



- AI & Future Skills Integration

CLASS-11

Syllabus and Exam Pattern

● SECTION A: SETS & FUNCTIONS (15%)

1. Sets

- Types of sets
- Operations on sets
- Venn diagrams

2. Relations & Functions

- Types of relations
- Types of functions (basic understanding)

◆ SECTION B: ALGEBRA (25%)

1. Complex Numbers

- Basic operations
- Representation

2. Quadratic Equations

- Nature of roots

- Solution methods

3. Sequence & Series

- Arithmetic Progression (AP)
- Geometric Progression (GP) (basic)

4. Binomial Theorem (Basic)

- Expansion for positive integral index
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● SECTION C: COORDINATE GEOMETRY (15%)

1. Straight Lines

- Slope
- Equation of line
- Distance between two points

2. Basic Conic Sections (Intro)

- Circle (basic form)
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● SECTION D: TRIGONOMETRY (15%)

- Trigonometric functions
 - Identities
 - Basic equations
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◆ SECTION E: STATISTICS & PROBABILITY (10%)

1. Statistics

- Mean, median, mode

2. Probability

- Basic probability concepts
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● SECTION F: MATHEMATICAL REASONING (5%)

- Statements and logical reasoning
 - Connectives (and, or, not)
 - Truth values (basic)
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SECTION G: SMART LOGIC & AI AWARENESS (5%)

(No specific study required)

1. Analytical Thinking

- Pattern-based reasoning
- Multi-step logical problems

2. AI Concepts (Introductory)

- Data interpretation
 - Decision-making based on patterns
 - Real-life applications (finance, education, etc.)
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SECTION H: ADVANCED REASONING & HOTS (5%)

- Algebra-based reasoning
 - Case-based questions
 - Multi-step analytical problems
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Weightage Structure

Section Area	Weightage
A Sets & Functions	15%
B Algebra	25%
C Coordinate Geometry	15%
D Trigonometry	15%
E Statistics & Probability	10%
F Mathematical Reasoning	5%
G Smart Logic & AI Awareness	5%
H Advanced Reasoning & HOTS	5%

Total = 100%

EXAM PATTERN

- Mode: Online / Offline (MCQ Based)
- Total Questions: 50
- Total Marks: 50

- Duration: 60 Minutes

Question Distribution:

- Core NCERT Maths: 42 Questions
 - Smart Logic & AI: 4 Questions
 - Advanced Reasoning & HOTS: 4 Questions
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 Important Note

The syllabus is based on NCERT Class 11 Mathematics with a strong focus on conceptual understanding and analytical thinking. The Smart Logic & AI Awareness section is designed to develop future-ready skills without requiring additional preparation.