CLASS 12 CHEMISTRY — LO's Aligned Monthly Split-up Syllabus (April 2026–March 2027) + Portion Boundaries + Exams + Weightage + Question Paper Design + Blueprint (For CM SoE & Non-CM SoE)

Developed by:- Jharkhand Council Of Educational Research & Training (Curriculum Division)

Month	Teaching Days (Available)	NCERT Chapter Titles	Sub-topics / Portion Boundary	LOs (*LO Mapping - IDs) (NCERT Higher Secondary Stage LO - Draft)	Practicals / Activities (Minimum)	Assessment / Exams
Apr 2026	23	CHEM: Unit 1 Solutions (Complete)	Unit 1 Solutions: 1.1 Types of Solutions; 1.2 Expressing Concentration of Solutions; 1.3 Solubility; 1.4 Vapour Pressure of Liquid Solutions; 1.5 Ideal and Non-ideal Solutions; 1.6 Colligative Properties and Determination of Molar Mass; 1.7 Abnormal Molar Masses. Portion boundary: Unit 1 complete.	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-08, LO-CHM-XII-09, LO-CHM-XII-10, LO-CHM-XII-11, LO-CHM-XII-19	Lab/Activity: preparing solutions of known concentration; numericals on concentration terms; colligative properties—conceptual problems + graphs.	Project RAIL (April portion): 04-05-2026
May 2026	14	CHEM: Unit 2 Electrochemistry (Complete)	Unit 2 Electrochemistry: 2.1 Electrochemical Cells; 2.2 Galvanic Cells; 2.3 Nernst Equation; 2.4 Conductance of Electrolytic Solutions; 2.5 Electrolytic Cells and Electrolysis; 2.6 Batteries; 2.7 Fuel Cells; 2.8 Corrosion. Portion boundary: Unit 2 complete.	LO-CHM-XII-03, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-09, LO-CHM-XII-10, LO-CHM-XII-11, LO-CHM-XII-12, LO-CHM-XII-16, LO-CHM-XII-19	Lab/Activity: electrochemical cell (Daniell cell) demo; conductance measurement (concept/demo); corrosion conditions mini-investigation + reporting.	Project RAIL (May portion): 15-06-2026
Jun 2026	12	CHEM: Unit 3 Chemical Kinetics (Complete)	Unit 3 Chemical Kinetics: 3.1 Rate of a Chemical Reaction; 3.2 Factors Influencing Rate of a Reaction; 3.3 Integrated Rate Equations; 3.4 Temperature Dependence of the Rate of a Reaction; 3.5 Collision Theory of Chemical Reactions. Portion boundary: Unit 3 complete.	LO-CHM-XII-01, LO-CHM-XII-03, LO-CHM-XII-06, LO-CHM-XII-08, LO-CHM-XII-09, LO-CHM-XII-10, LO-CHM-XII-19	Lab/Activity: kinetics experiment (effect of concentration/temperature/catalyst) + rate graph; numericals on rate law and integrated rate equations.	Project RAIL (June portion): 06-07-2026
Jul 2026	23	CHEM: Unit 4 The d-and f-Block Elements (Complete)	Unit 4 The d-and f-Block Elements: 4.1 Position in the Periodic Table; 4.2 Electronic Configurations of the d-Block Elements; 4.3 General Properties of the Transition Elements (d-Block); 4.4 Some Important Compounds of Transition Elements; 4.5 The Lanthanoids; 4.6 The Actinoids; 4.7 Some Applications of d- and f-Block Elements. Portion boundary: Unit 4 complete.	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-09, LO-CHM-XII-11, LO-CHM-XII-13, LO-CHM-XII-14, LO-CHM-XII-15, LO-CHM-XII-19	Activity: d- and f-block electronic configuration charting; case-based questions on general properties and applications; short notes on important compounds.	Project RAIL (July portion): 03-08-2026
Aug 2026	22	CHEM: Unit 5 Coordination Compounds (Complete) + Revision	Unit 5 Coordination Compounds: 5.1 Werner's Theory of Coordination Compounds; 5.2 Definitions of Some Important Terms Pertaining to Coordination Compounds; 5.3 Nomenclature of Coordination Compounds; 5.4 Isomerism in Coordination Compounds; 5.5 Bonding in Coordination Compounds; 5.6 Bonding in Metal Carbonyls; 5.7 Importance and Applications of Coordination Compounds. Portion boundary: Unit 5 complete. + Half-yearly revision/practice (Units 1–5).	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-11, LO-CHM-XII-13, LO-CHM-XII-15, LO-CHM-XII-19	Activity: nomenclature drill (IUPAC) + isomerism models; bonding (VBT/CFT overview as per text); practical file completion + Half-yearly revision set (Units 1–5).	Half Yearly Examination: 07-09-2026 to 12-09-2026 (covers Apr–Aug taught portion: Units 1–5)
Sep 2026	14	CHEM: Unit 6 Haloalkanes and Haloarenes (Complete); CHEM: Unit 7 Alcohols, Phenols and Ethers (Start)	Half-yearly follow-up + continuation: Unit 6 Haloalkanes and Haloarenes: 6.1 Classification; 6.2 Nomenclature; 6.3 Nature of C–X Bond; 6.4 Methods of Preparation of Haloalkanes; 6.5 Preparation of Haloarenes; 6.6 Physical Properties; 6.7 Chemical Reactions; 6.8 Polyhalogen Compounds. Unit 7 (start): 7.1 Classification; 7.2 Nomenclature; 7.3 Structures of Functional Groups. Portion boundary: Unit 6 complete; Unit 7 up to 7.3.	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-03, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-11, LO-CHM-XII-16, LO-CHM-XII-18, LO-CHM-XII-19	Lab/Activity: classification/nomenclature worksheets; conversion practice set (haloalkanes/haloarenes) + safety and environmental context (polyhalogen compounds).	Project RAIL (September portion): 05-10-2026

