KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- B.SC.I/B.A.I
Subject- MATHS
Paper- BM-121(NUMBER THEORY AND TRIGNOMETRY)

February,2023 **1st Week** **1Feb-4 Feb**	**Introduction to number theory:introduction to principle of mathematical induction,related examples.definition of divisibility and related theorems and results.division algorithm.definition of greatest common divisor and least common multiple.some theorems on G.CD. and L.C.M.**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**GAUSS theorem and some related theorem.examples based on theorems.definition:unit,prime no.,composite no.co-prime,twin prime,perfect number,some theorems on prime numbers.Euclid first theorem,Euclid second theorem,fundamental theorem of arithmetic.**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Standard form of canonical form and some related theorems.congruences:definition of congruence and related theorems.examples based on congruence.linear congruence and related theorems.examples based on linear congruences.**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Linear Diophantine equations and related theorems and examples.Fermat's,Wilson's and Chinese remainder theorem.Discuss about examples and exercises.simultaneous linear congruences.EULER'S function and RESIDUE systems (mod m).**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Residues ,least residues system,complete residue system,reduced residue systems,some theorems based on complete residue and reduced residue systems.euler's generalization of fermat's theoremand related examples.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher –MS.SILKY PURI
Class- B.SC.I/B.A.I
Subject- - MATHS
Paper- BM-121(NUMBER THEORY AND TRIGNOMETRY)

March, 2023 **1st Week** **1March -4 March**	**Some functions of number theory:greatest integer function(bracket function),theorems on bracket function.De polignac's formula and related examples.divisor function of n ,sigma function of n,perfect no. and related theorems .mobius function,mobius formula,related examples.**
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rd Week **13 March-18 March**	**Quadratic residues and quadratic reciprocity law:quadratic congruence and related theorems.quadratic residues and related theorems.legendre symbol and related theorems.gauss lemma and related theorems.examples based on gauss lemma .gauss reciprocity law and based examples.**
19 March,2023	**Sunday**
4th Week **20March-25 March**	**De moivre's theorem and its applications:examples and exercises based on de moivre's theorem .roots of a complex no.solutions of equations.expansions of trigonometry functions.formation of equations.circular functions of a complex variable:properties of exponential functions.periodicity of circular functions.**
23 March, 2023	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev**
26 March, 2023	**Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**Hyperbolic functions:periodicity of hyperbolic functions.relation between hyperbolic functions and circular functions.separate into real and imaginary parts of circular and hyperbolic functions.logarithm of a complex quantity:logarithm of complex,positive real and negative real number.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher –MS. SILKY PURI
Class-B.SC.I/B.A.I
Subject-MATHS
Paper- BM-121(NUMBER THEORY AND TRIGNOMETRY)

April, 2023 **1ˢᵗ Week** **1 April, 2023**	**Law of logarithm for complex numbers and based examples.general exponential function,general logarithm function.inverse circular and inverse hyperbolic functions:general value and principle value,relation between inverse functions.inverse hyperbolic functions,general value and principle value.**
2 April, 2023	**Sunday**
2ⁿᵈ Week **3 April -8 April**	**Inverse hyperbolic functions in terms of logarithms.gregory's series,another form of gregory's series,general value.evaluation of pi and related examples.summation of series:series of sines and cosines of angles which are in A.P.finding the sum of cosines of n angles when the angles are in A.P.**
4 April, 2023 **9 April, 2023**	**Sunday**
3ʳᵈ Week **10April -** **15April**	**Related examples and exercises to these topics.method of differences and related examples.C+iS method of summation.series depending upon the G.P.or the binomial series.series depending upon the exponential ,sine and cosine series.series depending on logarithmic series.summation of series depending upon tan inverse x.summation of series depending on hyperbolic series.**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4ᵗʰWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5ᵗʰWeek **24 April -29** **April**	**Revision and tests.**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher –MS. SILKY PURI
Class- B.SC.I/B.A.I
Subject-MATHS
Paper- - BM-121(NUMBER THEORY AND TRIGNOMETRY

May, 2023 **1st Week** **1 May -6 May**	**Revision and tests.**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Revision and tests.**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathemaics
Paper-   BM-122
Class-   B.A/B.Sc I Semester-

