

TEST CODE: DST (MCQ) SYLLABUS

Algebra: Arithmetic, Geometric and Power series. Permutations and combinations. Binomial theorem. Theory of quadratic equations. Inequalities. Complex numbers. Elementary set theory and functions. Vectors and matrices. Determinant, rank and inverse of a matrix. Solutions of linear equations.

Coordinate geometry: Straight lines, circles, parabolas, ellipses and hyperbolas.

Calculus: Countable and uncountable sets. Open and closed sets in \mathbb{R} . Taylor and Maclaurin series. Sequences, limits, continuity of functions of one real variable. Differentiation and integration of functions of one real variable with applications. Definite integrals. Areas using integrals. Maxima and minima and their applications.

Statistics and Probability: Measures of Central Tendency: Mean, Median and Mode for grouped and ungrouped data.
Measures of dispersion: Range, Mean deviation and Variance for grouped and ungrouped data.
Elements of probability, conditional probability, independence of events, Multiplication Theorem on probability, Bayes Theorem.