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Oct 2026	21	CHEM: Unit 7 Alcohols, Phenols and Ethers (Finish); CHEM: Unit 8 Aldehydes, Ketones and Carboxylic Acids (Complete)	Unit 7 (finish): 7.4 Alcohols and Phenols; 7.5 Some Commercially Important Alcohols; 7.6 Ethers. Unit 8 Aldehydes, Ketones and Carboxylic Acids: 8.1 Nomenclature and Structure of Carbonyl Group; 8.2 Preparation of Aldehydes and Ketones; 8.3 Physical Properties; 8.4 Chemical Reactions; 8.5 Uses of Aldehydes and Ketones; 8.6 Nomenclature and Structure of Carboxyl Group; 8.7 Methods of Preparation of Carboxylic Acids; 8.8 Physical Properties; 8.9 Chemical Reactions; 8.10 Uses of Carboxylic Acids. Portion boundary: Units 7 & 8 complete.	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-03, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-11, LO-CHM-XII-16, LO-CHM-XII-18, LO-CHM-XII-19	Lab/Activity: qualitative tests (where feasible): alcohols/phenols/aldehydes/ketones/carboxylic acids; conversion practice set + named reactions list as per text.	Project RAIL (October portion): 02-11-2026
Nov 2026	16	CHEM: Unit 9 Amines (Complete); CHEM: Unit 10 Biomolecules (Complete) + Quick Revision	Unit 9 Amines: 9.1 Structure of Amines; 9.2 Classification; 9.3 Nomenclature; 9.4 Preparation of Amines; 9.5 Physical Properties; 9.6 Chemical Reactions; 9.7 Method of Preparation of Diazonium Salts; 9.8 Physical Properties; 9.9 Chemical Reactions; 9.10 Importance of Diazonium Salts in Synthesis of Aromatic Compounds. Unit 10 Biomolecules: 10.1 Carbohydrates; 10.2 Proteins; 10.3 Enzymes; 10.4 Vitamins; 10.5 Nucleic Acids; 10.6 Hormones. Portion boundary: Full syllabus completed (Units 1–10).	LO-CHM-XII-01, LO-CHM-XII-02, LO-CHM-XII-03, LO-CHM-XII-05, LO-CHM-XII-06, LO-CHM-XII-07, LO-CHM-XII-11, LO-CHM-XII-13, LO-CHM-XII-15, LO-CHM-XII-16, LO-CHM-XII-18, LO-CHM-XII-19	Lab/Activity: qualitative tests for amines (where feasible) + diazonium salt applications; biomolecules tests (carbohydrates/proteins) simple; full-syllabus sample paper 1 + analysis.	Syllabus completion target for Class 12: Nov 2026
Dec 2026	15	Full Syllabus Practice & Remedial (Pre-Board Block) + Practical/Viva Revision	Full syllabus mixed practice: board-pattern questions (including competency/case-based); numericals; nomenclature; conversions; structures; targeted remediation based on gaps.	LO-CHM-XII-03, LO-CHM-XII-07, LO-CHM-XII-09, LO-CHM-XII-10, LO-CHM-XII-11, LO-CHM-XII-12, LO-CHM-XII-18, LO-CHM-XII-19, LO-CHM-XII-20	Minimum: 2 full mock papers + item-wise analysis; practical file completion + viva drill; remedial groups: (a) Physical chemistry (b) Inorganic (c) Organic (d) Biomolecules & mixed conversions.	Pre-Board + Remedial + Practice: 07-12-2026 to 12-12-2026 (Full syllabus)
Jan 2027	17	Remedial classes + Practice until board exams (School level) Board Practical / Theory Exams: Feb–Mar 2027 (as per Board schedule)				
Feb 2027	18					
Mar 2027	20					

