M.D.Govt. Girls College ,Dadupur Roran Karnal

Weekly Lesson Plan (Even Semester)

Session : 2024-25 (08-02-2025 to 30-05-2025)

Name	**Dr. Anil saini**	**Session**	**2024-25**	**Class**	**B.Sc. (I)**	**Subject**	**Mathematics**
Designation	**Associate Professor**	**Semester**	**IInd**	**Paper code**	**Algebra & Number Theory**	**Theory/Prac.**	**Practical**
		Paper	**Problem Solving & Practical using Maxima Software in Algebra & Number Theory**				

Sr. No.	Days	Topics
1	10-02-2025 to 14-02-2025	Problems to find the row rank and column rank of a matrix.
2	17-02-2025 to 21-02-2025	Problems to find the eigen values and eigen vectors of a matrix.
3	24-02-2025 to 28-02-2025	Problems to find the minimal polynomial of a matrix.
4	03-03-2025 to 07-03-2025	Problems of finding inverse of a matrix using Cayley-Hamilton theorem.
Holi Break (09-03-2025 to 16-03-2025)		
5	17-03-2025 to 21-03-2025	Problems of solving cubic equations by Cardon's method.
6	24-03-2025 to 28-03-2025	Problems of solving biquadratic equations by Descarte's method & Ferrari's method.
7	31-03-2025 to 04-04-2025	Problems to find gcd and lcm of two integers,
8	07-04-2025 to 11-04-2025	Problems to find solution of linear congruence using Euler's theorem.
9	14-04-2025 to 18-04-2025	Problems to find common solution of congruences using Chinese remainder theorem.
10	21-04-2025 to 25-04-2025	To find roots & multiple roots of algebraic equations using MAXIMA.
11	28-04-2025 to 02-05-2025	To find the value of a determinant & inverse of a square matrix using MAXIMA.
12	05-05-2025 to 09-05-2025	To find Eigen values & Eigen vectors of a square matrix using MAXIMA.
13	12-05-2025 to 16-05-2025	To solve system of linear equations using MAXIMA.
14	19-05-2025 to 23-05-2025	To find gcd and lcm of two or more integers using MAXIMA,
15	26-05-2025 to 30-05-2025	Problems of solving biquadratic equations by Ferrari's method using MAXIMA.

M.D.Govt. Girls College ,Dadupur Roran Karnal

Weekly Lesson Plan (Even Semester)

Session : 2024-25 (08-02-2025 to 30-05-2025)

Name	**Dr.Anil Saini**		**Session**	**2024-25**	**Class**	**B.Sc. (I)**	**Subject Mathematics**
Designation	**Associate Professor**		**Semester**	**IInd**	**Paper code**	**Algebra & Number Theory**	**Theory/Prac. Practical**
Teaching Days	**(1-4) Four days**	**Paper**	**Algebra & Number Theory**				

Sr. No.	Days	Topics
1	**10-02-2025 to 14-02-2025**	Matrices and its types, Symmetric and skew symmetric matrices,
2	**17-02-2025 to 21-02-2025**	Hermitian and skew Hermition matrices
3	**24-02-2025 to 28-02-2025**	Elementary operations on matrices, Rank of a matrix, Inverse of a matrix, Linear dependence and independence of rows and columms of matrix
4	**03-03-2025 to 07-03-2025**	Row rank and column rank of a matrix Eigen values, Eigen vectors and characteristic equation of a matrix
Holi Break (09-03-2025 to 16-03-2025)		
5	**17-03-2025 to 21-03-2025**	Minimal polynomial of a matrix, Cayley-Hamilton theorm and its use in finding the inverse of a matrix, Unitary and orthogonal matrices.
6	**24-03-2025 to 28-03-2025**	Relations between the roots and coefficients of general polynomial equation in one variable
7	**31-03-2025 to 04-04-2025**	Solutions of polynomial equations having conditions on roots, Common roots and multiple roots
8	**07-04-2025 to 11-04-2025**	Transformation of equation, Nature of the roots of an equation, Descarte's rule of signs.
9	**14-04-2025 to 18-04-2025**	Solutions of cubic equations (Cardon's method) Biquadratic equation and the solution.
10	**21-04-2025 to 25-04-2025**	Divisibility, Greatest common divisor (gcd), Least common multiple (lcm).
11	**28-04-2025 to 02-05-2025**	Prime numbers, Fundamental theorem of arithmetic
12	**05-05-2025 to 09-05-2025**	Linear congruences, Fermat's theorem
13	**12-05-2025 to 16-05-2025**	Euler's theorem, Wilson's theorem and its converse
14	**19-05-2025 to 23-05-2025**	Chinese Remainder theorem, Linear Diophantine equations in two variables.
15	**26-05-2025 to 30-05-2025**	Revision and Test

