

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manju Singh

Class- B.Sc 4th semester

Subject- Physical Chemistry (Theory)

Paper- XII (CH-205)

January, 2024 1 st Week 1 Jan - 6 Jan	Thermodynamics Second law of thermodynamics, need for the law, different statements of the law
7 Jan, 2024	Sunday
2 nd Week 8 Jan - 13 Jan	Carnot's cycle s and its efficiency, Carnot's theorem, Thermodynamics scale of temperature.
14 Jan, 2024	Sunday
3 rd Week 15 Jan – 20 Jan	Concept of entropy – entropy as a state function, entropy as a function of V & T, entropy as a function of P & T
17 Jan,2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4 th Week 22 Jan - 27 Jan	entropy change in physical change, entropy as a criteria of spontaneity and equilibrium.
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5 th Week 29 Jan – 31 Jan	Third law of thermodynamics: Nernst heat theorem, statement of concept of residual entropy, evaluation of absolute entropy from heat capacity data.

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manju Singh

Class- B.Sc 4th semester

Subject- Physical Chemistry (Theory)

Paper- XII (CH-205)

February, 2024 1 st Week 1 Feb – 3 Feb	Gibbs function (G) and Helmholtz function (A) as thermodynamic quantities
4 Feb, 2024	Sunday
2 nd Week 5 Feb - 10 Feb	G as criteria for thermodynamic equilibrium and spontaneity, its advantage over entropy change.
11 Feb, 2024	Sunday
3 rd Week 12 Feb-17 Feb	Variation of G with P, V and T.
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 19 Feb - 24 Feb	Test of chapter thermodynamics .
25 Feb, 2024	Sunday
5 th Week 26 Feb - 29 Feb	Assignment-I

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manju Singh

Class- B.Sc 4th semester

Subject- Physical Chemistry (Theory)

Paper- XII (CH-205)

March, 2024 1 st Week 1 March –2 March	Electrochemistry Electrolytic and Galvanic cells – reversible & irreversible cells, conventional representation of electrochemical cells.
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Calculation of thermodynamic quantities of cell reaction (ΔG , ΔH & K).
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Types of reversible electrodes – metal- metal ion, gas electrode, metal –insoluble salt- anion and redox electrodes.
17 March, 2024	Sunday
4 th Week 18 March – 22 March	Electrode reactions, Nernst equations, derivation of cell EMF and single electrode potential. Standard Hydrogen electrode, reference electrodes
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manju Singh

Class- B.Sc 4th semester

Subject- Physical Chemistry (Theory)

Paper- XII (CH-205)

April, 2024 1st Week 1 April- 6 April	Assignment-2 and standard electrode potential, sign conventions, Concentration cells with and without transference, liquid junction potential and its measurement
7 April ,2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	Applications of EMF measurement in solubility product and potentiometric titrations using glass electrode. More stress on numerical problems.
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22April - 27 April	
5th Week 29 April - 30 April	
University Examination:-1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Major)

Paper-B23-CHE-201

3rd Week 15 Feb-17 Feb	Valence bond theory approach, valence shell electron pair repulsion (VSEPR) theory Concept of reaction rates, rate equation, factors influencing the rate of reaction.
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 24 Feb	shapes of simple inorganic molecules and ions based on valence shell electron pair repulsion (VSEPR) theory and hybridization. Order and molecularity of a reaction, integrated rate expression for zero, first, Half-life period of a reaction Nomenclature, classification of carbon atoms in alkanes and its structure. Isomerism in alkanes, sources..
25 Feb, 2024	Sunday
5th Week 26 Feb - 29 Feb	Molecular orbital theory of homonuclear (N ₂ , O ₂) and heteronuclear (CO and NO) diatomic molecules Arrhenius equation. Nernst distribution law – its thermodynamic derivation Methods of formation: Wurtz reaction, Kolbe reaction.

