JEE Main Marks vs Percentile — Last 3 Years Trend (Out of 300)

Compiled by **Kunal Sir**

In JEE Main, your target score depends heavily on shift difficulty and session competition. In 2025 & 2026, after the syllabus reduction and removal of optional choice in Section B (5 mandatory numericals), marks required for 99 percentile settled between **175 and 205** across shifts. Always keep a **+15 mark buffer** in mocks.

Target Percentile	Approx. CRL Rank	Tough Shift Marks	Moderate Shift Marks	Easy Shift Marks	Typical NIT / IIIT Outc
TOP TIER NIT CSE / ECE & IIIT-A / IIIT-B BENCHMARKS					
99.90 %ile	~1,400	225 – 235	**240 – 250**	255 – 268	NIT Trichy / Surathkal CSE
99.70 %ile	~4,200	202 – 212	**218 – 228**	235 – 245	MNNIT Allahabad / M CSE, Top 3 ECE
99.50 %ile	~7,000	190 – 198	**204 – 214**	220 – 232	NIT Rourkela / Calicut Allahabad IT
99.00 %ile	~14,000	168 – 178	**184 – 195**	202 – 215	Tier-1 NIT ECE/EEE, T CSE (Nagpur/Surat)
CORE NIT BRANCHES, HOME-STATE CSE & JEE ADVANCED QUALIFICATION					
98.50 %ile	~21,000	154 – 164	**170 – 180**	186 – 198	Top NIT Mechanical/C New IIIT CSE
98.00 %ile	~28,000	142 – 152	**158 – 168**	174 – 185	Tier-1/2 NIT Core Brar (Mech/Civil/Chem)
97.00 %ile	~42,000	126 – 135	**140 – 150**	155 – 166	Tier-2/3 NIT Core, Sta Engineering Colleges
95.00 %ile	~70,000	105 – 114	**118 – 128**	132 – 142	Safe JEE Advanced C GFTIs / Northeast NIT
93.20 %ile	~95,000	92 – 100	**104 – 112**	116 – 125	General Category JEE Qualifying Cutoff

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Subject-Wise Breakup Needed for 99 Percentile (190+ Marks)

- **Chemistry (75–82 Marks in 35 min):** Fastest scoring section — direct NCERT Inorganic/Organic + formula Physical.
- **Physics (72–80 Marks in 50 min):** 18 to 20 questions are direct formula/graph applications.
- **Mathematics (45–55 Marks in 65 min):** Just 12 to 14 accurate questions in Maths puts you in the 99+ %ile bracket!

Many students prepare all 90 chapters with equal effort and end up running out of revision time in December. Let's look at what the last 3 years of JEE Main papers (2024–2026) actually tell us.

1. Why 55% of Chapters Give 78% of the Marks

Across 58 shifts in the last 3 years, **the top 10 priority chapters in Physics, Chemistry, and Maths account for 58 to 62 questions out of 75 (232 to 248 marks)**. Students who master these high-priority chapters first and solve their last 5 years of PYQs twice consistently cross 180+ even before touching low-output chapters.

2. Impact of Mandatory Section B (No More 5-out-of-10 Choice)

When Section B had 10 numerical questions and you could pick any 5, students used to skip entire blocks like Ionic Equilibrium, Rotation, or Definite Integration. Now that **all 5 numerical questions per subject are compulsory**, leaving a high-weightage chapter means losing a guaranteed 4-mark numerical. Even for tough chapters like Rotation or Ionic Equilibrium, cover the **standard sub-topics** (Moment of Inertia, pH/K_{sp} formulas) so you never blank out in Section B.

3. January Attempt vs April Attempt Reality

In January, 65% of Class 12 and dropper students walk in with incomplete revision. Because competition is less prepared in January, **the same percentile requires 10 to 15 fewer marks in January than in April**. Treat the January Session as your primary target!

