Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher:-Dr. Upasana Ahuja

Subject :-Mathematics

Week	Date	Class:-B.Sc+B.A 1st year	Class:-B.A(3rd year)	Class :-B.A 3rd year	Class:- B.Sc+B.A(1st yr)	Class :-B.A(2nd year)
		Semester :-2nd vector calculus	**Semester :-6th(Real and complex analysis)**	**Semester :-6th(Dyanmics)**	**Semester:-2nd ODE**	**Semester :-4th(sequence and series)**
	01.02.2023		ch-1 jacobians definitions and concept		introduction of independent and dependent variable	basic knowledge of number and sets
	02.02.2023	Ch 1 Introduction of vectors and scalars scalar triple product and geometrical interpretation	based theorems and examples		operation of power series,analytic function,singular point definition	ch-1 topology of real numbers,introduction of sets and l.u.b and g.l.b
	03.02.2023	examples based on scalar triple product	functional dependence and theorem		example based upon singularity	Archimedean property of reals
	04.02.2023	vector triple product and based examples	ch-2 Beta and gamma function some important properties		existence of power series solution and example based upon it	based examples
	06.02.2023		based examples	ch-1motion along a plane curve,introduction,some important concept	solution of O.D.E	Neighborhood of a point,based examples
	07.02.2023		gamma function properties,relation between beta and gamma function	based examples	based examples	bsed theorems,open sets,based examples and based theorems
	08.02.2023		based examples	examples of ex-1.2	based examples	closed sets and based theorems and examples
	09.02.2023	vector and scalar product of four vectors	duplication formula and based examples		Frobenius method and it's explanation,working rule	limit point of a set,closure of a set,based theorems
	10.02.2023	reciprocal system of vectors	test +assignments		based examples	
	11.02.2023	Ch 2 Introduction of Differentiation	ch-3 double integral ,evaluation of double integral		discuss the different cases of solution of differential equation	compact set,cover and open cover
	13.02.2023		based examples	examples of ex-1.3	based examples	heine boral property,based theorems
	14.02.2023		example based on substitution method for double integral	ch-2 Relative motion basic concept	questions based on solution of differential equation	ch-2 introduction of sequence
	15.02.2023		triple integral based examples	based examples	discuss the doubt of above topics	range of a sequence,costant sequence,lub of a sequence,glb of a sequence

	16.02.2023	differentiation of vector function and based examples	example based on substitution method for triple integral		summary of chapter-1	based theorems
	17.02.2023	based theorems	application of double and triple integral based examples		test	divergent sequence,oscillating sequence,based examples
	18.02.2023	**Maha Shivratri**			**Maha Shivratri**	
	20.02.2023		Dirichlet's integral,Liouvill's extension of dirichlet's integral based examples	ch-3 SHM ,articles	introduction of beta function and their properties	some basic theorems on limits and based examples
	21.02.2023		examples based on changeof order of integration	based examples	introduction of gamma function and their properties	test+assignment
	22.02.2023		ch-4 Fourier Series some important definitions	ch-4 Elastic string,hooks law, horizontal and vertical elastic string	explanation of bessel's equation and it's solution	based theorems
	23.02.2023	velocity and acceleration and based examples	theorems		explanation of bessel's function	based theorems and examples
	24.02.2023	ch-3 gradient, divergence and curl	based examples		recurrence relation for bessel's functions	monotonic sequence,based examples
	25.02.2023	rules for findind pertial derivatives of vectors and examples	examples of 4.2		based examples	limit point or cluster point,bolzano weierstrass theorem
	27.02.2023		examples based on change of interval	remaining examples of ch-4	representation of bessel's function in integral	subsequence and based theorems
	28.02.2023		examples of half range series	test	example of jacobi's series	based examples
	01.03.2023		based examples	ch-5 Newton's law ofmotion some definitions	equation reducible to bessel's equation	ch-3 infinite series,introduction
	02.03.2023	property of gradient, gradient of the product of 2 scalar point function	ch:-5calculus of complex functions		tips to reduce the equation to bessel's equation and question based upon it	based examples and theorems
	03.03.2023	regarding examples	some examples		orthogonality relation of bessel's function	cauchy's general principle of conveergence,based theorem
	04.03.2023	Level surface and related articles	complex function and based examples		based problems	different test
	05.03.2023 to 12.03.2023			**Holi Vacations**		
	13.03.2023		uniform continuity and based examples	examples of ex-5.1	test+assignment	different test
	14.03.2023		analytic function and based examples	examples of ex-5.2	legendre's equation and polynomial	based theorems
	15.03.2023		C-R Equation ,harmonic function,some other definitions	articals and examples of ex-5.3	Rodrigue's formula,derivation of legendre's polynomial from rodrigue's formula	based examples