February,2023 **1st Week** **1Feb-4 Feb**	**Introduction to Differential Equations, Types of Differential Equations** **Formation of Differential Equations and Geometrical Meaning**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Theorems and Questions based on Formation of Differential Eq.** **Exact Differential Equations and Questions based on it** **Discussion of Problems**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Introduction to Equations of First Order but not of First Degree** **Theorems based on Equations of First Order but not of First Degree** **Methods of solving Equations of First Order with degree higher than one** **Solution of Equations solvable for x** **Methods of solving equations solvable for y and problems based on it.** **Problem discussion**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Introduction to Lagrange's Equation and method for solving such Equations** **Introduction to Clairaut's Equation and method for solving such Equations** **Equations reducible to Clairaut's form and problems based on it** **Singular Solution, Discriminant, Questions related to p-Discriminant and c-Discriminant** **Discussion of Problems**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Methods for finding Orthogonal Trajectories and Questions based on it** **Discussion of Problems**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathemaics
Paper-   BM-
Class-   B.A/B.Sc I Semester

March, 2023 **1ˢᵗWeek** **1March -4 March**	Introduction to Linear Differential Equations with Constant Coefficients,Differential Operator Complete solution of Linear Differential Equations
2ⁿᵈ Week **5 March -12 March, 2023**	**Holi Break**
3ʳᵈWeek **13 March-18 March**	Auxiliary Equations, Methods for finding roots of Auxiliary Equations and Complete solution of Linear Differential Equations Inverse operator, Theorems based on Linear Differential Equations. Problem Discussion Introduction to the concept of Particular Integral and discussion of different methods of finding Particular Integral Questions based on finding solutin of Linear Differential Equation
19 March,2023	**Sunday**
4ᵗʰWeek **20March-25 March**	Questions based on finding solutin of Linear Differential Equation Class Test Introduction to Homogeneous Linear Differential Equations Discussion of methods of solving Homogeneous Linear Differential Equations, Questions based on solution of Homogeneous Linear Differential EquationsDiscussion of Problems
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March- 31 March**	Equations reducible to Homogeneous Linear form Discussion of methods for solving Equations reducible to HomogeneousLinear form.

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathemaics

Paper-   BM-

Class-   B.A/B.Sc I Semester

April, 2023 **1st Week** **1 April, 2023**	**Definition of Linear Differential Equations of Second order and its examplesSolution of Linear Differential Equations of Second order by changing the dependent variable** **Question Discussion**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Solution of Linear Differential Equations of Second order by changing theindependent variable and problems related to it.Introduction to the method of Variation of Parameters.Solution of Linear Differential Equations of Second order by the method ofundetermined coefficients Different ways of finding solution of these equations, questions based on it**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	**Introduction to Ordinary Simultaneous Differential Equations- Definition andExamples,Methods of solving Simultaneous Differential Equations with constantcoefficients and questions related to it Question Discussion,Solution of Simultaneous Differential Equations using Differential Operator, Solution of Simultaneous Differential Equations using Differential Operator**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29 April**	**Problem Discussion** **Class Test** **Solution of Simultaneous Differential Equations using Method of Differentiation,Discussion of some other methods for solving Simultaneous DifferentialEquations and questions related to it Discussion of problems**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathemaics

Paper-   BM-

Class-   B.A/B.Sc I Semester

May, 2023 **1st Week** **1 May -6 May**	**Solution of Simultaneous Differential Equations using Method of finding the** **second integral with the help of first integral** **Discussion of Problems** **Total Differential Equations- Definition and Examples** **Theorem for the Integrability of Total Differential Equations and questions based on it** **Concept of Condition for Exactness** **Solution of Total Differential Equations by using method of inspection and problems related to it**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Discussion of Problems** **Solution of Total Differential Equations by regarding one variable as constant out of three variables** **Questions discussion** **Class Test** **Method for solving Homogeneous Equations and problems related to it** **Method for solving Homogeneous Equations and problems related to it**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI

Class- B.SC.I/B.A.I

Subject-MATHS

Paper-BM-123 (vector analysis)

February,2023 **1st Week** **1Feb-4 Feb**	**Multiple product of vectors.** **Revision of scaler and vectors,Definition,Types and properties.** **Questions.**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Revision continued of vectors,Direction cosines and direction cosines and direction ratios,Scaler and vector product.Triple product,Determinant form and properties of scaler triple product .Continued…**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Geometrical interpretation of scaler triple product,Volume of a tetrahedron & based theorem.Numerical based on scaler triple product.**
18 Feb, 2023 **19 Feb,2023**	**Sunday**
4th Week **20Feb -25 Feb**	**Numerical based on scaler triple product.** **Vector triple product,Expansion formula ,Numericals** **Numericals continued on vector triple product** **Unsolved questions of vector triple product** **Scaler product of four vectors,vector product of four vectors,related examples.**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Unsolved numerical of product of four vectors.** **Reciprocal system of vectors and their properties.** **Differentiation of vectors,Scaler and vector functions,Based theorems**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS.SILKY PURI
Class- B.SC.I/B.A.I
Subject- MATHS
Paper- BM-123(vector analysis)