How to Use the Subject Priority Pages Ahead

- **Do Not Leave Any 🔥 Topic:** Every topic marked with 🔥 has appeared in almost every single JEE Main shift.
- **Read the Expert Suggestions Column Carefully:** Written directly from our shift-by-shift paper analysis so you know what to prioritize and what to skip when short on time.
- **Solve Top PYQs on The Crucible:** After revising a chapter's notes/formula card in 25 minutes, solve its Top PYQs under a timer.

Physics (Part 1) — Must Do Topics & Expert Suggestions

Compiled by **Kunal Sir**

Physics has **25 questions (100 marks)**. Below are the **Top 5 Priority Blocks in JEE Main Physics**. Finish their formula cards and last 5 years' PYQs first — they give 11 to 13 questions in every shift.

Chapter	Topic	Qs / Shift	Expert Suggestions
1. Modern Physics (Dual Nature, Atoms, Nuclei)	De Broglie & Photoelectric Effect 🔥 Bohr Orbit Radius/Energy/Spectra 🔥 Mass Defect & Binding Energy 🔥	**2 – 3** 🔥	* **Highest ROI block in JEE Main Physics.** Can be revised in 2 hours and gives 8 to 12 guaranteed marks in every shift. * Practice ratio questions on de Broglie wavelength ($\lambda = h/\sqrt{(2mqV)}$) and spectral line transitions ($1/\lambda = R Z^2(1/n_1^2 - 1/n_2^2)$).
2. Current Electricity	Meter Bridge & Wheatstone Network 🔥 Equivalent Resistance & Symmetry 🔥 Galvanometer to Ammeter/Voltmeter 🔥	**2** 🔥	* Almost every paper has 2 questions from Current Electricity (often 1 in Section A and 1 in Section B numericals). * Focus on Meter Bridge balancing length, power dissipation in series/parallel bulbs, and RC circuit steady-state current.
3. Electrostatics & Capacitance	Electric Field, Flux & Gauss Law 🔥 Electric Dipole in Uniform Field 🔥 Capacitor Networks & Dielectrics 🔥	**2 – 3** 🔥	* Gauss Law flux through cube faces, dipole torque/potential energy, and capacitor with dielectric slab (battery connected vs disconnected) repeat every year. * Memorize electric field & potential graphs for hollow vs solid spheres.
4. Ray & Wave Optics	Lens Maker's Formula & Combination 🔥 Prism Minimum Deviation & TIR 🔥 YDSE Fringe Shift & Intensity 🔥	**2 – 3** 🔥	* In Ray Optics, silvered lenses, prism TIR condition, and microscope/telescope magnifying power are the top favourites. * In Wave Optics, YDSE with a thin glass slab and Malus's law ($I = I_0 \cos^2\theta$) through rotated polaroids are must-do.
5. Magnetic Effects of Current & Magnetism	Field due to Wire, Loop & Solenoid 🔥 Force on Moving Charge & Wire 🔥 Magnetic Dipole & Bar Magnet 🔥	**2** 🔥	* Most questions are direct formula applications of Biot-Savart law (combined straight wire + circular arc segments) and force between parallel wires. * Do not skip torque and potential energy of a magnetic dipole ($U = -M \cdot B$).

Physics Top-5 Block Target: These 5 blocks alone give **44 to 52 marks** out of 100 in every JEE Main paper!

Practice Physics PYQs on Crucible ↗

Physics (Part 2) — Must Do Topics & Expert Suggestions

Compiled by **Kunal Sir**

Below are Chapters 6 to 10 in JEE Main Physics priority order. Notice how Units & Dimensions, Semiconductors, and KTG/Thermodynamics give fast marks with minimal calculation.