	16.03.2023	remaining examples of ex 3.3	based examples		generating function for rodrigue's formula	assignment+test
	17.03.2023	divergence and properties and based examples	based examples		based examples	ch-4 infinite series,introduction
	18.03.2023	curl and related examples	ch-6 elementary functions and mobious transformations ,some definitions		Recurrence relation and it's examples	D'Alembert Ratio test and based examples
	20.03.2023		elementary function,trignometery function,exponential function	ch-6 basic concepts of work,power and energy	porthogonality of legendre's polynomial and it's example	Cauchy's Root test and based examples
	21.03.2023		hyperbolic functions,log function,based examples	based examples	summary of chapter-3	Raabe's test,logarithmic test and based examples
	22.03.2023		conformal mapping,L.T and based examples	examples based on power	ch-4 hermite's equation and it's solution	Demorggan's and Bertrand'stest ,based examples
	23.03.2023	**Shaheedi Diwas**			**Shaheedi Diwas**	
	24.03.2023	laplace operator and related examples	mobius transformation and based examples		hermite's polynomial and generating function for it recurrence relation based examples orthogonal property of hermite's polynomial and it's examples discussion of doubt of chapter 4	Gauss's test and based examples
	25.03.2023	test	examples of 6.2		recurrence relation	cauchy's integral test and based examples
	27.03.2023		test	articals based on energy	based examples	cauchy's condensation test and based examples
	28.03.2023		ch-7 critical mapping some theorem	examples based on energy	orthogonal property of hermite's polynomial and it's examples	ch-5 Alternating series,introduction
	29.03.2023		important theorem	test	discussion of doubt of chapter 4	lebinitz's test for the convergence of alternating series,based examples
	30.03.2023	**Ram Navmi**			**Ram Navmi**	
	31.03.2023	ch-5 vector integration	examples		chapter-5 introduction of laplace transformation	theorem based on absolute,conditional convergence
	01.04.2023	line integral and regarding examples	test		linear property of laplace transformation and based examples	based examples
	03.04.2023	surface integral and based examples	examples of 7.1	ch-7 motion of a pertical on smooth curve in vertical plane and based examples	examples of first shifting property	test

	04.04.2023	**Mahavir Jayanti**			**Mahavir Jayanti**	
	05.04.2023		doubts of ch-1,2	motion on the outside of a vertical circle and based examples	function of exponential operator,2nd shifting theorem	ch-6 Alternating series,introduction
	06.04.2023	volume integral and based examples	revision of ch-1,2		piecewice continuous function	Abel's lemma,Abel's test
	07.04.2023	test	test of ch-1,2		based examples	Dirichlet's test,based examples
	08.04.2023	ch-6 Gauss's, Green's and Stoke's theorem introduction	revision of ch-3,4		laplace transformation derivatives	some theorem and examples
	10.04.2023		doubts of ch-3,4	motion on the inside of a smooth vertical circle based examples	effect of multiplication and division in finding laplace transformation	based examples
	11.04.2023		test of ch-3,4	some important results for a cycloid,motion on a cycloid	based examples	multiplication of series and based examples
	12.04.2023		revision of ch-5	remaining examples of ex-7.4	examples of effect of multiplication and division	cauchy's theorem,based examples
	13.04.2023	divergence theorem and based examples	doubts of ch-5		laplace transformation of integral	Mertin's theorem,some important theorem,based examples
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**			**Vaisakhi/Dr. B.R. Ambedkar Jayanti**	
	15.04.2023	based examples	test of ch-5		test	ch-7 infinite products,introduction
	17.04.2023		revision of ch-6	motion on a rough curve under gravity and based examples	based problem of Laplace transformation	convergence of an infinite product,based examples
	18.04.2023		doubts of ch-6	based examples	to find the laplace transformation of integral	based examples
	19.04.2023	Green's theorem	Dyanmics ch-8 projectiles		to find thee laplace transformation of some important functions	some important theorem
	20.04.2023	based examples	some important articals		ch-6 inverse laplace transformation and it's formula's	some important theorem
	21.04.2023	remaining examples	based examples		based example	based examples
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**			**Id-Ul-Fitr/Parshuram Jayant**	
	24.04.2023		remaining examples of ex-8.1	revision of unit 2 of real and complex analysis	solution by removing first derivative	based examples
	25.04.2023		velocity at any point of the trajectory and based examples	revision of unit 2 of real and complex analysis	based examples	based examples
	26.04.2023		test	test of unit 2	test of chapter 3	based problem
	27.04.2023	stoke's theorem	remaining examples of ex-8.2		solution by changing independent variable	based problem