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Major)

Paper-B23-CHE-201

March, 2024 1 st Week 1 March –2 March	Practicals
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	dipole moment and percentage ionic character in covalent bond. Nernst distribution law after association and dissociation of solute in one of the phases, of distribution law
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Ionic structures (NaCl, CsCl, ZnS (Zinc blende), CaF ₂) size effects Determination of degree of hydrolysis and hydrolysis constant of aniline hydrochloride Corey- House reaction and decarboxylation of carboxylic acids, physical properties.
17 March, 2024	Sunday
4 th Week 18 March – 22 March	Radius ratio rule and its limitations, Concept of Lattice energy Hydrogen Bonding – Definition, types Mechanism of free radical halogenation of alkanes: reactivity and selectivity Assignment-I
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Major)

Paper-B23-CHE-201

April, 2024 1st Week 1 April- 6 April	Born- Haber cycle, Solvation energy and its relationship with solubility of Ionic solids Nomenclature of alkenes and its structure. Methods of formation: dehydration of alcohols Nomenclature of Cycloalkanes, Baeyer' s strain theory and its limitations, theory of strainless rings.
7 April ,2024	Sunday
2nd Week 8 April – 13 April	Polarizing power and Polarisability of ions, Fajan's rule. effects of hydrogen bonding on properties of substances, application dehydrohalogenation of alkyl halide, Hofmann elimination and their mechanism. Assignment II
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	Saytzeff rule and relative stabilities of alkenes. Chemical reactions: electrophilic and free radical additions Brief discussion of various types of Van der Waals forces.
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22April - 27 April	Sessional exams
5th Week 29 April - 30 April	Addition of halogens, halogen acids Metallic bond – Qualitative idea of valence bond
May, 2024 1st Week 1 May- 4 May	Band theories of metallic bond (conductors, semiconductors, insulators) hydroboration–oxidation, oxymercuration-reduction

May, 2024 2nd Week 6 May- 11 May	ozonolysis and hydration. Markownikoff's rule of addition. Semiconductors – Introduction, types, and applications
10 May, 2024 12 May, 2024	Parshuram Jayanti Sunday
3rd Week 13 May- 18 May	Revision and test
University Examination:- 20 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024 (February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Minor)

Paper-B23-CHE-203

3rd Week 15 Feb-17 Feb	Atomic and ionic radii, Ionization energy trend in periodic table
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 24 Feb	Electron affinity and electronegativity trend in periodic table
25 Feb, 2024	Sunday
5th Week 26 Feb - 29 Feb	Effective nuclear charge and slater rules

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024 (February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Minor)

Paper-B23-CHE-203

March, 2024 1 st Week 1 March –2 March	-
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Stoichiometric and non-stoichiometric defects in crystals
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Lattice energy, Born- Haber cycle, Solvation energy and its relationship with solubility of Ionic solids
17 March, 2024	Sunday
4 th Week 18 March – 22 March	Polarizing power and Polarisability of ions, Fajan's rule. Assignment-I
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(February- May)

Name of the Teacher – Dr. Priyanka

Class- B.Sc 2nd semester

Subject- Chemistry (Minor)

Paper-B23-CHE-203

April, 2024 1st Week 1 April- 6 April	Localized and delocalized chemical bond, van der wall's interactions
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Resonance, resonance effect and hyperconjugation.
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	Inductive effect, electromeric effect and their comparison Assignment II
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	Sessional exams
5th Week 29 April - 30 April	Kinetic theory of gases, calculation of root mean square velocity
May, 2024 1st Week 1 May- 4 May	Calculation of average velocity and most probable velocity, collision diameter
May, 2024 2nd Week 6 May- 11 May	Collision frequency and mean free path. Questions practice
10 May, 2024 12 May, 2024	Parshuram Jayanti Sunday
3rd Week 13 May- 18 May	Revision and test
University Examination:- 20 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Inorganic Chemistry (Theory)

Paper- XI (CH-204)

January, 2024 1 st Week 1 Jan - 6 Jan	Chemistry of f-Block elements Lanthanides: Electronic structure, oxidation states
7 Jan, 2024	Sunday
2 nd Week 8 Jan - 13 Jan	magnetic properties, complex formation
14 Jan, 2024	Sunday
3 rd Week 15 Jan – 20 Jan	colour, ionic radii and lanthanide contraction, occurrence
17 Jan, 2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4 th Week 22 Jan - 27 Jan	separation of lanthanides, Lanthanide compounds
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5 th Week 29 Jan – 31 Jan	Test of chapter lanthanides

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Inorganic Chemistry (Theory)

Paper- XI (CH-204)

