fourth Week –sulphonic acids, sulphonamides and

sulphaguanidine. Synthetic detergents alkyl and aryl sulphonates.

March, 2026

First Week -- Holi Vacation (1st -8th Mar.,2026

Second Week –Organic Synthesis *via* Enolates
Acidity of alpha-hydrogen, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
Third Week -Synthetic Polymers
Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler-Natta polymerization and vinyl polymers.
Fourth Week – Condensation or step growth polymerization. Polyesters ,polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy re sins and polyurethanes. Natural and synthetic rubbers.

April, 2026

First Week-Amino Acids, Peptides& Proteins
Classification, of amino acids. Acid-base behavior, isoelectric point and electrophoresis.
Second Week – Preparation of -amino acids.Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides.
Third Week-Classical peptide synthesis, solid–phase peptide synthesis.
Fourth Week –
Structures of peptides and proteins: Primary & Secondary structure.

May ,2026

First Week- Revision and
Test and assignment submission

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

LESSION PLAN-2025-26(Even Sem.)

Name of the teacher…Ms SANGITA

Class and Section:… B. Sc. I Life Seience,BSc2nd,YOGA

Subject :Discipline Specific Course- Chemistry (B.Sc. 1st- Section C)

Discipline Specific Course- Chemistry (B.Sc. 2nd Section D)

Wellbeing through YOGA

Jan 2026

Second week BSc 1st Unit 1 Non-aqueous Solvents Physical properties of a solvent, types of solvents and their general characteristics, solvent system concept, reactions in non-aqueous solvents with reference to liquid NH3 and liquid SO2

BSc2nd Cordination Compounds,ligands,oxid.state,IUPAC Nomenclature,isomerism,chelates.

YOGA -History and philosophy of yoga ,hath yoga.

Third week BSc 1st Hard and soft acids and bases (HSAB concept), applications of HSAB principle. Noble Gases 27 Occurrence and uses,

BSc2nd- Velence bond theory,Inner and Outer orbital complexes.

YOGA- Astanga yoga.

Fourth week BSc 1st rationalization of inertness of noble gases, clathrates, preparation and properties, chemical properties of the noble gases,

BSc2nd- Megnetic properties of transition metal complexes

YOGA- Importance of yoga.

Feb 2026

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

First week BSc 1st chemistry of xenon: structure and bonding in xenon fluorides, oxides and oxyfluorides (XeF2, XeF4, XeF6, XeO3, XeO4, XeOF2, XeO2F2, XeOF4, XeF5 + , XeF5

BSc2nd- L-S Coupling ,Applications of magnetic moment data for 3d metal complexes.

YOGA- Basics of human physiology and anatomy.Benefits of asanas.

Second week BSc 1st Nature of bonding in noble gas compounds(Valance bond treatment and MO treatment for XeF2 and XeF4)

BSc2nd- Thermodynamic and kinetic aspects of metal complexes.

YOGA- Practice of yoga asanas.

Third week BSc 1st , molecular shapes of noble gas compounds (VSEPR theory).

BSc2nd- Kinetics and chemicai equilibrium -1st,2nd, 3rd order reaction.

YOGA- Pranayama and its benefits,

Fourth week BSc 1st Unit–II Thermodynamics Brief discussion upto first law of thermodynamics, heat capacity, heat capacities at constant volume and pressure and their relationship

BSc2nd- Arrhenius equation,collision theory.

YOGA- Basic breathing exercises.

March 2026

First week Holi vacation

Second week BSc 1st Joule's law, Joule–Thomson coefficient for ideal gases and real gases and inversion temperature, calculation of work and heat, dU & dH for the expansion of ideal gases and real gases under isothermal and adiabatic conditions for reversible and irreversible processes,

BSc2nd- Equilibrium constant,free energy,chemical potential.

YOGA- Bandhas and their pratical procedures.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Third week BSc 1st . Enthalpy and internal energy change at constant P, V &T, Kirchhoff's equation. Second law of thermodynamics and its limitations

BSc2nd- Van't Hoff reaction isochore and isotherm, Le-Chatelier's principle.

YOGA- Connection between mind ,body and soul.

Fourth week BSc 1st different statements of the law, Carnot's cycle and its efficiency, Carnot's theorem, thermodynamics scale of temperature. Concept of entropy– entropy as a state function, entropy change in ideal gases, entropy as a function of V & T

BSc2nd- Claperyron ,Clausius Claperyron equation.

YOGA- Benefits of meditation on mental health.