	28.04.2023	remaining examples	directions of projection for a particle to hit a given point		based examples	based theorems and examples
	29.04.2023	remaining examples	based examples		solution by undetermined coefficients	doubts session
	01.05.2023		remaining examples of ex-8.3	revision of unit 3 of real and complex analysis	queries related to the chapter	test
	02.05.2023		articals of ex-8.4	revision of unit 3 of real and complex analysis	chapter 7 introduction of simultaneous linear differential equations	revision of unit 1
	03.05.2023		examples of ex-8.4	test of unit 3	solution of stimultaneous equations	revision of unit 1
	04.05.2023	test	test		based examples	test of unit 1
	05.05.2023	revision of unit 1	ch-9 Central orbits basic concepts		different methods to solve the equations and based examples	doubts of unit 1
	06.05.2023	revision of unit 1	areal velocity,elliptic orbit,hyperbolic orbit		second integral with help of first	revision of unit 2
	08.05.2023		parabolic orbit,velocity in a circle	revision of unit 4 of real and complex analysis	based examples	revision of unit 2
	09.05.2023		other theorems	revision of unit 4 of real and complex analysis	test of chapter 5	test of unit 2
	10.05.2023		based examples	test of unit 4	chapter 8 introduction of total differential equations	doubts of unit 2
	11.05.2023	test of unit 1	test		method to solve total differential equation	revision of unit-3
	12.05.2023	revision of unit 2	articals of ex-9.2 and examples		based examples	revision of unit-3
	13.05.2023	revision of unit 2	remaining examples		method 2 to solve total differential equation and based examples	test of unit-3
	15.05.2023		remaining examples	revision of unit 1 and 2 of dynamics	method of auxiliary equation and based examples	doubts of unit 2
	16.05.2023		ch-10 Kepler's law of planetary motion basic concept	revision of unit 1 and 2 of dynamics	method for homogeneous equation and based examples	revision of unit 4
	17.05.2023	test	some important theorems	test	Revision	revision of unit 4
	18.05.2023	revision of unit 4	based examples		Test	test of unit 4
	19.05.2023	revision of unit 4	test		doubts of complete syllabus	doubts of unit 4
	20.05.2023	test	ch-11 Motion of a particle in 3D Basic concept		doubts of complete syllabus	revision of complete syllabus
	22.05.2023	**Maharan Partap Jayanti**			**Maharan Partap Jayanti**	
	23.05.2023		articals of ch-11	revision of unit 3 of dynamics	doubts of complete syllabus	doubts of complete syllabus
	24.05.2023		examples of ch-11	test	doubts of complete syllabus	doubts of complete syllabus
	25.05.2023	full length test	remaining examples		test of full syllabus	test of full syllabus

	26.05.2023	discussion	test		solution of test	solution of test

Dayanand Mahila Mahavidyalaya, Kurukshetra					
Lesson Plan (Even Semester)					
Session 2022-23 (01.02.2023 to 26.05.2023)					
Name of Teacher - Mrs. Prabhjot Kaur					
Subject- Mathematics					
Week	**Date**	**Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)**	**Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)**	**Class- B.AVI Sem (Linear Algebtra)**	**Class- B.Com II Sem (Business Mathematics)**
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	01.02.2023	Introduction to content of course	Introduction to content of course	Introduction to Vector Space	Introduction to content of course
	02.02.2023	De Moivre's Theorem	Practical Class	Examples of vector spaces	General Solution of Linear Inequalities
	03.02.2023	Applications of De Moivre's theorem	Practical Class	Examples of vector spaces	Examples of linear inequalities
	04.02.2023	Theorems on De Moivre's Theorem	Practical Class	Some properties of vector spaces	Graphical solution of linear inequalities in two variables
	06.02.2023	Examples on De Moivre's theorem	Programmer's model of a computer	Some properties of vector spaces	Examples of graphical solution of linear inequalities in two variables
	07.02.2023	Expansion of trigonometrical functions	Definition of Algorithm and examples	Subspaces, Some theorems on subspaces	Solution of system of linear inequalities in two variables
	08.02.2023	Some examples related to expansion of trigonometrical functions	Examples of Algorithm	Subspaces, Some theorems on subspaces	Examples of Solution of system of linear inequalities in two variables
	09.02.2023	Direct circular and hyperbolic functions	Practical Class	Sum of Linear subspaces	Examples of Solution of system of linear inequalities in two variables
	10.02.2023	Some theorems on direct circular and hyperbolic functions	Practical Class	Direct sum of Linear subspaces	Revision
	11.02.2023	Inverse circular and hyperbolic functions	Practical Class	Linearly independent and linearly dependent subsets of a vector space	Linear programming
	13.02.2023	Properties of Inverse circular and hyperbolic functions	Examples of Algorithm	Some results on Linearly independent and linearly dependent set of vectors	Formulation of equation

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	14.02.2023	Some theorems and examples on inverse circular and hyperbolic functions	Flow charts and examples	Some results on Linearly independent and linearly dependent set of vectors	Examples of Linear programming problem
	15.02.2023	Logarithm of a complex quantity	Examples of Flow Charts	Finitely generated vector space	Assignment and Test
	16.02.2023	Some theorems of Logarithm of a complex quantity	Practical Class	Some examples of finitely generated vector space	Graphical method of solution
	17.02.2023	Some examples of Logarithm of a complex quantity	Practical Class	Basis of a vector space	Examples of graphical method of solution
	18.02.2023	Maha Shivratri			
	20.02.2023	Assignment	Data types and examples	Existence theorem for basis of a finitely generated vector space	Different types of linear programming problems
	21.02.2023	Gregory's Series	Operators and expressions	Finite dimensional vector spaces	Problems relating to two variables including the case of mixed constraints
	22.02.2023	Some theorems on Gregory's Series	Operators and expressions	Some examples of Finite dimensional vector spaces	Problems relating to two variables including the case of mixed constraints
	23.02.2023	Summation of Trigonometry series and its examples	Practical Class	Invariance of the number of elements of basis sets	Examples of Problems relating to two variables including the case of mixed constraints
	24.02.2023	Properties of Summation of Trigonometry series	Practical Class	Dimensions of vector spaces	Problems relating to two variables including the case having no solution
	25.02.2023	Some theorems on Summation of Trigonometry series	Practical Class	Examples of basis, dimension of vector spaces	Problems relating to two variables including the case having no solution
	27.02.2023	Some examples of Summation of Trigonometry series	Input/Output Functions	Examples of basis, dimension of vector spaces	Examples of Problems relating to two variables including the case having no solution
	28.02.2023	Divisibility, Basic Definition and Introduction	Decision Statements and examples	Quotient space	Problems relating to two variables including the case having multiple solution

