Syllabus for Category B (Class 7 & 8)

ENGLISH

- Parts of Speech: In-depth usage
- Tenses: Present, Past, Future (all forms)
- Voice: Active and Passive
- Direct and Indirect Speech
- Transformation of Sentences
- Modals and Auxiliaries
- Subject-Verb Agreement
- Conjunctions, Prepositions
- Degrees of Comparison
- Articles, Determiners
- Homophones, Homonyms
- Phrasal Verbs
- Idioms and Proverbs
- Sentence Synthesis and Transformation
- Advanced Direct-Indirect Speech
- Conditional Sentences
- Error Correction Exercises
- Comprehension: Unseen Passage with inferential, factual, vocabulary based questions.

SCIENCE

- Motion and Time
- Force and Pressure
- Heat and Temperature
- Light and Shadows
- Electricity and Circuits
- Wind, Storms, and Cyclones
- Simple Machines
- Force and Pressure
- Friction
- Sound
- Chemical Effects of Electric Current
- Some Natural Phenomena (Lightning, Earthquakes)
- Light and Reflection
- Stars and The Solar System
- Matter and Its Composition
- Physical and Chemical Changes
- Elements, Compounds, and Mixtures
- Acids, Bases, and Salts (intro level)
- Air and Its Constituents
- Matter and Its States
- Atomic Structure (Intro to atoms and molecules
- Elements, Compounds, and Mixtures
- Metals and Non-Metals
- Coal and Petroleum
- Nutrition in Plants and Animals
- Respiration in Organisms
- Transportation in Plants & Animals
- Reproduction in Plants
- Adaptations in Animals and Plants
- Waste Disposal and Conservation
- Cell – Structure and Functions
- Reproduction in Animals
- Reaching the Age of Adolescence
- Microorganisms – Friend and Foe
- Crop Production and Management
- Conservation of Plants and Animals
- Human Body Systems (Digestive, Circulatory, etc.)

SOCIAL SCIENCE

- The Delhi Sultanate
- The Mauryan Empire
- Jainism and Buddhism
- The Sangam Age
- The Gupta Empire
- The Mughal Empire – Babur to Aurangzeb
- Administration under the Mughals
- Religious and Cultural Developments – Bhakti and Sufi Movements
- Vijayanagara and Bahmani Kingdoms
- Regional Kingdoms – Rajputs, Marathas
- Achievements of Akbar
- Architecture, Art, and Literature of Medieval India
- Decline of the Mughal Empire
- Advent of the Europeans in India
- British Conquest and Expansion (1757–1857)
- The Revolt of 1857 – Causes and Effects
- Reforms and Social Movements (Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, etc.)
- Rise of Indian Nationalism
- Formation of Indian National Congress
- Moderates and Extremists
- Jallianwala Bagh, Non-Cooperation, Civil Disobedience, Quit India Movement
- India's Struggle for Independence
- Interior of the Earth – Crust, Mantle, Core
- Rocks and Minerals
- Earthquakes and Volcanoes
- Major Landforms of the Earth
- Weather and Climate
- Atmosphere – Layers and Composition
- India – Physical Divisions and States
- India's Rivers and Water Resources
- Natural Vegetation and Wildlife
- Types of Resources – Natural, Human, Capital
- Soil and Water Resources
- Minerals and Power Resources
- Agriculture – Types and Distribution in India
- Industries – Classification and Major Industries (Cotton, Iron and Steel, IT)
- Transport and Communication
- Population and Migration
- India – Climate, Natural Disasters, Conservation
- Map Work – Physical and Political maps of India and the World
- The Constitution of India – Fundamental Rights & Duties
- Directive Principles of State Policy
- Union and State Government – Legislature, Executive, Judiciary
- The Role of the President, Prime Minister, and Parliament
- Law and Social Justice
- Local Self-Government (Urban & Rural)
- Secularism and Diversity
- Need for Government and Laws
- Types of Government – Democratic, Monarchy, etc.
- The Indian Constitution – Preamble and Features
- Role of Citizens
- Equality and Justice in Society
- Public Services and Duties

MATHS

1. Number System
- Integers and rational numbers
- Properties of operations (closure, commutativity, etc.)
- Laws of exponents
- Squares and square roots
- Rational and irrational numbers
- Real numbers
- Laws of indices
- Cubes and cube roots

2. Fractions and Decimals
- Operations with rational numbers
- Conversions between decimals and fractions

3. Ratio, Proportion, and Unitary Method
- Direct and inverse proportions
- Word problems involving daily life applications

4. Algebra
- Algebraic expressions
- Simple equations (one variable)
- Laws of algebra

5. Geometry
- Lines and angles
- Triangles and their properties
- Congruency
- Construction using compass and scale
- Quadrilaterals and special types (parallelogram, trapezium, etc.)
- Circles – chords, arcs, angles
- Basic theorems (introductory level)
- Constructions (geometrical and using angles)

6. Mensuration
- Area and perimeter of plane figures (triangle, parallelogram, circle)
- Volume and surface area of cube and cuboid
- Area and perimeter of complex shapes
- Surface area and volume of cube, cuboid, cylinder
- Application-based word problems

7. Data Handling
- Mean, median, mode
- Bar graphs, double bar graphs, pie charts

8. Practical Arithmetic
- Profit, loss, discount
- Simple and compound interest
- Time and work
- Speed, distance, and time
- Percentage

LOGICAL REASONING

1. Verbal Reasoning
- Series completion (Alphabet, Number, Word)
- Analogy (e.g., Book: Reading:: Pen : Writing)
- Classification/Odd one out
- Coding–decoding (Letter or number-based)
- Blood relations
- Direction sense test
- Logical sequence of words
- Venn diagrams (word problems)
- Puzzle tests (based on seating, ranking, age)
- Statement and conclusions/inferences
- Cause and effect reasoning
- Syllogisms (basic level)

2. Non-Verbal Reasoning
- Figure series completion
- Analogy (shape-based)
- Classification of figures
- Mirror and water images
- Paper folding and cutting
- Embedded figures
- Cube and dice problems
- Pattern completion
- Dot situation problems
- Counting figures (triangles, squares, etc.)

3. Analytical Reasoning / Problem Solving
- Seating arrangements (linear and circular)
- Calendar-based problems
- Clocks (angles, time calculations)
- Mathematical puzzles
- Inequality reasoning
- Binary logic (True/False problems)
- Data sufficiency

GENERAL AWARENESS

- Current Affairs
- National and international events
- Awards and honors (Padma Awards, Nobel, sports awards)
- Books and authors
- Important personalities (politics, science, sports)
- Major international days (e.g., Earth Day, Yoga Day)
- Famous Personalities
- National symbols: Flag, anthem, animal, bird, etc.
- Important dates in Indian & world history
- Countries and capitals
- Indian states, rivers, dams, temples
- Scientific instruments and their uses
- National and international games
- Olympic Games, Asian Games, Commonwealth
- Famous sportspersons and recent tournaments
- National sports of countries
- Inventions and discoveries
- Everyday science: water, air, light, food, environment
- Indian scientists & space missions (e.g. ISRO, Chandrayaan, Mangalyaan
- Important monuments and heritage sites