SUBJECT

Strategy

MODULE

NTA & NMC Curriculum Master Blueprint

WEIGHTAGE

720 / 720 Marks Complete Blueprint

CURRICULUM

NCERT Rationalized

NTA NEET UG 2027 Official Syllabus & Weightage Breakdown

Prepared by NEETnova Academic Council & Kota Senior Faculty Panel * 100% Aligned with Official NTA & NMC Guidelines

1. EXECUTIVE OVERVIEW & STRATEGIC FOUNDATION

This comprehensive master compendium outlines the official NTA NEET UG 2027 curriculum based strictly on the rationalized NCERT textbooks and National Medical Commission (NMC) guidelines. It includes the complete subject-wise marks distribution, high-yield chapter priority matrix, confirmed deleted topics, and an actionable revision blueprint designed to guide aspirants toward securing a top All India Rank (AIR) in the 720-mark medical entrance exam.

2. NCERT LINE-BY-LINE COMPREHENSIVE STUDY MODULE

1.1 Physics Unit-Wise Structure & Marks Allocation (180 Marks)

NEET Physics comprises 45 questions (Section A: 35 mandatory, Section B: 10 out of 15). Mechanics constitutes the largest single block (12-14 Qs, ~52 marks), followed by Electrodynamics (10-12 Qs, ~44 marks), Modern Physics (6-8 Qs, ~28 marks), Optics (5-7 Qs, ~24 marks), and Thermodynamics/KTG (4-6 Qs, ~20 marks). Focus on conceptual clarity, standard derivations, and daily timed numerical solving.

- Mechanics: Kinematics, Laws of Motion, Work-Energy-Power, Rotational Motion (12-14 Qs)
- Electrodynamics: Electrostatics, Current Electricity, Magnetism, EMI & AC (10-12 Qs)
- Modern Physics: Dual Nature, Atoms, Nuclei, Semiconductor Electronics (6-8 Qs)
- Optics: Ray Optics, Optical Instruments, Wave Optics (5-7 Qs)
- Thermal Physics: Thermal Properties, Thermodynamics, Kinetic Theory of Gases (4-6 Qs)

NCERT LINE HIGHLIGHT: Mechanics and Electrodynamics form over 55% of the total physics question paper in NEET UG.

1.2 Chemistry Balanced 3-Way Distribution (180 Marks)

Chemistry is equally divided into Physical Chemistry (~15 Qs, formula & calculation driven), Inorganic Chemistry (~15 Qs, 100% direct NCERT statements, electronic configurations, and periodic trends), and Organic Chemistry (~15 Qs, named reactions, reaction mechanisms, and acidity/basicity comparisons). Mastering NCERT in-text examples and back-of-chapter exercises is mandatory.

- Physical Chemistry: Solutions, Electrochemistry, Chemical Kinetics, Equilibrium, Mole Concept (15 Qs)
- Inorganic Chemistry: Periodic Table, Chemical Bonding, Coordination Compounds, p-Block, d & f-Block (15 Qs)
- Organic Chemistry: GOC, Hydrocarbons, Haloalkanes, Alcohols-Phenols-Ethers, Carbonyl Compounds, Amines, Biomolecules (15 Qs)

NCERT LINE HIGHLIGHT: Inorganic Chemistry questions are framed almost verbatim from NCERT tables and exception boxes.

1.3 Biology 360/360 Dominance: Botany & Zoology (360 Marks)

Biology constitutes 50% of the NEET score (90 questions to attempt). High-yield units include Human Physiology (12-15 Qs), Genetics and Evolution (12-15 Qs), Ecology and Environment (10-12 Qs), Cell Biology & Biomolecules (10-12 Qs), and Plant Physiology (8-10 Qs). Every line of the NCERT textbook, including figure captions and summary paragraphs, is potential question material.