March, 2023 **1stWeek** **1March -4 March**	Derivative of a vector function w.r.t. scaler successive derivative based theorems.Continued… Derivative of a vector function w.r.t. scaler successive derivative,Based theorems Questions.
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	Sessionals Curves in space,Tangent vectors,Velocity and acceleration Numericals on tangent vector,velocity and acceleration Gradient,Divergence and curl. Partial derivative of vector function & rule.
19 March,2023	**Sunday**
4thWeek **20March-25 March**	Gradient,Divergence and curl Partial derivative of vector function & rules. Two vector differentiation operator,Gradient of the product of two vectors. Level surfaces based theorems,Directional derivative of scaler point function Equation of tangent plane and normal to level surface based theorems Divergence of vector function and their properties,Numericals.
23 March, 2023	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev**
26 March, 2023	**Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Curl of a vector point function & their properties.Numericals Second order Differential functions.Laplacian operator,Harmonic function. Introduction,Coordinate surfaces and curves,orthogonal curvilinear coordinates, condition for orthogality & its unit vectors. Arc length, Volume element and area element.

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – MS. SILKY PURI
Class- B.SC.I/B.A.I
Subject-MATHS
Paper-BM-123(vector analysis)

April, 2023 **1st Week** **1 April, 2023**	**Cylindrical & Spherical coordinates,Based numerical** **Indefinite and definite integral and based theorems** **Line integral and based numerical.** **Numericals continued and work done by force** **Surface integral & numericals** **Volume integral & numericals** **Gauss's divergence theorem.**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Deductions from Gauss divergence theorem,** **Green's theorem,Reduction of surface integral to line integral** **Stoke's theorems,Cartesian form in plane,Cartesian form in space** **Green's divergence theorem.**
4 April, 2023 **9 April, 2023**	**Sunday**
3rd Week **10April -** **15April**	**Green's Theorem,Reduction of surface integral to line integral** **Stoke's theorem,Cartesian form in plane,Cartesian form in space** **Green's theorem in plane is special case of stoke's theorem.** **Continued…**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	**Numericals** **Class Test** **REVISION**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- B.SC.I/B.A.I
Subject- MATHS
Paper- BM-123(vector analysis)

May, 2023 **1st Week** **1 May -6 May**	**Numericals** **Class Test** **REVISION**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Numericals** **Class Test** **REVISION**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal
Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- BBA-I
Subject- MATHS
Paper- ELEMENTS OF BUSINESS MATHS-II

February,2023 **1st Week** **1Feb-4 Feb**	**Cartesian systems of rectangular coordinates :rectangular axes and origin,coordinates of a point ,distance between two points.circumcentre with examples.internal division and external division ,section formula,midpoint formula with examples,centroid of a triangle,incentre of a triangle and find these coordinates of a triangle.**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Straight line:slope of a line passing through two given points.parallel and perpendicular lines.coolinearity of three points with examples.intercepts:equation of a line parallel to X-axis and Y-axis ,slope –intercept form of a line ,one point form,two point form of a line.**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Intercept form of a line ,equation of a line in perpendicular and normal form.equation ofa line in symmetric form or parametric form with examples.general equation of a straight line :reduction of general equation to the standard form ,intercept form,normal form.**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Angle between two lines:condition of parallelism and perpendicularity of lines.point of intersection of two straight lines.perpendicular distance of a point from a line.Arithmetic progressions:general term,finite and infinite sequences.properties of an A.P.with examples ,representations of terms in A.P.**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Sum of 'n' terms of an A.P. ,Arithmetic mean:to insert 'n' A.M. between two quantities 'a' and 'b',sum of 'n' arithmetic means between two numbers.Geometric progression :general term with examples.sum of first 'n' terms of G.P.with examples and exercises.sum of G.P.upto infinity terms with examples and exercises.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- BBA-I
Subject- MATHS
Paper- - ELEMENTS OF BUSINESS MATHS-II

