## IAS Math (Series) Contents

442-14	Series: Trigonometry	Fourteenth
₹135.00	A.R. Vasishtha, S.K. Sharma & A.K. Vasishtha	Edition

\* Inverse Circular Functions \* Complex Numbers \* De-Moiver's Theorem \* Deduction from De-Moivre's Theorem \* Exponential, Trigonometric and Hyperbolic Functions of a Complex Variable \* Logarithms of Complex Quantities \* Inverse Circular and Hyperbolic Functions of Complex Quantities \* Expansion of Some Trigonometrical Functions \* Gregory's Series and Trigonometrical Expansions \* Summation of Trigonometrical Series.

443-19	Series: Matrices	Nineteenth
₹110.00	A.R. Vasishtha & A.K. Vasishtha	Edition

- \* Algebra of Matrices \* Determinants \* Inverse of a Square Matrix \* Rank of a Matrix \* Linear Equations
- \* Eigenvalues and Eigenvectors or Characteristic Roots and Characteristic Vectors.

444-11	Series: Algebra	Eleventh
₹ 140.00	A.R. Vasishtha, R.K. Gupta & A.K. Vasishtha	Edition

\* Theory of Equation \* General Properties of Equation \* Relations between the Roots and Coefficients of an Equation \* Symmetric Functions of the Roots \* Transformation of Equation \* Solution of Cubic Equations, Other Topics \* Inequalities \* Continued Fractions \* Convergence of Infinite Series.

446-21	Series: Differential Calculus	Twenty First
₹ 250.00	A.R. Vasishtha, S.K. Sharma & A.K. Vasishtha	Edition

\* Differentiation \* Successive Differentiation \* Expansions of Functions \* Partial Differentiation \* Indeterminate Forms \* Tangents and Normals \* Curvature \* Asymptotes \* Change of the Independent Variable, Miscellaneous Solved Problem \* Maxima and minima (of Functions of a Single Independent Variable) \* Maxima and Minima (of Functions of Two Independent variable) \* Maxima and Minima (of Function of Several Variables) \* Envelopes and Evolutes \* Jacobians \* Singular Points \* Curve Tracing \* Functions of a Real Variable, Limits, Continuity and Differentiability \* Rolle's Theorem, Mean Value Theorem, Taylor's and Maclaurin's Theorems.

447-18	Series: Integral Calculus	Eighteenth
₹ 250.00	A.R. Vasishtha, S.K. Sharma & A.K. Vasishtha	Edition

- \* Elementary Integration (Standard Forms, Integration by parts) \* Integration of Rational Fractions
- \* Integration of Irrational Algebraic Fractions \* Integration of Trigonometric Functions \* Reduction Formulae (Trigonometric Functions) \* Reduction Formulae (Continued) [For Irrational, Algebraic and Transcendental Functions] \* Definite Integrals (Properties of Definite Integrals, Definite Integral as the

limit of Sum, Summation of Series with the help of Definite Integrals) \* Areas of Curves (Quadrature) \* Lengths of Curves (Rectification) (Lengths of Curves and Intrinsic Equations) \* Volumes and Surfaces of Solids of Revolution (Volumes of Solids of Revolution, Surface of Solids of Revolution, Theorem of Pappus and Guldin) \* Multiple Integrals (Double Integrals, Triple Integrals, Change of Order of Integration, Change of Variables in Double Integral) \* Beta and Gamma Functions (Euler's Integrals, Dirichlet's Integrals, Liouville's Extension of Dirichlet's Theorem \* Convergence of Improper Integrals.

448-14	Series: Differential Equation	Fourteenth
₹ 150.00	A.R. Vasishtha & S.K. Sharma	Edition

\* Differential Equation I \* Introduction \* Differential Equation of 1<sup>st</sup> Order and 1<sup>st</sup> Degree \* Linear Differential Equations with Constant Coefficients \* Orthogonal Trajectories \* Homogeneous Linear Differential Equations \* Differential Equation of the First Order but not of the First Degree \* Differential Equations II \* Linear Equations of Second Order with Variable Coefficients \* Ordinary Simultaneous Differential Equations \* Total Differential Equations.

