

S.M.S.L. Govt. College Julana(Jind)
Lesson Plan (Aug to Dec. 2026)

Name of Teacher – Dr. Neha Mittal

Paper – Quantitative Aptitude

Class – B.A. 3rd Sem (SEC)

Subject – Mathematics

Session :- 2026-2027 (Odd Sem.)

Weeks	Contents
Week - 1	Basics, Unit-1 Linear Equations
Week - 2	Quadratic Equations
Week - 3	Quadratic Equations
Week - 4	System of Algebraic Equations in two Variables and their applications in simple problems
Week - 5	System of Algebraic Equations in two Variables and their applications in simple problems
Week - 6	Assignment- 1, Unit – 2 Time and Distance: Problem based on trains
Week - 7	Problem based on trains
Week - 8	Boats and Streams
Week - 9	Pipes and Cisterns
Week - 10	Pipes and Cisterns
Week - 11	Assignment-2, Unit-3 Simple Interest
Week - 12	Compound interest, Partnership
Week - 13	Basic idea of set theory to solve practical problems
Week - 14	Unit – 4 Basic Idea of Permutations and Combinations
Week - 15	Events and sample space, Probability
Week - 16	Data interpretation: raw and grouped data, Bar Graph, Pie Chart
Week - 17	Mean, Median
Week - 18	Mode, Revision
Week - 19	Revision

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S.M.S.L. Govt. College Julana(Jind)

Lesson Plan (Aug to Dec. 2026)

Name of Teacher – Dr. Neha Mittal

Paper – Sequence & Series

Class – B.A/B.Sc. 5th Sem(Major)

Subject – Mathematics

Session :- 2026-2027 (Odd Sem.)

Weeks	Contents
Week - 1	Unit-1, Basics, Boundedness of the set of real numbers, l.u.b and g.l.b of a set, Archimedean, algebraic and ordered properties in $\mathbb{R}$
Week - 2	Real number system as a complete ordered field, Neighbourhood
Week - 3	Interior point, Isolated points, limit points
Week - 4	Open set, closed set, interior of a set, closure of a set in real numbers and their properties
Week - 5	Bolzano weierstrass theorem, open cover, compact set and Heine Borel theorem
Week - 6	Assignment – 1, Unit-2 Denumerable and non-denumerable set, Denumerability of integers
Week - 7	Rationals and non-denumerability of real numbers
Week - 8	Sequences: Real sequence and their convergence, Theorems on limits of sequence, Bounded and monotonic sequence
Week - 9	Cauchy's sequence, Cauchy general principal of convergence
Week - 10	Subsequences and Subsequential limits, Limit superior and limit inferior
Week - 11	Unit-3, Convergence and divergence of infinite series, Comparison test of positive terms infinite series
Week - 12	Cauchy general principal of convergence of series, Convergence and divergence of geometric series
Week - 13	Hyper Harmonic series or p-series, D'Alembert's Ratio test, Rabbe's test
Week - 14	Logarithmic test, Cauchy's nth root test, De-Morgan and Bertrand's test, gauss test, Cauchy integral test, Cauchy condensation test
Week - 15	Unit-4, Alternating series, Absolute and conditional convergence, Leibnitz test
Week - 16	Arbitrary series, Abel's and Dirichlet's test, Insertion and removal of parenthesis
Week - 17	Re-arrangement of terms in a series, Riemann's re-arrangement theorem
Week - 18	Pringsheim's theorem, Cauchy product of series, Revision
Week - 19	Revision

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LESSON PLAN (Aug-Dec 2026)

Name of Teacher – Ms. Meena
 Paper – Introductory Mathematics
 Session: - 2026-2027 (Odd Sem.)

Subject: - Mathematics
 Class –BA MDC 1st

Weeks With Months	Contents
August Week 1	Sets and their representations, Empty set, Finite and infinite sets, Subsets, Equal sets, Power sets, Universal set, Union and intersection of sets
Week 2	Difference of two sets, Complement of a set, Venn diagram, De-Morgan's laws and their applications.
Week 3	An introduction to matrices and their types, Operations on matrices, Symmetric and skew-symmetric matrices
Week 4	Minors, Co-factors. Determinant of a square matrix,
Week 5	Adjoint and inverse of a square matrix, Solutions of a system of linear equations up to order 3.
September Week 1	Revision of Unit-I through Assignments and Tests Complex numbers, Operations on complex numbers, Modulus and argument of a complex number
Week 2	Linear inequalities, Algebraic solutions of linear inequalities in two variables and their graphical representation.
Week 3	Quadratic equations, Solution of quadratic equations.
Week 4	Revision of Unit-II through Assignments and Tests
October Week 1	Arithmetic progression, Geometric progression, Harmonic progression,
Week 2	Arithmetic mean (A.M.), Geometric mean (G.M.), Harmonic mean (H.M.), Relation between A.M., G.M. and H.M.
Week 3	Doubts and revision of unit III, Slope of a line and angle between two lines,
Week 4	Different forms of equation of a line: Parallel to co-ordinate axes, Point-slope form
November Week 1	Vacations
Week 2	Different forms of equation of a line : Slope-intercept form, Two-point form, General form
Week 3	Distance of a point from a straight line.
Week 4	Standard form of a circle and its properties. Revision of Unit-IV through Assignments and Tests
December Week 1	Revision and doubt classes

Meena

LESSON PLAN (Aug-Dec 2026)

Name of Teacher –Ms. Meena
Paper – Business Mathematics-I
Session: - 2026-2027 (Odd Sem.)