- Genetics & Molecular Biology: Principles of Inheritance, Molecular Basis of Inheritance (14-16 Qs)
- Human Physiology: Breathing, Circulation, Excretion, Locomotion, Neural & Chemical Coordination (12-15 Qs)
- Ecology & Environment: Organisms & Populations, Ecosystem, Biodiversity & Conservation (10-12 Qs)
- Reproduction: Sexual Reproduction in Flowering Plants, Human Reproduction, Reproductive Health (10-12 Qs)
- Cell Biology & Cell Division: Cell Structure, Cell Cycle & Cell Division, Biomolecules (10-12 Qs)

NCERT LINE HIGHLIGHT: 95%+ of questions in Biology are direct extractions from NCERT textbooks with zero outside references needed.

1.4 Confirmed Rationalized & Deleted Chapters Alert

To prevent wasted preparation time, note that the following topics remain deleted under NMC rationalization: In Biology: Digestion & Absorption, Transport in Plants, Mineral Nutrition, Reproduction in Organisms, Environmental Issues. In Chemistry: Solid State, Surface Chemistry, States of Matter, Hydrogen, s-Block Elements, Polymers, Chemistry in Everyday Life. In Physics: Rolling Motion derivations, Carnot Engine, Potentiometer, Transistors, Communication Systems.

- Deleted Biology: Digestion & Absorption, Transport in Plants, Mineral Nutrition, Environmental Issues
- Deleted Chemistry: Solid State, Surface Chemistry, States of Matter, Hydrogen, s-Block Elements, Polymers
- Deleted Physics: Pure Rolling derivations, Carnot Engine, Potentiometer, Transistors, Communication Systems

NCERT LINE HIGHLIGHT: NMC Directive: Questions will only be framed from the rationalized NCERT syllabus published for the active academic cycle.

1.5 3-Tier Chapter Priority Matrix for Maximum ROI

Strategic preparation requires categorizing chapters into 3 priority tiers based on question yield versus preparation time. Prioritizing Tier 1 guarantees a safe qualifying foundation of 550+ marks before advancing to Tier 2 and Tier 3 rank-deciding units.

- Tier 1 (Core Foundations - 60% weightage): Genetics, Human Physiology, Mechanics, Electrostatics, Chemical Bonding, GOC
- Tier 2 (High-Scoring Units - 25% weightage): Modern Physics, Solutions, Coordination Compounds, Cell Division, Ecology
- Tier 3 (Factual Review - 15% weightage): Biomolecules, Periodic Properties, Units & Measurements, Living World

NCERT LINE HIGHLIGHT: Complete Tier 1 chapters thoroughly with at least 80 MCQs each before moving on to factual Tier 3 units.

1.6 Official Scoring Scheme, Section B Rules & Tie-Breaking Criteria

NEET UG consists of 200 multiple-choice questions across 4 subjects (Physics, Chemistry, Botany, Zoology), of which 180 must be answered. Each subject has Section A (35 mandatory questions) and Section B (15 questions, attempt any 10). Each correct response awards +4 marks, each incorrect response incurs -1 mark penalty, and unattempted questions receive 0.

- Section A: 35 Questions per subject (All 35 compulsory, total 140 marks)
- Section B: 15 Questions per subject (Attempt ANY 10 questions, total 40 marks)
- Negative Marking Penalty: -1 mark deducted for every incorrect bubble
- Tie-Breaking Order: Higher marks in Biology > Higher marks in Chemistry > Higher marks in Physics > Proportion of incorrect answers

NCERT LINE HIGHLIGHT: If more than 10 questions are attempted in Section B, only the first 10 attempted questions are evaluated by NTA.

