RAJIV GANDHI GOVT. COLLEGE FOR WOMEN BHIWANI

HANSI ROAD, BHIWANI-127021 (HARYANA)

AISHE Code:- C-28016
Website:- www.gcwbhiwani.ac.in

Phone No 01664-255118
Email:-gcwbhiwani@gmail.com

Ref. No. ....

Dated ....

LESSON PLAN
SESSION 2023-24 (EVEN SEM)

DEPARTMENT : Mathematics

NAME OF FACULTY:_Mr. Rambir Nehra

SUBJECT: Business Mathematics

MONTH	WEEK	
February	Week 1st	Matrices : Definition of matrix , Type of matrices. How to construct a matrix with example, Basic operation of matrices with example . Discuss about multiplication of matrices with example.
	Week 2nd	Discuss about properties of matrix multiplication with example and positive integral powers of matrices with example .
	Week 3rd	Discuss about of Transpose of matrix and its properties with example .Symmetric and skew symmetric matrices with example .
	Week 4th	Discuss about of Determinants with example and how to solve second order and third order determinants with example.
March	Week 1st	Discuss about properties of determinants with example . and elementary operations . how to solve problem using properties of determinants .
	Week 2nd	Discuss about adjoint of matrix with example and inverse of a square matrix with example . Discuss about the solution of linear equation with example .
	Week 3rd	Applications of matrices to simple business and economic problem.
	Week 4th	Holi Break
April	Week 1st	Test of 1st unit. Discuss about simple interest and compound interest with example .
	Week 2nd	Different kinds of example base on compound interest.
	Week 3rd	Discuss about Differentiation with example , differentiation of product of two function and differentiation of quotient of two function with example .
	Week 4th	Differentiation of logarithmic and exponential function with example.
May	Week 1st	Discuss about application of differentiation , 1st derivates test and 2nd derivative test for finding local maxima and local minima with example.
	Week 2nd	Discuss about permutation and combination with example .
	Week 3rd	Discuss about sequences and series with example.
	Week 4th	Revision.

SIGN

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LESSON PLAN
SESSION 2023-24 (EVEN SEM)

DEPARTMENT : **Mathematics**

NAME OF FACULTY: **Mr. Rambir Nehra**

SUBJECT: Business Mathematics

MONTH.	WEEK	
February	Week 1st	Matrices : Definition of matrix , Type of matrices. How to construct a matrix with example, Basic operation of matrices with example . Discuss about multiplication of matrices with example.
	Week 2nd	Discuss about properties of matrix multiplication with example and positive integral powers of matrices with example .
	Week 3rd	Discuss about of Transpose of matrix and its properties with example .Symmetric and skew symmetric matrices with example .
	Week 4th	Discuss about of Determinants with example and how to solve second order and third order determinants with example.
March	Week 1st	Discuss about properties of determinants with example . and elementary operations . how to solve problem using properties of determinants .
	Week 2nd	Discuss about adjoint of matrix with example and inverse of a square matrix with example . Discuss about the solution of linear equation with example .
	Week 3rd	Applications of matrices to simple business and economic problem.
	Week 4th	Holi Break
April	Week 1st	Test of 1st unit. Discuss about simple interest and compound interest with example .
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	Week 3rd	Discuss about Differentiation with example , differentiation of product of two function and differentiation of quotient of two function with example .
	Week 4th	Differentiation of logarithmic and exponential function with example.
May	Week 1st	Discuss about application of differentiation , 1st derivatives test and 2nd derivative test for finding local maxima and local minima with example.
	Week 2nd	Discuss about permutation and combination with example .
	Week 3rd	Discuss about sequences and series with example.
	Week 4th	Revision.

