

**ALGEBRA, MATRICES AND VECTOR ANALYSIS**  
**MT(N) 121**

**SYLLABUS**

Relations Between the Roots and The Coefficient of an Equation, Solutions Of Cubic and Biquadratic Equations, Algebra of Matrices, Determinants, Application of Matrices, Eigen Values and Eigen Vectors, Exponential and Trigonometrical variables, Hyperbolic function, Inverse Hyperbolic and Trigonometric function and logarithm of complex number, Summation of Series, Infinite product and Gregory's series, Vectors Multiple products and Differentiation of vectors, Gradient, Divergence and Curl Green's, Gauss's and Stoke's theorems

**REFERENCES:-**

- Spiegel, R. Murray "Vector Analysis, Schaum's Outline Series, 1959.
- Shanti Narayan(2003) A Textbook of Vector Calculus. S. Chand Publishing.
- Erwin. Kreyszig(2009) Advanced engineering mathematics, 10th edition.
- Sri Sreehari T and Mr. Jafar T.K(2019) Theory of equations and Abstract Algebra.

**SUGGESTED READING:-**

- A.R.Vasishtha(2016-17) Elementary Algebra & Trigonometry.
- Kenneth Hoffman & Ray Kunze(2015) Linear Algebra (2<sup>nd</sup> edition). Prentice-Hall.
- Shanti Narayan and P. K. Mittal. A textbook of matrices. S. Chand Publishing, 2010.
- [https://sist.sathyabama.ac.in/sist\\_coursematerial/uploads/SMTA5204](https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SMTA5204)