PIONEER ACADEMY™

For Competitive Examinations

(CDS)
COMBINED DEFENCE SERVICE
SYLLABUS

UPSC | MPSC | NDA | CDS | CAPF | AFCAT

**PUNE| THANE| ANDHERI | DADAR | KALYAN | PCMC | BORIVALI |
NERUL | SATARA | ONLINE**

COMBINED DEFENCE SERVICE (CDS)

SYLLABUS

SECTIONS	TOPICS
ENGLISH	• Spotting Errors Questions • Sentence Arrangement Questions • Synonyms & Antonyms • Selecting Words • Ordering of Sentence • Comprehension Questions • Ordering of words in a sentence • Fill in the blanks questions • Idioms and Phrases
GENERAL AWARENESS (GK)	• Economics • Physics • Current Affairs • Politics • Chemistry • Sociology • History • Defence related Award • Geography • Environment • Sport • Biology • Cultural • Book • Statement

		• true/false
ELEMENTARY MATHEMATICS	**ALGEBRA**	• Basic Operations • simple factors • Remainder Theorem • H.C.F. • L.C.M. • Theory of polynomials • solutions of quadratic equations • relation between its roots and coefficients (Only real roots to be considered) • Simultaneous linear equations in two unknowns—analytical and graphical solutions • Simultaneous linear in equations in two variables and their solutions • Practical problems leading to two simultaneous linear equations or in equations in two variables or quadratic equations in one variable & their solutions • Set language and set notation • Rational expressions and conditional identities • Laws of indices
	ARITHEMATIC	• Number System: Natural numbers, Integers, Rational and Real numbers. • Fundamental operations: addition, substraction, multiplication, division,

		Square roots, Decimal fractions
		• Unitary method
		• 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. Factorisation Theorem
		• H.C.F. and L.C.M.
		• Euclidean algorithm
		• Logarithms to base 10
		• laws of logarithms
		• use of logarithmic tables
	TRIGONOMETRY	• Sine ×, cosine ×, Tangent × when $0° < × < 90°$
		• Values of sin ×, cos × and tan ×, for ×= 0°, 30°, 45°, 60° and 90°
		• Simple trigonometric identities
		• Use of trigonometric tables

		• Simple cases of heights and distances
	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
		• Circles and its properties including tangents and normals
		• Loci
	MENSURATION	• Areas of squares
		• rectangles
		• parallelograms
		• triangle and circle
		• Areas of figures which can be split up into these figures (Field Book)
		• Surface area and volume of cuboids
		• lateral surface and volume of right circular cones and cylinders
		• surface area and volume of spheres
	STATISTICS	• Collection and tabulation of statistical data

		• Graphical representation frequency polygons
		• histograms
		• bar charts
		• pie charts etc
		• Measures of central tendency