Chapter	Topic	Qs / Shift	Expert Suggestions
6. Thermodynamics & KTG	First Law & Polytropic Processes 🔥 P-V, V-T, P-T Graphs & Work 🔥 RMS/Avg Speeds & Equipartition 🔥	**2** 🔥	* Directly overlaps with Physical Chemistry (watch sign convention of work W). * Adiabatic vs Isothermal slope, mixture of gases C_p/C_v (γ_{mix}), and RMS speed ratios are asked in almost every shift.
7. Units, Dimensions, Errors & Instruments	Dimensional Formula in Custom Units 🔥 Percentage Error Propagation 🔥 Vernier Calipers & Screw Gauge 🔥	**1 – 2** 🔥	* Low-input, 100%-accuracy chapter. Expressing energy/length in terms of (F, A, T) or (h, c, G) comes every year. * Spend 30 minutes mastering zero-error sign correction in Vernier Calipers and Screw Gauge.
8. Semiconductors & Logic Gates	Logic Gates & Truth Tables 🔥 Zener Diode Voltage Regulator 🔥 PN Junction Forward/Reverse Bias 🔥	**1 – 2** 🔥	* **Logic Gates & De Morgan's Law** give 4 free marks in under 45 seconds in almost every shift. * Practice Zener diode current distribution ($I = I_Z + I_L$) and half/full-wave rectifier output frequency.
9. Kinematics, NLM, WPE & Gravitation	Projectile, Relative Motion & Graphs 🔥 Friction on Incline & Variable Force 🔥 Variation of g & Satellite Energy 🔥	**3 – 4** 🔥	* In Mechanics, JEE Main rewards strong basics: v-t/a-x graphs, block-on-block friction, Work-Energy theorem, and escape/orbital velocity. * Gravitation formulas mirror Electrostatics — revise both together.
10. Rotational Motion, EMI/AC, Waves & SHM	Moment of Inertia & Pure Rolling 🔥 LCR Resonance & Motional EMF 🔥 SHM Phase/Time & Organ Pipes 🔥	**3 – 4** 🔥	* Even if you find Rotation tough, **never skip Moment of Inertia (parallel/perpendicular axes + cavity removal) and Angular Momentum conservation** — 70% of JEE Main Rotation questions are from just these two!

Physics Exam-Hall Rule: Draw a clean diagram first — 80% of sign mistakes in Optics & Mechanics vanish!

Practice Physics PYQs on Crucible ↗

Chemistry (Part 1) — Must Do Topics & Expert Suggestions

Compiled by **Paaras Sir**

Chemistry has **25 questions (100 marks)** and should be finished in **32 to 35 minutes** so you save time for Maths. After 8 chapters were deleted from JEE Main, weightage concentrated heavily in the 10 chapters below.

Chapter	Topic	Qs / Shift	Expert Suggestions
1. General Organic Chemistry (GOC) & Isomerism	Aromaticity, Acidity & Basicity 🔥 Carbocation Stability & Shifts 🔥 RS/EZ, Optical & Conformers 🔥 Purification & Quantitative Est. 🔥	**3** 🔥	* **#1 block in JEE Main Chemistry.** Every single shift asks Acidity/Basicity order, Carbocation stability, and Stereochemistry. * Do not ignore **Purification & Dumas/Kjeldahl/Carius estimation** at the end of NCERT Class 11 GOC — 1 numerical comes from it in almost every shift!
2. Coordination Compounds	CFT Splitting, CFSE & Spin-Only μ 🔥 VBT, Hybridization & Geometry 🔥 Synergic Bonding & Isomerism 🔥	**2 – 3** 🔥	* Highest weightage Inorganic chapter. Strong vs weak field ligands (spectrochemical series), $t_{2g}^{x}e_{g}^{y}$ configuration, and spin-only magnetic moment $\sqrt{(n(n+2))}$ BM are guaranteed questions.
3. Chemical Bonding & Periodic Table	VSEPR Shape & Lone Pairs 🔥 MOT Bond Order & Magnetism 🔥 Dipole Moment & Hydrogen Bonding 🔥 IE, Electron Gain & Radius Exceptions 🔥	**2 – 3** 🔥	* Foundation of entire Inorganic Chemistry. Memorize MOT order for 14-electron species (N_2, CO, CN^-, NO^+) and VSEPR shapes of XeF_2, XeF_4, $XeOF_4$, SF_4, ClF_3.
4. Aldehydes, Ketones, Carboxylic Acids & Amines	Aldol, Cannizzaro & Haloform 🔥 Carbylamine, Hinsberg & Diazonium 🔥 Tollens, Fehling & 2,4-DNP Tests 🔥	**2 – 3** 🔥	* Sequential reagent questions (A → B → C) in JEE Main heavily combine Diazonium salt coupling, Gabriel phthalimide, Hofmann bromamide, and Aldol condensation.
5. Electrochemistry & Chemical Kinetics	Nernst Equation & $\Delta G^\circ = -nFE^\circ$ 🔥 Kohlrausch Law & Faraday's Laws 🔥 1st-Order Kinetics & Arrhenius Eq. 🔥	**2 – 3** 🔥	* Primary source of Section B integer numericals! Practice log-to-power-of-10 simplifications so you never get stuck in final arithmetic.