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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. III(NM),B.Sc III(CS) SEMESTER

Subject: MATHEMATICS

Name of Paper: SPECIAL FUNCTIONS AND & INTEGRAL TRANSFORMS

Name of Teacher: Ms. PREETI

Month	Week	Topic	Practical
Feb	Week 1st	Define Power series method and use it in finding solution of differential equation. Introduce Beta and Gamma Functions and their properties	Assignment 1
	Week 2nd	Define Bessel equation and finding its solution. Define Bessel Function and its properties-Convergence, Recurrence	Assignment 2
	Week 3rd	Define Orthogonality of Bessel functions and solving the problems of the students and discuss about whole Section-1	
	Week 4th	Legendre and Hermite functions and their properties-Recurrence Relations and generating functions	Assignment 3 / Assignment 4
March	Week 1st	Orhogonality of Legendre and Hermite polynomials. Rodrigues' Formula for Legendre & Hermite Polynomials.test-1	Assignment 5
	Week 2nd	Laplace Integral Representation of Legendre polynomial and solving the problems of the students.	Assignment 6
	Week 3rd	Laplace Transforms – Existence theorem for Laplace transforms, Linearity of the Laplace transforms, Shifting theorems.Assignment	
	Week 4th	**HOLI Break**	Assignment 7
April	Week 1st	Laplace transforms of derivatives and integrals, Differentiation and integration of Laplace transforms.Test-2	Assignment 8
	Week 2nd	Convolution theorem, Inverse Laplace transforms, convolution theorem, Inverse Laplace transforms of derivatives and integrals	Assignment 9
	Week 3rd	Solution of ordinary differential equations using Laplace transform and solving the problem. Fourier transforms: Linearity property, Shifting,. Modulation, Convolution Theorem	Assignment 10
	Week 4th	Parseval's identity for Fourier transforms, solution of differential Equations using Fourier Transforms.Revision of whole syallbus.	

SIGNATURE

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LESSON PLAN
SESSION 2023-24 (EVEN SEM)

DEPARTMENT- MATHEMATICS

NAME OF FACULTY - UDAI BHAN

SUBJECT   MATHEMATICS

JANURAY 2024

WEEK 3   Basic concepts for groups, Definition of a group with examples, Simple properties of groups, Some theorems on order of elements of Group

WEEK 4   Definition of Subgroups, Criterion for Subgroups, Some theorems on Subgroups, Generation of groups, Cyclic Groups

FEBRUARY 2024

WEEK 1   Examples Of Cyclic Groups, Some theorems on Cyclic Groups, Theorems on Cyclic Groups, Definition of Cosets, Left and Right Cosets, Some theorems on Cosets, Examples on Cosets.

WEEK 2   **Lagrange's Theorems,** Theorems on Index of Subgroups, Definition and Examples of Normal Subgroups, Some theorems on Normal Subgroups, Definition and Examples of Quotient Groups, Basic concepts of Homomorphism of Groups, Definition and Examples of Homomorphism of Groups, Some theorems on Homomorphism of Groups, Definition of Kernel Homomorphism of Group

WEEK 3   Some theorems on Kernel Homomorphism of Groups, **First Fundamental Theorem of Groups Homomorphism, Second Fundamental Theorem of Groups Homomorphism, Third Fundamental Theorem of Groups Homomorphism**

WEEK 4   Definition and Examples of Automorphism of a Groups Some theorems on Automorphism of a Groups.

Definition and Examples of **Inner** Automorphism of a Groups, Definition of Commutator, Derived Group

MARCH 2024

WEEK 1 Definition and Examples of Permutation Groups, Composition of Permutations Inverse of Permutations, Symmetric Group, Cyclic Permutation, Transposition, Disjoint Cycles, Even and Odd Permutations,

WEEK 2 Alternating Group, **Cayley's theorem**, Definition and Examples of Rings, Some theorems on Rings, Rings without or with zero divisors, Integral Domain, Skew Field,

WEEK 3 Definition and Examples of Field, Some theorems on Subrings, Some theorems on Characteristics of Rings

WEEK 4 Theorems on Ideals of Rings, Theorems on Simple Rings, Theorems on Principal Ideal

