



WEST BENGAL BOARD (WBCHSE) · CLASS 12

Mathematics

Higher Secondary curriculum divided under the new WBCHSE semester framework covering Advanced Calculus (Continuity, Differentiability, Definite Integrals, Differential Equations), Linear Algebra, Vectors, 3D Geometry, Linear Programming, and Probability.

Board: West Bengal Council of Higher Secondary Education (New Semester Framework)

Theory: 80 Marks (Sem III & IV)

Internal/Practical: 20 Marks (Project)

Exam Duration: 3 Hours 15 Mins

UNIT-WISE SYLLABUS & MARKS BREAKDOWN

UNIT	CHAPTERS & PRESCRIBED TOPICS	MARKS
Semester III	Relations, Functions & Linear Algebra Relations and Functions: Composition of functions, invertible functions, binary operations; Inverse Trigonometric Functions; Matrices and Determinants: Adjoint, inverse of matrix, consistency of linear system, solution using matrix inversion and Cramer's rule	20
Semester III	Differential Calculus & Applications Continuity & differentiability, Rolle's and Lagrange's Mean Value Theorems, derivatives of implicit and parametric functions, Tangents and normals, increasing and decreasing functions, Maxima and minima	20
Semester IV	Integral Calculus & Differential Equations Indefinite and definite integrals, properties of definite integrals, area bounded by curves; Differential equations: Order and degree, solution by variable separation, homogeneous equations, first-order linear differential equations	20
Semester IV	Vectors, 3D Geometry, LPP & Probability Vectors: Dot product, cross product, scalar triple product; Three-Dimensional Geometry: Direction cosines and ratios, line and plane equations in space; Linear Programming: Formulation and graphical solution; Probability: Bayes' theorem, random variables, probability distribution, binomial distribution	20

INTERNAL / PRACTICAL ASSESSMENT SCHEME (20 MARKS (PROJECT))

EVALUATION COMPONENT	MARKS WEIGHTAGE
Project Work / Lab Assessment Practical mathematics notebook, mathematical computing, viva voce	20 Marks

RECOMMENDED REFERENCE LITERATURE

Prescribed Textbooks: Chhaya Prakashani Mathematics Class XII (Souredranath De), WBCHSE HS Text, Excellence Problem Sheets

Every unit in this curriculum is taught with structured conceptual lectures, followed by weekly speed-testing, detailed mistake analysis, and dedicated 1:1 doubt-clearing sessions to build board exam confidence.

Excellence Tuition Centres: Sarsuna (Opp. High School) · Joka · Chatterjee Para (Behala)

Admissions & Inquiries: +91 89022 70803 · excellence-tuition.vercel.app