April 2026

First week BSc 1st entropy as a function of P & T, entropy as a function of P & V, entropy as a criterion of spontaneity and equilibrium. Unit–III Hydrocarbons Alkanes: Physical and chemical properties of alkanes, free radical substitutions, halogenation, concept of relative reactivity v/s selectivity

BSc2nd- Alcohols-methods of preparation.

YOGA-Benefits of mudras and their practical procedures.

Second week BSc 1st ,. Alkenes: Structure and isomerism, general methods of preparation, physical and chemical properties. Mechanism of E1, E2, E1cb reactions, Saytzeff and Hoffmann elimination, electrophilic addition (mechanism with suitable examples)

BSc2nd- chemical reactions of alcohols.

YOGA- Class test

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Third week BSc 1st Markownikoff rule, syn and anti-addition, addition of H2, X2 oxymercuration-demercuration, hydroboration- oxidation, ozonolysis, hydroxylation. Alkynes: General methods of preparation, reactions of alkynes: acidity, electrophilic and nucleophilic additions, hydration to form carbonyl compounds, alkylation of terminal alkynes, Class Test

BSc2nd- Phenols-methods of preperations,properties, acidic cherecter.

YOGA- Presentations of some breathing exercises.

Fourth week Unit–IV Aromatic Hydrocarbons and Dienes Concept of aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples and heterocyclic compounds with suitable examples, electrophilic aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism, directing effects of groups in electrophilic substitution**,** Class Test.

BSc2nd- chemical reactions of phenol,Esters- cleavage og esters with HI.

YOGA- Mudras and their practical procedures

May 2026

First week nomenclature and classification of dienes: isolated, conjugated and cumulated dienes. Structure of butadiene, chemical reactions- 1, 2 and 1, 4 additions (electrophilic and free radical mechanism), Diels – Alder reaction

BSc2nd-revision, Class test.

YOGA-Presentations of yoga asanas.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Govt. Post Graduate College For Women, Rohtak

Dept. of Chemistry Lesson Plan 2025-26 Semester- IV

Name of Faculty - Dr. Suman (MIS - E2954)

Classes & Subject - B Sc II (Sec–A) Fundamental Chemistry

BA II (Maths, Hindi & Sociology) Well being Through Yoga

January

B Sc – II

Second Week **Unit–I Coordination Compounds**

Introduction of coordination compounds, Ligands, coordination number.

BA II

Second Week **Unit- 1 Introduction to Yoga**

History and Philosophy of Yoga, Ashtanga Yoga

B Sc – II

Third Week **O**xidation states of Metal ions, coordination entity, IUPAC nomenclature of coordination compounds.

BA II

Third Week Hatha Yoga

B Sc – II

Fourth Week Isomerism in coordination compounds with coordination numbers 4

BA II

Fourth Week Importance of Yoga

February

B Sc – II

First Week Isomerism in coordination compounds with coordination numbers 6

BA II

First Week **Unit- 2 Physical Wellbeing through Asanas**

Basics of human physiology & anatomy.

B Sc – II

Second Week Chelates and chelate effect, Valence bond theory and its application to complexes of coordination numbers 4 and 6.

BA II

Second Week Benefits of Asanas in Physical Health

B Sc – II

Third Week Examples of inner and outer orbital complexes, limitations of VBT, Basic idea of Crystal field theory. **Test of Unit 1**

BA II

Third Week Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana Mandukasana.

B Sc – II

Fourth Week **Unit–II Magnetic Properties of Transition Metal Complexes**

Types of magnetic behavior, methods of determining magnetic susceptibility

(Assignment Given)

BA II

Fourth Week Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana. **(Assignment)**

March

First Week **Holi Holidays**

B Sc – II

Second Week Spin-only formula. L-S coupling, correlation of μs and μeff values, orbital contribution to magnetic moments, applications of magnetic moment data for 3d metal complexes. Thermodynamic and Kinetic Aspects of Metal Complexes: A brief outline of thermodynamic stability of metal complexes,

BA II

Second Week Bhujangasana, Shalabhasana, Dhanurasana, Makarasana, Shavasana

Unit 3: Physical Wellbeing through Pranayama and Bandhas

Introduction to Pranayama and its Benefits

B Sc – II

Third Week Factors affecting the stability, substitution reactions of square planar complexes of Pt (II). Integrated rate expression for first, second and third order reaction and their half-life period. Methods of determination of order of reaction. Effect of temperature on the rate of reaction – Arrhenius equation.

BA II

Third Week Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati) Introduction to Bandhas and their practical procedure

B Sc – II

Fourth Week **Unit–III Kinetics and Chemical Equilibrium**

Theories of reaction rate–Simple collision theory for unimolecular and bimolecular collision. Transition state theory of bimolecular reactions. Equilibrium constant and free energy, concept of chemical potential, thermodynamic derivation of law of chemical equilibrium.Temperature dependence of equilibrium constant, Van't Hoff reaction isochores.

