Govt. College for Girls, Padha (Karnal)

Lesson Plan for Even Semester

Name of the teacher-PREETI RANI

Class- B.A.6th SEM

Subject- MATHEMATICS

Paper- - LINEAR ALGEBRA

1st Week	Vector spaces, subspaces, Sum and Direct sum of subspaces.
2nd Week	Linear span, Lineraly Independent and dependent subsets of a vector space.
3rd Week	Finitely generated vector space , Existence theorem for basis of a generated vector space.
4th Week	Finite dimensional vector spaces, Invariance of the number of elements of basic sets.
5th Week	Dimensions, Quotient space and its dimension.
6th Week	Homomorphism and isomorphism of vector spaces.
7th Week	Linear transformations and Linear form on vector spaces.
8th Week	Vector space of all the linear transforms. Dual spaces, Bidual spaces.
9th Week	Annihilator of subspaces of finite dimensional vector spaces, Null space.
10th Week	Range space of a transformation, Rank and Nullity theorem. Algebra of Linear Transformation.
11th Week	Minimal Polynomial of a linear transformation.

12th Week	Singular and non-singular linear transformations.
13th Week	Matrix of a linear transformation, Change of basis. Eigen values and Eigen vectors of linear transformations.
14th Week	Inner product spaces, Cauchy-Schwariz inequality. Orthogonal vectors, Orthogonal complements.
15th Week	TEST AND REVISION
16th Week	Orthogonal sets and Basis , Bessel's inequality for finite dimensional vector spaces.
17th Week	Gram-Schmidt Orthogonalization process.
18th Week	Adjoint Of a linear transformation and its properties, Unitary linear transformations.
19th Week	TEST AND REVISION