LOs (*LO Mapping - IDs) (NCERT Higher Secondary Stage LO - Draft)

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LO-CHM-XII-01	differentiates technical terms / phenomena / processes, based on properties/characteristics, such as molecularity and order of a reaction; ionic and electrical conductivity; ideal and non-ideal solutions; amorphous and crystalline solids; DNA and RNA etc.
LO-CHM-XII-02	classifies materials/phenomena/processes based on properties/characteristics, such as crystalline solids on the basis of their properties; primary, secondary and tertiary alcohols; primary, secondary and tertiary amines; and various types of polymers etc.
LO-CHM-XII-03	plans and conducts projects/investigations/experiments to arrive at and verify facts, principles and phenomena, or to seek answers to queries on their own, such as pigments in leaves/flowers, amount of oxalate ions in guava fruit, functional groups in organic compounds, and casein in milk etc.
LO-CHM-XII-04	takes appropriate precautionary measures while handling apparatus and chemicals during laboratory work, such as use of safety glasses, laboratory coat, safe handling of chemicals and glassware, reactions with harmful gases in fuming hood, and proper disposal of chemicals and broken glassware.
LO-CHM-XII-05	relates processes and phenomena with causes/effects, such as electrical and magnetic properties of solids with their structure; physical properties of alcohols, phenols and ethers with structures; and physical and chemical reactions of aldehydes, ketones and carboxylic acids with structures.
LO-CHM-XII-06	explains scientific terms/factors/laws/theories governing processes and phenomena, such as minerals, ores, roasting, calcination, refining, close packing, Henry's law and Raoult's law, d- and f-block elements, haloalkanes, alcohols, phenols, ethers, aldehydes, ketones, biomolecules and polymers etc.

