ORSET-2K26

TRIPURA'S LARGEST SCHOLARSHIP TEST

Comprehensive Master Syllabus (Classes 5 to 12)

CLASS 5 SYLLABUS

MATHEMATICS

- Large Numbers and Place Value
- Addition, Subtraction, Multiplication & Division
- Factors and Multiples
- Fractions and Decimals
- Basic Geometry: Lines, Angles and Shapes
- Perimeter and Area
- Measurement: Length, Weight, Capacity and Time
- Patterns and Number Sequences
- Data Handling and Graphs

SCIENCE

- Living and Non-living Things
- Plants: Parts, Functions and Life Cycle
- Animals and Their Habitats
- Human Body and Sense Organs
- Food, Nutrition and Health
- States of Matter
- Force, Work and Energy (Basic Concepts)
- Light, Sound and Shadows
- Air, Water and Environment
- Earth, Solar System and Natural Resources

CLASS 6 SYLLABUS

MATHEMATICS

- Knowing Our Numbers
- Whole Numbers
- Playing with Numbers
- Integers
- Fractions and Decimals
- Basic Algebra
- Ratio and Proportion
- Geometry: Lines, Angles and Shapes
- Mensuration
- Data Handling
- Symmetry and Patterns

SCIENCE

- Components of Food
- Materials and Their Properties
- Separation of Substances
- Changes Around Us
- Living Organisms and Their Surroundings
- Motion and Measurement
- Light, Shadows and Reflections
- Electricity and Circuits
- Magnets
- Water, Air and Environment

CLASS 7 SYLLABUS

MATHEMATICS

- Integers
- Fractions and Decimals
- Rational Numbers (Basic)
- Simple Equations
- Lines and Angles
- Triangles and Their Properties
- Congruence of Triangles
- Comparing Quantities
- Percentage and Profit-Loss
- Perimeter and Area
- Algebraic Expressions
- Exponents and Powers
- Symmetry
- Data Handling

SCIENCE

- Nutrition in Plants and Animals
- Respiration in Organisms
- Transportation in Plants and Animals
- Reproduction in Plants
- Heat
- Acids, Bases and Salts
- Physical and Chemical Changes
- Weather, Climate and Adaptations
- Motion and Time
- Electric Current and Its Effects
- Light
- Water and Forests
- Soil

CLASS 8 SYLLABUS

MATHEMATICS

- Rational Numbers
- Linear Equations in One Variable
- Understanding Quadrilaterals
- Practical Geometry
- Data Handling
- Squares and Square Roots
- Cubes and Cube Roots
- Comparing Quantities
- Algebraic Expressions and Identities
- Factorisation
- Mensuration
- Exponents and Powers
- Direct and Inverse Proportion
- Introduction to Graphs
- Number Puzzles

SCIENCE

- Crop Production and Management
- Microorganisms
- Synthetic Fibres and Plastics
- Metals and Non-metals
- Coal and Petroleum
- Combustion and Flame
- Conservation of Plants and Animals
- Cell Structure and Functions
- Reproduction in Animals
- Force and Pressure
- Friction
- Sound
- Chemical Effects of Electric Current
- Light
- Some Natural Phenomena
- Stars and Solar System

CLASS 9 SYLLABUS

MATHEMATICS

- Number Systems
- Polynomials
- Coordinate Geometry
- Linear Equations in Two Variables
- Introduction to Euclid's Geometry
- Lines and Angles
- Triangles
- Quadrilaterals
- Circles
- Heron's Formula
- Surface Areas and Volumes
- Statistics
- Probability

SCIENCE

Physics

- Motion, Force and Laws of Motion
- Gravitation, Work and Energy, Sound

Chemistry

- Chemical Reactions and Equations
- Acids, Bases and Salts, Metals & Non-metals
- Carbon and Its Compounds, Periodic Classification

Biology

- Life Processes, Control and Coordination
- How do Organisms Reproduce?, Heredity
- Our Environment

