

# 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 7 Mathematics Syllabus

1. Chapter 1: Integers
  - Properties of addition and subtraction of integers
  - Multiplication and division of integers
2. Chapter 2: Fractions and Decimals
  - Operations on fractions
  - Multiplication and division of fractions
  - Decimal numbers and their operations
3. Chapter 3: Data Handling
  - Collection and organization of data
  - Mean, median, mode of data
  - Chance and probability
4. Chapter 4: Simple Equations
  - Introduction to equations
  - Solving simple linear equations
  - Applications of simple equations
5. Chapter 5: Lines and Angles
  - Types of angles (complementary, supplementary, adjacent, etc.)
  - Properties of lines, angles, and intersecting lines
  - Transversal lines and related angles
6. Chapter 6: The Triangle and Its Properties
  - Types of triangles
  - Angle sum property of a triangle
  - Pythagoras theorem

- Properties of medians and altitudes

## 7. Chapter 7: Congruence of Triangles

- Congruent figures
- Criteria for congruence of triangles (SSS, SAS, ASA, RHS)

## 8. Chapter 8: Comparing Quantities

- Ratios and percentages
- Profit and loss
- Simple interest

## 9. Chapter 9: Rational Numbers

- Introduction to rational numbers
- Representation of rational numbers on a number line
- Operations on rational numbers

## 10. Chapter 10: Practical Geometry

- Construction of parallel lines
- Construction of triangles using different criteria

## 11. Chapter 11: Perimeter and Area

- Perimeter and area of rectangles and squares
- Area of parallelograms and triangles
- Circle – circumference and area

## 12. Chapter 12: Algebraic Expressions

- Terms, coefficients, and algebraic expressions
- Operations on algebraic expressions (addition, subtraction)
- Using expressions practically

## 13. Chapter 13: Exponents and Powers

- Laws of exponents
- Standard form of large numbers using exponents

## 14. Chapter 14: Symmetry

- Line symmetry in different shapes
- Rotational symmetry

## 15. Chapter 15: Visualising Solid Shapes

- 2D and 3D shapes
- Views of 3D objects (top, front, and side views)

# Class 7 Science Syllabus

## 1. Chapter 1: Nutrition in Plants

- Mode of nutrition in plants
- Photosynthesis in plants
- Other modes of nutrition

## 2. Chapter 2: Nutrition in Animals

- Nutrition in humans and digestion
- Nutrition in other animals

## 3. Chapter 3: Fibre to Fabric

- Wool and silk
- Processing of wool and silk

## 4. Chapter 4: Heat

- Heat and temperature
- Modes of heat transfer
- Thermometers

## 5. Chapter 5: Acids, Bases and Salts

- Definition of acids and bases
- Indicators and their uses
- Neutralization reactions

## 6. Chapter 6: Physical and Chemical Changes

- Differences between physical and chemical changes
- Rusting, crystallization, and other examples of chemical changes

## 7. Chapter 7: Weather, Climate and Adaptations of Animals to Climate

- Climate and weather
- Adaptations in animals to different climates

## 8. Chapter 8: Winds, Storms, and Cyclones

- Air pressure and winds
- Storms and cyclones
- Safety measures during storms

## 9. Chapter 9: Soil

- Types of soil
- Soil profile and its composition
- Importance of soil conservation

#### 10. Chapter 10: Respiration in Organisms

- Types of respiration (aerobic and anaerobic)
- Human respiratory system
- Respiration in other animals and plants

#### 11. Chapter 11: Transportation in Animals and Plants

- Circulatory system in humans
- Excretory system in humans
- Transport of water and nutrients in plants

#### 12. Chapter 12: Reproduction in Plants

- Modes of reproduction in plants
- Pollination and fertilization
- Seed dispersal

#### 13. Chapter 13: Motion and Time

- Distance and time
- Speed and its measurement
- Graphical representation of motion

#### 14. Chapter 14: Electric Current and its Effects

- Electric circuit and symbols
- Heating and magnetic effects of electric current
- Electromagnets and their uses

#### 15. Chapter 15: Light

- Reflection of light
- Image formation by mirrors and lenses
- Multiple reflections

#### 16. Chapter 16: Water: A Precious Resource

- Importance of water and its sources
- Depletion of water resources
- Conservation of water

#### 17. Chapter 17: Forests: Our Lifeline

- Role of forests in the ecosystem

- Forest products and their importance

## 18. Chapter 18: Wastewater Story

- Importance of sanitation
- Sewage treatment and disposal
- Ways to reduce wastewater