Lesson Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Odd Semester (Semester-V)
Session – 2024-25

Department: Mathematics

Class: B.Sc.-III (NM &Voc.)/B.A.-III
Subject: Analysis-I (Paper I)

Name of the Teacher: Dr Nisha Sharma

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
July	22.07.2024	31.07.2024	Countable and Uncountable sets	Syllabus, Examination pattern discussed
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2024				
August	01.08.2024	31.08.2024	Riemann Integral.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 2.09.2024				
September	01.09.2024	30.09.2024	Reimann Integration: Conditions of integrability of continuous and monotonic functions, Properties of integrable functions, Continuity of the integral function, Mean Value Theorems, Beta and Gamma functions, Improper Integrals and their convergence	Doubt session, Assignments, revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.09.2024				
October	01.10.2024	31.10.2024	Comparison tests, Absolute and Conditional Convergence, Able's and Dirichlet's test, Frullani integral, Integral as a function of a parameter.	Doubt session, Assignments, Power Point Presentations
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.10.2024				
November	01.11.2024	18.11.2024	Continuity, derivability and integrabilityof a function of a parameter	Question papers discussed. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 18.11.2024				
End semester Examination 19.11.2024 to 26.12.2024				

Lesson Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Odd Semester (Semester-V)
Session – 2024-25

Department: Mathematics

Class: B.Sc.-III (NM &Voc.)/B.A.-III
Subject: Modern Algebra (Paper II)

Name of the Teacher: Dr Sonica

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
July	22.07.2024	31.07.2024	Groups, Subgroups, Lagrange's Theorem.	Syllabus, Examination pattern discussed
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2024				
August	01.08.2024	31.08.2024	Normal subgroups and QuotientGroups, Homomorphisms,Isomorphism Theorems.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 02.09.2024				
September	01.09.2024	30.09.2024	Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of n A , $n \geq 5$ (without proof).	Doubt session, Assignments, revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.10.2024				
October	01.10.2024	31.10.2024	Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings	Doubt session, Assignments, Power Point Presentations
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.11.2024				
November	01.11.2024	18.11.2024	Prime and Maximal Ideals,Homomorphisms, Isomorphism Theorems, Polynomial rings.	Question papers discussed. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 18.11.2024				
End semester Examination 19.11.2024 to 26.12.2024				

Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans-Odd Semester (Semester-V)

Session – 2024-25

Department: Mathematics

Class: B.Sc.-III (NM &Voc.)/B.A.-III

Subject: Probability Theory (Paper III)

Name of the Teacher: Dr Navjot Kaur

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
July	22.07.2024	31.07.2024	Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2024				
August	01.08.2024	31.08.2024	Random Variables: Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectation of random variable, mean, variance, moments of distribution.	Doubt session, Revision of a few topics and class test.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 02.9.2024				
September	01.09.2024	30.09.2024	Moment generating function, skewness and kurtosis. Probability generating function. Discrete Random Variables: Bernoulli random variable, binomial random variable.	Doubt session, Assignments. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 1.10.2024				

October	01.10.2024	31.10.2024	Continuous Random Variables: Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable. Negative binomial random variable, geometric random variable, Poisson random variable.	Doubt session, class test/Assignments.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.11.2024				
November	01.11.2024	18.11.2024	Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.	Doubt session, Question papers discussed. Revision tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 18.11.2024				
End semester Examination 19.11.2024 to 26.12.2024				

Lesson Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Even Semester (Semester-VI)
Session – 2024-25

Department: Mathematics

Class: B.Sc.-III (NM &Voc.)/B.A.-III
Subject: Analysis-II (Paper I)

Name of the Teacher: Dr Sonica, Dr Navjot Kaur

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
January	10.01.2025	31.01.2025	Double and triple integrals	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.02.2025				
February	01.02.2025	28.02.2025	Vector Calculus, Sequences and Series of functions	Doubt session, Assignments, revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.03.2025				
March	01.03.2025	31.03.2025	Power Series and Fourier Series	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.04.2025				
April	01.04.2025	26.04.2024	Revision	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 26.04.2025				
End semester Examination 28.04.2025 to 04.06.2025				

Lesson Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Even Semester (Semester-VI)
Session – 2024-25
Department: Mathematics
Class: B.Sc.-III (NM &Voc.)/B.A.-III
Subject: Linear Algebra (Paper II)
Name of the Teacher: Dr Sonali

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
January	10.01.2025	31.01.2025	Vector Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear Iependence and independence of vectors	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.02.2025				
February	01.02.2025	28.02.2025	Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations	Doubt session, Assignments, revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.03.2025				
March	01.03.2025	31.03.2025	Linear transformations and matrices, Change of basis. Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value.	Doubt session, Assignments
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.04.2025				
April	01.04.2025	26.04.2025	Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix)	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 26.04.2025				
End semester Examination 28.04.2025 to 04.06.2025				

Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans-Even Semester (Semester-VI)

Session – 2024-25

Department: Mathematics

Class: B.Sc.-III (NM &Voc.)/B.A.-III

Subject: Numerical Analysis (PAPER-III)

Name of the Teacher: Dr Sonali

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
January	10.01.2025	31.01.2025	Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials. Interpolation techniques : Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 28.01.2025				
February	01.02.2025	28.02.2025	Interpolation formulas using Difference. Numerical Differentiation. Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas. Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition).	Doubt session, Assignments, Class tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 25.02.2025				
March	01.03.2025	31.03.2025	Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods). The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.	Doubt session, Assignments. Class tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 25.03.2025				

April	01.04.2025	25.04.2025	Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods	Doubt sessionand tests. Question papers discussed. Revision of the topics important from examination point of view.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 22.04.2025				
End semester Examination 28.04.2025 to 04.06.2025				