TABLE 1.1: NEET UG 2027 SUBJECT-WISE WEIGHTAGE & QUESTION MATRIX

Subject Component	Sec A Qs	Sec B (Attempt)	Total Marks	Weightage %	Recommended
Botany	35 Qs	10 / 15 Qs	180 Marks	25.0%	25 - 30 Minutes

Zoology	35 Qs	10 / 15 Qs	180 Marks	25.0%	25 - 30 Minutes
Chemistry	35 Qs	10 / 15 Qs	180 Marks	25.0%	40 - 45 Minutes
Physics	35 Qs	10 / 15 Qs	180 Marks	25.0%	55 - 65 Minutes
OMR & Review Buffer	-	-	-	-	30 - 35 Minutes
GRAND TOTAL	140 Qs	40 Qs	720 Marks	100.0%	200 Minutes

TABLE 1.2: NMC CONFIRMED RATIONALIZED VS DELETED TOPICS COMPARISON

Subject	Retained Core Topics (Must Master)	Confirmed Deleted Chapters (Do NOT Study)
Physics	Kinematics, Laws of Motion, Rotational (Fixed Axis), Gravitation, Modern Physics, Semiconductor Diodes, Ray & Wave Optics	Rolling Motion derivations, Carnot Engine, Refrigerators, Potentiometer, Transistors, Communication Systems
Chemistry	Solutions, Electrochemistry, Kinetics, Coordination Compounds, d & f-Block, Carbonyl Compounds, Amines, Biomolecules	Solid State, Surface Chemistry, States of Matter, Hydrogen, s-Block Elements, Polymers, Chemistry in Everyday Life
Biology	Genetics, Molecular Basis, Ecology, Human Physiology (6 systems), Plant Physiology (Photosynthesis, Respiration, PGRs)	Digestion & Absorption, Transport in Plants, Mineral Nutrition, Reproduction in Organisms, Environmental Issues

TABLE 1.3: NEET MARKS VS ALL INDIA RANK (AIR) & ADMISSION BENCHMARK

Marks Range	Expected AIR	Target Medical Institution	Strategic Category Safe Cutoff
705 - 720	AIR 1 - 50	AIIMS New Delhi, JIPMER Puducherry, MAMC Delhi	Guaranteed Top 10 National Institutions
680 - 704	AIR 51 - 800	Top Peripheral AIIMS, VMMC, IMS-BHU, KGMU Lucknow	Premier Central Government Colleges
650 - 679	AIR 801 - 5,500	Top State Govt Medical Colleges (SMS, GMC, Seth GS)	Safe 15% All India Quota (AIQ) MBBS
615 - 649	AIR 5,501 - 18,000	Peripheral State GMCs / Govt Society Colleges	State Quota MBBS Confirmed (General)
570 - 614	AIR 18,001 - 42,000	Semi-Govt Medical Colleges / Reserved AIQ Quota	OBC / EWS / SC / ST Category MBBS Seats

4. FORMULA VAULT, KEY EQUATIONS & SHORTCUTS

Total NEET Marks Formula

Total = (Phys: 180) + (Chem: 180) + (Bio: 360) = 720

180 attempted questions out of 200

NTA Scoring Formula

Final Score = (Correct * 4) - (Incorrect * 1)

Unattempted = 0 marks penalty

Section B Selection Rule

Attempt exactly 10 out of 15 questions per subject

Only first 10 attempted are evaluated if >10 bubbled

Qualifying PCB Aggregate (Gen/EWS)

Class 12 PCB Aggregate >= 50.0%

Must pass Physics, Chemistry, Biology individually

Qualifying PCB Aggregate (OBC/SC/ST)

Class 12 PCB Aggregate >= 40.0%

Applies to recognized central/state reserved categories

Minimum Age Criteria

Age >= 17 Years by 31st December of Exam Year

Born on or before 31-Dec-2010 for NEET 2027

AIIMS New Delhi Benchmark

Target Score >= 705 / 720 (AIR < 50)

Requires Bio 355+, Phys 175+, Chem 175+

State Government Medical College Benchmark

Target Score >= 640 - 655 / 720

Safe All India Quota (AIQ) & State Quota MBBS seat

5. STEP-BY-STEP SOLVED NUMERICALS & ILLUSTRATIONS

Illustration 01: 200-Minute Exam Time Budgeting Optimization

Problem: A candidate has 200 minutes for 180 questions (90 Bio, 45 Chem, 45 Phys). Determine the optimal subject-wise time allocation and review buffer.