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	01.03.2023	Divisibility -related examples, theorems	Conditional and Logical Statements	Some theorems on quotient space	Examples of Problems relating to two variables including the case having multiple solution
	02.03.2023	Divisibility -related examples, theorems	Practical Class	Some examples of quotient space	Examples of Problems relating to two variables including the case having multiple solution
	03.03.2023	Greatest common divisor(G.C. D) and least common multiple(L.C.M)	Practical Class	Dimension of quotient space	Examples of Problems relating to two variables including the case having multiple solution
	04.03.2023	Some theorems and examples on G.C.D and L.C.M	Practical Class	Homomorphism of vector spaces	Unbounded solution
	05.03.2023 to 12.03.2023	Holi Vacations			
	13.03.2023	Primes and related theorems, examples	Conditional and Logical Statements	Examples of homomorphism of vector spaces	Examples of unbounded solution
	14.03.2023	Fundamental theorem of Arithmetic	Implementation of loops and examples	Isomorphism of vector spaces	Redundant constraints
	15.03.2023	Examples on Fundamental theorem of arithmetic	Implementation of loops and examples	Examples of isomorphism of vector spaces	Examples of redundant constraint
	16.03.2023	Linear Congruences	Practical Class	Assignment	Revision
	17.03.2023	Test	Practical Class	Linear transformations and linear forms on vector spaces	Data representation and interpretation
	18.03.2023	Examples of Linear Congruences	Practical Class	Some theorems on linear transformations and linear forms on vector spaces	Introduction
	20.03.2023	Fermat's theorem	Switch statement and case control structures	Some theorems on linear transformations and linear forms on vector spaces	Classification of data
	21.03.2023	Assignment	Switch statement and case control structures	Dual spaces	Assignment and test
	22.03.2023	Some theorems and examples of Fermat's Theorem	Functions and examples	Examples of dual spaces	Tabulation of data

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	23.03.2023	Shaheedi Diwas			
	24.03.2023	Wilson's Theorem	Practical Class	Test	Diagrammatic representation of data
	25.03.2023	Converse of Wilson's theorem	Practical Class	Examples of dual spaces	Graphic representation of data
	27.03.2023	Some theorems and examples of Wilson's Theorem	Preprocessors and arrays with examples	Bidual spaces	Significance of diagrams , Graphs
	28.03.2023	Linear Diophantine equations in two variables	Preprocessors and arrays with examples	Examples of bidual spaces	Types of Diagrams
	29.03.2023	Solution of Linear Diophantine equation and some examples	Strings and examples	Examples of bidual spaces	Bar diagram and Examples
	30.03.2023	Ram Navmi			
	31.03.2023	Some theorems related to Linear Diophantine equation	Practical Class	Annihilator of subspaces of finite dimension la vector spaces	Pie charts and Examples
	01.04.2023	Residues-Definition and Examples	Practical Class	Examples of annihilators	Pictographs
	03.04.2023	Residues-Definition and Examples	Character data type	Null space	Examples of pictographs
	04.04.2023	Mahavir Jayanti			
	05.04.2023	Complete residue system	Standard string handling functions	Theorems on null space	Graphs of time series or line graphs
	06.04.2023	Some theorems and examples on Complete residue system	Practical Class	Examples of null space	Examples of line graphs
	07.04.2023	Some theorems and examples on Complete residue system	Practical Class	Examples of null space	Graphs of frequency distribution
	08.04.2023	Reduced residue system	Practical Class	Range space of linear transformation	Histogram
	10.04.2023	Some theorems and examples on Reduced residue system	Arithmetic operations and exmaples	Theorems on range space	Examples of histogram

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	11.04.2023	Euler's Function and based examples	Definition of Structures, using structures,	Examples of range space	Frequency polygon
	12.04.2023	Euler's generalization of Fermat's theorem	Use of Structures in arrays and arrays in structures	Rank and nullity theorem	Frequency polygon
	13.04.2023	Theorems and examples related to Euler's generalization of Fermat's theorem	Practical Class	Examples of rank-nullity theorem	Cumulative frequency curves
	14.04.2023	Vaisakhi/Dr. B.R. Ambedkar Jayanti			
	15.04.2023	Solution of Simultaneous Linear Congruences – Chinese Remainder theorem	Practical Class	Examples of rank-nullity theorem	Examples of cumulative frequency curves
	17.04.2023	Solution of Simultaneous Linear Congruences – Chinese Remainder theorem	Pointers data type and examples	Algebra of linear transformation	Examples of cumulative frequency curves
	18.04.2023	Some examples of Chinese Remainder theorem	Pointers and arrays with examples	Theorems on algebra of linear transformation	Examples of cumulative frequency curves
	19.04.2023	Some examples of Chinese Remainder theorem	Pointers and functions with examples	Theorems on algebra of linear transformation	Limitations of diagrams and graphs
	20.04.2023	Some theorems related to quadratic residues	Practical Class	Minimal polynomial of a linear transformation	Limitations of diagrams and graphs
	21.04.2023	Some theorems related to quadratic residues	Practical Class	Examples of minimal polynomial of linear transformations	Introduction to Permutation
	22.04.2023	Id-Ul-Fitr/Parshuram Jayant			
	24.04.2023	Test	Solution of Algebraic and Transcedental equations : Bisection method with examples	Examples of minimal polynomial of linear transformations	Properties of Permutation
	25.04.2023	Some theorems related to quadratic residues	Regula Falsi method and exmamples	Singular linear transformations	Properties of Permutation
	26.04.2023	Legendre Symbol and its properties	Secant Method and exmaples	Examples of singular transformation	Properties of Permutation
	27.04.2023	Legendre Symbol and its properties	Practical Class	Non-singular linear transformation	Examples of Permutation

