Revised Syllabus for NIMCET Exam
(With effect from 2026)

Mathematics: (50 Questions)

Set Theory and Logic: Concepts of Sets- Unions, Intersection, Difference, Symmetric difference, Cartesian Product, Cardinality, Functions and Relations, Venn Diagrams, Truth tables, Connectives, Tautology and Contradictions.

Probability and Statistics: Basic concepts of probability theory, Averages, Dependent and independent events, Bayes' Theorem, Mean, Median, Mode, Mean deviation, Standard deviation, variance, Moments, and Frequency distributions.

Algebra: Fundamental operations in algebra, Quadratic equations with real coefficients, Relation between roots & coefficients, Symmetric functions of roots and their sums, indices, logarithms, exponentials, arithmetic, geometric, harmonic progressions, finite sums of powers of natural numbers. Matrices & determinants, simultaneous linear equations, Permutations & Combinations, and Binomial Theorem.

Coordinate Geometry: Rectangular Cartesian coordinates, distance formulae, equation of a line (various forms), and intersection of lines, pair of straight lines, equations of a circle, parabola, ellipse, and hyperbola, Section formula, Tangents and normal to circles and conics.

Calculus: Functions on real numbers, limits of functions, left and right limits, limits at infinity, continuous functions, applications of the intermediate value theorem, differentiation, applications of differentiation, tangents, normals, simple examples of maxima and minima, applications of Rolle's theorem, Mean Value Theorem, Integration of functions- by parts, by substitution, by partial fraction, integration of odd & even functions, periodic, definite integrals, area computations.

Trigonometry: Trigonometric functions, identities, principal value of inverse trigonometric functions, properties of triangles, solution of triangles, heights and distances, trigonometric equations and their general solutions.

Analytical Ability & Logical Reasoning: (40 Questions)

Verbal Reasoning, Non-verbal Reasoning, Deductive Reasoning, Inductive Reasoning -Topics Include blood relations, coding-decoding, direction test, seating arrangement, puzzles, input-output, syllogism, alphanumeric series, mirror images, statements and conclusions/arguments.

Problem solving, Critical thinking, Data Interpretation, Numerical Reasoning, Data Sufficiency, Data Visualization.

Computer Awareness: (20 Questions)

Computer Basics: Organization of a computer, Central Processing Unit (CPU), structure of instructions in CPU, input/output devices, computer memory, and back-up devices.

Data Representation: Representation of characters, integers, and fractions, binary and hexadecimal representations, binary arithmetic: addition, subtraction, multiplication, division, simple arithmetic, and two's complement arithmetic, floating point representation of numbers, Boolean algebra.

Computer Hardware: Input Devices: Keyboard, mouse, scanner, etc. Output Devices: Monitor, printer, speakers, etc. Storage Devices: Hard drives, SSDs, USB drives, etc. Memory: RAM, ROM, cache, etc.

Computer Software: Operating Systems: Windows, macOS, Linux, Android, etc. System Software: Utility programs, device drivers. Application Software: Basic concepts & tools.

Internet and Email: Web Browsing - Understanding how the internet works and how to navigate it. Email - Sending, receiving, and managing emails. Online Security -Basic awareness of online threats and safety measures.

General English: (10 Questions)

Comprehension of written text, usage of words (vocabulary), Grasp of Grammatical Patterns (usage of sentence forms, sounds, and word formation processes), meaning of words and phrases, technical writing, and overall accuracy and fluency in expressions of English required for technical education.