

## Lesson Plan

Name of the Assistant/ Associate Professor... MA SAHESH DEVI

Class and Section... B.A. IIIrd year sem. VI<sup>th</sup>

Subject... Linear Algebra (mathematics) 2018

Week	Date	Topics
1	1-Jan-18	
	2-Jan-18	
	3-Jan-18	
	4-Jan-18	
	5-Jan-18	
	6-Jan-18	
	7-Jan-18	Sunday
2	8-Jan-18	Vector spaces and subspaces :- Introduction, its definition
	9-Jan-18	vector in $R^n$ , 'Solved examples', Exercise,
	10-Jan-18	Some general properties of vector space, Subspaces.
	11-Jan-18	Some theorem on vector subspaces, Example, Exercise,
	12-Jan-18	Linear sum of subspaces, Direct sum of subspaces.
	13-Jan-18	Disjoint subspaces, Theorems, examples, exercise.
	14-Jan-18	Sunday
3	15-Jan-18	Basic and Dimension :- Introduction, Linear combination of v.
	16-Jan-18	Linear D and independence of vector, Some results on linearly D.
	17-Jan-18	spanning sets, linear span, finitely generated vector space.
	18-Jan-18	Theorem, Basis of a vector space. ordered Basis.
	19-Jan-18	Co-ordinates of a vector relative to the basis. Theorem.
	20-Jan-18	Existence theorem, Theorem, Theorem
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Invariance of the number of elements of a basis
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Maximal linearly independent set, minimal generating set
	26-Jan-18	Republic Day
	27-Jan-18	Dimension of a vector space, Extension theorem, Theorem
	28-Jan-18	Sunday
5	29-Jan-18	Identical spaces, Theorem (Dimension of linear sum)
	30-Jan-18	Dimension of Direct sum, Complementary subspaces
	31-Jan-18	Examples, Exercise.

## Lesson Plan

Name of the Assistant/ Associate Professor... SAHESH DEVI

Class and Section: B.A IIIrd year sem VI<sup>th</sup>

Subject: Linear Algebra (maths)

Week	Date	Topics
	1-Feb-18	Quotient Space: $\rightarrow$ Introduction, Theorem.
	2-Feb-18	Theorem, Example, Exercise.
	3-Feb-18	Dimension of a quotient space
	4-Feb-18	Sunday
6	5-Feb-18	Linear Transformation: $\rightarrow$ Introduction, Solved example.
	6-Feb-18	Linear Transformation or vector space Homomorphism.
	7-Feb-18	Properties of linear transformation
	8-Feb-18	Solved example, Exercise.
	9-Feb-18	To find the linear Transformation T.
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
7	12-Feb-18	Rank and Nullity: $\rightarrow$ Introduction, Solved example
	13-Feb-18	Maha Shivratri
	14-Feb-18	Null space or kernel of a linear transformation.
	15-Feb-18	Range or image of a linear transformation.
	16-Feb-18	Solved example, Exercise.
	17-Feb-18	Theorem. Exercise.
	18-Feb-18	Sunday
	8	19-Feb-18
20-Feb-18		Test, Exercise.
21-Feb-18		Theorem, example, Exercise.
22-Feb-18		Theorem, example, test.
23-Feb-18		Fundamental theorem of V. spaces Homomorphism.
24-Feb-18		Theorem, test.
25-Feb-18		Sunday
9		26-Feb-18
	27-Feb-18	Rank and Nullity of a linear transformation
	28-Feb-18	solved example, exercise.

## Lesson Plan

Name of the Assistant/ Associate Professor... SAHESH DEVI

Class and Section... B.A. 3rd year sem V<sup>th</sup>

Subject... Linear Algebra (maths)

Week	Date	Topics
	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Algebra of linear Transformations:- Introduction.
	4-Mar-18	Sunday
10	5-Mar-18	Sum of linear transformations
	6-Mar-18	Theorem, Solved example
	7-Mar-18	Theorem, Exercise.
	8-Mar-18	Composition of two linear transformations
	9-Mar-18	Theorem, Solved example.
	10-Mar-18	Theorem, Exercise.
	11-Mar-18	Sunday
11	12-Mar-18	Singular and non-singular transformation.
	13-Mar-18	Invertible linear transformation.
	14-Mar-18	Theorem, Exercise.
	15-Mar-18	Matrix of a linear transformation $\Rightarrow$ Introduction.
	16-Mar-18	Co-ordinate vector.
	17-Mar-18	Matrix of a linear transformation Relative to ordered basis
	18-Mar-18	Sunday
12	19-Mar-18	Theorem, solved example.
	20-Mar-18	Matrix of a L.T w.r.t the standard basis.
	21-Mar-18	matrices of identity and zero transformations
	22-Mar-18	Theorem, Exercise.
	23-Mar-18	Theorem, solved examples.
	24-Mar-18	change of Basis
	25-Mar-18	Sunday/ Ram Navami
13	26-Mar-18	Dual space $\Rightarrow$ Introduction. Solved example.
	27-Mar-18	vector space of all L.T.
	28-Mar-18	Dual space, Bidual or double dual of a v. space.
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Annihilator, Annihilator of an Annihilator.
	31-Mar-18	Solved example, Exercise.

## Lesson Plan

Name of the Assistant/ Associate Professor: SAHESH DEVI

Class and Section: B.A. IIIrd Year, Sem VIth.

Subject: Linear Algebra (maths)

Week	Date	Topics
14	1-Apr-18	Sunday
	2-Apr-18	Eigen values and eigen vectors $\rightarrow$ Introduction.
	3-Apr-18	Eigen values and eigen v. of a linear transformation.
	4-Apr-18	Eigen space, characteristic polynomial of LT
	5-Apr-18	Some important theorem, Similar matrices.
	6-Apr-18	Diagonalisation, minimal polynomial
	7-Apr-18	Inner product space $\rightarrow$ Introduction Solved example.
	8-Apr-18	Sunday
15	9-Apr-18	Inner product space. Norm of a vector.
	10-Apr-18	Cauchy schwarz inequality, Triangle inequality.
	11-Apr-18	Theorem, Solved example.
	12-Apr-18	Normed linear space. Exercise.
	13-Apr-18	Orthogonal vector and orthogonal complement.
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
16	16-Apr-18	Orthonormal set, Solved example. Bessel's inequality.
	17-Apr-18	Gram-Schmidt orthogonalization process. Theorem.
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Linear operators on inner product spaces: - Introduction
	20-Apr-18	Adjoint operator, self adjoint operator,
	21-Apr-18	Some important concept, some theorem on linear operator.
	22-Apr-18	Sunday
	17	23-Apr-18
24-Apr-18		unit-test
25-Apr-18		unit-test
26-Apr-18		
27-Apr-18		
28-Apr-18		