

ELIXIIT Scholarship Admission Test (ESAT)

SYLLABUS & PATTERN


Class XII Passed Admission



ELIXIIT SCHOLARSHIP ADMISSION TEST



- 1. Number Theory:** Arithmetic of Integers, Fundamental Theorem of Arithmetic, Division Algorithm, Prime Numbers, Concepts of gcd and lcm, Simple Applications of Congruences, Rational and Irrational Numbers.
- 2. Geometry:** Mensuration, Geometry involving Triangles, Similarities of Triangles, Circle Geometry, Surface Areas and Volume, Miscellaneous and Mixed Problems (concept based), Heights and Distances
- 3. Trigonometry:** Trigonometric Identities, Applications of the t-ratios, Solutions of Triangles
- 4. Algebra:** Inequalities, Polynomials, System of Linear Equations, Quadratic Equations and expressions, Probability Theory, Sequence and Series, Complex Number
- 5. Vectors & Co-ordinate geometry:** Basics concepts of Coordinate Geometry, Straight Lines, Circles, Parabola, Ellipse, Hyperbola, Vectors and 3D
- 6. Simple Counting Technique Based Problems,** Permutation Combination, Binomial Theorem
- 7. Calculus:** Sets, Relations, Functions, Limit, Continuity, Differentiability, Methods of Differentiation, Application of Derivative, Indefinite and Definite Integration, Area under the Curves.



**EXAM
PATTERN**

Test Duration: 1 hour

Number of Questions: 20

Total Marks: 80

Test Pattern: Objective

Marking Scheme:

+4 for every correct answer

-1 for every incorrect answer

0 in all other cases

Please Note: It is compulsory to log in at least 30 minutes prior to ESAT. A student will not be allowed to take the exam if the student joins late