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	28.04.2023	Lemma of Gauss and its examples	Practical Class	Examples of non-singular transformations	Examples of Permutation
	29.04.2023	Lemma of Gauss and its examples	Practical Class	Some theorems on singular and non-singular transformation	Examples of Permutation
	01.05.2023	Gauss reciprocity law and examples	Newton-Raphson's Method and examples	Matrix of a linear transformation	Introduction to combination
	02.05.2023	Gauss reciprocity law and examples	Newton's Iterative Method for finding pth root of a number	Assignment and test	Properties of Combination
	03.05.2023	Some theorems and examples related to Gauss reciprocity law	Order of convergence of all methods	Theorems on matrix of linear transformation	Properties of Combination
	04.05.2023	Some theorems and examples related to Gauss reciprocity law	Practical Class	Examples of matrix of linear transformation	Examples of Combination
	05.05.2023	Greatest integer function and based theorems	Practical Class	Change of basis and theorems	Examples of Combination
	06.05.2023	Greatest integer function and based theorems	Practical Class	Examples of change of basis	Examples of Combination
	08.05.2023	Greatest integer function and based theorems	Simutaneous linear algebraic equations: Gauss Eliminiation Method with examples	Eigen values and Eigen vectors of linear transformations	Introduction and Basic Properties of Binomial theorem
	09.05.2023	The number of divisors and the sum of divisors of a natural number n (The functions d(n) and)	Triangularisation method with examples	Inner product spaces and its examples	Properties of Binomial Theorem
	10.05.2023	The number of divisors and the sum of divisors of a natural number n (The functions d(n) and)	Crout's Method with examples	Cauchy-Schwarz inequality	Properties of Binomial Theorem
	11.05.2023	Mobius function and Mobius inversion formula	Practical Class	Orthogonal vectors and its examples	Examples of Binomial Theorem
	12.05.2023	Mobius function and Mobius inversion formula	Practical Class	Orthogonal complements and its examples	Examples of Binomial Theorem

Week	Date	Class- B.A/B.Sc II Sem (Number Theory and Trigonometry)	Class- B.A/B.Sc IV Sem (Programming in C and Numerical Methods)	Class- B.AVI Sem (Linear Algebtra)	Class- B.Com II Sem (Business Mathematics)
		Semester II	**Semester IV**	**Semester VI**	**Semester II**
	13.05.2023	Some examples on Mobius function and Mobius inversion formula	Practical Class	Some theorems on orthogonal sets and basis	Examples of Binomial Theorem
	15.05.2023	Some examples on Mobius function and Mobius inversion formula	Cholesky Decomposition Method and examples	Bessel's inequality for finite dimensional vector spaces	Examples of finding middle, general term of Binomial Expansion
	16.05.2023	Revision of complete syllabus	Iterative method, Jacobi's Method with examples	Gram-Schmidt Orthogonalization process	Examples of finding middle, general term of Binomial Expansion
	17.05.2023	Revision of complete syllabus	Gauss Seidal's Method, Relaxation Method and examples	Examples on Gram-Schmidt Orthogonalization process	Revision
	18.05.2023	Revision	Practical Class	Adjoint of linear transformation and its properties	Revision
	19.05.2023	Test	Practical Class	Unitary Linear transformations and examples	Test
	20.05.2023	Revision	Practical Class	Revision	Revision
	22.05.2023	Maharan Partap Jayanti			
	23.05.2023	Revision	Revision	Revision	Revision
	24.05.2023	Revision	Revision	Revision	Revision
	25.05.2023	Revision	Revision	Revision	Revision
	26.05.2023	Revision	Revision	Revision	Revision

Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher:-Ms. Sukriti

Subject :-Mathematics

Week	Date	Class :-B.sc(3rd year)	Class:-B.Sc(3rd year)	Class ……
		Semester:-6th(linear algebra)	**Semester :-6th(Real and complex analysis)**	**Semester ……**
	01.02.2023	ch-1(vector spaces and subspaces)	ch-1 jacobians definitions and concept	
	02.02.2023	examples of exercise 1.1	based theorems and examples	
	03.02.2023	subspaces and based theorems	functional dependence and theorem	
	04.02.2023	subspaces based examples	ch-2 Beta and gamma function some important properties	
	06.02.2023	linear sum,direct sum,disjoint subspaces	based examples	ch-1motion along a plane curve,introduction,some important concept
	07.02.2023	based theorem and examples	gamma function properties,relation between beta and gamma function	based examples
	08.02.2023	ch-2 introduction of basis and dimension	based examples	examples of ex-1.2
	09.02.2023	L.I,L.D based theorem and examples	duplication formula and based examples	
	10.02.2023	linear span,finitely generated vector space based theorem and examples	test +assignments	
	11.02.2023	basis of vector space,existence theorem,maximal linearly independent set	ch-3 double integral ,evaluation of double integral	
	13.02.2023	based theorems and examples	based examples	examples of ex-1.3
	14.02.2023	dimension of linear sum,direct sum,complementary subspaces	example based on substitution method for double integral	ch-2 Relative motion basic concept
	15.02.2023	based theorems and examples	triple integral based examples	based examples
	16.02.2023	ch-3 introduction of quotient space,examples,dimension of quotient space	example based on substitution method for triple integral	
	17.02.2023	based examples	application of double and triple integral based examples	
	18.02.2023	**Maha Shivratri**		

Week	Date	Class :-B.sc(3rd year)	Class:-B.Sc(3rd year)	Class ……
		Semester:-6th(linear algebra)	**Semester :-6th(Real and complex analysis)**	**Semester ……**
	20.02.2023	ch-4 linear transformation,vector space homomorphism,properties	Dirichlet's integral,Liouvill's extension of dirichlet's integral based examples	ch-3 SHM ,articles
	21.02.2023	based examples,vector space isomorphism and based theorems	examples based on changeof order of integration	based examples
	22.02.2023	based examples	ch-4 Fourier Series some important definitions	ch-4 Elastic string,hooks law,horizontal and vertical elastic string
	23.02.2023	to find linear transformation and based examples	theorems	
	24.02.2023	ch-5 rank and nullity based some theorems and definitions	based examples	
	25.02.2023	fundamental theorem of vector space homomorphism,sylvester's law	examples of 4.2	
	27.02.2023	based examples	examples based on change of interval	remaining examples of ch-4
	28.02.2023	test of ch-1st and 2nd+assignment	examples of half range series	test
	01.03.2023	ch-6 (algebra of linear transformation)sum and composition of L.T and based theorems	based examples	ch-5 Newton's law ofmotion some definitions
	02.03.2023	based theorems and examples	ch:-5 calculus of complex functions	
	03.03.2023	singular andnon singular transformation based theorems and examples	some examples	
	04.03.2023	invertible L.T based theorems and based examples	complex function and based examples	
	05.03.2023 to 12.03.2023	**Holi Vacations**		
	13.03.2023	ch-7 Matrix of a linear transformaton some definitions and theorems	uniform continuity and based examples	examples of ex-5.1
	14.03.2023	zero transformation and based examples	analytic function and based examples	examples of ex-5.2
	15.03.2023	based theorems and examples	C-R Equation ,harmonic function,some other definitions	articals and examples of ex-5.3
	16.03.2023	change of basis theorems and examples	based examples	
	17.03.2023	test of unit 2	based examples	

Week	Date	Class :-B.sc(3rd year)	Class:-B.Sc(3rd year)	Class ……
		Semester:-6th(linear algebra)	**Semester :-6th(Real and complex analysis)**	**Semester ……**
	18.03.2023	ch-8 Dual space definition and some theorems	ch-6 elementary functions and mobious transformations ,some definitions	
	20.03.2023	based theorems and examples	elementary function,trignometery function,exponential function	ch-6 basic concepts of work,power and energy
	21.03.2023	bidual of a vector space based theorems,annihilator	hyperbolic functions,log function,based examples	based examples
	22.03.2023	based theorems and examples	conformal mapping,L.T and based examples	examples based on power
	23.03.2023	**Shaheedi Diwas**		
	24.03.2023	ch-9 eigen value and eigen vectors some definitions and examples	mobius transformation and based examples	
	25.03.2023	some important theorem	examples of 6.2	
	27.03.2023	based examples	test	articals based on energy
	28.03.2023	similar matrices based theorems	ch-7 critical mapping some theorem	examples based on energy
	29.03.2023	based theorems and examples	important theorem	test
	30.03.2023	**Ram Navmi**		
	31.03.2023	Diagonalisation	examples	
	01.04.2023	based theorems and examples	test	
	03.04.2023	minimal polynomial based theorems	examples of 7.1	ch-7 motion of a pertical on smooth curve in vertical plane and based examples
	04.04.2023	**Mahavir Jayanti**		
	05.04.2023	based theorems and examples	doubts of ch-1,2	motion on the outside of a vertical circle and based examples
	06.04.2023	test	revision of ch-1,2	
	07.04.2023	ch-10 Inner Product Spaces	test of ch-1,2	
	08.04.2023	definition and based examples	revision of ch-3,4	
	10.04.2023	norm of a vector space and based examples	doubts of ch-3,4	motion on the inside of a smooth vertical circle based examples
	11.04.2023	triangular inerquality and some other theorems	test of ch-3,4	some important results for a cycloid,motion on a cycloid
	12.04.2023	based examples	revision of ch-5	remaining examples of ex-7.4
	13.04.2023	orthogonal complement some definition and theorems	doubts of ch-5	
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**		
	15.04.2023	based examples	test of ch-5	

