

◆ UP TGT Maths Syllabus – Level & Nature

- **Level:** Graduation (B.Sc./B.A. Mathematics)
- **Type:** Objective (MCQ)
- **Medium:** Hindi / English
- **Negative Marking:** नहीं
- **Focus:** Concept clarity + numerical problem solving

1. Algebra (बीजगणित)

Algebra UP TGT Maths syllabus का सबसे महत्वपूर्ण भाग है। हर साल इससे अच्छी संख्या में प्रश्न पूछे जाते हैं।

Topics Covered:

- Sets (Union, Intersection, Complement)
- Relations & Functions
- Types of Functions (One-One, Onto, Bijective)
- Theory of Equations
- Complex Numbers
- Permutations & Combinations
- Binomial Theorem
- Matrices (Types, Operations)
- Determinants & Properties
- Linear Algebra (System of Linear Equations)

Exam Focus:

Concept-based MCQs, formula application, matrices & determinants से direct questions

2. Trigonometry (त्रिकोणमिति)

Trigonometry में basic से advanced level तक के questions पूछे जाते हैं।

Topics Covered:

- Trigonometric Ratios & Identities
- Trigonometric Equations
- Inverse Trigonometric Functions
- Properties & Graphs
- Heights and Distances (Basic)

 **Exam Focus:**

Identities, inverse functions और simplification-based questions

 **3. Coordinate Geometry (निर्देशांक ज्यामिति)**

यह section geometry + algebra का combination है।

Topics Covered:

- Straight Line (Slope, Intercepts, Angle)
- Pair of Straight Lines
- Circle (Equation, Tangent, Normal)
- Parabola
- Ellipse
- Hyperbola

 **Exam Focus:**

Equation-based MCQs, graph understanding

 **4. Calculus (कलन)**

Calculus UP TGT Maths syllabus का **high-weightage** section माना जाता है।

Topics Covered:**(A) Differential Calculus**

- Limits
- Continuity
- Differentiation
- Derivatives of Functions
- Applications of Derivatives (Maxima–Minima, Tangents)

(B) Integral Calculus

- Indefinite Integrals
- Definite Integrals
- Properties of Definite Integrals
- Applications of Integrals (Area under Curve)

(C) Differential Equations

- Formation

- Solution of Differential Equations

 **Exam Focus:**

Step-wise solving, formula clarity, conceptual MCQs

 **5. Vector Algebra & 3D Geometry**

यह section visualization और formula application पर आधारित होता है।

Topics Covered:

- Vectors (Addition, Scalar Multiplication)
- Scalar Product
- Vector Product
- Direction Cosines & Ratios
- Equation of Line
- Equation of Plane
- Angle between Lines & Planes

 **Exam Focus:**

Vector identities, 3D formulas

 **6. Statistics (सांख्यिकी)**

Statistics से numerical और theoretical दोनों तरह के प्रश्न आते हैं।

Topics Covered:

- Measures of Central Tendency (Mean, Median, Mode)
- Measures of Dispersion (Variance, Standard Deviation)
- Correlation & Regression
- Probability Basics

 **Exam Focus:**

Formula-based numericals, interpretation questions

 **7. Probability (प्रायिकता)**

Probability section logic और calculation दोनों की जाँच करता है।

Topics Covered:

- Basic Probability Concepts
- Conditional Probability
- Bayes' Theorem
- Random Variables
- Probability Distribution

 **Exam Focus:**

Conceptual clarity + numerical accuracy

 **8. Mathematical Reasoning & Modern Mathematics**

यह section comparatively छोटा लेकिन scoring होता है।

Topics Covered:

- Statements & Logical Reasoning
- Truth Tables
- Boolean Algebra (Basics)
- Mathematical Induction (Basic Idea)
- Numerical Methods (Introductory)

 **Exam Focus:**

Logic-based MCQs

 **Overall Weightage Trend (Expected)**

- Algebra + Calculus → **High**
- Coordinate Geometry → **Moderate**
- Trigonometry → **Moderate**
- Vectors, Statistics, Probability → **Moderate**
- Reasoning & Modern Maths → **Low to Moderate**