BA II

Fourth Week **Unit- 4 Mental Wellbeing through Meditationand Mudras**

Connection between Mind, Body, and Spirit **(Test of Unit 3)**

April

B Sc – II

First Week Van't Hoff reaction isotherm. Le-Chatelier's principle and its applications, Clapeyron equation and Clausius – Clapeyron equation & its applications.

Unit–IV Alcohols, Phenols and Ethers

Alcohols: General methods of preparation using Grignard reagent, ester hydrolysis, reduction of aldehydes, ketones, carboxylic acid and esters.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BA II

First Week Benefits of Meditation on Mental Health, Benefit of Mudras for Meditation

B Sc – II

Second Week Reactions: with sodium, HX (Lucas test), esterification, oxidation (with PCC, alk. $KMnO_4$, acid. dichromate, con. HNO_3).Oppeneauer oxidation. Diols: Oxidation of diols. Pinacol- Pinacolone rearrangement. Phenols: Methods of preparation, physical properties and acidic character.

BA II

Second Week Introduction to Mudras and their practical procedure

Guided Meditation Sessions (Mindfulness, Loving-kindness)

B Sc – II

Third Week Reactions: electrophilic substitution (nitration, halogenation and sulphonation). Reimer-Tiemann reaction, Gattermann-Koch reaction, Houben-Hoesch condensation, Schotten-Baumann reaction. Ethers (aliphatic and aromatic): Cleavage of ethers with HI.

BA II

Third Week **Revision, Group Discussion**

B Sc – II

Fourth Week **Revision, Group Discussion &Problem Solving**

BA II

Fourth Week **Problem Solving**

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Govt. Post Graduate College For Women, Rohtak

Dept. of Chemistry Lesson Plan 2025-26 Semester- IV

Name of Faculty - Seema

Classes & Subject - B Sc II (Sec–B) Fundamental Chemistry

BA II (Maths, Hindi & Sociology) Well being Through Yoga

January

B Sc – II

Second Week **Unit–I** **Coordination Compounds**

Introduction of coordination compounds, Ligands, coordination number.

BA II

Second Week **Unit- 1** **Introduction to Yoga**

History and Philosophy of Yoga, Ashtanga Yoga

B Sc – II

Third Week **O**xidation states of Metal ions, coordination entity, IUPAC nomenclature of coordination compounds.

BA II

Third Week Hatha Yoga

B Sc – II

Fourth Week Isomerism in coordination compounds with coordination numbers 4

BA II

Fourth Week Importance of Yoga

February

B Sc – II

First Week Isomerism in coordination compounds with coordination numbers 6

BA II

First Week **Unit- 2 Physical Wellbeing through Asanas**

Basics of human physiology & anatomy.

B Sc – II

Second Week Chelates and chelate effect, Valence bond theory and its application to complexes of coordination numbers 4 and 6.

BA II

Second Week Benefits of Asanas in Physical Health

B Sc – II

Third Week Examples of inner and outer orbital complexes, limitations of VBT, Basic idea of Crystal field theory. **Test of Unit 1**

BA II

Third Week Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana Mandukasana.

B Sc – II

Fourth Week **Unit–II Magnetic Properties of Transition Metal Complexes**

Types of magnetic behavior, methods of determining magnetic susceptibility

(Assignment Given)

BA II

Fourth Week Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana. **(Assignment)**

March

First Week **Holi Holidays**

B Sc – II

Second Week Spin-only formula. L-S coupling, correlation of μs and μeff values, orbital contribution to magnetic moments, applications of magnetic moment data for 3d metal complexes. Thermodynamic and Kinetic Aspects of Metal Complexes: A brief outline of thermodynamic stability of metal complexes,

BA II

Second Week Bhujangasana, Shalabhasana, Dhanurasana, Makarasana, Shavasana

Unit 3: Physical Wellbeing through Pranayama and Bandhas

Introduction to Pranayama and its Benefits

B Sc – II

Third Week Factors affecting the stability, substitution reactions of square planar complexes of Pt (II). Integrated rate expression for first, second and third order reaction and their half-life period. Methods of determination of order of reaction. Effect of temperature on the rate of reaction – Arrhenius equation.