Week	Date	Class :-B.sc(3rd year)	Class:-B.Sc(3rd year)	Class ……
		Semester:-6th(linear algebra)	**Semester :-6th(Real and complex analysis)**	**Semester ……**
	17.04.2023	orthonormal set based theorems	revision of ch-6	motion on a rough curve under gravity and based examples
	18.04.2023	Bessel's inequality and other theorem	doubts of ch-6	based examples
	19.04.2023	gram-schmidt orthogonalization process,some other theorem	Dyanmics ch-8 projectiles	
	20.04.2023	based example	some important articals	
	21.04.2023	test	based examples	
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**		
	24.04.2023	ch-11 linear operators on inner product spaces some definition	remaining examples of ex-8.1	revision of unit 2 of real and complex analysis
	25.04.2023	some theorems on linear operator	velocity at any point of the trajectory and based examples	revision of unit 2 of real and complex analysis
	26.04.2023	based theorems	test	test of unit 2
	27.04.2023	based theorems	remaining examples of ex-8.2	
	28.04.2023	based theorems and examples	directions of projection for a particle to hit a given point	
	29.04.2023	based theorems and examples	based examples	
	01.05.2023	test	remaining examples of ex-8.3	revision of unit 3 of real and complex analysis
	02.05.2023	revision of unit 1	articals of ex-8.4	revision of unit 3 of real and complex analysis
	03.05.2023	revision of unit 1	examples of ex-8.4	test of unit 3
	04.05.2023	revision of unit 1	test	
	05.05.2023	test of unit 1	ch-9 Central orbits basic concepts	
	06.05.2023	doubts of unit 1	areal velocity,elliptic orbit,hyperbolic orbit	
	08.05.2023	revision of unit 2	parabolic orbit,velocity in a circle	revision of unit 4 of real and complex analysis
	09.05.2023	revision of unit 2	other theorems	revision of unit 4 of real and complex analysis
	10.05.2023	test of unit 2	based examples	test of unit 4
	11.05.2023	doubts of unit 2	test	
	12.05.2023	revision of unit 3	articals of ex-9.2 and examples	
	13.05.2023	revision of unit 3	remaining examples	
	15.05.2023	test of unit 3	remaining examples	revision of unit 1 and 2 of dynamics
	16.05.2023	doubts of unit 3	ch-10 Kepler's law of planetary motion basic concept	revision of unit 1 and 2 of dynamics
	17.05.2023	revision of unit 4	some important theorems	test
	18.05.2023	revision of unit 4	based examples	
	19.05.2023	test of unit 4	test	

Week	Date	Class :-B.sc(3rd year)	Class:-B.Sc(3rd year)	Class ……
		Semester:-6th(linear algebra)	**Semester :-6th(Real and complex analysis)**	**Semester ……**
	20.05.2023	doubt of unit 4	ch-11 Motion of a particle in 3D Basic concept	
	22.05.2023	**Maharan Partap Jayanti**		
	23.05.2023	revision of complete syllabus	articals of ch-11	revision of unit 3 of dynamics
	24.05.2023	revision of complete syllabus	examples of ch-11	test
	25.05.2023	full test	remaining examples	
	26.05.2023	doubts session	test	

Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher:-Ms. Sukriti

Subject :-Mathematics

Week	Date	Class:- B.Sc+B.A(2nd year)	Class :-B.Sc(2nd year)
		Semester:-4th(special function and integral transformation)	**Semester :-4th(sequence and series)**
	01.02.2023	introduction of power series,convergence of power series,interval of convergence	basic knowledge of number and sets
	02.02.2023	operation of power series,analytic function,singular point definition	ch-1 topology of real numbers,introduction of sets and l.u.b and g.l.b
	03.02.2023	example based upon singularity	Archimedean property of reals
	04.02.2023	existence of power series solution and example based upon it	based examples
	06.02.2023	solution of O.D.E	Neighborhood of a point,based examples
	07.02.2023	based examples	bsed theorems,open sets,based examples and based theorems
	08.02.2023	Frobenius method and it's explanation,working rule	closed sets and based theorems and examples
	09.02.2023	based examples	limit point of a set,closure of a set,based theorems
	10.02.2023	discuss the different cases of solution of differential equation	problem
	11.02.2023	based examples	compact set,cover and open cover
	13.02.2023	questions based on solution of differential equation	heine boral property,based theorems
	14.02.2023	discuss the doubt of above topics	ch-2 introduction of sequence
	15.02.2023	summary of chapter-1	range of a sequence,costant sequence,lub of a sequence,glb of a sequence
	16.02.2023	introduction of beta function and their properties	based theorems
	17.02.2023	introduction of gamma function and their properties	divergent sequence,oscillating sequence,based examples
	18.02.2023	**Maha Shivratri**	
	20.02.2023	explanation of bessel's equation and it's solution	some basic theorems on limits and based examples
	21.02.2023	explanation of bessel's function	test+assignment
	22.02.2023	recurrence relation for bessel's functions	based theorems
	23.02.2023	based examples	based theorems and examples
	24.02.2023	representation of bessel's function in integral	monotonic sequence,based examples
	25.02.2023	example of jacobi's series	limit point or cluster point,bolzano weierstrass theorem
	27.02.2023	equation reducible to bessel's equation	subsequence and based theorems
	28.02.2023	tips to reduce the equation to bessel's equation and question based upon it	based examples
	01.03.2023	orthogonality relation of bessel's function	ch-3 infinite series,introduction