Subject: - Mathematics
Class –B.Com. 1st Sem Minor

Weeks With Months	Contents
August Week 1	Basics of Set Theory, Representation of sets , Equivalent sets, power set, complement of a set
Week 2	Venn Diagrams of sets
Week 3	De-Morgan's laws; Logical statements and truth tables
Week 4	Assignment and test of unit 1 Logarithms: Laws of operation, log tables
Week 5	Arithmetic progression.
September Week 1	Geometric progression and doubts
Week 2	Matrices and Determinants: Definition of a matrix, order, equality, types of matrices
Week 3	Operations on matrices: Addition, multiplication and multiplication with a scalar and their simple properties.
Week 4	Determinant of a square matrix (upto 3x 3 order): Properties of determinants
October Week 1	minors, co-factors
Week 2	Applications of determinants in finding the area of triangle,
Week 3	Adjoint and inverse of a square matrix, solutions of a system of linear equations by examples.
Week 4	Doubt classes and test Compound interest and annuities: Different types of interest rates
November Week 1	Vacations
Week 2	Types of annuities, present value and amount of an annuity (including the case of continuous compounding),
Week 3	Valuation of simple loans and debentures
Week 4	Problems related to sinking funds.
December Week 1	Test Revision and Assignment

Meena

LESSON PLAN (Aug-Dec 2026)

Name of Teacher –Ms. Meena
 Paper – Differential Equations- I
 Session: - 2026-2027 (Odd Sem.)

Subject: - Mathematics (Major)
 Class –B.A., B.Sc. 3rd Sem

Weeks With Months	Contents
August Week 1	Basic concepts and genesis of differential equations; order and degree, Differential equations of first order and first degree; exact differential equations
Week 2	Integrating factor; equations of first order and first degree
Week 3	First-order higher-degree equations solvable for x, y and p
Week 4	Lagrange's equations; Clairaut's form, Singular solutions;
Week 5	Orthogonal trajectories of one-parameter families of curves in a plane
September Week 1	Class exercises and short test on Unit I , Solutions of Linear differential equations with constant coefficients
Week 2	Solutions of Linear non-homogeneous differential equations
Week 3	Linear differential equations of second order with variable coefficients
Week 4	Method of reduction of order; method of undetermined coefficients
October Week 1	Variation of parameters; Cauchy–Euler equation
Week 2	Assignment and test of unit 2 Solutions of Simultaneous differential equations; total differential equations
Week 3	Genesis of PDE; concept of linear and non-linear PDEs
Week 4	Complete, general and singular solutions of PDE; linear PDE of first order, Lagrange's method for first-order PDE: $Pp + Qq = R$
November Week 1	Vacations
Week 2	Test of Unit 3 Integral surfaces passing through a given curve; surfaces orthogonal to a system of surfaces
Week 3	Compatible systems of first-order equations; Charpit's method; special types of first-order PDEs
Week 4	Jacobi's method; second-order PDEs with constant coefficients; complete revision
December Week 1	Test Revision and Assignment

Meena

LESSON PLAN (Aug-Dec 2025)**Name of Teacher –Dr. Nishu Gupta****Subject: - Mathematics****Paper – Reasoning****Class –BA/BSC 5th Sem VOC****Session: - 2026-2027 (Odd Sem.)**

Weeks With Months	Contents
August Week 1	Verbal Reasoning: Series Completion,
Week 2	Number series, Letter Series, Alpha numeric series,
Week 3	Wrong Letter Series, Repeat Series, Wrong Number Series,
Week 4	Number Analogy, Word Analogy.
Week 5	Coding and Decoding: Letter Coding,
September Week 1	Number coding, Matrix coding,
Week 2	Place arrangement, Direction sense,
Week 3	Family-based puzzles; Blood Relationships.
Week 4	Revision, Test and assignment.
October Week 1	Arithmetic reasoning,
Week 2	Venn diagrams,
Week 3	Logical diagrams,
Week 4	Symbol Substitution.
November Week 1	Vacations
Week 2	Non-verbal Reasoning: Choosing the odd figure,
Week 3	Water Images, Mirror Images.
Week 4	Word Analogy, Number Analogy
December Week 1	Test Revision and Assignment

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Name of Teacher - Dr. Nishu Gupta
 Paper - Calculus
 Session - 2026-2027 (Odd sem.)

LESSON PLAN (Aug-Dec 2025)

Subject: - Mathematics
 Class - BA/BSC 1st Sem Major

Weeks With Months	Contents
August Week 1	Basics
Week 2	Unit-1, Limit and continuity
Week 3	Types of discontinuity and differentiability, Successive differentiation of functions
Week 4	Leibnitz theorem, General theorems on differentiable functions and expansions
Week 5	Taylor's theorem with Lagrange's form and Cauchy's form of remainder after n terms
September Week 1	Maclaurin's form and infinite series
Week 2	Assignment-1, Unit-2 Asymptotes parallel to coordinates axis and oblique asymptotes,
Week 3	Curvature and Radius of Curvature
Week 4	Unit 3 Singular points and point of inflexion, Multiple points Cusps, node and conjugate points
October Week 1	Tracing of curves
Week 2	Curvature, Parametric curve, Polar curve and pedal curve
Week 3	Assignment- 2, Reduction formulae
Week 4	Unit-4 Rectification, Length of curve
November Week 1	Vacations
Week 2	Intrinsic equation of curve
Week 3	Test Quadrature, Sectorial area
Week 4	Area bounded by closed curve in Cartesian, parametric and polar form, Volumes and surfaces of solids of revolution
December Week 1	Revision

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