APRIL 2024

WEEK 1 Theorems on Prime Ideal and Maximal Ideal **Quotient Rings,** Some theorems on Homomorphism of Rings

WEEK 2 Definition of Kernel Homomorphism of Rings, Some theorems on Kernel Homomorphism of Rings, **First Fundamental Theorem of Rings Homomorphism, Second Fundamental Theorem of Rings Homomorphism**

WEEK 3 **Third Fundamental Theorem of Ringss Homomorphism, Embedding Rings,**

WEEK 4 Definition of Unit, Associates, Prime, Irreducible elements. Some theorems on Euclidean Rings, **P.I.D**

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LESSON PLAN SESSION 2023-24 (EVEN-SEMESTER)

Class: BA III /B.Sc. III (NM, CS) 5th Sem

Subject: MATHEMATICS

Name of Paper: REAL ANALYSIS (20UMTH603)

Name of Teacher: Mr. Lalit Kajal

Month	Week	Topic	Practical
Jan	Week 4th	Introduction to Riemann Integral. Partition, refinements	
Feb	Week 1st	Lower and upper sums, Theorems and Related examples	Assignment 1
	Week 2nd	Lower and Upper Riemann integral, Basic theorems	Assignment 2
	Week 3rd	Integrability of continuous and monotonic functions. Theorems	Assignment 3
	Week 4th	Fundamental theorems of integrals calculus. Mean value theorems of integral calculus. **Class Test**	Assignment 4
March	Week 1st	Introduction to improper integral. Convergence of improper integral. Various comparison test. Abel's test, Dirichlet's test, Frullani's integral.	Assignment 5
	Week 2nd	Integral as a function of a parameter. Continuity and differentiability of an integral of function of parameter.	Assignment 6
	Week 3rd	Introduction to metric space. Related theorems. Limit points, open and closed set, closure and interior, boundary points.	Assignment 7
	Week 4th	**HOLI Break**	
April	Week 1st	Subspace of metric space, Cauchy sequence, Cantor, bairre theorems, Contraction Principal	Assignment 8
	Week 2nd	Continuous Function, uniform continuity, compactness and sequential compactness.	Assignment 9
	Week 3rd	Bolzano-Weierstrass theorems, Total boundedness. **Class Test**	Assignment 10
	Week 4th	Finite intersection property, Continuity in relation with compactness.	

Teacher's Signature

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LESSON PLAN SESSION 2023-24 (EVEN-SEMESTER)

Class: BA III /B.Sc. III (NM, CS) 5th Sem

Subject: MATHEMATICS

Name of Paper: REAL ANALYSIS (20UMTH603)

Name of Teacher: Mr. Lalit Kajal

Month	Week	Topic	Practical
Jan	Week 4th	Introduction to Riemann Integral. Partition, refinements	
Feb	Week 1st	Lower and upper sums, Theorems and Related examples	Assignment 1
	Week 2nd	Lower and Upper Riemann integral, Basic theorems	Assignment 2
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	Week 4th	Fundamental theorems of integrals calculus. Mean value theorems of integral calculus. **Class Test**	Assignment 4
March	Week 1st	Introduction to improper integral. Convergence of improper integral. Various comparison test. Abel's test, Dirichlet's test, Frullani's integral.	Assignment 5
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	Week 4th	**HOLI Break**	
April	Week 1st	Subspace of metric space, Cauchy sequence, Cantor, bairre theorems, Contraction Principal	Assignment 8
	Week 2nd	Continuous Function, uniform continuity, compactness and sequential compactness.	Assignment 9
	Week 3rd	Bolzano-Weierstrass theorems, Total boundedness. **Class Test**	Assignment 10
	Week 4th	Finite intersection property, Continuity in relation with compactness.	

