

Govt. College For Girls, Manesar

Lesson Plan

Name of Teacher: SANEHLATA		Class: B.Sc.1st Year
Session: 2022-23 Even Semester		Subject: Number Theory And Trigonometry
Month	Week	Topic
February	3	Divisibility, G.C.D.(greatest common divisors), L.C.M.(least common multiple) Primes
	4	Fundamental Theorem of Arithmetic. Linear Congruences, Fermat's theorem.
March	1	Wilson's theorem and its converse. Linear Diophantine equations in two variables
	2	Complete residue system and reduced residue system modulo m. Chinese Remainder Theorem. Quadratic residues.
	3	Legendre symbols. Lemma of Gauss; Gauss reciprocity law. Greatest integer function $[x]$.
	4	The number of divisors and the sum of divisors of a natural number
April	1	De Moivre's Theorem and its Applications.
	2	Expansion of trigonometrical functions
	3	Moebius function and Moebius inversion formula.
	4	Direct Circular and hyperbolic functions and their properties
May	1	Inverse circular and hyperbolic functions and their properties.
	2	Logarithm of a complex quantity.
	3	Grocery series.
	4	Summation of Trigonometry series.
June	1	Rivison and Test

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Lesson Plan

Name of Teacher: SANEHLATA		Class: B.Sc.1st Year
Session: 2022-23 Even Semester		Subject: Vector Calculus
Month	Week	Topic
February	3	Scalar and vector product of three vectors, product of four vectors. Reciprocal vectors.
	4	Vector differentiation. Scalar Valued point functions, vector valued point functions,
March	1	derivative along a curve, directional derivatives
	2	Gradient of a scalar point function,
	3	, geometrical interpretation of grad) , character of gradient as a point function.
	4	Divergence and curl of vector point function, characters of Div f & and Curl f & as point function,
April	1	Gradient, divergence and curl of sums and product and their related vector identities
	2	Laplacian operator
	3	Orthogonal curvilinear coordinates Conditions for orthogonality fundamental triad of mutually orthogonal unit vectors..
	4	radient, Divergence, Curl and Laplacian operators in terms of orthogonal curvilinear coordinates,
May	1	, Cylindrical co-ordinates and Spherical coordinates.
	2	, Vector integration; Line integral
	3	Surface integral, Volume integral.
	4	. Theorems of Gauss, Green & Stokes and problems based on these theorms.
June	1	Rivison and Test

Sanehlata

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Lesson Plan

Name of Teacher: SANEHLATA		Class: B.Sc. 2nd Year
Session: 2022-23 Even Semester		Subject: Sequences And Series
Month	Week	Topic
February	3	Boundedness of the set of real numbers; least upper bound, greatest lower bound of a set, neighborhoods, interior points, isolated points, limit points,\
	4	open sets, closed set, interior of a set, closure of a set in real numbers and their properties.
March	1	Bolzano-Weiestrass theorem, Open covers, Compact sets and Heine-Borel Theorem.
	2	Sequence: Real Sequences and their convergence, Theorem on limits of sequence,
	3	, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence
	4	, Subsequences, Subsequential limits.
April	1	Infinite series: Convergence and divergence of Infinite Series, Comparison Tests of positive terms Infinite series,
	2	Raabe's test, Logarithmic tCauchy's general principle of Convergence of series,
	3	Convergence and divergence of geometric series, Hyper Harmonic series or p-series.
	4	Infinite series: D-Alembert's ratio test, de Morgan and Bertrand's test, Cauchy's Nth root test, Gauss Test, Cauchy's integral test, Cauchy's condensation test
May	1	Alternating series, Leibnitz's test, absolute and conditional convergence, Arbitrary series: abel's lemma, Abel's test, Dirichlet's test,
	2	nsertion and removal of parenthesis, re-arrangement of terms in a series, Dirichlet's theorem,
	3	Riemann's Re-arrangement theorem, Pringsheim's theorem (statement only),
	4	Multiplication of series, Cauchy product of series, (definitions and examples only) Convergence and absolute convergence of infinite products.
June	1	Rivison and Test

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Lesson Plan

Name of Teacher: SANEHLATA		Class: B.Sc. 3rd Year
Session: 2022-23 Even Semester		Subject: Real And Complex Analysis
Month	Week	Topic
February	3	Jacobians, Beta And Gama Function
	4	Double and Triple integrals,
March	1	Double and Triple integrals,
	2	Fourier's series:
	3	Fourier expansion of piece wise monotonic functions, Properties of Fourier Coefficients,
	4	Dirichlet's conditions, Parseval's identity for Fourier series,
April	1	Fourier series for even and odd functions,
	2	Half range series, Change of Intervals.
	3	Extended Complex Plane,
	4	Stereographic projection of complex numbers, continuity and differentiability of complex functions,
May	1	Analytic functions, Cauchy-Riemann equations. Harmonic functions
	2	Mappings by elementary functions: Translation, rotation, Magnification and Inversion.
	3	Conformal Mappings, Mobius transformations.
	4	Fixed points, Cross ratio, Inverse Points and critical mappings.,
June	1	Rivison and Test

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Lesson Plan

Name of Teacher: SANEHLATA		Class: B.Com.1st Year
Session: 2022-23 Even Semester		Subject: Business Mathematics
Month	Week	Topic
February	3	definition of matrix types of matrix algebra of matrix
	4	calculation of values of determinants up to 3rd order urgent of a matrix elementary row and column operations
March	1	determinants
	2	determinant by using operations solution of system of linear equation
	3	differentiation
	4	differentiation
April	1	application of differentiation
	2	application of differentiation
	3	compound interest and their properties certain different type of interest rate
	4	type of annuities present value and amount of an annuity
May	1	ratio proportion and percentage
	2	profit and loss
	3	Revision and test
	4	Revision and test
June	1	Revision and test

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