Week	Date	Class:- B.Sc+B.A(2nd year)	Class :-B.Sc(2nd year)
		Semester:-4th(special function and integral transformation)	**Semester :-4th(sequence and series)**
	02.03.2023	test+assignment	based examples and theorems
	03.03.2023	legendre's equation and polynomial	cauchy's general principle of conveergence,based theorem
	04.03.2023	Rodrigue's formula,derivation of legendre's polynomial from rodrigue's formula	different test
	05.03.2023 to 12.03.2023	**Holi Vacations**	
	13.03.2023	generating function for rodrigue's formula	different test
	14.03.2023	based examples	based theorems
	15.03.2023	Recurrence relation and it's examples	based examples
	16.03.2023	porthogonality of legendre's polynomial and it's example	assignment+test
	17.03.2023	summary of chapter-3	ch-4 infinite series,introduction
	18.03.2023	ch-4 hermite's equation and it's solution	D'Alembert Ratio test and based examples
	20.03.2023	hermite's polynomial and generating function for it	Cauchy's Root test and based examples
	21.03.2023	recurrence relation	Raabe's test,logarithmic test and based examples
	22.03.2023	based examples	Demorggan's and Bertrand'stest ,based examples
	23.03.2023	**Shaheedi Diwas**	
	24.03.2023	orthogonal property of hermite's polynomial and it's examples	Gauss's test and based examples
	25.03.2023	discussion of doubt of chapter 4	cauchy's integral test and based examples
	27.03.2023	chapter-5 introduction of laplace transformation	cauchy's condensation test and based examples
	28.03.2023	linear property of laplace transformation and based examples	ch-5 Alternating series,introduction
	29.03.2023	examples of first shifting property	lebinitz's test for the convergence of alternating series,based examples
	30.03.2023	**Ram Navmi**	
	31.03.2023	function of exponential operator,2nd shifting theorem	theorem based on absolute,conditional convergence
	01.04.2023	piecewice continuous function	based examples
	03.04.2023	based examples	test
	04.04.2023	**Mahavir Jayanti**	
	05.04.2023	laplace transformation derivatives	ch-6 Alternating series,introduction
	06.04.2023	effect of multiplication and division in finding laplace transformation	Abel's lemma,Abel's test
	07.04.2023	based examples	Dirichlet's test,based examples
	08.04.2023	examples of effect of multiplication and division	some theorem and examples
	10.04.2023	laplace transformation of integral	based examples

Week	Date	Class:- B.Sc+B.A(2nd year)	Class :-B.Sc(2nd year)
		Semester:-4th(special function and integral transformation)	**Semester :-4th(sequence and series)**
	11.04.2023	based examples	multiplication of series and based examples
	12.04.2023	to find the laplace transformation of integral	cauchy's theorem,based examples
	13.04.2023	to find thee laplace transformation of some important functions	Mertin's theorem,some important theorem,based examples
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**	
	15.04.2023	test	ch-7 infinite products,introduction
	17.04.2023	ch-6 inverse laplace transformation and it's formula's	convergence of an infinite product,based examples
	18.04.2023	based examples	based examples
	19.04.2023	other method to find inverse transform	some important theorem
	20.04.2023	based examples	some important theorem
	21.04.2023	convolution theorem and it's questions	based examples
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**	
	24.04.2023	test	based examples
	25.04.2023	ch-7 application of laplace transformation to integral equation	based examples
	26.04.2023	based examples	based problem
	27.04.2023	ch-8 solution of linear differential equation and it's examples	based problem
	28.04.2023	solution of O.D.E with variable coefficient and it's examples	based theorems and examples
	29.04.2023	assignment+test	doubts session
	01.05.2023	ch-9 fourier transform	test
	02.05.2023	based properties and examples	revision of unit 1
	03.05.2023	example of use of inverse transform	revision of unit 1
	04.05.2023	convolution theorem for fourier transform,parseval's identity	test of unit 1
	05.05.2023	finite sine and cosine transform and based examples	doubts of unit 1
	06.05.2023	ch-10 method to solve wave and heat equation	revision of unit 2
	08.05.2023	examples of solution of wave equation	revision of unit 2
	09.05.2023	examples of heat equation	test of unit 2
	10.05.2023	discussion of ch-9 & 10	doubts of unit 2
	11.05.2023	discussion of unit-1	revision of unit-3
	12.05.2023	test of unit-1	revision of unit-3
	13.05.2023	discussion of unit-2	test of unit-3
	15.05.2023	discussion of unit-2	doubts of unit 2
	16.05.2023	test of unit 2	revision of unit 4
	17.05.2023	discussion of unit-3	revision of unit 4
	18.05.2023	discussion of unit-3	test of unit 4
	19.05.2023	test of unit 3	doubts of unit 4
	20.05.2023	discussion of unit-4	revision of complete syllabus
	22.05.2023	**Maharan Partap Jayanti**	
	23.05.2023	discussion of unit-4	doubts of complete syllabus
	24.05.2023	discussion of complete syllabus	doubts of complete syllabus
	25.05.2023	test of complete syllabus	test of full syllabus
	26.05.2023	doubt	solution of test