BA II

Third Week Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati) Introduction to Bandhas and their practical procedure

B Sc – II

Fourth Week **Unit–III Kinetics and Chemical Equilibrium**

Theories of reaction rate–Simple collision theory for unimolecular and bimolecular collision. Transition state theory of bimolecular reactions. Equilibrium constant and free energy, concept of chemical potential, thermodynamic derivation of law of chemical equilibrium.Temperature dependence of equilibrium constant, Van't Hoff reaction isochores.

BA II

Fourth Week **Unit- 4 Mental Wellbeing through Meditationand Mudras**

Connection between Mind, Body, and Spirit **(Test of Unit 3)**

April

B Sc – II

First Week Van't Hoff reaction isotherm. Le-Chatelier's principle and its applications, Clapeyron equation and Clausius – Clapeyron equation & its applications.

Unit–IV Alcohols, Phenols and Ethers

Alcohols: General methods of preparation using Grignard reagent, ester hydrolysis, reduction of aldehydes, ketones, carboxylic acid and esters.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BA II

First Week Benefits of Meditation on Mental Health, Benefit of Mudras for Meditation

B Sc – II

Second Week Reactions: with sodium, HX (Lucas test), esterification, oxidation (with PCC, alk. $KMnO_4$, acid. dichromate, con. HNO_3).Oppeneauer oxidation. Diols: Oxidation of diols. Pinacol- Pinacolone rearrangement. Phenols: Methods of preparation, physical properties and acidic character.

BA II

Second Week Introduction to Mudras and their practical procedure

Guided Meditation Sessions (Mindfulness, Loving-kindness)

B Sc – II

Third Week Reactions: electrophilic substitution (nitration, halogenation and sulphonation). Reimer-Tiemann reaction, Gattermann-Koch reaction, Houben-Hoesch condensation, Schotten-Baumann reaction. Ethers (aliphatic and aromatic): Cleavage of ethers with HI.

BA II

Third Week **Revision, Group Discussion**

B Sc – II

Fourth Week **Revision, Group Discussion &Problem Solving**

BA II

Fourth Week **Problem Solving**

Govt. Post Graduate College For Women, Rohtak

Dept. of Chemistry Lesson Plan Even Sem

Name of Faculty- Dr. Sonika

Classes- B Sc III Sec. (A and B)

Subject- (Inorganic Chemistry)

Sem- VI

January

Third Week

Organometallic Chemistry

Definition, nomenclature and classification of organometallic compounds.

Fourth Week Preparation, properties, and bonding of alkyls of Li, Al, Hg, and Sn.

A brief account of metal-ethylenic complexes, mononuclear carbonyls and the nature of bonding in metal carbonyls.

February

First Week

Acids and Bases, HSAB Concept, Arrhenius, Bronsted – Lowry, the Lux – Flood, Solvent system.

Second Week Lewis concepts of acids & bases, relative strength of acids & bases. **Assignment**

Third Week Concept of Hard and Soft Acids & Bases. Symbiosis, electronegativity and hardness and softness.

Fourth Week

Bioinorganic Chemistry

Essential and trace elements in biological processes.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

March

First Week. **Holi Break**

Second Week Metalloporphyrins with special reference to haemoglobin and myoglobin

Third Week Biological role of alkali and alkaline earth metal ions with special reference to Ca2+.

Fourth Week Nitrogen fixation.

April

First Week Preparation and properties of Silicones and phosphazenes.

Second Week Structure and uses of Silicones and phosphazenes.

Third Week Revision

Fourth Week Group discussion and problem solving

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Government College for Women, Rohtak

Department of Chemistry

Lesson Plan, Even Semester (Session 2025-26)

SHAMMY LAJ

B.Sc.6th Sem Sec – A,C (**Organic And Inorganic Chemistry)**

January, 2026

Second Week -- **Synthetic Polymers**
Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler-Natta polymerization and vinyl polymers.

Third Week -- Condensation or step growth polymerization. Polyesters ,polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Fourth Week – Natural and synthetic rubbers
Revision and Test

February, 2026

First Week – **Amino Acids, Peptides& Proteins**
Classification, of amino acids. Acid-base behavior, isoelectric point and electrophoresis.

Second Week – Preparation of -amino acids.Structure and nomenclature of peptides and proteins.

Third Week – Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Fourth Week – Classical peptide synthesis, solid– phase peptide synthesis. Structures of peptides and proteins: Primary & Secondary structure.

March, 2026

First Week –**Holi Vacation**

Second Week - Revision and Test and assignment submission
Third Week – **AOrganometallic Chemistry**
Definition, nomenclature and classification of organometallic compounds.

Fourth Week- Preparation, properties, and bonding of alkyls of Li, Al, Hg, and Sn.

April, 2026

First Week –. A brief account of metal-ethylenic complexes, mononuclear carbonyls and the nature of bonding in metal carbonyls.