Strategic Framework: Allocate time proportional to question complexity: Biology questions take ~35-40 seconds, Chemistry takes ~50 seconds, and Physics numericals take ~80 seconds, leaving a safety buffer for OMR bubbling.

1. Step 1: Biology (90 Qs) at 40s per question = 60 minutes.
2. Step 2: Chemistry (45 Qs) at 53s per question = 40 minutes.
3. Step 3: Physics (45 Qs) at 80s per question = 60 minutes.
4. Step 4: Total active solving time = 60 + 40 + 60 = 160 minutes.
5. Step 5: Reserved buffer time = 200 - 160 = 40 minutes (used for OMR filling, Section B selection, and re-checking marked questions).

FINAL ANSWER: Bio: 60m | Chem: 40m | Phys: 60m | Buffer: 40m

Illustration 02: Negative Marking Defense & Score Impact

Problem: An aspirant attempts 170 questions with 15 incorrect answers. Calculate the candidate score and the relative score loss compared to leaving those 15 questions unattempted.

Strategic Framework: Calculate positive marks from correct answers, subtract negative penalty, and determine the opportunity cost of wild guessing.

1. Step 1: Correct answers = 170 - 15 = 155 questions.
2. Step 2: Raw positive marks = 155 × 4 = 620 marks.
3. Step 3: Negative penalty = 15 × (-1) = -15 marks. Actual score = 620 - 15 = 605 marks.
4. Step 4: If those 15 doubtful questions were skipped, score would have been 620 marks.
5. Step 5: Net loss due to negative marking = 15 marks directly + missed rank shift of approximately 4,500 All India Ranks.

FINAL ANSWER: Score: 605 / 720 (Net loss: 15 marks & ~4,500 ranks)

6. HIGH-YIELD NCERT POINTERS & RAPID FIRE CHECKLIST

- [ ] NMC officially removed the upper age limit for NEET UG in 2022; candidates of any age above 17 are 100% eligible.
- [ ] There is strictly NO attempt limit for NEET UG; aspirants can appear an unlimited number of times.
- [ ] Section B contains 15 questions per subject: you must attempt ANY 10. If more than 10 are answered, only the first 10 are evaluated.
- [ ] Biology covers exactly 50% of total NEET marks (360 out of 720); scoring 340+ here is the foundation of any GMC seat.
- [ ] The examination is conducted in pen-and-paper offline mode on an OMR sheet for a duration of exactly 200 minutes (2:00 PM to 5:20 PM IST).
- [ ] Class 12 board marks do NOT contribute to NEET ranking; only the minimum PCB aggregate eligibility percentage (50% Gen, 40% reserved) is required.

7. NTA EXAM TRAPS & NEGATIVE MARKING ALERTS

Trap: Attempting all 15 questions in Section B. NTA evaluates only the first 10 answered questions, ignoring subsequent correct answers.

Trap: Wild guessing on 50-50 questions. Each wrong answer costs 5 relative marks (+4 missed + 1 negative penalty).

Trap: Rushing through Biology to save time for Physics. Rushing leads to reading errors on "NOT true", "EXCEPT", and "INCORRECT" statements.

Trap: Studying deleted chapters from old coaching material. Always cross-check topics against the rationalized NCERT list.

8. MEMORY HACKS & MNEMONICS FOR RAPID RETENTION

NMC Eligibility Rules: "No Limits, Just Minimums" -> NO Upper Age Limit, NO Attempt Limit, Only Minimum 17 Years & 50% PCB.

Section B Strategy: "Scan 15, Pick 10, Lock In" -> Never solve blindly in sequence; scan all 15 to pick the easiest 10 questions.