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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. I(NM),B.Sc I(CS) SEMESTER

Subject: MATHEMATICS

Name of Paper: VECTOR CALCULUS

Name of Teacher: Ms. MANJU

Month	Week	Topic	Practical
Feb	Week 1st	Gradient of a scalar point function, geometrical interpretation of grad Φ ,	Assignment 1
	Week 2nd	character of gradient as a point function	Assignment 2
	Week 3rd	Divergence and curl of vector point function, characters of Div fρ and Curl fρ as point function, examples .Test -I	Assignment 3
	Week 4th	Gradient, divergence and curl of sums and product and their related vector identities. Laplacian operator	Assignment 4
March	Week 1st	Orthogonal curvilinear coordinates Conditions for orthogonality fundamental triad of mutually orthogonal unit vectors .Assignment-I	Assignment 5
	Week 2nd	Gradient, Divergence, Curl.	Assignment 6
	Week 3rd	Laplacian operators in terms of orthogonal curvilinear coordinates, Cylindrical co-ordinates and Spherical co- ordinates.	Assignment 7
	Week 4th	**HOLI Break**	
April	Week 1st	Vector integration; Line integral. Surface integral, Volume integral.Test II	Assignment 8
	Week 2nd	Theorems of Gauss, Green & Stokes and problems based on these theorems .Assignment –II	Assignment 9
	Week 3rd	General equation of second degree,Tracing of conics,Tangent at any point to the Conic. Chord of contact,pole of line to conic,director circle of conic.	Assignment 10
	Week 4th	Revision of all Four Units.	

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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. I(NM),B.Sc I(CS) SEMESTER

Subject: MATHEMATICS

Name of Paper: VECTOR CALCULUS

Name of Teacher: Ms. MANJU

Month	Week	Topic	Practical
Feb	Week 1st	Gradient of a scalar point function, geometrical interpretation of grad Φ ,	Assignment 1
	Week 2nd	character of gradient as a point function	Assignment 2
	Week 3rd	Divergence and curl of vector point function, characters of Div fρ and Curl fρ as point function, examples .Test -I	Assignment 3
	Week 4th	Gradient, divergence and curl of sums and product and their related vector identities. Laplacian operator	Assignment 4
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	Week 2nd	Gradient, Divergence, Curl.	Assignment 6
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	Week 4th	**HOLI Break**	
April	Week 1st	Vector integration; Line integral. Surface integral, Volume integral.Test II	Assignment 8
	Week 2nd	Theorems of Gauss, Green & Stokes and problems based on these theorems .Assignment –II	Assignment 9
	Week 3rd	General equation of second degree,Tracing of conics,Tangent at any point to the Conic. Chord of contact,pole of line to conic,director circle of conic.	Assignment 10
	Week 4th	Revision of all Four Units.	

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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. I(NM),B.Sc I(CS),B.A-1 SEMESTER

Subject: MATHEMATICS

Name of Paper: NUMBER THEORY& TRIGNOMETRY

Name of Teacher: Miss. ANITA

Month	Week	Topic	Practical
Feb	Week 1st	Divisibility, greatest common divisor, least common multiple, primes fundamental theorem of arithmetic.	Assignment 1
	Week 2nd	Linear congruencies, Fermat's theorem, Wilson's theorem and its converse.	Assignment 2
	Week 3rd	Complete residue system and reduced residue system modulo m, Euler's function	Assignment 3
	Week 4th	Euler's generalization of Fermat's theorem, Chinese Remainder theorem	Assignment 4
March	Week 1st	Quadratic residues, Legender symbol, Gauss's lemma, Gauss reciprocity law.	Assignment 5
	Week 2nd	Greatest integer function, divisor function.	Assignment 6
	Week 3rd	Application of divisor function, sum function. Test-1	Assignment 7
	Week 4th	**HOLI Break**	
April	Week 1st	De Moivre's theorem and its application.Test II	Assignment 8
	Week 2nd	Expansion of trigonometric functions. Assignment –II	Assignment 9
	Week 3rd	Direct circular and hyperbolic functions and their properties.	Assignment 10
	Week 4th	Logarithm of a complex quantity, Gregory's series, Summation of trigonometric series.	

