

ANDHRA UNIVERSITY
DEPARTMENT OF MATHEMATICS
M.A/M.SC MATHEMATICS
II-SEMESTER

SX-S 219

2005-2006 AB

M 205 LINEAR ALGEBRA

UNIT I

Elementary Canonical Forms: Introduction-Characteristic Values-Annihilating Polynomials-Invariant Subspaces-Simultaneous Triangulation-Simultaneous Diagonalization

Sections 6.1, 6.2, 6.3, 6.4, 6.5 of Chapter 6 in Prescribed Text book

UNIT II

Direct-sum Decompositions-Invariant Direct Sums-The Primary Decomposition Theorem-Cyclic Subspaces and Annihilators-Cyclic Decompositions and the Rational Form.

Sections 6.6, 6.7, 6.8 of Chapter 6 and Sections 7.1, 7.2 of Chapter 7 in Prescribed Text book

UNIT III

The Jordan Form-Computation of Invariant Factors-Semi-Simple Operators

Sections 7.3, 7.4, 7.5 of Chapter 7 in Prescribed Text book

UNIT IV

Bilinear Forms: Bilinear Forms- Symmetric Bilinear Forms-Skew Symmetric Bilinear Forms-Group Preserving Bilinear Forms.

Sections 10.1, 10.2, 10.3, 10.4 of Chapter 10 in Prescribed Text book

Prescribed Text Book: Linear Algebra second edition By Kenneth Hoffman and Ray Kunze, Prentice-Hall of India Private Limited, New Delhi-110001, 2002