

BabaFatehSinghjiGovt.College,Assandh,Karnal

Department of MATHEMATICS

Session: 2023-2024

Class: B.A.I (Sem II)

LessonPlan: Algebra and Number Theory

Sr.No		
1	Week1 15 Feb To 17 Feb	<ul style="list-style-type: none"> * Symmetric Matrices, * Skew symmetric Matrices * Hermitian Matrices * Skew-Hermitian Matrices. * Practical work
2	Week2 19 Feb To 24 Feb	<ul style="list-style-type: none"> * Orthogonal Matrix. * Unitary Matrix. * Rank of a Matrix. * do * Practical work
3	Week3 26 Feb To 2 March	<ul style="list-style-type: none"> * Elementary operations on Matrices. * Equivalent Matrices. * Practical work * Column Echelon Matrix.
4	Week-4 4 March To 9 March	<ul style="list-style-type: none"> * Some theorems on characteristic roots and characteristic vector. * Cayley-Hamilton theorem. * Minimal Polynomial and Minimal eqⁿ * Practical work of Matrix.
5	Week-5 11 March To 16 March	<ul style="list-style-type: none"> * General Equation. * Synthetic division * Fundamental theorem of Algebra. * do * Practical work
6	Week-6 18 March To 23 March	<ul style="list-style-type: none"> * Factor theorem. * Relation betⁿ the roots and the co-efficients of eqⁿ * Practical Method. * transformation in general. * Descartes's Rule of signs. * Practical Work

7	Week 7 1 April To 6 April	<ul style="list-style-type: none"> * Cardon Method * Descartes's solution of the biquadratic. * Ferrari's Method ———— do ———— * Practical work
8	Week-8 8 April To 13 April	<ul style="list-style-type: none"> * divisibility and its theorems. * division algorithm * Fundamental theorem of Arithmetic. * Standard form of Canonical form. * Practical Work
9	Week-9 15 April To 20 April	<ul style="list-style-type: none"> * Congruences * Linear Congruence * Linear diophantine Equations. ———— do ———— * Practical work
10	Week-10 22 April To 30 April	<ul style="list-style-type: none"> * Fermat's theorem and its converse * Euler's theorem (functions) * Complete Residue System (mod m) * Wilson's theorem and its converse ———— do ———— * Chinese Remainder theorem ———— do ———— * Practical work