

SYLLABUS *for* VMC's Admission Test

JEE, NEET, Olympiads and Board Preparatory Programs

Note: Existing students cannot be re-admitted/ re-enrolled through New Admission Test

1 Year Program for Students going to **Class 12th (JEE 2025)**

PHYSICS

Units and Measurements, Vectors, Kinematics of a Particle, Motion in Two Dimensions, Dynamics of a particle, Energy and Momentum, Rotation, Gravitation, Properties of Matter, Heat and Thermodynamics, Liquids

CHEMISTRY

Stoichiometry, Atomic Structure, Periodicity, Chemical Bonding, States of Matter, Thermochemistry, Thermodynamics, Chemical Equilibrium, Ionic Equilibrium, Redox Reaction, General Organic Chemistry

MATHEMATICS

Sets, Relations, Functions, Quadratic Equations, Trigonometry, Sequence and Series, Complex Numbers, Permutation and Combination, Binomial Theorem, Straight Lines, Circles

PATTERN **Physics:** 20 Questions | **Chemistry:** 20 Questions | **Mathematics:** 20 Questions

2 Year Program for Students going to **Class 11th (JEE 2026)**

Mental Ability (MAT)

Verbal and Non-Verbal Series, Logical Sequence of Words, Verbal and Non-Verbal Analogy, Coding and Decoding, Arithmetical Reasoning, Alphabet Test, Puzzle Test, Mirror Images, Analytical Reasoning, Blood Relation, Dice and Cube, Grouping of Identical Figures, Calendar, Logical Venn Diagrams, Clock, Verbal and Non-Verbal Classification, Paper Folding and Paper Cutting, Ranking and Time Sequence, Figure Matrix, Data Sufficiency

MATHEMATICS

Real Numbers, Number System, Polynomials, Linear Equation in Two Variables, Lines and Angles, Triangles, Quadrilaterals, Circles, Heron's Formula, Surface area & Volume, Statistics, Trigonometry, Probability, Quadratic Equations, Arithmetic Progressions, Similar Triangles

PATTERN **MAT:** 15 Questions | **Mathematics:** 20 Questions

1 Year Program for Students going to **Class 12th (NEET 2025)**

PHYSICS

Physical World, Units and Measurements, Motion in a Straight Line, Motion in a Plane, Laws of Motion, Work, Energy and Power

CHEMISTRY

Some Basic Concepts of Chemistry, Structure of Atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure
 Organic Chemistry: Some basic Principles and Techniques

BIOLOGY

The Living World, Biological Classification, Plant Kingdom, Animal Kingdom, Morphology of Flowering Plants, Structural Organization in Animals, Cell-The Unit of Life, Biomolecules.

PATTERN **Physics:** 25 Questions | **Chemistry:** 25 Questions | **Biology:** 50 Questions

2 Year Program for Students going to **Class 11th (NEET 2026)**

PHYSICS

Reflection and Refraction: Reflection of light at curved surfaces, Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification. Refraction; laws of refraction, refractive index. Refraction of light by spherical lens, Image formed by spherical lenses, Lens formula (Derivation not required), Magnification. Power of a lens.

Human eye and colourful world: Functioning of a lens in human eye, defects of vision and their corrections, applications of spherical mirrors and lenses. Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.

CHEMISTRY

Chemical reactions: Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation and reduction

Acids, bases and salts: Their definitions in terms of furnishing of H⁺ and OH⁻ ions, General properties, examples and uses, concept of pH scale (Definition relating to logarithm not required), importance of pH in everyday life; preparation and uses of sodium hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris.

BIOLOGY

Life processes: 'Living Being'. Basic concept of nutrition, respiration, transport and excretion in plants and animals.

Mental Ability (MAT)

Verbal and Non-Verbal Series, Logical Sequence of Words, Verbal and Non-Verbal Analogy, Coding and Decoding, Arithmetical Reasoning, Alphabet Test, Puzzle Test, Mirror Images, Analytical Reasoning, Blood Relation, Dice and Cube, Grouping of Identical Figures, Calendar, Logical Venn Diagrams, Clock, Verbal and Non-Verbal Classification, Paper Folding and Paper Cutting, Ranking and Time Sequence, Figure Matrix, Data Sufficiency

PATTERN **Physics:** 30 Questions | **Chemistry:** 30 Questions | **Biology:** 30 Questions | **MAT:** 10 Questions

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3 Year Program for Students going to **Class 10th**

Mental Ability (MAT)

Verbal and Non-Verbal Series, Logical Sequence of Words, Verbal and Non-Verbal Analogy, Coding and Decoding, Arithmetical Reasoning, Alphabet Test, Puzzle Test, Mirror Images, Analytical Reasoning, Blood Relation, Dice and Cube, Grouping of Identical Figures, Calendar, Logical Venn Diagrams, Clock, Verbal and Non-Verbal Classification, Paper Folding and Paper Cutting, Ranking and Time Sequence, Figure Matrix, Data Sufficiency

MATHEMATICS

Number System, Polynomials, Coordinate Geometry, Introduction to Euclid's Geometry, Lines & Angles, Triangles, Heron's Formula, Linear Equation in Two Variables, Quadrilaterals, Circles, Surface area & Volume, Statistics, Profit and Loss, Percentage, Simple and Compound Interest

PATTERN **MAT:** 15 Questions | **Mathematics:** 20 Questions

4 Year Program for Students going to **Class 9th**

Mental Ability (MAT)

Verbal and Non-Verbal Series, Logical Sequence of Words, Verbal and Non-Verbal Analogy, Coding and Decoding, Arithmetical Reasoning, Alphabet Test, Puzzle Test, Mirror Images, Analytical Reasoning, Blood Relation, Dice and Cube, Grouping of Identical Figures, Calendar, Logical Venn Diagrams, Clock, Verbal and Non-Verbal Classification, Paper Folding and Paper Cutting, Ranking and Time Sequence, Figure Matrix, Data Sufficiency

MATHEMATICS

Rational Number, Linear Equation in One Variable, Quadrilaterals, Square & Square Roots, Cube & Cube Roots, Data Handling, Factorization, Algebraic Expression, Exponents & Powers, Direct & Inverse Proportion, Mensuration, Profit and Loss, Percentage, Simple and Compound Interest

PATTERN **MAT:** 15 Questions | **Mathematics:** 20 Questions

Admissions to VMC Foundation Programs

are granted on the basis of its

**"Direct Admissions
Process"**

for students moving to
class 6, 7, & 8.

*Scholarships will be awarded based
 on their school examination results.*