Second Week – **BAcids and Bases, HSAB Concept**Arrhenius, Bronsted – Lowry, the Lux – Flood, Solvent system

Third Week- Lewis concepts of acids & bases, relative strength of acids & bases.

Fourth Week – Concept of Hard and Soft Acids & Bases. Symbiosis, electronegativity and hardness and softness.

May 2026

First Week – Revision and test

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Government College for Women, Rohtak

Department of Chemistry

Lesson Plan, Even Semester (Session 2025-26)

POOJA RANI

B.Sc.6th Sem. Sec – A, B (**Physical Chemistry)**

YOGA SEC - stats

January, 2026

Second Week -- **Electronic Spectrum** Concept of potential energy curves for bonding and antibonding molecular orbitals

- *History and Philosophy of Yoga.*

Third Week -- Qualitative description of selection rules and Franck- Condon principle.

- *Ashtanga Yoga & Hatha Yoga.*

Fourth Week – Qualitative description of sigma and pie and n molecular orbital (MO) their energy level and respective transitions.

- *Importance of Yoga.*

February, 2026

First Week – **Photochemistry** Interaction of radiation with matter, difference between thermal and photochemical processes.

- *Basics of human physiology & anatomy.*

Second Week – Laws of photochemistry: Grotthus-Drapper law, Stark- Einstein law (law of photochemical equivalence) Jablonski diagram depicting various processes occurring in the excited state,

- *Benefits of Asanas in Physical Health.*

Third Week – Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions-energy transfer processes (simple examples).

- *Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana, Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana Mandukasana, Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana, Uttanpadasana, Sarvangasana, Halasana, Bhujangasana, Shalabhasana, Dhanurasana, Makarasana, Shavasana).*

Fourth Week –Solutions:

Dilute Solutions and Colligative Properties - Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

- *Introduction to Pranayama and its Benefits.*

March, 2026

First Week – Holi Vacation

Second Week - Dilute solution, Colligative properties, Raolut's law, relative lowering of vapour pressure, molecular weight determination, Osmosis law of osmotic pressure and its measurement,

- *Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati).*

Third Week -- Determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression in freezing point

- *Introduction to Bandhas and their practical procedure.*

Fourth Week – Experimental methods for determining various colligative properties. Abnormal molar mass, degree of dissociation and association of solutes.

- *Connection between Mind, Body, and Spirit.*

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

April, 2026

First Week – **Phase Equilibrium** Statement and meaning of the terms – phase component and degree of freedom

- *Benefits of Meditation on Mental Health.*

Second Week – Thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system – Example – water and Sulphur systems.

- *Benefit of Mudras for Meditation.*

Third Week -- Phase equilibria of two component systems solid-liquid equilibria, simple eutectic Example Pb-Ag system, desilerisation of lead

- *Introduction to Mudras and their practical procedure.*

Fourth Week – Revision and test

- *Guided Meditation Sessions (Mindfulness, Loving-kindness).*

May, 2026

Test and assignment submission

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Government College for Women, Rohtak

Department of Chemistry

Lesson Plan, Even Semester (Session 2025-26)

DR.NIDHI

B.Sc.4th Sem, 2nd sem Sec – A

January, 2026

Second Week – Journal electronic configuration of P block elements inert paraphrase atomic and ionic radii oxidation stakes ionization energy electron gain enthalpy electronegativity color and their oxidizing power

THIRD WEEK

B.Sc 2nd – Allotropes Catenation diagonal relation and anomalous behaviour of first member of each group compound of P Block elements reactivity towards hydrogen oxygen halogen and metals

BSc 1st Unit 1- Non-aqueous Solvents Physical properties of a solvent, types of solvents and their general characteristics, solvent system concept, reactions in non-aqueous solvents with reference to liquid NH3 and liquid SO2

Fourth Week

B.Sc 2nd – Anomalous behavior of nitrogen, phosphorus, oxygen and sulfur,6 interhalogen compounds, compounds of Xe with fluorine and oxygen,

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BSc 1st- Hard and soft acids and bases (HSAB concept), applications of HSAB principle. Noble Gases 27 Occurrence and uses,

February, 2026

First Week

B.Sc 2nd – Forms of solids, symmetry elements, unit cells, crystal systems, bravais lattice types and identifications, lattice planes

BSc **1st -**rationalization of inertness of noble gases, clathrates, preparation and properties, chemical properties of the noble gases,

Second Week

B.Sc 2nd -, voids, packing in solids, packing efficiency in crystalline solids, radius ratio rule, structure of ionic solids, structure of NaCl, KCl and CsCl, CaF_2 and Na_2O,

BSc 1st- chemistry of xenon: structure and bonding in xenon fluorides, oxides and oxyfluorides (XeF2, XeF4, XeF6, XeO3, XeO4, XeOF2, XeO2F2, XeOF4, XeF5 + , XeF5

Third Week

B.Sc 2nd – defects in crystals, brief introduction to metallic bond, band theory of metallic bond,

BSc 1st- nature of bonding in noble gas compounds (valence bond treatment and MO treatment for XeF2 and XeF4), molecular shapes of noble gas compounds (VSEPR theory).

