

**GOVT. KODURAM DALIT COLLEGE NAWAGARH DIST BEMETARA (C.G.)**

**B.Sc. Mathematics**

**Programme Outcomes**

At the end of the programme, students may able to;

- PO1: Be familiar with and appreciate the connections between theory and applications.
- PO2: Make effectively in a multidisciplinary environment.
- PO3: Prepare for life-long learning.
- PO4: Display positive attitudes and values towards the discipline, so that they can contribute to the dynamics of society. Specific outcomes
- PSO1: Be familiar with different areas of mathematics.
- PSO2: Be prepared to use mathematics, not only in the discipline of mathematics but also in other disciplines and their future endeavours.
- PSO3: Develop the skills necessary to formulate and understand proofs and to provide justification.
- PSO4: Think critically and communicate mathematical concepts and solutions.
- PSO5: Develop an understanding of the precise language of mathematics and be able to integrate mathematical arguments with their critical thinking skills.

**Course Outcome**

**B.Sc. Mathematics**

**“Algebra and Trigonometry”**

After completion of this course, students be able to

- CO1: Acknowledge symmetrically, skew-symmetric, Hermitian, skew hermitian and orthogonal matrices.
- CO2: Obtain the inverse of a matrix by elementary operations.
- CO3: Reduce the matrix into normal form and echelon form and can find the rank and nullity of the matrix.
- CO4: Determine the eigenvalues and eigenvectors of a square matrix.
- CO5: Apply the Caley-Hamilton theorem to problems for finding the inverse of the matrix.

- CO6: Solve the system of linear equation by Cramer's rule and by Inverse of Matrix.
- CO7: Distinguish between Consistent and Inconsistent system of linear equations.
- CO8: Acquire the knowledge of the relationship between coefficient and roots of an equation.
- CO9: Explain different methods for finding the roots of an equation.
- CO10: Identify the reciprocal equation and solve it.
- CO11: acquire the knowledge of different techniques of transforming the equation to a convenient form.
- CO12: Explain the different methods of Cardan's method, Ferrari method and Descartes method in the theory of equation.
- CO13: Determine the number of real roots and imaginary roots of the equation.
- CO14: Explain the fundamental ideas of sets and functions.
- CO15: Determine equivalence relations on sets and corresponding equivalence classes.
- CO16: Differentiate between various types of functions and relations.
- CO17: Understand binary operation on sets, Group Structure, Subgroup, Cyclic Group, Coset decomposition.