March, 2023 **1st Week** **1March -4 March**	Geometric mean:definition with examples.product of 'n' G.M. between 'a' and 'b'.Application of A.P. and G.P.to business problems.Harmonic progression :general term,harmonic mean:to find the H.M. between two quantities 'a' and 'b'.relation between A.M.,G.M.and H.M.,sigma notation .sum of first n natural numbers.
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rd Week **13 March-18 March**	Sum of squares of the first n natural numbers,sum of cubes of first n natural numbers.Aritthmetico-geometric series:general term,sum of 'n' terms of an arithmetic-geometric series.sum of an infinite arithmetic-geometric series.
19 March,2023	**Sunday**
4th Week **20March-25 March**	Integration:introduction to definite and indefinite integral and some standard elementary integrals.integration by substitution,integration by parts.partial fractions and their uses in integration.definite integral with examples.Application of integration in business and commerce : determination of cost function and average cost function when marginal cost function is given.
23 March, 2023	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev**
26 March, 2023	**Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Determination of revenue function and demand function when marginal revenue function is given with examples.consumer's and producer's surplus .the learning curve with examples and exercises.logarithms:definition and some important deductions .some important properties of logarithms:product and quotient formula.

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – MS. SILKY PURI
Class- BBA-I
Subject- MATHS
Paper- - ELEMENTS OF BUSINESS MATHS-II

April, 2023 **1st Week** **1 April, 2023**	**Power formula.base changing formula.two systems of logarithms:natural logarithms,common logarithms.rules to find the characteristics and mantissa with examples.tables of logarithms.anti-logarithms.**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Compound interest:introduction to simple interest,compound interest.results and formulas for S.I. and C.I. with examples.examples and exercises to find S.I.and C.I.when the rate of interest is different for different years.problems on effective rate of interest with examples.**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April - 15April**	**Problems on depreciation and problems on population with examples and exercises.to check table values for logarithms and anti –logarithms.**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29 April**	**Revision and tests.**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class-BBA-I
Subject-MATHS
Paper- - ELEMENTS OF BUSINESS MATHS-II

May, 2023 1ˢᵗ Week 1 May -6 May	Revision and tests.
7 May, 2023	**Sunday**
2ⁿᵈ Week 8 May -13 May	Revision and tests.
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(1February to May, 2023)

Name of the Teacher – Ms. Meenu Kalra

Subject-MATHS

Paper-   MATHEMATICAL FOUNDATIONS-II

Class-   BCA-I(SEM II)

February,2023 **1st Week** **1Feb-4 Feb**	**Introduction to logical statements.symbolic notation of statements.truth tables.simple and compound statements.truth table for conjunction and disjunction.negation:truth table for negation and negation of compound statements.**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Implications:conditional statements and biconditional statements.argument:valid argument,fallacy and truth tables.joint denial.tautologies and contradictions.**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Laws of logic:idempotent laws,commuatative laws,associative laws,distributive laws,identity laws,complement laws,involution law,de morgan's law,quantifiers:universal,existential quantifiers,negation of statements with quantifiers.**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Principle of mathematical induction with examples.groups:introduction to binary operationas and composition tables.some fundamental properties of binary operations.algebraic structure.definition of group with examples.**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Semi group,finite and infinite groups ,order of a group.addition modulo M,multiplication modulo with examples,order of an element of a group ,general properties of groups.complexes and subgroups of a group ,criterian for a complexto be a subgroup,intersection of subgroup with theorems.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Meenu Kalra
Subject-MATHS
Paper-   MATHEMATICAL FOUNDATIONS-II
Class-   BCA-I(SEM II)

March, 2023 **1stWeek** **1March -4 March**	**Cosets:right coset,left coset wit examples,normal subgroups,simple groups,quotient group with examples.homomorphism and isomorphism,kernel of homomorphism.Rings:types of rings with examples.rings without or with zero divisors,integral domain.**
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	**Division ring or a skew field,field with examples,theorems and laws of fields,subrings:characterstic of a ring with examplesideals:definition and examples of ideals,simple ring.principle ideal:principle ideal ring and principle ideal domain.maximal ideal,prime ideal with examples.nilpotent and nil ideals.**
19 March,2023	**Sunday**
4thWeek **20March-25 March**	**Quotient rings(factor rings),ring homomorphism ,kernel of a ring homomorphism.Matrices:some definitions and types of matrices.basic operations on matrices,scalar multiplication ,negation ,addition and difference of a matrix.multiplication,positive integral powers of matrices with examples**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**Determinants:determinants of second and third order,minors and cofactors ,sarrus diagram,properties of determinants.Matrices(continued):singular and non singular matrices,transpose of a matrix,inverse of a square matrix ,symmetric and skew-symmetric matrices with results.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Ms. Meenu Kalra

