CMG Govt. College for Women, Bhodia Khera (Fatehabad)
Lesson Plan 2022-23

Name of Asstt. /Associate: Mr. Sonu Ram

Class and Section: BA/BSC-I, 1st semester.

Subject- Mathematics (Algebra)

Month	Week	Topics
August	3rd	Introduction to matrices, examples of matrix, Symmetric, skew symmetric, Hermitian matrix, revision.
		elementary matrix, taking doubts elementary operations of matrices
	4th	upper triangular matrix, lower triangular metrics, take doubts, revision.
		Take doubts of Exercise 1.1 and Exercise 1.2 and revision of 1st chapter
Month	Week	
September	1st	like sum of matrices, subtraction of matrices, take doubts, revision conjugate of matrices, adjoint of matrix, taking doubts, revision
	2nd	equivalent matrices, minors of matrices, row echelon matrices, take doubts, revision.
	3rd	multiplication of matrices, rank of matrices, elementary row operators on matrices, elementary column operations of matrices, take doubts, revision.
	4th	Inverse of matrices, rank of matrix and inverse of matrix, row rank and column rank of matrix, eigen value of matrix, taking doubts, revision. Take 1st assignment
Month	Week	
October	1st	eigen vector of matrix, and characteristic equation of matrix, characteristic value of matrix. Examples of homogeneous polynomial. take doubts, revision.
	2nd	Introduction to the system of linear equations, homogeneous equation and non-homogeneous equation, theorem of consistency of a linear system of equations, solution system of linear equations, taking doubts, revision, take 2nd assignment.
	3rd	solution of non-homogeneous system of linear equations, take doubts, revision.
	4th	Unitary matrices, orthogonal matrices, examples of unitary and orthogonal matrices, bilinear and quadratic forms of matrices, take doubts, revision. Take class test.

November	1st week	Introduction to polynomial, introduction to homogeneous polynomial and non-homogeneous.
	2nd week	Relation between roots of an equation and roots and coefficients of general polynomial equation in one variable.
	3rd week	Solutions of polynomial equations having on roots. Common roots and multiple roots. Transformation of roots of an equation.
	4th week	Nature of roots of an equation., solution of cubic equation, Cardon method,
Month	week	
December	1st	Descartes rule of an equations and revision
	2nd	Biquadratic equations and their solutions and revision