

# Exam Syllabus:

- Subjects: Mathematics and Science
- Based on: NCERT Curriculum
- Format: Objective Questions
- Total Marks: 100
- Monitoring: Under CCTV Surveillance
- **Negative Marking: 1/3 mark deduction**

## Class 8 Mathematics Syllabus

1. Chapter 1: Rational Numbers
  - Properties of rational numbers
  - Representation on the number line
  - Rational numbers between two numbers
2. Chapter 2: Linear Equations in One Variable
  - Solving linear equations
  - Applications in real-life problems
3. Chapter 3: Understanding Quadrilaterals
  - Polygons and types of quadrilaterals
  - Properties of parallelograms
  - Angle sum property
4. Chapter 4: Practical Geometry
  - Construction of quadrilaterals given different conditions
  - Drawing various types of quadrilaterals
5. Chapter 5: Data Handling
  - Organizing data
  - Mean, median, and mode
  - Probability
6. Chapter 6: Squares and Square Roots
  - Properties of square numbers
  - Finding square roots using different methods
  - Applications of square roots

## 7. Chapter 7: Cubes and Cube Roots

- Properties of cubes
- Finding cube roots

## 8. Chapter 8: Comparing Quantities

- Ratios and percentages
- Discount, profit, and loss
- Simple and compound interest

## 9. Chapter 9: Algebraic Expressions and Identities

- Terms, factors, and coefficients
- Addition, subtraction, and multiplication of algebraic expressions
- Standard identities

## 10. Chapter 10: Visualising Solid Shapes

- 3D shapes and their representation
- Views of solid shapes (top, front, side views)

## 11. Chapter 11: Mensuration

- Area of trapezium and polygons
- Volume and surface area of cubes, cuboids, and cylinders

## 12. Chapter 12: Exponents and Powers

- Laws of exponents
- Standard form of numbers
- Use of exponents in real-life scenarios

## 13. Chapter 13: Direct and Inverse Proportions

- Direct and inverse variations
- Applications in daily life

## 14. Chapter 14: Factorisation

- Factorising expressions
- Division of algebraic expressions
- Factorising using identities

## 15. Chapter 15: Introduction to Graphs

- Reading and plotting graphs
- Different types of graphs
- Applications of graphs

## 16. Chapter 16: Playing with Numbers

- Puzzles based on numbers
- Tests for divisibility

# Class 8 Science Syllabus

## 1. Chapter 1: Crop Production and Management

- Agricultural practices
- Irrigation and crop protection
- Storage of crops

## 2. Chapter 2: Microorganisms: Friend and Foe

- Types of microorganisms
- Useful and harmful microorganisms
- Disease-causing microorganisms

## 3. Chapter 3: Synthetic Fibres and Plastics

- Types of synthetic fibres
- Characteristics of synthetic fibres
- Plastics and their uses

## 4. Chapter 4: Materials: Metals and Non-Metals

- Physical and chemical properties of metals and non-metals
- Reactions of metals and non-metals

## 5. Chapter 5: Coal and Petroleum

- Formation of coal and petroleum
- Products of coal and petroleum
- Conservation of natural resources

## 6. Chapter 6: Combustion and Flame

- Combustion and types of combustion
- Structure of flame
- Fuel and its efficiency

## 7. Chapter 7: Conservation of Plants and Animals

- Deforestation and its consequences
- Conservation of wildlife
- Biosphere reserves, national parks, and sanctuaries

8. Chapter 8: Cell – Structure and Functions
  - Discovery of the cell
  - Structure and functions of cells
  - Differences between plant and animal cells
  
9. Chapter 9: Reproduction in Animals
  - Types of reproduction (sexual and asexual)
  - Human reproductive system
  - Fertilization and development
  
10. Chapter 10: Reaching the Age of Adolescence
  - Changes during puberty
  - Endocrine glands and hormones
  - Reproductive health
  
11. Chapter 11: Force and Pressure
  - Types of forces
  - Effects of force
  - Pressure and its applications
  
12. Chapter 12: Friction
  - Types of friction
  - Factors affecting friction
  - Increasing and reducing friction
  
13. Chapter 13: Sound
  - Production and propagation of sound
  - Characteristics of sound waves
  - Human ear and hearing
  
14. Chapter 14: Chemical Effects of Electric Current
  - Electric current and its chemical effects
  - Electroplating
  - Applications of chemical effects of current
  
15. Chapter 15: Some Natural Phenomena
  - Lightning and its effects
  - Earthquakes and their causes
  
16. Chapter 16: Light
  - Laws of reflection

- Human eye and its functioning
- Defects of vision and their correction

#### 17. Chapter 17: Stars and the Solar System

- The solar system and its components
- Phases of the moon
- Constellations

#### 18. Chapter 18: Pollution of Air and Water

- Air and water pollution
- Causes and effects of pollution
- Measures to reduce pollution