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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. I(NM),B.Sc I(CS),B.A-1 SEMESTER

Subject: MATHEMATICS

Name of Paper: NUMBER THEORY& TRIGNOMETRY

Name of Teacher: Miss. ANITA

Month	Week	Topic	Practical
Feb	Week 1st	Divisibility, greatest common divisor, least common multiple, primes fundamental theorem of arithmetic.	Assignment 1
	Week 2nd	Linear congruencies, Fermat's theorem, Wilson's theorem and its converse.	Assignment 2
	Week 3rd	Complete residue system and reduced residue system modulo m, Euler's function	Assignment 3
	Week 4th	Euler's generalization of Fermat's theorem, Chinese Remainder theorem	Assignment 4
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	Week 2nd	Greatest integer function, divisor function.	Assignment 6
	Week 3rd	Application of divisor function, sum function. Test-1	Assignment 7
	Week 4th	**HOLI Break**	
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	Week 2nd	Expansion of trigonometric functions. Assignment –II	Assignment 9
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LESSON PLAN SESSION 2023-24(EVEN-SEMESTER)

Class: B.Sc. III(NM),B.Sc III(CS) SEMESTER

Subject: MATHEMATICS

Name of Paper: SPECIAL FUNCTIONS AND & INTEGRAL TRANSFORMS

Name of Teacher: Ms. KAVITA KHANDELWAL

Month	Week	Topic	Practical
Feb	Week 1st	Define Power series method and use it in finding solution of differential equation. Introduce Beta and Gamma Functions and their properties	Assignment 1
	Week 2nd	Define Bessel equation and finding its solution. Define Bessel Function and its properties-Convergence, Recurrence	Assignment 2
	Week 3rd	Define Orthogonality of Bessel functions and solving the problems of the students and discuss about whole Section-1	Assignment 3
	Week 4th	Legendre and Hermite functions and their properties-Recurrence Relations and generating functions	Assignment 4
March	Week 1st	Orhogonality of Legendre and Hermite polynomials. Rodrigues' Formula for Legendre & Hermite Polynomials.test-1	Assignment 5
	Week 2nd	Laplace Integral Representation of Legendre polynomial and.solving the problems of the students.	Assignment 6
	Week 3rd	Laplace Transforms – Existence theorem for Laplace transforms, Linearity of the Laplace transforms, Shifting theorems.Assignment	Assignment 7
	Week 4th	**HOLI Break**	
April	Week 1st	Laplace transforms of derivatives and integrals, Differentiation and integration of Laplace transforms.Test-2	Assignment 8
	Week 2nd	Convolution theorem, Inverse Laplace transforms, convolution theorem, Inverse Laplace transforms of derivatives and integrals	Assignment 9
	Week 3rd	Solution of ordinary differential equations using Laplace transform and solving the problem. Fourier transforms: Linearity property, Shifting, Modulation, Convolution Theorem	Assignment 10
	Week 4th	Parseval's identity for Fourier transforms, solution of differential Equations using Fourier Transforms.Revision of whole syallbus.	

SIGNATURE

RAJIV GANDHI GOVT. COLLEGE FOR WOMEN, BHIWANI

LESSON PLAN 2023-24

Class: B.Sc. N·M., C-S, BA – 3rd Semester

Subject: Differential Equations (Maths)

Name of Paper: Ordinary Differential Equations and Partial Differential Equations