Chemistry Top-5 Block Target: These 5 blocks give **12 to 14 questions (48–56 marks)** per shift!

Practice Chemistry PYQs on Crucible ↗

Chemistry (Part 2) — Must Do Topics & Expert Suggestions

Compiled by **Paaras Sir**

Below are Chapters 6 to 10 in JEE Main Chemistry priority order. Notice that **Biomolecules, d & f Block, and Salt Analysis** are pure NCERT line-by-line goldmines.

Chapter	Topic	Qs / Shift	Expert Suggestions
6. d & f Block Elements & p-Block Trends	$KMnO_4$ & $K_2Cr_2O_7$ Reactions 🔥 Lanthanoid Contraction & States 🔥 Group 13–18 Anomalous Trends 🔥	**2 – 3** 🔥	* Read NCERT d & f Block line by line — Assertion-Reason and Statement-I/II questions lift sentences verbatim from NCERT tables (especially $Ce^{4+}/Eu^{2+}/Yb^{2+}$ redox tendencies).
7. Thermodynamics, Thermochemistry & Equilibrium	Enthalpy of Formation/Combustion 🔥 Spontaneity ($\Delta G = \Delta H - T\Delta S$) 🔥 Le Chatelier, pH, Buffers & K_{sp} 🔥	**2 – 3** 🔥	* In Section B numericals, Hess's Law, Born-Haber cycle, and $\Delta H = \Delta U + \Delta n_g RT$ are asked repeatedly. Watch J vs kJ unit conversions carefully!
8. Atomic Structure, Mole Concept & Solutions	Bohr Model, Quantum Nos & Nodes 🔥 Stoichiometry, Limiting Reagent & Redox 🔥 Colligative Properties & van't Hoff i 🔥	**3** 🔥	* Easy, predictable numericals: radial nodes ($n - l - 1$), molarity/molality conversion, and elevation in boiling point / osmotic pressure with van't Hoff factor i.
9. Biomolecules & Practical Chemistry (Salt Analysis)	Glucose Reactions, Amino Acids & DNA 🔥 Vitamins & Deficiency Diseases 🔥 Cation Group Reagents & Flame Tests 🔥	**2** 🔥	* **Do not leave Biomolecules or Salt Analysis!** They take 4 hours to revise from Paaras Sir's notes and give 8 marks in under 60 seconds in Round 1.
10. Hydrocarbons, Haloalkanes, Alcohols & Phenols	Markovnikov, Ozonolysis & Alkyne Acid. 🔥 S_N1 / S_N2 / E1 / E2 Stereochemistry 🔥 Reimer-Tiemann, Kolbe & Lucas Test 🔥	**2 – 3** 🔥	* Focus on carbocation rearrangement in dehydration/hydrohalogenation, ozonolysis retro-synthesis, and rate of S_N1 vs S_N2.

