

# IITBMO2025 Syllabus

## Syllabus for Level I

1. **Arithmetic**

Basic arithmetic, ratio and proportion, time and distance, time and work

2. **Algebra**

Basic algebra, polynomials and equations, inequalities, surds, indices

3. **Geometry**

Basic geometry, mensuration, polygons, trigonometry

4. **Number Theory**

Divisibility, counting, progressions and patterns, mathematical induction

5. **Miscellaneous**

Permutations and combinations, basic probability

## Syllabus for Level II

1. **Arithmetic**

Basic arithmetic, ratio and proportion, time and distance, time and work

2. **Algebra**

Basic algebra, polynomials and equations, inequalities, logarithm, surds, indices, complex numbers, matrices, determinants

3. **Geometry**

Basic geometry, mensuration, polygons, trigonometry, 2-dimensional and 3-dimensional coordinate geometry, conic sections

4. **Number Theory**

Divisibility, counting, progressions and patterns, mathematical induction

5. **Calculus**

Functions, limits, continuity, differentiability, differentiation, integration, applications of calculus to optimization problems

6. **Miscellaneous**

Permutations and combinations, basic probability, linear programming problems (LPP)