Name of Teacher: UDAI BHAN

Month	Week	
August 2023	Week 1st	Exact Differential Equation, I.F., Reduction to Exact D.E.,
	Week 2nd	Equations First Order But not First Degree, solvable for p, Solvable for y, Lagrange's Equ. Types of Solutions, Singular solution, Clairaut form
	Week 3rd	Orthogonal trajectries, Polar Form, Linear Differential Equ., P.I. of the type $\frac{1}{f(D)}$ Sinax.
	Week 4th	P.I. of the type $\frac{1}{f(D)} x^n$, $\frac{1}{f(D)}(e^{ax}V)$, $\frac{1}{f(D)}(xV)$
September 2023	Week 1st	Homogenious Differential Equations, Equations Reducible to Homogeneous Linear Form
	Week 2nd	Formation of P.D.E., First Order Linear Partial Differential Equ. Different types of FOPDE
	Week 3rd	First Order Non Linear Partial Differential Equations
	Week 4th	Charpit Method, Some Standard Form of Clarpit Method
October 2023	Week 1st	Jacobi's Method, Test
	Week 2nd	Linear Partial Differential Equations of second and Higher order
	Week 3rd	Solution of Non-Homogeneous LPDE with Constant co-efficient
	Week 4th	Method of Separation of Variables: Wave Equations One-Dimensional
November 2023	Week 1st	Heat Equ. One Dimensional, Laplace Equation
	Week 2nd	Two-Dimensional Wave, Heat and Laplace Equations

Udai Bhan

Teacher's Signature

Lesson Plan for the Subject Algebra

Session (2023-24)

Class: B.A./B.Sc. 1st Year

Name : Ms. Manju , Assistant Professor of Mathematics

<u>Aug. 2023</u>

Unit 1:

chapter 1: Matrices

Chapter 2: Rank of a Matrix

<u>Sep. 2023</u>

Unit 1:

Chapter 3: Characteristic Equation of a Matrix

Unit 2:

Chapter 4: Applications of Matrices to a system of Linear Equations

<u>Oct. 2023</u>

Test and Revision

<u>Unit 2 :</u>

Chapter 5: Orthogonal and Unitary Matrices

Chapter 6 : Bilinear and Quadratic Forms

Unit 3:

Chapter 7: Relation Between the Roots and Coefficients of an Equation

<u>Nov. 2023</u>

Unit 3:

Chapter 8: Transformation of Equations

Unit 4:

Chapter 9: Solution of Cubic and Bi -Quadratic Equations

<u>Dec.2023</u>

Chapter 10: Descarte's Rule of Signs Tests, **Test, Revision and Assignments**

Lesson plan for session (2023-24)
Subject : Statics & Dynamics
Class: B.A./B.Sc. 5th Sem.
Name: Ms. Kavita Khandelwal, Assistant Professor of Mathematics

<u>Aug. 2023</u>

Unit 1

Chapter 1: Friction

Chapter2: Centre of Gravity

Chapter3: Virtual Work

<u>Sep. 2023</u>

Unit 2

Chapter 4: Forces in Three Dimensions

Chapter 5: Wrenches

Chapter6: Null Lines and Null Planes

<u>Oct. 2023</u>

<u>Test and Revision</u>

Unit 3

Chapter7: Conservative Forces and Impulsive Forces

Chapter8: Projectiles

<u>Nov.2023</u>

Unit 4:

Chapter 9: Central Orbits

Chapter 10: Kepler's Laws of Planetary Motion

Chapter11: Motion of a Particle in Three Dimension

<u>Dec. 2023</u>

Tests, Revision and Assignment

July (Week-4)

August :

(Week-1) → Sets, Subsets, Equal sets, Universal sets. finite and infinite sets. Operations on Sets, Union, Intersection and complements of Sets.

Week-2 → Cartesian Products, Cardinality of set. Simple Applications.

Week-3 → Definition, Minors, Cofactors, properties of Determinants. Applications (some) of determinants.

Week-4 → find area of triangle, Solving a system of linear equations using determinants. + (Test)

September :

Week-1 → Matrices : Definition, Matrices' Types, Addition, Subtraction, Scalar Multiplication and Matrix multiplication.

Week-2 → Adjoint, Inverse, Solving system of linear equations, Cramer's rule.

Week-3 → Properties of Relations, Equivalence Relation. Partial order relation.