Fourth Week

B.Sc 2nd – semiconductor : introduction, types and applications.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BSc 1st -Unit–II Thermodynamics Brief discussion upto first law of thermodynamics, heat capacity, heat capacities at constant volume and pressure and their relationship

March, 2026

First Week – Holi break

Second Week

B.Sc 2nd –Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, standard electrode potential,

BSc 1st -Joule's law, Joule–Thomson coefficient for ideal gases and real gases and inversion temperature, calculation of work and heat, dU & dH for the expansion of ideal gases and real gases under isothermal and adiabatic conditions for reversible and irreversible processes,

Third Week

B.Sc 2nd --dry cells, electrolytic cells and galvanic cells, EMF of a cell,

BSc 1st . enthalpy and internal energy change at constant P, V &T, Kirchhoff's equation. Second law of thermodynamics and its limitations

Fourth Week

B.Sc 2nd – Nernst equation and its applications to chemical cells, definition of corrosion, mechanism of corrosion, classification of corrosion

BSc 1st- different statements of the law, Carnot's cycle and its efficiency, Carnot's theorem, thermodynamics scale of temperature. Concept of entropy– entropy as a state function, entropy change in ideal gases, entropy as a function of V & T

April, 2026

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

First Week

B.Sc 2nd – Structure and resonance, general methods of preparation, chemical reaction: nucleophilic, aromatic substitution,

BSc 1st -entropy as a function of P & T, entropy as a function of P & V, entropy as a criterion of spontaneity and equilibrium. Unit–III Hydrocarbons Alkanes: Physical and chemical properties of alkanes, free radical substitutions, halogenation, concept of relative reactivity v/s selectivity

Second Week

B.Sc 2nd – effect of substituent on reactivity of Halo Arenes,

BSc 1st ,. Alkenes: Structure and isomerism, general methods of preparation, physical and chemical properties. Mechanism of E1, E2, E1cb reactions, Saytzeff and Hoffmann elimination, electrophilic addition (mechanism with suitable examples

Third Week

B.Sc 2nd --reaction with strong base, .

BSc 1st Markownikoff rule, syn and anti-addition, addition of H2, X2 oxymercuration-demercuration, hydroboration- oxidation, ozonolysis, hydroxylation. Alkynes: General methods of preparation, reactions of alkynes: acidity, electrophilic and nucleophilic additions, hydration to form carbonyl compounds, alkylation of terminal alkynes.Aromatic Hydrocarbons and Dienes Concept of aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples

Fourth Week

B.Sc 2nd – relative reactivity and strength of C-X bond in alkyl, allyl, aryl, benzyl, vinyl halides.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

B.SC 1st-Aromatic Hydrocarbons and Dienes Concept of aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples and heterocyclic compounds with suitable examples, electrophilic aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism, directing effects of groups in electrophilic substitution

May 2026

Test and assignment submission

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

LESSION PLAN-2025-26(Even Sem.)

Name of the teacher…Ms **MEENA**

Class and Section:… B.Sc.I **Physical Seience,BSc2nd Physical science**

Subject :Discipline Specific Course- Chemistry (B.Sc. 1st- Section C)

Discipline Specific Course- Chemistry (B.Sc. 2nd Section D)

Jan 2026

Second week BSc 1st Unit 1 Non-aqueous Solvents Physical properties of a solvent, types of solvents and their general characteristics, solvent system concept, reactions in non-aqueous solvents with reference to liquid NH3 and liquid SO2

BSc2nd Cordination Compounds,ligands,oxid.state,IUPAC Nomenclature,isomerism,chelates.

Third week BSc 1st Hard and soft acids and bases (HSAB concept), applications of HSAB principle. Noble Gases 27 Occurrence and uses,

BSc2nd- Velence bond theory,Inner and Outer orbital complexes.