Inorganic & Organic Golden Rule: Revise NCERT highlighted lines & exceptions 3 times before the exam!

Practice Chemistry PYQs on Crucible ↗

Mathematics (Part 1) — Must Do Topics & Expert Suggestions

Compiled by **Kunal Sir**

Mathematics has **25 questions (100 marks)**. Even though JEE Main Maths is lengthy, **scoring 50 to 60 marks (13 to 15 questions) already puts you at 99+ percentile in Maths**! Start Round 1 with the 5 high-output blocks below.

Chapter	Topic	Qs / Shift	Expert Suggestions
1. 3D Geometry & Vector Algebra	Shortest Distance Between Skew Lines 🔥 Image & Foot of Perpendicular on Line 🔥 Vector Dot/Cross Product & Projection 🔥	**3 – 4** 🔥	* **Non-negotiable #1 priority in JEE Main Maths (12 to 16 marks per shift).** * Shortest distance between skew lines comes in almost every single paper — practice the determinant and cross-product calculation until you can do it in 90 seconds without sign errors.
2. Matrices & Determinants	System of Linear Equations (Cramer) 🔥 Adjoint & Inverse Properties 🔥 Cayley-Hamilton & Matrix Powers A^n 🔥	**2** 🔥	* guaranteed 8 marks in every shift. Memorize $\|\text{adj } A\| = \|A\|^{n-1}$, $\|\text{adj}(\text{adj } A)\| = \|A\|^{(n-1)^2}$, and $\Delta = \Delta_1 = \Delta_2 = \Delta_3 = 0$ conditions for infinite vs no solution.
3. Sequences & Series + Binomial Theorem	AP, GP, AM-GM & Telescoping Sums 🔥 General Term, Remainder & Coeffs 🔥 Vandermonde & Binomial Series 🔥	**2 – 3** 🔥	* In Binomial Theorem, finding the term independent of x and remainder problems (e.g. 7^{103} divided by 25 using $(50 - 1)^{51}$) are highly repetitive and fast.
4. Definite Integration & Area Under Curves	King's Property $\int f(x) = \int f(a+b-x)$ 🔥 Leibnitz Rule & Periodic/GIF Integrals 🔥 Area Between Parabola, Line & Circle 🔥	**2 – 3** 🔥	* Skip lengthy Indefinite integrals in Round 1 and jump straight to Definite Integration & Area. Standard parabola-line area ($8a^2/3m^3$) saves 3 minutes!
5. Differential Equations	Linear Diff. Equation $dy/dx + Py = Q$ 🔥 Bernoulli's Reducible Form 🔥 Homogeneous & Variable Separable 🔥	**1 – 2** 🔥	* 80% of JEE Main Differential Equations questions are Linear Differential Equations (I.F. = $e^{\int P\,dx}$) in y or in x ($dx/dy + Px = Q$).

Maths Top-5 Block Target: Mastering just these 5 blocks gives you **11 to 13 questions (44–52 marks = 99 %ile in Maths)**!

Practice Maths PYQs on Crucible ↗

Mathematics (Part 2) — Must Do Topics & Expert Suggestions

Compiled by **Kunal Sir**

Below are Chapters 6 to 10 in JEE Main Mathematics priority order. Statistics, Probability, and Sets & Relations are your fastest Round-1 marks.

