

## Lesson Plan

Name of the Assistant/ Associate Professor.....Natasha.....

Class and Section:.....BCA 1st year.....

Subject:....Discrete structure in computer science .....

Session:.....2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	
August	1	An introduction of matrix and their types , operation on matrices
	2	Symmetry and skew symmetry matrices, minors , cofactors of matrix
	3	Determinant of square matrix , adjoint and inverse of square matrix
	4	Solution of system of linear equation up to order 3
September	1	Introduction to counting , basic counting techniques
	2	Inclusion and exclusion principle , pigeon hole principle
	3	Permutation and combination, summation
	4	Introduction to recurrence relation and generating function
October	1	Introduction to probability, random experiment , random variable
	2	Expected value , independent variable ,dependent variable, Bayes theorem
	3	Mutually exclusive event ,complimentary event and geometrical probability
	4	Probability with or without replacement , binomial distribution
November	1	Poisson distribution , geometric distribution
	2	Central tendency mean median mode
	3	Data type and data presentation , attribute, variable,discrete and continuous variable
	4	Univariant and bivariate distribution , type of characteristics
December	1	Different type of scale : normal, ordinal , interval and ratio
	2	Frequency distribution , Histogram , Ogive curves
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January	1	
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February	1	
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March	1	

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April	1	
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May	1	
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Natasha

**Signature**

## Lesson Plan

Name of the Assistant/ Associate Professor.....Smt. Poonam .....

Class and Section: B.COM 1<sup>ST</sup> Year.....

Subject:.....Business Mathematics .....

Session:.....2024-2025.....

Month	Week	Topics
July	1	
	2	
	3	
	4	Definition of matrix , types of matrix , algebra of matrix
August	1	Property of determinant , calculation of value of determinant
	2	Adjoint of matrix , row and column operation
	3	Find inverse of matrix through adjoint and row or column operation
	4	Solutions of system having unique solution
September	1	Logarithm , law of operations
	2	Anti logarithm and it's operators
	3	Arithmetic progression
	4	Geometrical progression
October	1	Idea of simple derivative of function
	2	Rule of differentiation - simple standard form
	3	Maxima and minima of function
	4	Relations of cost , revenue and profit
November	1	Certain different types of interest rates
	2	Concept of present value and amount of sum
	3	Type of annuity and present value and amount
	4	Compound continues cost
December	1	
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January	1	
	2	
	3	
	4	
February	1	
	2	
	3	
	4	
March	1	
	2	
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April	1	
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May	1	
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## Lesson Plan

Name of the Assistant/ Associate Professor.....Smt. Poonam .....

Class and Section: B.A and B.Sc.....

Subject:.....Calculus Mathematics .....

Session:.....2024-2025.....

Month	Week	Topics
July	1	
	2	
	3	
	4	Successive Differentiation
August	1	Continue - Successive Differentiation
	2	Limit and continuity
	3	Continue - Limit and continuity
	4	Indeterminate form
September	1	Asymptotes
	2	Continue – Asymptotes
	3	Reduction formula
	4	Reduction formula and curve tracing
October	1	Curve tracing
	2	Curve tracing and Rectification
	3	Continue – Rectification
	4	Quadrature
November	1	Continue – Quadrature
	2	Volume and surface of solids
	3	Continue- Volume and surface of solids
	4	
December	1	
	2	
	3	
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January	1	
	2	
	3	
	4	
February	1	
	2	
	3	
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March	1	
	2	
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April	1	
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	4	
May	1	
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## Lesson Plan

Name of the Assistant/ Associate Professor.....Natasha.....

Class and Section:.....Bsc / BA 2nd year.....

Subject:.....Differential equations .....

Session:.....2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	
August	1	Basic concept and genesis of ordinary differential equation, order and degree of differential equation
	2	Solutions of differential equation of first order and first degree, exact differential equation, integrating factor
	3	First order higher degree equation solvable for x,y and p, lagrange equation, clairaut's form and singular solution
	4	Orthogonal trajectory of one parameter families of curve in a plane
September	1	Solutions of linear ordinary differential equation with the constant coefficient
	2	Linear non homogeneous differential equation , method of undetermined coefficient
	3	Linear differential equation of second order with variable coefficient, method of reduction of order
	4	Method of variation of parameters, cauchy euler equation
October	1	Solution of simultaneous differential equation
	2	Total differential equation , genesis of partial differential equation
	3	Concept of linear and non linear partial differential equation, complete solution and general solution
	4	Singular solution of partial differential equation , linear partial differential equation of first order, lagranges method
November	1	Integral surface passing through a given curve
	2	Surfaces orthogonal to a given system of surface
	3	Compatible system of first order equation, charpit's method
	4	Special type of first order partial differential equation, jacobis method
December	1	Second order partial differential equation with constant coefficient
	2	Revision and test
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January	1	
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	4	
February	1	

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	3	
	4	
March	1	
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	3	
	4	
April	1	
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May	1	
	2	
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**Natasha  
Signature**



## Lesson Plan

Name of the Assistant/ Associate Professor.....Natasha.....

