

SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)
Coimbatore-641035.

UNIT 2- Orthogonal Transformation of a Real Symmetric Matrix

Canonical Form

Reduction of quadratic form to canonical form by orthogonal transformation:

$$D = N^{T}AN$$

Since, (y1. 42 491) D (y2), where (y3)
$$y = \begin{pmatrix} y_{1} \\ y_{2} \\ y_{3} \end{pmatrix} \cdot \begin{pmatrix} CF = Y^{T}DY \\ y_{3} \end{pmatrix}$$