M.D.Govt. Girls College ,Dadupur Roran Karnal

Weekly Lesson Plan (Even Semester)

Session : 2024-25 (08-02-2025 to 30-05-2025)

Name	**Dr. Anil saini**		**Session**	**2024-25**	**Class**	**B.Sc. (II)**	**Subject Mathematics**
Designation	**Associate Professor**		**Semester**	**IVth**	**Paper Name & code**	**Analytic Geometry& Vector Calculus**	**Theory/Prac. Practical**

Sr. No.	**Days**	**Topics**
1	**10-02-2025 to 14-02-2025**	Scalar and Vector product of three vectors, four vectors, reciprocal vectors, vector differentiation and derivative along a curve, directional derivatives
2	**17-02-2025 to 21-02-2025**	Gradient of a scalar point function, divergence of vector point functions, their geometrical meanings and vector identities.
3	**24-02-2025 to 28-02-2025**	curl of vector point functions, their geometrical meanings and vector identities.
4	**03-03-2025 to 07-03-2025**	Vector integration: line integral, surface integral and volume integral.
Holi Break (09-03-2025 to 16-03-2025)		
5	**17-03-2025 to 21-03-2025**	Vector integration: line integral, surface integral and volume integral.
6	**24-03-2025 to 28-03-2025**	Theorem of Gauss, Green, Stoke and problems based on these.
7	**31-03-2025 to 04-04-2025**	Sphere: General form, Plane section of a sphere. Sphere through a given circle. Intersection of two spheres, tangent plane and line, polar plane and line
8	**07-04-2025 to 11-04-2025**	Orthogonal spheres, radical plane of two spheres and co-axal system of spheres.
9	**14-04-2025 to 18-04-2025**	Cone: Equation of a cone, right circular cone, quadric cone, enveloping cone. Tangent plane and condition of tangency.
10	**21-04-2025 to 25-04-2025**	Cylinder: Right circular cylinder and enveloping cylinder. Central Conicoids: Equation of tangent plane. Director sphere. Normal to the conicoids. Polar plane of a point.
11	**28-04-2025 to 02-05-2025**	Enveloping cone of a conicoid, Enveloping cylinder of a conicoid, confocal conicoid, reduction of second degree equations.
12	**05-05-2025 to 09-05-2025**	General equation of second degree: Classification of conic sections; centre, asymptotes, axes, eccentricity, foci and directrices of conics.
13	**12-05-2025 to 16-05-2025**	Tangent at any point to a conic, chord of contact, pole of line to a conic, director circle of a conic.
14	**19-05-2025 to 23-05-2025**	Polar equation of a conic, tangent and normal to a conic, confocal conics.
15	**26-05-2025 to 30-05-2025**	Revision and Test

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Weekly Lesson Plan (Even Semester)

Session : 2024-25 (08-02-2025 to 30-05-2025)

Name	**Dr. Anil saini**		**Session**	**2024-25**	**Class**	**B.SC/B.Com. (I)**	**Subject Mathematics**	
Designation	**Associate Professor**		**Semester**	**IInd**	**Paper**	**Numerical Ability Enhancement Skills**	**Theory**	
		Paper						

