

# Territorial Army Officer 2025: Exam Pattern/ Syllabus

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## 1. Standard and Syllabus of the Examination:

Paper	Subject	Time Allotted	Number of Questions	Marks
In one session	Part - 1: Reasoning		25	25
	Part - 2: Elementary Mathematics		25	25
	Part - 3: General Knowledge		25	25
	Part - 4: English		25	25
	<b>Total</b>	<b>02 Hours</b>	<b>100</b>	<b>100</b>

## 2. Standard:

The standard of the papers in **Elementary Mathematics** will be of **Matriculation level**.  
The standard of papers in other subjects will be approximately such as may be expected of a graduate of an Indian university.

## 3. Syllabus:

### (a) Part – 1: Reasoning

The question paper will be designed to test the candidate's ability to complete sequences, making logical conclusions based on simple patterns of numbers, statements, figures, letters, etc., as may be expected of a rational thinking person without any special study of the subject.

### (b) Part – 2: Elementary Mathematics

#### (i) Arithmetic:

- Number System – Natural numbers, Integers, Rational and Real numbers.
- Fundamental operations – Addition, subtraction, multiplication, division.
- Square roots, Decimal fractions.
- Average, Time and distance, Time and work.
- Percentages, Applications to simple and compound interest, Profit and loss, Ratio and proportion, Variation.
- Elementary Number Theory – Division algorithm, Prime and composite numbers, Tests of divisibility by 2, 3, 4, 5, 9 and 11.
- Multiples and Factors.
- Factorization Theorem.
- H.C.F. and L.C.M.
- Euclidean algorithm.
- Logarithms to base 10, laws of logarithms, use of logarithmic tables.

#### (ii) Algebra:

- Basic Operations, simple factors.

- Remainder Theorem, H.C.F., L.C.M., Theory of polynomials.
- Solutions of quadratic equations (only real roots to be considered).
- Simultaneous linear equations in two unknowns – analytical and graphical solutions.
- Practical problems leading to two simultaneous linear equations or inequations in two variables or quadratic equations in one variable & their solutions.
- Set language and set notation.

**(iii) Trigonometry:**

- Sine x, Cosine x, Tangent x when  $0^\circ < x \leq 90^\circ$ .
- Values of sin x, cos x, and tan x for  $x = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ , and  $90^\circ$ .
- Simple trigonometric identities.
- Use of trigonometric tables.
- Simple cases of heights and distances.

**(iv) Geometry:**

- Lines and angles.
- Plane and plane figures.
- Theorems on properties of angles at a point.
- Parallel lines.
- Sides and angles of a triangle.
- Congruency of triangles.
- Similar triangles.
- Concurrence of medians and altitudes.
- Properties of angles, sides, and diagonals of a parallelogram, rectangle, and square.
- Circle and its properties including tangents and normal.
- Loci.

**(v) Mensuration:**

- Areas of squares, rectangles, parallelograms, triangle and circle.
- Surface area and volume of cuboids, lateral surface and volume of right circular cones and cylinders, surface area and volume of spheres.

**(vi) Statistics:**

- Collection and tabulation of statistical data.
- Graphical representation: frequency polygons, histograms, bar charts, pie charts, etc.
- Measures of central tendency.

**(c) Part – 3: General Knowledge**

- General knowledge including current events and matters of everyday observation and experience in scientific aspects.
- Questions on history of India and geography of nature which candidates should be able to answer without special study.

**(d) Part – 4: English**

- Designed to test the candidates' understanding of English and workman-like use of words.

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#### 4. Candidates to Ensure their Eligibility for the Examination:

Candidates applying for the examination must ensure that they **fulfill all eligibility conditions** before applying.

- Their admission at all stages is **provisional**, subject to eligibility verification.
- **Mere issue of Admit or Admission Certificate does not imply eligibility** unless the candidate is finally cleared by the competent authority.

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#### 5. Exam Duration:

Maximum time is **02 Hours**.

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#### 6. Type of Exam:

**Computer-based test (CBT).**

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#### 7. Qualifying Marks:

The Territorial Army Directorate may set **qualifying marks in any or all papers** of the examination.

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#### 8. Penalty for Wrong Answers:

For each question for which a wrong answer has been given by the candidate, **one-third (0.33%) of the marks** assigned to that question will be deducted as a penalty.