February, 2024 1 st Week 1 Feb – 3 Feb	Actinides: General characteristics of actinides
4 Feb, 2024	Sunday
2 nd Week 5 Feb - 10 Feb	chemistry of separation of Np, Pu and Am from uranium
11 Feb, 2024	Sunday
3 rd Week 12 Feb-17 Feb	Transuranic elements
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 19 Feb - 24 Feb	comparison of properties of Lanthanides and actinides with transition elements. .
25 Feb, 2024	Sunday
5 th Week 26 Feb - 29 Feb	Assignment- 1

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Inorganic Chemistry (Theory)

Paper- XI (CH-204)

March, 2024 1 st Week 1 March –2 March	Test of chapter actinides
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Theory of Qualitative and Quantitative Analysis Chemistry of analysis of various groups of basic and acidic radicals
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	chemistry of identification of acid radicals in typical combination
17 March, 2024	Sunday
4 th Week 18 March – 22 March	chemistry of interference of acid radicals including their removal in the analysis of basic radicals
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Inorganic Chemistry (Theory)

Paper- XI (CH-204)

April, 2024 1st Week 1 April- 6 April	Assignment-2
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	common ion effect, solubility product, theory of precipitation, co-precipitation, post precipitation, purification of precipitates.
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	
5th Week 29 April - 30 April	
University Examination:-1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Organic Chemistry (Theory)

Paper- XIII (CH-206)

January, 2024 1 st Week 1 Jan - 6 Jan	Amines Structure and nomenclature of amines, physical properties. Separation of a mixture of primary, secondary and tertiary amines.
7 Jan, 2024	Sunday
2 nd Week 8 Jan - 13 Jan	Structural features affecting basicity of amines. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles, reductive amination of aldehydic and ketonic compounds.
14 Jan, 2024	Sunday
3 rd Week 15 Jan – 20 Jan	Gabriel - phthalimide reaction, Hofmann bromamide reaction. Electrophilic aromatic substitution in aryl amines, reactions of amines with nitrous acid.
17 Jan, 2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4 th Week 22 Jan - 27 Jan	Test of chapter amines and Diazonium Salts- Mechanism of diazotisation, structure of benzene diazonium chloride
26 Jan, 2024 28 Jan, 2024	Republic Day Sunday
5 th Week 29 Jan – 31 Jan	Replacement of diazo group by H, OH, F, Cl, Br, I, NO ₂ and CN groups

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Organic Chemistry (Theory)

Paper- XIII (CH-206)

February, 2024 1 st Week 1 Feb – 3 Feb	reduction of diazonium salts to hydrazines, coupling reaction and its synthetic application.
4 Feb, 2024	Sunday
2 nd Week 5 Feb - 10 Feb	Test of chapter diazonium salts and Aldehydes and Ketones- Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chlorides
11 Feb, 2024	Sunday
3 rd Week 12 Feb-17 Feb	advantage of oxidation of alcohols with chromium trioxide (Sarett reagent), pyridinium chlorochromate (PCC) and pyridinium dichromate. Physical properties
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 19 Feb - 24 Feb	Comparison of reactivities of aldehydes and ketones. Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin,
25 Feb, 2024	Sunday
5 th Week 26 Feb - 29 Feb	Assignment-I and aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives.

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Organic Chemistry (Theory)

Paper- XIII (CH-206)

March, 2024 1st Week 1 March –2 March	Wittig reaction. Mannich reaction.Oxidation of aldehydes, Baeyer–Villiger oxidation of ketones,
3 March, 2024	Sunday
2nd Week 4 March - 9 March	Cannizzaro reaction. MPV, Clemmensen, Wolff-Kishner, LiAlH ₄ and NaBH ₄ reductions.
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3rd Week 11 March - 16 March	Test of chapter aldehyde and ketones and practice of previous years questions
17 March, 2024	Sunday
4th Week 18 March – 22 March	Infrared (IR) absorption spectroscopy- Molecular vibrations, Hooke 's law, selection rules, intensity and position of IR bands, measurement of IR spectrum
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Manishita Rani

Class- B.Sc 4th semester

Subject- Organic Chemistry (Theory)

Paper- XIII (CH-206)