Sr. No.	**Days**	**Topics**
1	**10-02-2025 to 14-02-2025**	HCF, LCM of integers, Ratio and Proportion, Progressions
2	**17-02-2025 to 21-02-2025**	Arithmetic Progression, Geometric Progression, Harmonic Progression with their simple and basic practical applications, Number series completion.
3	**24-02-2025 to 28-02-2025**	Percentage, Profit & Loss, Alligation or mixture, Average, Average speed problems, Calendar.
4	**03-03-2025 to 07-03-2025**	Percentage, Profit & Loss, Alligation or mixture, Average, Average speed problems, Calendar.
Holi Break (09-03-2025 to 16-03-2025)		
5	**17-03-2025 to 21-03-2025**	Percentage, Profit & Loss, Alligation or mixture, Average, Average speed problems, Calendar
6	**24-03-2025 to 28-03-2025**	Logarithms, Area of Quadrilaterals
7	**31-03-2025 to 04-04-2025**	Volume and surface area of Cube, Cuboid, Cylinder, Cone, Sphere and Hemisphere.
8	**07-04-2025 to 11-04-2025**	Volume and surface area of Cube, Cuboid, Cylinder, Cone, Sphere and Hemisphere.
9	**14-04-2025 to 18-04-2025**	Volume and surface area of Cube, Cuboid, Cylinder, Cone, Sphere and Hemisphere.
10	**21-04-2025 to 25-04-2025**	Real number system, Operations on numbers
11	**28-04-2025 to 02-05-2025**	Tests for divisibility of natural numbers
12	**05-05-2025 to 09-05-2025**	Tests for Decimals, Fractions
13	**12-05-2025 to 16-05-2025**	Square roots, Cube roots,
14	**19-05-2025 to 23-05-2025**	Surds and indices, Use of BODMAS.
15	**26-05-2025 to 30-05-2025**	Revision and Test

M.D.Govt. Girls College ,Dadupur Roran Karnal

Weekly Lesson Plan (Even Semester)

Session : 2024-25 (08-02-2025 to 30-05-2025)

Name	**Dr. Anil saini**		**Session**	**2024-25**	**Class**	**B.Com. (I)**	**Subject Mathematics**
Designation	**Associate Professor**		**Semester**	**IInd**	**Paper**	**Business Mathematics -II**	**Theory**
		Paper					

Sr. No.	**Days**	**Topics**
1	**10-02-2025 to 14-02-2025**	Linear programming: Formulation of linear programming problems
2	**17-02-2025 to 21-02-2025**	Linear programming: solution by graphical and simplex methods
3	**24-02-2025 to 28-02-2025**	Applications of linear programming in solving problems related to business and commerce.
4	**03-03-2025 to 07-03-2025**	Differentiation; derivative of simple functions
Holi Break (09-03-2025 to 16-03-2025)		
5	**17-03-2025 to 21-03-2025**	Differentiation; other functions (excluding trigonometric functions)
6	**24-03-2025 to 28-03-2025**	Differentiation having applications in business studies; Maxima and minima of Revenue, Cost, Demand, Production, Profit functions and other functions related to business and commerce.
7	**31-03-2025 to 04-04-2025**	Integration: Definite and indefinite (simple functions excluding trigonometric functions)
8	**07-04-2025 to 11-04-2025**	Integration: Definite and indefinite (simple functions excluding trigonometric functions)
9	**14-04-2025 to 18-04-2025**	Integration: Basic rules of integration, application of integration in commercial and business problems.
10	**21-04-2025 to 25-04-2025**	Integration: Basic rules of integration, application of integration in commercial and business problems.
11	**28-04-2025 to 02-05-2025**	Integration: Basic rules of integration, application of integration in commercial and business problems.
12	**05-05-2025 to 09-05-2025**	Binomial Theorem
13	**12-05-2025 to 16-05-2025**	Permutations and Combinations.
14	**19-05-2025 to 23-05-2025**	Permutations and Combinations.
15	**26-05-2025 to 30-05-2025**	Revision and Test