CLASS 10 SYLLABUS

MATHEMATICS

- Real Numbers, Polynomials
- Pair of Linear Equations in Two Variables
- Quadratic Equations, Arithmetic Progressions
- Triangles, Coordinate Geometry
- Introduction & Applications of Trigonometry
- Circles, Areas Related to Circles
- Surface Areas and Volumes
- Statistics and Probability

SCIENCE

Physics

- Light: Reflection and Refraction
- Human Eye and Colourful World
- Electricity, Magnetic Effects of Electric Current

Chemistry

- Matter in Our Surroundings
- Is Matter Around Us Pure?
- Atoms and Molecules, Structure of Atom

Biology

- Cell: Fundamental Unit of Life, Tissues
- Diversity in Living Organisms, Health & Disease
- Natural Resources, Improvement in Food Resources

CLASS 11 SYLLABUS

PHYSICS

- Units and Measurements, Motion in Straight Line/Plane
- Laws of Motion, Work, Energy and Power
- System of Particles & Rotational Motion, Gravitation
- Mechanical Properties of Solids & Fluids
- Thermal Properties, Thermodynamics, Kinetic Theory
- Oscillations and Waves

CHEMISTRY

- **Physical:** Basic Concepts, Structure of Atom, Chemical Bonding, Thermodynamics, Equilibrium
- **Inorganic:** Periodicity, p-Block Elements (Intro)
- **Organic:** Basic Principles & Techniques, Hydrocarbons

MATHEMATICS & BIOLOGY

Mathematics

- Sets, Relations & Functions, Trigonometric Functions
- Complex Numbers, Quadratic Equations, Linear Inequalities
- Permutations, Combinations, Binomial Theorem
- Sequences & Series, Straight Lines, Conic Sections
- 3D Geometry, Limits & Derivatives, Statistics, Probability

Biology (Botany & Zoology)

- **Botany:** Plant Kingdom, Anatomy/Morphology, Cell Cycle, Photosynthesis, Respiration, Growth
- **Zoology:** Animal Kingdom, Digestion, Breathing, Body Fluids, Excretion, Locomotion, Neural & Chemical Coordination

CLASS 12 SYLLABUS

PHYSICS

- Electric Charges, Fields, Potential & Capacitance
- Current Electricity, Moving Charges & Magnetism
- Electromagnetic Induction, AC, EM Waves
- Ray & Wave Optics, Dual Nature, Atoms & Nuclei
- Semiconductor Electronics

CHEMISTRY

- **Physical:** Solutions, Electrochemistry, Chemical Kinetics
- **Inorganic:** d- and f-Block Elements, Coordination Compounds
- **Organic:** Haloalkanes, Alcohols, Aldehydes, Amines, Biomolecules

MATHEMATICS & BIOLOGY

Mathematics

- Relations & Functions, Inverse Trigonometric Functions
- Matrices, Determinants, Continuity & Differentiability
- Applications of Derivatives, Integrals, Differential Equations
- Vector Algebra, 3D Geometry, Linear Programming, Probability

Biology (Botany & Zoology)

- **Botany:** Sexual Reproduction in Flowering Plants, Inheritance, Molecular Basis, Evolution, Biotechnology
- **Zoology:** Human Reproduction, Health & Disease, Ecosystem, Biodiversity

REASONING & MENTAL ABILITY (CLASSES 5 TO 10)

CORE TOPICS COVERED

- **Number Series & Alphabet Series:** Missing numbers, patterns, letter patterns
- **Classification & Coding-Decoding:** Odd one out, simple letter/number codes
- **Analogy & Direction Sense:** Number, word/shape analogy, directions & distance
- **Blood Relations & Ranking:** Basic family relationships, position, rank & comparison
- **Mathematical Puzzles:** Missing values, number grids, logical patterns
- **Calendar & Clock:** Basic day/date and time problems
- **Venn Diagrams & Spatial Reasoning:** Simple grouping, paper folding, shape mirror/water images
- **Arithmetic Reasoning:** Age, time, money, simple puzzles

DIFFICULTY LEVEL GUIDANCE

- **Class 5-6:** Basic patterns, numbers, shapes
- **Class 7-8:** Multi-step reasoning and puzzles
- **Class 9-10:** Olympiad-style logical and analytical reasoning