Chapter	Topic	Qs / Shift	Expert Suggestions
6. Statistics & Probability	Variance & SD of Transformed Data 🔥 Missing Two Observations in Mean/Var 🔥 Bayes' Theorem & Conditional Prob. 🔥	**2** 🔥	* **Statistics (1 Q every shift):** When two observations are misread or missing, use Σx_i and Σx_i^2 directly — guaranteed 4 marks. * **Probability:** Focus on Bayes' Theorem and total probability.
7. Sets, Relations & Functions	Reflexive, Symmetric & Transitive 🔥 Equivalence Classes & Bijective Count 🔥 Domain, Range & Functional Equations 🔥	**2** 🔥	* Checking equivalence relations (especially on Z or N×N) and counting onto/bijective functions come in almost every shift and take under 90 seconds.
8. Limits, Continuity, Diff. & AOD	1^∞ & 0/0 Limits via Series Expansion 🔥 Piecewise Continuity & Sharp Corners 🔥 Monotonicity & Maxima/Minima 🔥	**2 – 3** 🔥	* Memorize Taylor expansions for sin x, cos x, tan x, ln(1+x), e^x up to x^3 — they solve JEE Main limit questions in 3 lines.
9. Straight Lines, Circles & Conic Sections	Orthocentre/Circumcentre & Reflection 🔥 Circle Chords & Radical Axis 🔥 Focal Chords & Eccentricity of Conics 🔥	**2 – 3** 🔥	* After tangents/normals were trimmed from Conics, questions focus heavily on **focal distances, eccentricity relations, and locus of midpoint of chords**.
10. Complex Numbers, P&C, Quadratic & Trig	Cube Roots of Unity (1, ω, ω^2) & $\lvert z-z_0\rvert$ 🔥 Dictionary Rank, Gap/Tie & Distribution 🔥 Newton's Sum $S_n = \alpha^n \pm \beta^n$ & ITF 🔥	**3 – 4** 🔥	* **Must-do patterns:** Newton's sum formula for Quadratic roots ($aS_n + bS_{n-1} + cS_{n-2} = 0$), dictionary rank in P&C, and $\omega^3 = 1$ properties.

Maths Exam-Hall Rule: Pick the 12 cleanest questions in Round 1 first — never get stuck on a 6-minute calculation!

Practice Maths PYQs on Crucible ↗

How to Attempt JEE Main (2 Round Method) & Preparation Checklist

Compiled by **Kunal Sir**

Knowing the syllabus is only half the battle. In JEE Main, students with the exact same preparation level often differ by **35 to 45 marks** purely because of their paper-attempting strategy.

1. First-Round Clock (Finish Round 1 in 140 Minutes)

Follow a strict Round-1 timer in every mock test: **Chemistry: 32–35 minutes** · **Physics: 45–50 minutes** · **Mathematics: 55 minutes**. That leaves **40 full minutes for Round 2** to solve your marked medium-length questions and double-check Section B integer calculations.

2. The 2 Round Method — Don't Solve Like Q1, Q2, Q3...

Round 1 (Low-Hanging Fruit): Scan 2–3 questions at a time. If a question is a direct formula, NCERT fact, or standard PYQ pattern you can solve in under 2 minutes, finish it immediately. If a question looks doable but lengthy, write its question number on your rough sheet and move on. **Never give a stuck question a "second try" during Round 1.**

3. Examiner Is Your Friend — And Be Logical, Not Emotional

Use options smartly: dimensional checks in Physics, boundary values/special cases in Maths, and elimination in Assertion-Reason. At the same time, never get emotional about your favourite chapter: **the most expensive sentence in the exam hall is "*mujhe toh yeh chapter aata hai.*"** Every 4-mark question carries the exact same weightage — an easy Statistics question gives the same +4 as a brutal 7-minute Definite Integral!

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Preparation Checklist (Follow For Every Chapter & Mock)

1. 25-Minute Formula Card / Notes Revision: Revise formulas and methods orally before starting questions — lectures are not a Netflix show!

2. Solve Top PYQs Under a Timer: Do not just read solutions; solve the last 5 years' PYQs yourself on The Crucible.

3. Maintain Your "My Mistakes" Notebook: Before every mock test, revise the mistakes you made in previous tests — we retain through questions, not passive reading.

4. Sit for the Full 3 Hours in Every Mock: Don't judge yourself by your score in the first 3 Full Tests; your real potential score starts showing from the 4th test onwards!