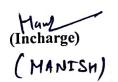
Shr	i Guru Teg b	ahadur Ji Government College, Taraori(Karnal)
epartme	nt: Mathem	natics Class: Bec. III (V+1 Sem)
		r Algebra Lesson Plan
Month	Week 1	Vector spaces, subspaces, Sum and divect sum of Subspaces, Lineau span, Lineauly Independent and
	Week 2	Finetly generated vector space. Existence the word for basis of a finitely generated vector space.
	Week 3	Finite dimensional vectorspaces, Invaviance of the number of elements of basis sets.
	Weck 4	Dimensions, Quotient space and its dimension. Homomorphism and isomorphism of wector space.
	Week 1	Linear transformation and linear forms on vector space
	Week 2	Vector space of all the linear transformations. Dual spaces, Bidual spaces, annihilator of subspaces of finite dimensional vector spaces. Null spaces.
	Week 3	Range space of a linear toansformation, Rank and Nullity Theorem.
	Week 4	Class test
	Week 1	Algebra of Uneau transformation, Hinimal polynomial of a linear transformation, Singular & Non-Singular LT.
	Week 2	Matrix of LT, change of basis, Eigen values & Eigen vectors of linear transformation Inner product Spaces, Courchy - Schwarz inequality.
	Week 3	orthogonal vectors, Orthogonal compliments.
4	Week 4	Class test
	Week 1	Orthogonal sets and Basis, Bessels inequality for finite dimensional vector spaces:
	Week 2	cram - Schmidt Orthogonalization process, Adjoint of a LT and its probesties, Unitary linear transformat
	Week 3	Classal-
	Week 4	Revision

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Shri Guru Teg bahadur Ji Government College, Taraori (Karnal)

Class:B.Com I (IInd sem) Department: Mathematics

		thematics-II Lesson Plan
	an 1	Differentiation, derivative of simple functions and other funtions.
Month	Week 1	Differentiation, derivative of simple rand
		Application of derivative in business studies, maxima and minima of
eb, 2025	Week 2	Application of derivative in business seems
		Application of derivative in Cost, demand and production, profit function
		Application of derivative in Cost, demand and products
	Week 3	related to business and commerce.
	λ , , , , ,	Class test, Integration
	Week 4	
20	Alexander and a second a second and a second a second and	Integration of definite and indefinite functions.
March, 2025	Week 1	integration of decision
2023		Holi Break
	Week 2	3.3
n di	VVCCR 2	· · · · · · · · · · · · · · · · · · ·
		Basic rules of integration, application of integration in commercial and
	Week 3	business problems.
	- Maria	Binomial Theorem
	Week 4	
A! 2025	and the second	Permutation and probles related to permutations.
April, 2025	Week 1	
		Combination and problems related to combination.
	Week 2	Combination and processes
		Linear programming Problems (LPP)
	Week 3	Linear programming ricoloms (Dr. 1)
	VI COR D	G: Armosthad to galve I PD
	Week 4	Simplex method to solve LPP.
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May, 2023	Week 1	ISO Profit Method to solve LPP.
	Week 2	Applications of LPP in solving real life problems.
	14.1	Class Test
	Week 3	
	Week 4	Revision



Shri Guru Teg bahadur Ji Government College, Taraori (Karnal)

Department:Mathematics

Class:B.Sc I (IInd Sem)

Subject: Algebra and Number Theory

		Lesson Plan
Month	Week 1	Symmetric, Skew Symmetric, Hermitian and skew Hermitian Matrices
Feb, 2025	Week 2	Elementary operations on matrices, Rank of a Matrix, inverse of a matrix, Linear dependence and independence of rows and columns of matrix.
	Week 3	Row rank and column rankof a matrix, eigen values, Eigen vectors and characterstic operation and matrix minimal polynomial of a matrix.
	Week 4	Cayley-Hamilton theorems and its use in finding the inverse of a matrix, Unitary and orthogonal matrices.
March, 2025	Week 1	Relation between the roots and coefficients of a general polynomial equation in one variable.
	Week 2	Holi Break
	Week 3	Solution of polynomial equations having conditions on roots, Common roots and multiple roots.
	Week 4	Transformation of equations, nature of roots of an equation, descarte's rule of signs.
April, 2025	Week 1	Solutions of cubic equations (Cardon's Method), Biquadratic equation and their solutions
	Week 2	Divisibility, Greatest common factor, Least common Multiple
	Week 3	Prime numbers, Fundamental theorem of arithmetic.
	Week 4	Class Test, Linear Congrueces
May, 2023	Week 1	Fermat's Theorem and Euler's theorem
	Week 2	Wilson's Theorem and its converse, Chinese Remainder theorem.
	Week 3	Linear Diophantine equations in two variables.
	Week 4	Class Test and revision.

Hawl (Incharge) (HANESH)