



Aggarwal College Ballabgarh

LESSON PLAN 17 WEEKS (JAN-APRIL)-2025

Name of Faculty: Yogesh Kumar Goyal
Designation/ Department: Mathematics

CLASS: BA/B.Sc. III	SEMESTER: VI	SECTION:
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SUBJECT:

Week		
1	7-1-2025	An Introduction to Syllabi
	8-1-2025	Vector spaces, examples
	9-1-2025	Subspaces and Examples
	10-1-2025	Theorems on subspaces
	11-1-2025	Problems on subspaces
	12-1-2025	S. U. N. D. A. Y.
2	13-1-2025	Sum and direct sum of subspaces
	14-1-2025	Linear combination of vectors, Linear dependence and independence of vectors
	15-1-2025	Theorems and illustrations of Linear dependence and independence of vectors
	16-1-2025	Maximal linearly independent set and problems
	17-1-2025	Finitely generated vector spaces Problem discussion
	18-1-2025	Basis, Definition and examples
	19-1-2025	S. U. N. D. A. Y.
3	20-1-2025	Bases and dimension of finitely generated vector spaces and existence theorem
	21-1-2025	Examples of bases
	22-1-2025	Problem discussion

	23-1-2025	Quotient spaces
	24-1-2025	Dimension of quotient space
	25-1-2025	Examples Based on quotient space
	26-1-2025	REPUBLIC DAY /S. U. N. D. A. Y.
4	27-1-2025	Discussion and assignment
	28-1-2025	Homomorphism of and isomorphism of vector Spaces
	29-1-2025	Theorems of homomorphism
	30-1-2025	Second theorem of Homomorphism
	31-1-2025	Linear transformations
	1-2-2025	Kernel and image of a linear transformation, Null space and Image spaces
	2-2-2025	S. U. N. D. A. Y/BASANT PANCHAMI
5	3-2-2025	Rank and Nullity theorem
	4-2-2025	Examples and theorems based on Rank and Nullity
	5-2-2025	Problem discussion
	6-2-2025	Test
	7-2-2025	To construct a desired transformation
	8-2-2025	Examples
	9-2-2025	S. U. N. D. A. Y
6	10-2-2025	Discussion and assignment
	11-2-2025	Revision
	12-2-2025	HOLIDAY: GURU RAVIDAS JAYANTI
	13-2-2025	
	14-2-2025	
	15-2-2025	

	16-2-2025	S. U. N. D. A. Y.
7	17-2-2025	Dual spaces
	18-2-2025	Dimension of dual spaces and examples
	19-2-2025	Bidual spaces
	20-2-2025	Discussion on transformations and problems
	21-2-2025	Problem discussion
	22-2-2025	Problem discussion
	23-2-2025	S. U. N. D. A. Y.
8	24-2-2025	Introduction to Algebra
	25-2-2025	Algebra of linear transformations
	26-2-2025	HOLIDAY: MAHA SHIVRATRI
	27-2-2025	Theorems and Examples
	28-2-2025	Algebra of linear transformations
	1-3-2025	linear transformations and examples
	2-3-2025	S. U. N. D. A. Y.
9	3-3-2025	Rank and Nullity of linear transformations
	4-3-2025	Minimal polynomial of a linear transformation
	5-3-2025	Singular and non-singular transformations
	6-3-2025	Theorems and examples
	7-3-2025	Matrix associated with a linear transformation
	8-3-2025	Uniqueness of transformation and associated matrix
	9-3-2025	S. U. N. D. A. Y.
10	10-3-2025	Problem and example discussion
	11-3-2025	Change of coordinate vectors with the change of bases

	12-3-2025	Problem discussion
	13-3-2025	Relation between matrices with change of bases
	14-3-2025	Problem discussion
	15-3-2025	Relation between the Matrices w.r.t. two different bases of a linear transformation
	16-03-2025	S. U. N. D. A. Y.
11	17-3-2025	Problem discussion
	18-3-2025	Eigen values and eigen vectors
	19-3-2025	Eigen values and eigen vectors of a linear transformation
	20-3-2025	Problem discussion
	21-3-2025	Characteristic roots of a linear transformation
	22-3-2025	Problem discussion and assignment
	23-3-2025	S. U. N. D. A. Y.
12	24-3-2025	Diagonalisation of a linear transformation
	25-3-2025	Diagonalisation of linear transformation and Diagonalised matrix
	26-3-2025	Illustrations
	27-3-2025	Problem discussion
	28-3-2025	Introduction to Inner product space
	29-3-2025	Inner product spaces
	30-3-2025	S. U. N. D. A. Y.
13	31-3-2025	HOLIDAY: ID-UL-FITR
	1-4-2025	Illustrations
	2-4-2025	Cauchy Schwarz's inequality
	3-4-2025	Interpretation of Cauchy Schwarz's inequality
	4-4-2025	Triangle inequality and parallel gram law

	5-4-2025	Illustrations
	6-4-2025	S. U. N. D. A. Y.
14	7-4-2025	Orthogonal vectors
	8-4-2025	Theorems and examples
	9-4-2025	Gram-Schmidt Orthogonalisation process
	10-4-2025	Problem discussion
	11-4-2025	Orthogonal complements
	12-4-2025	Illustrations
	13-4-2025	S. U. N. D. A. Y.
15	14-4-2025	HOLIDAY: AMBEDKAR JAYANTI
	15-4-2025	Discussion on questions from question papers
	16-4-2025	Bessels inequality
	17-4-2025	Illustrations
	18-4-2025	Illustrations
	19-4-2025	TEST
	20-4-2025	S. U. N. D. A. Y.
16	21-4-2025	Adjoint of a linear transformation
	22-4-2025	Theorems and example
	23-4-2025	Unitary Linear transformations
	24-4-2025	Revision Unit I, Question paper Questions
	25-4-2025	Revision Unit I, Question paper Questions
	26-4-2025	Revision Unit II, Question paper Questions
	27-4-2025	S. U. N. D. A. Y.
	28-4-2025	Revision Unit II, Questions of Questions Papers

17	29-4-2025	Revision Unit III, Questions of Questions Papers
	30-4-2025	HOLIDAY: AKSHAY TRITYA
	01-05-2025	Revision Unit IV, Questions of Questions Papers
	02-05-2025	Revision Unit IV, Questions of Questions Papers
	03-05-2025	Over all discussion.
	04-05-2025	S. U. N. D. A. Y.

Signature