April, 2024 1st Week 1 April- 6 April	Assignment-2 and fingerprint region, characteristic absorptions of various functional groups
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	interpretation of IR spectra of simple organic compounds. Applications of IR spectroscopy in structure elucidation of simple organic compounds.
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	
5th Week 29 April - 30 April	
University Examination:-1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – MS. SWATI BAJAJ

Class- B.SC final year

Subject- (CH-304)Inorganic Chemistry

Paper- 1

January, 2024 1 st Week 1 Jan - 6 Jan	Acids and Bases Arrhenius, Bronsted-lowry, Lux-flood, solvent system and Lewis concept of acids and bases
7 Jan, 2024	Sunday
2 nd Week 8 Jan - 13 Jan	Relative strength of acids and bases, levelling solvents, hard and soft acids and bases(HSAB),
14 Jan, 2024	Sunday
3 rd Week 15 Jan – 20 Jan	Applications of HSAB principle
17 Jan,2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4 th Week 22 Jan - 27 Jan	REVISION OF CHAPTER-1
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5 th Week 29 Jan – 31 Jan	Organometallic chemistry Definition, classification and nomenclature of organometallic compounds, preparation.

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS.SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject(CH-304)Inorganic Chemistry

Paper- 1

February, 2024 1 st Week 1 Feb – 3 Feb	Properties and bonding of alkyls of Li, Al, Hg and Sn, concept of hapticity of organic ligand
4 Feb, 2024	Sunday
2 nd Week 5 Feb - 10 Feb	Structure and bonding in metal-ethylenic complexes, Structure of Ferrocene,
11 Feb, 2024	Sunday
3 rd Week 12 Feb-17 Feb	classification in metal carbonyls, preparation, properties and bonding in mononuclear carbonyls
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 19 Feb - 24 Feb	Revision of chapter-2
25 Feb, 2024	Sunday
5 th Week 26 Feb - 29 Feb	Bio inorganic chemistry Metal ions present in biological system, classification on the basis of action (essential, non essential, trace, toxic),

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS. SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject-(CH-304)Inorganic Chemistry

Paper- 1

March, 2024 1 st Week 1 March –2 March	Metalloporphyrins with special reference to haemoglobin and myoglobin.
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Biological role of Na ⁺ , K ⁺ , Ca ⁺² , Mg ⁺² , Fe ⁺² ions, Cooperative effect, Bohr effect.
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Test of chapter-3
17 March, 2024	
4 th Week 18 March – 22 March	Silicones and Phosphazenes And Assignment-2
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS. SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject(CH-304)Inorganic Chemistry

Paper- 1

April, 2024 1st Week 1 April- 6 April	Nomenclature, classification, preparation
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	uses of silicones, elastomers,
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	polysiloxane copolymers, poly phosphazenes and bonding in triphosphazene.

5th Week 29 April - 30 April	REVISION AND QUERIES
University Examination:-1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – MS. SWATI BAJAJ

Class- B.SC final year

Subject- (CH-306) Organic Chemistry

Paper- 1

January, 2024 1st Week 1 Jan - 6 Jan	Organic Synthesis <i>via</i> Enolates Acidity of α -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate
7 Jan, 2024	Sunday
2nd Week	Synthesis of ethyl acetoacetate: the Claisen

8 Jan - 13 Jan	condensation. Keto-enol tautomerism of ethyl acetoacetate.
14 Jan, 2024	Sunday
3rd Week 15 Jan – 20 Jan	Test of chapter -1
17 Jan,2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4th Week 22 Jan - 27 Jan	Heterocyclic Compounds Introduction: Molecular orbital picture and aromatic characteristics of pyrrole, furan
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5th Week 29 Jan – 31 Jan	Introduction: Molecular orbital picture and aromatic characteristics of thiophene and pyridine. Methods of synthesis and chemical reactions

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS.SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject- (CH-306) Organic Chemistry**Paper- 2**

February, 2024 1st Week 1 Feb – 3 Feb	Mechanism of nucleophilic substitution reactions in pyridine derivatives. Comparison of basicity of pyridine, piperidine and pyrrole.
4 Feb, 2024	Sunday
2nd Week 5 Feb - 10 Feb	Introduction to condensed five and six- membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline
11 Feb, 2024	Sunday
3rd Week 12 Feb-17 Feb	special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 24 Feb	Mechanism of electrophilic substitution reactions of, quinoline and isoquinoline.
25 Feb, 2024	Sunday
5th Week 26 Feb - 29 Feb	Test of chapter -2 and assignment -1