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LO-CHM-XII-07	draws structures of molecules/diagrams/flow charts/concept maps/graphs/tables, such as Daniell cell, Cottrell smoke precipitator, froth flotation process, blast furnace, structure/manufacture of acids, flow chart for ammonia and metal extraction, electronic configuration tables, solids properties and adsorption isotherm graphs.
LO-CHM-XII-08	derives or writes expressions for equations, such as integrated rate laws for zero order and first order reactions and Raoult's law etc.
LO-CHM-XII-09	analyses and interprets data/graphs/figures, such as graphs for predicting order of reaction, effect of catalyst on activation energy, and trends in melting points of organic compounds, atomic radii of transition elements and ionic radii of lanthanoids etc.
LO-CHM-XII-10	calculates using the data given, such as packing efficiency of cubic unit cells, concentration of solutions, Henry's law constant, emf of galvanic cells using Nernst equation, standard electrode potential and rate constant of a reaction etc.
LO-CHM-XII-11	uses scientific conventions, symbols, chemical formulae and chemical equations as per international standards, such as SI units, symbols and names of elements, formulae, chemical equations, electronic configurations and IUPAC nomenclature.
LO-CHM-XII-12	measures physical quantities using appropriate apparatus, such as analytical balance, pipette, burette, volumetric flask, measuring cylinder and thermometer etc.
LO-CHM-XII-13	takes initiative to know about scientific discoveries/inventions, such as Rasayan Shastra/Rastantra/Ras Kriya/Ras Vidya, optical activity in coordination compounds, Grignard reagents, structure of DNA and cracking of genetic code etc.
LO-CHM-XII-14	appreciates the contribution of ancient chemistry of India and its role in different spheres of life, such as metallurgy, medicine, manufacture of cosmetics, glass, dyes, baked bricks and pottery etc.
LO-CHM-XII-15	realizes and appreciates the interface of chemistry with other disciplines such as Physics, Biology, Mathematics, Geology and Geography; including role of biomolecules in biosystems and chemical composition of rocks and soil.
LO-CHM-XII-16	applies scientific concepts in daily life and solving problems, such as role of alcohol as hand sanitizer, polymers, antacids, tranquilizers, antibiotics, antifertility drugs, artificial sweetening agents, food preservatives and cleaning action of soap etc.
LO-CHM-XII-17	exhibits creativity in designing models using eco-friendly resources and out-of-box thinking in solving problems, such as 3-D models of graphite/diamond, molecular models of organic compounds, Daniell cell and DNA model etc.
LO-CHM-XII-18	exhibits values of honesty, objectivity, rational thinking and freedom from myth/superstitious beliefs while taking decisions, respect for life, and reports experimental data honestly with an open-minded questioning attitude.
LO-CHM-XII-19	communicates the findings and conclusions effectively, such as those of experiment/activity/project orally and in written form using appropriate figures, tables, graphs and digital forms etc.
LO-CHM-XII-20	makes efforts to conserve environment, such as judicious use of chemicals, keeping surroundings clean, use of biodegradable soaps and polymers, and micro-scale experimental techniques wherever possible.

A. THEORY BLUEPRINT

S.No.	Unit / Block	Marks	Details / Scope
1	Solutions	7	Unit 1
2	Electrochemistry	9	Unit 2
3	Chemical Kinetics	7	Unit 3
4	d- and f-Block Elements	7	Unit 4
5	Coordination Compounds	7	Unit 5
6	Haloalkanes and Haloarenes	6	Unit 6
7	Alcohols, Phenols and Ethers	6	Unit 7

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8	Aldehydes, Ketones and Carboxylic Acids	8	Unit 8
9	Amines	6	Unit 9
10	Biomolecules	7	Unit 10
	TOTAL	70	Theory Paper: 3 Hours

B. QUESTION PAPER DESIGN / BLUEPRINT

Competency / Domain	Marks	Weightage
Remembering and Understanding	28	40%
Applying	21	30%
Analysing, Evaluating and Creating	21	30%
TOTAL	70	100%

C. TYPOLOGY OF QUESTIONS

Item	Details
Paper Design Note	No chapter-wise weightage is provided in the official syllabus; care is to be taken to cover all chapters.
Internal Choice	There will be no overall choice in the question paper; however, 33% internal choices are provided in all sections.

D. PRACTICAL BLUEPRINT — 30 MARKS

S.No.	Component	Marks	Details
1	Volumetric Analysis	8	
2	Salt Analysis	8	
3	Content Based Experiment	6	
4	Project Work	4	
5	Class Record and Viva	4	
	TOTAL	30	