

JEE Main April 2025: Chemistry Preparation Checklist

Initial Setup (Days 1-2)

- Create one-page Physical Chemistry formula sheet
- Prepare Organic Chemistry reaction mechanism flashcards
- Make Periodic Table trends quick-reference guide
- Set up Named Reactions summary sheet
- Prepare an error log notebook
- Download/organize past JEE Main papers (last 5 years)
- Establish daily study schedule with time blocks for all subjects
- Set up progress tracking system

Daily Must-Do Checklist

- 20-30 minutes formula/concept revision
- Complete topic of the day (60-90 minutes)
- Solve 15-20 practice MCQs
- Review mistakes from previous days (10 minutes)
- Update quick-reference materials with new insights
- Cross-check topic coverage with JEE syllabus
- Complete 2-minute recall after each chemistry session

Physical Chemistry Priority List

- Chemical & Ionic Equilibrium
 - K_c , K_p relationships
 - pH calculations
 - Buffer solutions
 - Solubility product
 - Common ion effect
- Thermodynamics
 - First & Second Laws
 - Enthalpy, Entropy, Free Energy
 - Spontaneity of reactions
 - Thermochemical equations

- Electrochemistry
 - Electrochemical cells
 - Nernst equation
 - EMF calculations
 - Electrode potentials
- Solutions & Colligative Properties
 - Raoult's law and deviations
 - Elevation in boiling point
 - Depression in freezing point
 - Osmotic pressure
 - van't Hoff factor
- Chemical Kinetics
 - Rate laws and order
 - Half-life calculations
 - Arrhenius equation
 - Activation energy

Organic Chemistry Priority List

- General Organic Chemistry
 - IUPAC nomenclature
 - Isomerism (all types)
 - Electronic effects
 - Stability of intermediates
 - Acidity/basicity concepts
- Reaction Mechanisms
 - SN1 vs SN2
 - E1 vs E2
 - Addition reactions
 - Electrophilic aromatic substitution
- Carbonyl Compounds
 - Aldehydes and Ketones
 - Carboxylic acids and derivatives
 - Characteristic reactions
- Nitrogen Compounds
 - Amines (classification and basicity)

- Diazonium salts
- Preparation and reactions
- Named Reactions
 - Aldol condensation
 - Cannizzaro reaction
 - Sandmeyer reaction
 - Wurtz reaction
 - Hoffmann bromamide
 - Reimer-Tiemann reaction

Inorganic Chemistry Priority List

- p-Block Elements
 - Group 15-17 elements
 - Important compounds
 - Oxoacids
 - Anomalous behavior of first elements
- Coordination Compounds
 - IUPAC nomenclature
 - Isomerism
 - Crystal Field Theory
 - Magnetic properties and color
- d & f Block Elements
 - Electronic configurations
 - Properties
 - Important compounds
- Periodic Properties
 - Atomic/ionic radii
 - Ionization energy
 - Electronegativity
 - Metallic character
- Chemical Bonding
 - Ionic, covalent, metallic bonds
 - VSEPR theory
 - Hybridization
 - MOT concepts

Weekly Progress Check

- Week 1: Completed Physical Chemistry priority topics
- Week 1: Completed beginning of Organic Chemistry
- Week 1: Taken at least one sectional test
- Week 2: Completed Organic Chemistry priority topics
- Week 2: Completed Inorganic Chemistry priority topics
- Week 2: Taken at least one full mock test

Mock Test Schedule

- Day 5: Physical Chemistry sectional test
- Day 8: Organic Chemistry sectional test
- Day 11: Inorganic Chemistry sectional test
- Day 13: Full Chemistry mock test
- Day 14: Error analysis and final revision

Final 3 Days Preparation

- Review all formula sheets and quick-reference materials
- Practice 30 mixed MCQs from all areas
- Revise common error patterns from your error log
- Review high-weightage topics one final time
- Prepare exam day kit (admit card, stationery, etc.)
- Get proper sleep and stay hydrated
- Brief review of most critical formulas/reactions

Exam Day Strategy

- Wake up early and review key formulas (30 mins)
- Follow first-scan approach for Chemistry section
- Allocate proper time: Physical (12-15 mins), Organic (10-12 mins), Inorganic (8-10 mins)
- Use elimination method for uncertain questions
- Double-check calculations before marking answers
- Skip and return to time-consuming questions

Materials Needed

- NCERT Chemistry Textbooks (XI & XII)
- Formula handbook/quick reference
- Previous years' JEE Main question papers

- Topic-specific MCQ collections
- Index cards for flashcards
- Highlighters and sticky notes
- Progress tracking notebook/app