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS. SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject- (CH-306) Organic Chemistry

Paper- 2

March, 2024 1 st Week 1 March –2 March	Amino Acids, Peptides& Proteins Classification, of amino acids. Ac id-base behavior, isoelectric point and electrophoresis. Preparation of amino acids. Structur e and nomenclature of peptide s and proteins.
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Classical peptide synthesis, solid–phase peptide synthesis. Structures of peptides and proteins : Primary & Secondary structure.
17 March, 2024	Sunday
4 th Week 18 March – 22 March	Test of chapter-3 and Assignment-2
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher –MS. SWATI BAJAJ

Class- B.SC FINAL YEAR

Subject(CH-306) Organic Chemistry

Paper- 2

April, 2024 1st Week 1 April- 6 April	Synthetic Polymers Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 April - 20 April	
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	Ziegler –Natta polymerization and vinyl polymer s. Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins. Natural and synthetic rubbers.
5th Week 29 April - 30 April	Revision, Queries.
University Examination:-1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Priyanka

Class- B.SC final year

Subject- (CH-305) Physical Chemistry

Paper- 2

January, 2024 1 st Week 1 Jan - 6 Jan	Introduction to statistical mechanics Need for statistical thermodynamics, thermodynamic probability
7 Jan, 2024	Sunday
2 nd Week 8 Jan - 13 Jan	Maxwell Boltzmann distribution statistics, Born oppenheimer approximation
14 Jan, 2024	Sunday
3 rd Week 15 Jan – 20 Jan	Partition function and its physical significance Factorization of partition function.
17 Jan,2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4 th Week 22 Jan - 27 Jan	REVISION OF CHAPTER-1
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5 th Week 29 Jan – 31 Jan	Photochemistry Interaction of radiation with matter, difference between thermal and photochemical processes

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Priyanka

Class- B.SC FINAL YEAR

Subject- CH-305) Physical Chemistry

Paper- 2

February, 2024 1st Week 1 Feb – 3 Feb	Laws of photochemistry: Grotthus-Draper law, Stark-Einstein law (law of photochemical equivalence)
4 Feb, 2024	Sunday
2nd Week 5 Feb - 10 Feb	Jablonski diagram depicting various processes occurring in the excited state, qualitative description of fluorescence, phosphorescence,
11 Feb, 2024	Sunday
3rd Week 12 Feb-17 Feb	Non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions-energy transfer processes (simple examples).
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 24 Feb	Test of chapter-2
25 Feb, 2024	Sunday
5th Week 26 Feb - 29 Feb	Solutions, Dilute Solutions and Colligative Properties Ideal and non-ideal solutions, methods of expressing concentrations

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Priyanka

Class- B.SC FINAL YEAR

Subject- CH-305) Physical Chemistry

Paper- 2

March, 2024 1 st Week 1 March –2 March	(i) relative lowering of vapour pressure (ii) Elevation in boiling point (iii) depression in freezing point (iv) osmotic pressure. Thermodynamic derivation of relation between amount of solute and elevation in boiling point and depression in freezing point.
3 March, 2024	Sunday
2 nd Week 4 March - 9 March	Applications in calculating molar masses of normal, dissociated and associated solutes in solution
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 11 March - 16 March	Test of chapter-3
17 March, 2024	Sunday

4th Week 18 March – 22 March	Phase Equilibrium Statement and meaning of the terms – phase, component and degree of freedom, And Assignment-2
23 March- 31 March	Holi Break

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Priyanka
Class- B.SC FINAL YEAR
Subject- CH-305) Physical Chemistry
Paper- 2

April, 2024 1st Week 1 April- 6 April	Thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system –Example – water system.
7 April, 2024	Sunday
2nd Week	Sessional Exams

8 April – 13 April	
11 April, 2024 14 April, 2024	Id-UI-Fitr Sunday
3rd Week 15 April - 20 April	Phase equilibria of two component systems solid-liquid equilibria
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 April - 27 April	simple eutectic Example Pb-Ag system, desilverisation of lead.
5th Week 29 April - 30 April	REVISION AND QUERIES
University Examination:-1 May, 2024 Onwards	