Week-4 → Functions : Domain & Range, Onto, Into, 1-1 functions. + (Test)

October :

Week-1 → Composite and inverse functions.

Week-2 → Differentiation :

Week-3 → Continue

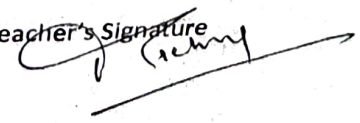Week-4 → Integration

November : → Integration Continue...

December : → Limits and continuity.

Monika

RAJIV GANDHI GOVT. COLLEGE FOR WOMEN, BHIWANI

LESSON PLAN 2023-24 [odd sem]

Class:	BCA 1st Sem
Subject:	Mathematics
Name of Paper:	Elements of Mathematics
Name of Teacher:	Dr. Rambir Nehra

Month	Week	
August	Week 1st	
	Week 2nd	Sets and its type and some example on Exercise 1.1, venn Diagram representation of set Some theorem, Exercise 1.2, some Problem
	Week 3rd	on base set theory and Exercise 1.3 Problem solved, order pair and its base Some Example, Exercise 1.4.
	Week 4th	Matrix and various kind of Matrix with Example, Addition Matrix, Multiplication of Matrix
September	Week 1st	Determinants, How to solve different type order Determent, operation using Determinants,
	Week 2nd	Property of Determinants, Exercise 2.5, Discuss some Problem,
	Week 3rd	Application of Determinants, solution of system of linear equation using Determinants,
	Week 4th	inverse of Matrix,
October	Week 1st	Relation and function, Different kind of relation with graph and with Example, its Problem on base
	Week 2nd	limits and How to Apply limit, some example, continuity with example,
	Week 3rd	Discontinuity with Example.
	Week 4th	Differentiation How to differentiat different kind of function with Examples
November	Week 1st	indefinite integral, How to indefinite integral different kind of function with Example
	Week 2nd	Definite integral with example. reduction formula, limits as sum

Teacher's Signature

RAJIVGANDHIGOVT.COLLEGEFORWOMEN BHIWANI

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LESSON PLANSESSION 2023-24(EVEN-SEMESTER)

Class: B.Com 2nd Sem

Subject: Mathematics

Name of Paper: Business Mathematics

Name of Teacher: Ms. MONIKA DEVI

Month	Week	Topic
Feb	Week 1st	Matrices: Definition of a matrix. Types of matrices. Algebra of matrices. Applications of matrices operations for solution to simple business and economicproblems Applications of matrices operations for solution to simple business and economicproblems
	Week 2nd	Determinants and inverse of a matrix: Calculation of values of determinants up to third order. Finding inverse of a matrix through determinant method. Solution ofsystem of linear equation up to three variables.
	Week 3rd	Compound Interest: Certain different types of interest rate; Concept of present value and amount of a sum. Test 1
	Week 4th	Annuities: Types of annuities; Present value and amount of an annuity, including the case of continuous compounding
March	Week 1st	Differentiation: Concept of differentiation. Assignment-I
	Week 2nd	Rules of differentiation - simple standard forms.
	Week 3rd	Applications of differentiation -elasticity of demand and supply. Maxima and Minima of functions (involving second or third order derivatives) relating to cost, revenue and profit
	Week 4th	**HOLI Break**
	Week 1st	Permutations and Combinations: Definition, Formulas, Difference between Permutations and Combinations Test –II
	Week 2nd	Fundamental Principle of Counting, N and R in Permutations and Combinations. Assignment –II
	Week 3rd	Sequence and Series: Definition, Types- Arithmetic Progression.
April	Week 4th	Geometric Progression, Formulas, Difference between Sequence and Series.

Monika

SIGNATURE

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Dated........................

LESSON PLANSESSION 2023-24(EVEN-SEMESTER)

Class: B.Com 2nd Sem
Subject: Mathematics
Name of Paper: Business Mathematics
Name of Teacher: Ms. MONIKA DEVI

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Monika

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