Fourth week BSc 1st rationalization of inertness of noble gases, clathrates, preparation and properties, chemical properties of the noble gases,

BSc2nd- Megnetic properties of transition metal complexes

Feb 2026

First week BSc 1st chemistry of xenon: structure and bonding in xenon fluorides, oxides and oxyfluorides (XeF2, XeF4, XeF6, XeO3, XeO4, XeOF2, XeO2F2, XeOF4, XeF5 + , XeF5

BSc2nd- L-S Coupling ,Applications of magnetic moment data for 3d metal complexes.

Second week BSc 1st Nature of bonding in noble gas compounds(Valance bond treatment and MO treatment for XeF2 and XeF4)

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BSc2nd- Thermodynamic and kinetic aspects of metal complexes.

Third week BSc 1st , molecular shapes of noble gas compounds (VSEPR theory).

BSc2nd- Kinetics and chemicai equilibrium -1st,2nd, 3rd order reaction.

Fourth week BSc 1st Unit–II Thermodynamics Brief discussion upto first law of thermodynamics, heat capacity, heat capacities at constant volume and pressure and their relationship

BSc2nd- Arrhenius equation,collision theory.

March 2026

First week Holi vacation

Second week BSc 1st Joule's law, Joule–Thomson coefficient for ideal gases and real gases and inversion temperature, calculation of work and heat, dU & dH for the expansion of ideal gases and real gases under isothermal and adiabatic conditions for reversible and irreversible processes,

BSc2nd- Equilibrium constant,free energy,chemical potential.

Third week BSc 1st . Enthalpy and internal energy change at constant P, V &T, Kirchhoff's equation. Second law of thermodynamics and its limitations

BSc2nd- Van't Hoff reaction isochore and isotherm, Le-Chatelier's principle.

Fourth week BSc 1st different statements of the law, Carnot's cycle and its efficiency, Carnot's theorem, thermodynamics scale of temperature. Concept of entropy– entropy as a state function, entropy change in ideal gases, entropy as a function of V & T

BSc2nd- Claperyron ,Clausius Claperyron equation.

April 2026

First week BSc 1st entropy as a function of P & T, entropy as a function of P & V, entropy as a criterion of spontaneity and equilibrium. Unit–III Hydrocarbons Alkanes: Physical and chemical properties of alkanes, free radical substitutions, halogenation, concept of relative reactivity v/s selectivity

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BSc2nd- Alcohols-methods of preparation.

Second week BSc 1st ,. Alkenes: Structure and isomerism, general methods of preparation, physical and chemical properties. Mechanism of E1, E2, E1cb reactions, Saytzeff and Hoffmann elimination, electrophilic addition (mechanism with suitable examples)

BSc2nd- chemical reactions of alcohols.

Third week BSc 1st Markownikoff rule, syn and anti-addition, addition of H2, X2 oxymercuration-demercuration, hydroboration- oxidation, ozonolysis, hydroxylation. Alkynes: General methods of preparation, reactions of alkynes: acidity, electrophilic and nucleophilic additions, hydration to form carbonyl compounds, alkylation of terminal alkynes, Class Test

BSc2nd- Phenols-methods of preperations,properties, acidic cherecter.

Fourth week Unit–IV Aromatic Hydrocarbons and Dienes Concept of aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples and heterocyclic compounds with suitable examples, electrophilic aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism, directing effects of groups in electrophilic substitution**,** Class Test.

BSc2nd- chemical reactions of phenol,Esters- cleavage og esters with HI.

May 2026

First week nomenclature and classification of dienes: isolated, conjugated and cumulated dienes. Structure of butadiene, chemical reactions- 1, 2 and 1, 4 additions (electrophilic and free radical mechanism), Diels – Alder reaction

BSc2nd-revision, Class test.

Govt. Post Graduate College For Women, Rohtak

Dept. of Chemistry Lesson Plan Even Sem

Name of Faculty- Anita

Classes- B Sc III Sec. (A)

Subject- (Inorganic Chemistry)

Sem- VI

January

Third Week

Organometallic Chemistry

Definition, nomenclature and classification of organometallic compounds.

Fourth Week Preparation, properties, and bonding of alkyls of Li, Al, Hg, and Sn.

A brief account of metal-ethylenic complexes, mononuclear carbonyls and the nature of bonding in metal carbonyls.

February

First Week

Acids and Bases, HSAB Concept, Arrhenius, Bronsted – Lowry, the Lux – Flood, Solvent system.

Second Week Lewis concepts of acids & bases, relative strength of acids & bases. **Assignment**

Third Week Concept of Hard and Soft Acids & Bases. Symbiosis, electronegativity and hardness and softness.

Fourth Week

Bioinorganic Chemistry

Essential and trace elements in biological processes.