Subject-MATHS

Paper- MATHEMATICAL FOUNDATIONS-II

Class- BCA-I(SEM II)

April, 2023 **1ˢᵗ Week** **1 April, 2023**	**Hermitian and skew –hermitian matrices.rank of a matrix:submatrix of a matrix,elementary operations:row equivalent and column equivalent of a matrix.reduction of a matrix to triangular form,normal form of a matrix,elementary matrices,rank of the product of two matrices.**
2 April, 2023	**Sunday**
2ⁿᵈ Week **3 April -8 April**	**Using elementary operations find inverse of a matrix,to calculate PAQ where PAQ is in normal form.application of matrices to solution of system of linear equations:homogeneous and non homogeneous linear equations using inverse of a matrix.solutions of systems of homogeneous and non homogeneous using rank of a matrix.**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3ʳᵈ Week **10April -** **15April**	**Characteristic equation of a matrix :characteristics matrix and characteristic polynomial and characteristics equation and characteristics roots or eigen values of a matrix.characteristics vector or eigen vector or latent vector with examples.scalar polynomial and matric polynomial**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4ᵗʰWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5ᵗʰWeek **24 April -29 April**	**Cayley-hamilton theorem with examples and verify these equations.some important theorems:theorems for eigen values and eigen vectors for hermitian matrix,triangular and orthogonal matrix.theorems for linearly independent and linearly dependent vectors.diagonalization of a square matrix:definition and examples**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Meenu Kalra
Subject-MATHS
Paper-   MATHEMATICAL FOUNDATIONS-II
Class-   BCA-I(SEM II)

May, 2023 **1st Week** **1 May -6 May**	**Revision and tests.**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Class Test & Revision**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(1February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper- BUSINESS MATHEMATICS

Class- B.Com.-I(SEM-2)

February,2023 **1st Week** **1Feb-4 Feb**	**Linear equations in two variables** **Questions** **Linear Programming** **Questions** **Questions** **Student problems** **Problem Discussion**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Data interpretation** **Classification and Tabulation** **Questions** **Questions** **Continued..**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Data –Introduction,Classification and tabulation** **Continue** **Continue** **Continue** **Assignment-1**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Diagrammatic Representation of data** **Continue** **Continue** **Problem Discussion** **Continue**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Continue** **Continue** **Continue** **Problem Discussion** **Continue**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA
Subject- MATHEMATICS
Paper- BUSINESS MATHEMATICS
Class- B.Com.-I(SEM-2)

March, 2023 **1ˢᵗWeek** **1March -4 March**	**Questions related to diagrams** **Continue** **Continue** **Continue** **Problem Discussion** **Continue** **Continue** **Continue** **Continue**
2ⁿᵈ Week **5 March -12** **March, 2023**	**Holi Break**
3ʳᵈWeek **13 March-18** **March**	**Graphical Representation of Data** **Continue** **Continue** **Assignment-2**
19 March,2023	**Sunday**
4ᵗʰWeek **20March-25** **March**	**Permutations and Combinations** **Continue** **Continue** **Continue** **Continue** **Problems Discussion**
23 March, 2023	**ShaheediDiwas/Martyrdom Day of Bhagat** **Singh, Rajguru&Sukhdev**
26 March, 2023	**Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March- 31** **March**	**Permutations and Combinations** **Continue** **Continue** **Continue** **Continue** **Problems Discussion**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper- BUSINESS MATHEMATICS

Class- B.Com.-I(SEM-2)

April, 2023 **1st Week** **1 April, 2023**	**Questions** **Questions** **Continue** **Continue** **Student problems**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Binomial Theorem** **Discussion on formulas** **Questions** **Questions** **Questions**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	**Student Problems** **Continued** **Continued** **Continued**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	**Revised topic based on student problems** **Continued** **Continued** **Continued**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper- BUSINESS MATHEMATICS

Class- B.Com.-I(SEM-2)

May, 2023 **1st Week** **1 May -6 May**	**Questions** **Questions**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Students Problems & REVISION**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathematics

Paper-   Sequence and series

Class-   B.A/B.Sc III Semester

February,2023 **1st Week** **1Feb-4 Feb**	**Sets,Bounded and Unbounded Sets** **Least upper bound and Greatest lower bound** **Theorems**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Examples** **Problem Discussion** **Neighbourhood of a Point** **Theorems** **Problems** **Test**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Examples** **Interior Point of a Set** **Open Set** **Theorems** **Closed Sets** **Examples**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Limit Point** **Closures** **Theorems** **Problems** **Bolzano Weierstrass Theorem**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Theorems** **Examples** **Compact Set** **Cover and Open Cover** **Theorems** **Examples**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathemaics
Paper-   Sequence and series
Class-   B.A/B.Sc I Semester

March, 2023 **1ˢᵗWeek** **1March -4 March**	**Sequence** **Convergent Sequence and Divergent Sequence** **Oscillatory Sequence** **Examples** **Problems** **Test**
2ⁿᵈ Week **5 March -12 March, 2023**	**Holi Break**
3ʳᵈWeek **13 March-18 March**	**Basic Theorems of limits and Squeeze Principle** **Cauchy First Theorem** **Cauchy Second Theorem** **Examples** **Problems** **Monotonic Sequence**
19 March,2023	**Sunday**
4ᵗʰWeek **20March-25 March**	**Nested Sequence** **Examples** **Limit Point of a Sequence** **Cauchy Sequence**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March- 31 March**	**Subsequence** **Problem Discussion** **Test** **Infinite Series** **Examples**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathematics

Paper-   Sequence and series

Class-   B.A/B.Sc III Semester

April, 2023 **1st Week** **1 April, 2023**	**Cauchy General Principle of Convergence** **Geometric Series** **Series of Positive terms** **Comparison Test, p-series Test** **Examples**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Problems** **D'Alemberts Ratio Test and Examples** **Cauchy Root Test and Examples** **Raabes Test and Examples** **Logarithmic Test and Examples** **De Morgan's Test and Gauss Test**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	**Cauchy Integral Test and Cauchy Condensation Test** **Alternating Series, Leibnitz's Test** **Absolute and Conditional Convergence** **Arbitrary Series, Abels Lemma, Abels Test** **Examples, Dirichlet's Test and Examples** **Insertion and Removal of Parenthesis, Examples**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	**Riemann Arrangement Theorem** **Multiplication of Series, Cauchy Theorem** **Mertin's Theorem and Examples**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathematics
Paper-   Sequence and series
Class-   B.A/B.Sc II Semester

May, 2023 **1st Week** **1 May -6 May**	**Infinite Product, Sequence of Partial Sum** **General Principle of Convergence** **More Theorems on Infinite Product**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Revision of the syllabus**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal
Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- B.SC.II/B.A.II
Subject- MATHS
Paper- BM-243(SPECIAL FUNCTIONS AND LAPLACE TRANSFORMS)

February,2023 **1st Week** **1Feb-4 Feb**	Power series:convergence of power series.interval of convergence.operation on power series.shifting of index.analytic functions.existence of power series and their solution.frobenius methods-case 1,case 2,case 3,case 4.Beta and gamma function.Bessel's equation,Bessel's function.
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	Recurrence relation,examples of bessel's function.generating function.jacobi's series.orthogonality of bessel's functions.legendre's equation and polynomial.generating function.examples related to legendre polynomial.recurrence relation.orthogonality of legendre polynomial.
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	Hermite's equation.hermite's polynomial.generating function.rodrigue's formula.recurrence relation of hermite's polynomial.laplace transformation,properties.shifting property of laplace.change of scale property.function of exponent order.
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	Laplace transformation of derivatives.laplace transformation of integration.sine and cosine series.laplace transformation of some important functions.inverse laplace transformation .inverse transformation of laplace.convolution theorem.application of laplace transformation
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Examples of laplace application.solution of linear differential equation with constant and variable coefficients.solution of simultaneous linear equation with constant coefficients.solution of ordinary differential equation.

