

GOVT. COLLEGE FOR WOMEN, BASTARA
LESSON-PLAN (Session 2023-24) EVEN SEMESTER

Name of Teacher: Anuradha
Designation: Assistant Professor
Subject: Algebra and Number Theory

Class: B.Sc 2nd sem

Subject Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Feb	Symmetric, Skew Symmetric, Hermitian and Skew Hermitian matrices, Elementary operations on matrices, Rank of a matrix, Inverse of a matrix, linear dependence and independence of rows and columns of matrix, Row rank and column rank of a matrix, Eigen values, Eigen vectors and characteristic equation of a matrix	Group discussion
2	March	Minimal polynomial of a matrix, Cayley Hamilton theorem and its use in finding the inverse of a matrix, Unitary and orthogonal matrices, Relation between the roots and coefficients of general polynomial equation in constant variable, Solutions of polynomial equations having conditions on roots, Common roots and multiple roots, Transformation of equations.	ASSIGNMENT
3	April	Nature of roots of an equation, Descartes's rule of signs, Solutions of cubic equations (Cardan's method), Biquadratic equations and their solutions, Divisibility, Greatest common divisor, Least common multiples, Prime numbers, Fundamental theorem of arithmetic.	UNIT TEST
4	May	Linear congruences, Fermat's theorem, Euler's theorem, Wilson's theorem and its converse, Chinese Remainder theorem, Linear Diophantine equations in two variables	REVISION

*Vacation as per university calendar

2 Assignments and 01 unit test will be taken as per schedule.

Kamlesh
Principal
CW (Bastara) Gharana

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