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

March

First Week. **Holi Break**

Second Week Metalloporphyrins with special reference to haemoglobin and myoglobin

Third Week Biological role of alkali and alkaline earth metal ions with special reference to Ca2+.

Fourth Week Nitrogen fixation.

April

First Week Preparation and properties of Silicones and phosphazenes.

Second Week Structure and uses of Silicones and phosphazenes.

Third Week Revision

Fourth Week Group discussion and problem solving

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Govt. Post Graduate College For Women, Rohtak Dept. of Chemistry **Lesson Plan 2025-26**

Name of Faculty - Dr. Aarti Dalal (3124)

Classes & Subject - B Sc II (Sec–B) Minor Chemistry

B Sc I Skill Chemistry Sec A

BA II (History)Well being Through Yoga

January

B Sc – II

Second Week **Unit–I Chemical Bonding and molecular structure** Valence electron, ionic bond covalent bond,and bond parameters.

BA II

Second Week **Unit- 1 Introduction to Yoga**

History and Philosophy of Yoga, Ashtanga Yoga

B Sc – I

Composition of soil, concept of pH and pH measurement of soil, complexometric titrations, chelation,

BA II

Third Week Hatha Yoga

B Sc – II

Fourth Week: VSEPR theory, Concept of hybridisation,Shapes of molecules.

BA II

Fourth Week Importance of Yoga

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

B Sc – I chelating agents, use of indicators, estimation of calcium and magnesium ions in soil. Definition of pure water,

February

B Sc – II

First Week Thermodynamics : concept of system, Types of system,, Extensive and intensive property

BA II

First Week **Unit- 2 Physical Wellbeing through Asanas**

Basics of human physiology & anatomy.

B Sc – I sources responsible for contaminating water, water sampling methods, water purification methods

BA II

Second Week Benefits of Asanas in Physical Health

B Sc – II

Third Week : Examples of inner and outer orbital complexes, limitations of VBT, Basic idea of Crystal field theory.

B Sc – I sources responsible for contaminating water, water sampling methods, water purification methods

Test of Unit 1

BA II

Third Week Practice of some important Asanas (Vrikshasana, Utkatasana, Padahasthasana,

Trikonasana, Veerasana,; Baddha Padamasana, Uttitha Padamasana, Pawanmuktasana Mandukasana.

B Sc – II

Fourth Week **:** Chemical and ionic eqilibirium, Law of mass action, equlibirium constant, Factor affecting equilibirium, theories of acid and base

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

(Assignment Given)

BA II

Fourth Week Uttanmandukasana, Pashimottanasana, Matsyasana, Naukasana,

Uttanpadasana, Sarvangasana, Halasana. **(Assignment)**

B Sc – I determination of dissolved oxygen of a water sample

March

First Week **Holi Holidays**

B Sc – II

Second Week: Sublimation, Phase Transition, ionization.

BA II

Second Week Bhujangasana, Shalabhasana, Dhanurasana, Makarasana, Shavasana

Unit 3: Physical Wellbeing through Pranayama and Bandhas

Introduction to Pranayama and its Benefits

B Sc – I

Third Week: General introduction to pesticides (natural and synthetic), benefits and adverse effects, changing concepts of pesticides,

BA II

Third Week Basic Breathing Exercises (Puraka, Rechaka and Kumbhaka, Anulom Vilom, Bhastrika Bhramari, Kapalbhati) Introduction to Bandhas and their practical procedure

B Sc – II

Fourth Week **:** Alkyl Halides: Structures of haloalkanesand their classification,

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

BA II

Fourth Week **Unit- 4 Mental Wellbeing through Meditationand Mudras**

Connection between Mind, Body, and Spirit **(Test of Unit 3)**

April

B Sc – II

First Week general methods of preparation, chemical reaction

BA II

First Week Benefits of Meditation on Mental Health, Benefit of Mudras for Meditation

B Sc – II

Second Week: nucleophilic substitutionreaction with mechanism and specific example from: hydrolysis, nitrite and nitro formation and willianson ether synthesis.

BA II

Second Week Introduction to Mudras and their practical procedure

Guided Meditation Sessions (Mindfulness, Loving-kindness)

B Sc – II

Third Week nucleophilic substitutionreaction with mechanism and their types, nucleophilic substitutionreaction with mechanism and specific example from: hydrolysis, nitrite and nitro formation and willianson ether synthesis.

BA II

Third Week Test Revision, Group Discussion

B Sc – II

TEACHER WISE TIME (TABLE CHEMISTRY DEPARTMENT)2025-26(EVEN SEM)

Fourth Week Revision, Group Discussion &Problem Solving

BA II

Fourth Week Group Discussion and Problem Solving