KVA DAV College for Women, Karnal
Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – MS. SILKY PURI
Class- B.SC.II/B.A.II
Subject- MATHS
Paper- BM-243(SPECIAL FUNCTIONS AND LAPLACE TRANSFORMS)

March, 2023 **1ˢᵗWeek** **1March -4 March**	**Fourier transformation and its properties.examples and exercises for fourier transformation.fourier sine and cosine transformation.use of inverse transformation.examples and exercises for inverse sine and cosine transformation.**
2ⁿᵈ Week **5 March -12 March, 2023**	**Holi Break**
3ʳᵈWeek **13 March-18 March**	**Convolution theorem.fourier transform of the derivative.relation between fourier and laplace transforms.parseval's identity.related examples and exercises for parseval's identity.**
19 March,2023	**Sunday**
4ᵗʰWeek **20March-25 March**	**Finite sine and cosine transformation.group discussion for above topics.** **Heat equation.wave equation.related examples and exercises.**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March- 31 March**	**Continued heat and wave equations.** **Revision of power series.** **Revision laplace transformation.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – MS.SILKY PURI
Class- B.SC.II/B.A.II
Subject- MATHS
Paper- BM-243(SPECIAL FUNCTIONS AND LAPLACE TRANSFORMS)

April, 2023 **1ˢᵗ Week** **1 April, 2023**	**Revision of laplace transformation continued.** **Revision of fourier transformation.** **Revision of bessel's functions.** **Revision of legendre's function.**
2 April, 2023	**Sunday**
2ⁿᵈ Week **3 April -8 April**	**Revision of legendre function continued.** **Revision of hermite's function .**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3ʳᵈ Week **10April -** **15April**	**Continued revision and tests.**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4ᵗʰWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5ᵗʰWeek **24 April -29** **April**	**Continued revision and tests.**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher –MS. SILKY PURI
Class- B.SC.II/B.A.II
Subject-MATHS
Paper- BM-243(SPECIAL FUNCTIONS AND LAPLACE TRANSFORMS)

May, 2023 **1ˢᵗ Week** **1 May -6 May**	**Continued revision and tests.**
7 May, 2023	**Sunday**
2ⁿᵈ Week **8 May -13 May**	**Continued revision and tests.**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Class- B.A/B.Sc (IV Sem)
Subject- Mathematics
Paper- Programming in C and Numerical Methods

February,2023 **1st Week** **1Feb-4 Feb**	**Computers: A General Introduction, Programmer's Model of a computer,**
	Control unit, memory, types of memory, input and output devices, some
	computer terminologies.
	Algorithm, its definition, characteristics of algorithms, examples based on
	algorithms, Flowcharts, Advantages of flowcharts, conventions of flowcharts,
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**limitations of flowcharts, examples based on flowcharts.**
	Introduction to C language, its importance, C-character set, trigraph
	characters, C-tokens, keywords, constants,types of constants, escape
	sequence, variables, rules for naming a variable and discussion of examples
	and problems.
	Data-Types, different types of data types, data type for integers, characters,
12Feb, 2023	**Sunday**
3rd Week	**Data-Types, different types of data types, data type for integers,**

13Feb -17 Feb	**characters,**
	floating point type, double type numbers, void type, qualifiers, variable
	declaration, assignment statement, typedef declaration and enum
	declaration, scanf function, printf function, illustration of concepts with
	programming examples in C.
	Use of comments, new line character, main function, execution of a C program.
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4ᵗʰ Week **20Feb -25 Feb**	**Operators and Expressions, types of operators, special operators, operator**
	precedence, cast operators, library functions, illustration of these concepts
	using programs.
	Decision Control Structures: Sequence, Selection, Iteration, if statement
26 Feb, 2023	**Sunday**
5ᵗʰ Week **27 Feb -28 Feb**	**if else statement, nested if else statements, illustration of these concepts**
	using programs, else-if ladder, switch statement, goto statement, illustration
	of these concepts using programs in C.
	Loops: definition, types, while statement: syntax, flow chart, programming
	examples, do-while statement: syntax, flow chart, programming examples,
	for loop: syntax, flow chart, programming examples, nested control structure

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Class- B.A/B.Sc (IV Sem)
Subject- Mathematics
Paper- Programming in C and Numerical Methods

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March, 2023 1stWeek 1March -4 March	programming examples.
	Break statement: syntax, programming examples, Continue statement: syntax,
	programming examples.
	Functions: introduction, advantages, overview, Function definition,
	return statement: syntax, programming examples.
	Problems
2nd Week 5 March -12 March, 2023	**Holi Break**
3rdWeek 13 March-18 March	Accessing a function, Function Prototyping: syntax, flow chart, programming
	examples, local and global variables, Recursion and programming
	examples based on it, discussion of other C programs.
	The C Preprocessor, file inclusion, macros, macros with arguments, macros
	versus functions, different types of directives, conditional compilation
	directives, nesting of directives, some other directives.
19 March,2023	**Sunday**