449-10	Series: Analytical Geometry of Two Dimensions	Tenth
₹ 125.00	A.R. Vasishtha, D.C. Agarwal & A.K. Vasishtha	Edition

\* Change of Axes \* Hyperbola \* Polar Equation of a Conic (Chord of Contact) \* Tracing of Conics (General Equation of Second Degree) \* General Conics, Contacts and Confocals \* Ellipse.

450-13	Series: Analytical Geometry of Three Dimensions	Thirteenth
₹ 160.00	A.R. Vasishtha, R.K. Gupta & A.K. Vasishtha	Edition

\* System of Co-ordinates \* Direction Cosines and Projections \* The plane \* The Straight Line \* Shortest Distance \* Volume of Tetrahedron \* Skew Lines \* Change of Axes \* The Sphere \* The Cylinder \* The Cone \* Central Conicoids.

451-6	Series: Modern Algebra	Sixth
₹ 170.00	A.R. Vasishtha & Kiran Vasishtha	Edition

- \* Mappings, Binary Compositions and Relations \* Group \* Rings \* Vector Spaces \* Rings (Continued)
- \* Normal subgroups.

452-8	Series: Vector Calculus	Eighth
₹ 125.00	A.R. Vasishtha & Kiran Vasishtha	Edition

\* Multiple Products \* Differentiation and Integration Vectors \* Gradient, Divergence and Curl \* Green's, Gauss's and Stroke's Theorems.

455-12	Series: Statics	Twelfth
₹210.00	A.R. Vasishtha, R.K. Gupta & A.K. Vasishtha	Edition

\* Introduction (Concurrent Force, Lami's Theorem) \* Equilibrium of a Rigid Body (Moments, Equilibrium of Coplanar Forces) \* Virtual Work \* Strings in Two Dimensions (Common Catenary) \* Strings in Two Dimensions (Catenary of Uniform Strength and Strings Resting on a Smooth and Rough Plane Curve) \* Stable and Unstable Equilibrium \* Centre of Gravity, 8. Equilibrium of Force in Three Dimensions [Central Axis(Excluding Wrenches)] \* Force in Three Dimension (Screws and Wrenches; Nul Lines and Nul Planes) \* Attraction \* Potential.

456-15	Series: Dynamics	Fifteenth
₹ 245.00	A.R. Vasishtha, R.K. Gupta & A.K. Vasishtha	Edition

\* Kinematics in Two Dimensions \* Rectilinear Motion \* Constrained Motion \* Central Orbits \* Planetary Motion (The Inverse Squar Law) \* Motion in a Resisting Medium (In a Straight Line) \* Projectiles \* Work, Energy and Impulse \* D' Alembert's Principle (And Equation of Motion of Rigid Body) \* Moment of Inertia \* Motion about a Fixed Axis.

457-6	Series: Real Analysis	Sixth
₹ 235.00	A.R. Vasishtha, A.K. Vasishtha & Hemlata Vasishtha	Edition

- \* Real Number System (Bounded and Unbounded Set of Real Numbers, Neighborhoods and Limit Points)
- \* Sequences \* Infinite Series \* Limits and Continuity \* Differentiability \* The Riemann Integral \* The Riemann-Stieltjes Integral \* Uniform Convergence of Sequences and Series of Functions \* Convergence of Improper Integrals.

458-9	Series: Numerical Analysis	Nineth
₹ 185.00	A.R. Vasishtha, A.K. Vasishtha & Hemlata Vasishtha	Edition

\* The Calculus of Finite Difference \* Interpolation (With Equal Intervals) \* Interpolation (with Unequal Intervals) \* Solution of Algebraic and Trancendental Equation \* Simultaneous Linear Algebraic Equations \* Matrix Inversion \* Numerical solution of Ordinary Differential Equations \* Central Differences & Gauss Interpolation Formulae \* Numerical Integration \* Approximations.

459-1	Series: Hydrostatics	First
₹ 100.00	A.R. Vasishtha, Vipin Vasishtha & A.K. Vasishtha	Edition

\* Preliminary Concepts \* Theorems on Fluid Pressure under Gravity and Condition of Equilibrium of Fluid \* Whole Pressure on a Plane Surface \* Thrusts on Curved Surfaces \* Centre of Pressure \* Equilibrium of Floating Bodies.