

Lesson Plan (2024-25)

B.A 1st / B.Sc 1st (Calculus)

For the month of July : ϵ - δ definition of limit and continuity of a real valued function, Basic Properties of limit, Types of Discontinuities, Differentiability of functions.

For the month of August : Applications of L'Hospital's rule to indeterminate forms, successive differentiation, Leibnitz theorem, Taylor's and Maclaurin's series expansion with different forms of remainder, Asymptotes: horizontal, vertical and oblique asymptotes for algebraic curves, Asymptotes for polar curves, Intersection of a curve and its asymptotes.

For the month of September : Curvature and radius of curvature of curves (Cartesian, parametric, polar and intrinsic forms), Newton's method, centre of curvature and circle of curvature, Multiple points, Node, cusp, conjugate point, Test for concavity and convexity, Point of inflexion.

For the month of October : Tracing of curves, Reduction formula, Rectification, intrinsic equation of a curve.

For the month of November : Quadrature, Area bounded by closed curves, Volume and surfaces of solids of revolution, Revision.

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A/P of Mathematics