Class and Section:.....Bsc / BA 2nd year.....

Subject:.....Differential equations .....

Session:.....2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	
August	1	Basic concept and genesis of ordinary differential equation, order and degree of differential equation
	2	Solutions of differential equation of first order and first degree, exact differential equation, integrating factor
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March	1	
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April	1	
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May	1	
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**Natasha  
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## Lesson Plan

Name of the Assistant/ Associate Professor...SONU.....

Class and Section:...B.Sc2nd/B.A2nd.....

Subject:...QUANTITATIVE APTITUDE(SEC).....

Session:...2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	Linear Equations and Quadratic Equations
August	1	System of Quadratic Equations in two variables
	2	Clock(basic concept)
	3	Simple Interest and Compound Interest
	4	Partnership
September	1	Set Theory to solve problems
	2	Trigonometry Ratios and Identities
	3	Basic idea of Permutations and Combinations
	4	Events and Sample Space
October	1	Data Interpretation:Bar Graph,Pie Chart
	2	Mean,Median and Mode
	3	Time and Distance :problems based on trains
	4	Boat and Streams,Pipes and Cistern
November	1	Work and Time:Problems based on work and time
	2	Work and Wages
	3	REVISION
	4	REVISION
December	1	REVISION
	2	EXAM DAYS
	3	
	4	
January	1	
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February	1	
	2	
	3	
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March	1	
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	3	
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April	1	
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May	1	
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**Signature**

## Lesson Plan

Name of the Assistant/ Associate Professor.....Natasha.....

Class and Section:.....B.sc final year / BA final year.....

Subject:.....Numerical analysis

Session:.....2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	
August	1	Finite difference operator and their relations, finding the missing terms and effect of error in the different tabular value
	2	Interpolation with equal interval , Newton's forward interpolation formula
	3	Newton's backward interpolation formula, interpolation with unequal interval
	4	Newton's divided difference, Lagrange interpolation formula
September	1	Hermite formula, central difference Gauss forward interpolation formula
	2	Gauss backward , Sterling formula , Practical
	3	Bessel formula , Probability distribution of random variable
	4	Binomial distribution, Poison distribution , Practical
October	1	Normal distribution : Mean, Variance and fitting
	2	Numerical differentiation : derivative of a function using interpolation formula
	3	Eigen value problem , power methods , Jacobis method
	4	Given's method , house holder method, QR method , Lanczo's method
November	1	Newton's cote Quadrature formula, trapezoidal rule, Simpsons one third rule
	2	Simpsons 3/8 rule , Chebychev formula , Gauss quadrature formula , Practical
	3	Single step method, Picard method, Taylor series method , Practical
	4	Euler's method , Runge kutta method , multiple step method
December	1	Predictor corrector method , Modified Euler method, Milne Simpson's method
	2	Revision
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January	1	
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February	1	
	2	

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	4	
March	1	
	2	
	3	
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April	1	
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May	1	
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Natasha

**Signature**

## Lesson Plan

Name of the Assistant/ Associate Professor.....SONU .....

Class and Section:.....B..Sc3rd/B.A 3rd.....

Subject: Real Analysis .....

Session:2024-25.....

Month	Week	Topics
July	1	
	2	
	3	
	4	Riemann Integral
August	1	Riemann Integral
	2	Integrability of continuous and monotonic functions
	3	The fundamental theorem of Integral Calculas
	4	M.V.T of integral calculas
September	1	Improper integral and their cgs
	2	Comparison test
	3	Abel's Test and Dirchlet's Test
	4	Metric space
October	1	Metric space(open sets)
	2	Metric space(open sets)
	3	Metric space (closed sets)
	4	Continuous function and uniform continuity
November	1	Compactness of metric space
	2	Sequential compactness,BWP totally Bdd
	3	F.I.P continuity with compactness
	4	revision and sessionals
December	1	revision and sessionals
	2	revision
	3	exam days
	4	
January	1	
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February	1	
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March	1	
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April	1	
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May	1	
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**Signature**



## Lesson Plan

Name of the Assistant/ Associate Professor.....Smt. Poonam .....

Class and Section: B.A and B.Sc.....

Subject:.....Group and Ring theory Mathematics .....

Session:.....2024-2025.....

Month	Week	Topics
July	1	
	2	
	3	
	4	Definition of group with examples and properties of group
August	1	Subgroup and subgroup criteria
	2	Generation of group cyclic group
	3	Cosets left and right cosets
	4	Index of subgroup coset decomposition
September	1	Lagrange theorem and its consequences
	2	Normal subgroup quotient group
	3	Homomorphism isomorphism auto morphism and inner automorphism
	4	Automorphism of cyclic group
October	1	centre of a group
	2	Derived group of group and sessional test
	3	Introduction of rings Subrings char. Of ring
	4	Integral domain and field, Ring Homomorphism
November	1	Ideals(Principial Prime and maximal)
	2	Quotient ring, Field of ID
	3	Euclidean rings Polynomials rings
	4	Polynomials over the rational field
December	1	
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February	1	
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March	1	
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April	1	
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May	1	
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