4th Week **20 March-25 March**	**Arrays: definition, types, examples, declaration of arrays, initialization of**
	arrays, programming examples, two dimensional arrays, multi dimensional
	arrays, illustration of these concepts using programs in C, passing arrays to
	functions and discussion of programming examples.
	Solution of Algebraic and Transcendental Equations, continuation and
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**variation of sign, location of roots, theorems and questions based on it,**
	Bisection Method and questions based on it, Regula Falsi Method, its order of
	convergence and questions based on it, Secant Method and questions based
	on it.
	Newton-Raphson Method, its order of convergence and questions based on it.
	Simultaneous Linear Algebraic Equations, Gauss Elimination Method

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Dr. Shweta Dhawan
Class- B.A/B.Sc (IV Sem)
Subject- Mathematics
Paper- Programming in C and Numerical Methods

April, 2023 1st Week 1 April, 2023	questions based on Gauss Elimination Method, Gauss Jordan Method and questions based on it,
	Triangularisation Method and questions based on it, Cholesky Decomposition
	Method and questions based on it and discussion of problems.
	Crout's Method and questions based on it, Jacobi's Method and questions
	based on it, Gauss Seidel Method and questions based on it
2 April, 2023	**Sunday**
2nd Week 3 April -8 April	Relaxation Method and questions based on it and discussion of problems.
	Puppetting of strings, reading strings, writing strings, concatenation of
	strings, comparision of strings, programming examples based on strings,
	Structures and Unions: definition, declaration, initialization, dot and sizeof
	operator, array of structures, structures and functions, illustration of concept
	of unions using programming examples.

4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3ʳᵈ Week **10April -** **15April**	**Relaxation Method and questions based on it and discussion of problems.**
	Puppetting of strings, reading strings, writing strings, concatenation of
	strings, comparision of strings, programming examples based on strings,
	Structures and Unions: definition, declaration, initialization, dot and sizeof
	operator, array of structures, structures and functions, illustration of concept
	of unions using programming examples.
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4ᵗʰWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5ᵗʰWeek **24 April -29** **April**	**Structures and Unions: definition, declaration, initialization, dot and sizeof**
	operator, array of structures, structures and functions, illustration of concept
	of unions using programming examples.
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Class- B.A/B.Sc (IV Sem)
Subject- Mathematics
Paper- Programming in C and Numerical Methods

May, 2023 **1st Week** **1 May -6 May**	**Revision of all Numerical Methods to find real root of algebraic and transcendental Equations namely Bisection Method, Regular Falsi Method, Newton Method, Secant Method**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Revision of Numerical Methods to find approximate solution of simultaneously linear algebraic Equations using Gauss elimination, Guass Seidal , Triangularisation, Jacobi method and many others**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(1February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper-   COMPUTER ORIENTED STATISTICAL METHODS

Class-   B.C.A. SEM IV

February,2023 **1st Week** **1Feb-4 Feb**	**Statistics:Preparing Frequency Distribution Table** **Cumulative frequency**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Measure of Central Tendancy,Types:** **Arithmetic mean,Geometric Mean,Harmonic Mean** **Median,Mode**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Measure of Dispersion:Range,Quartile Deviation** **Coefficient of mean deviation,Standard deviation** **Mean deviation**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Moments:moment about mean,Moments about any point,Moment about origin,Moment about mean in terms of moment about anypoint,** **Moment about any point in terms of moment about mean**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Correlation: Introduction,Types,Properties,Methods of correlation** **Karl Pearson's Coefficient of correlation,Rank Correlation and Concurrent Deviation method,Probable error.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper-   COMPUTER ORIENTED STATISTICAL METHODS

Class-   B.C.A. SEM IV

March, 2023 **1stWeek** **1March -4 March**	**Regression:Introduction,Aim of Regression Analysis,Types of Regression Analysis,Lines of regression,Properties of Regression Coefficient and Regression Lines,Comparison with Correlation**
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	**Sessionals** **Curve fitting,Straight Line,Parabolic curve,Geometric curve and exponential curve.** **Baye's theorem in decision making, Forecasting techniques** **First & second assignment.**
19 March,2023	**Sunday**
4thWeek **20March-25 March**	**Types: Binomial,Poisson,Normal Distribution,Mean and variance of Binomial,Poisson and Normal Distribution**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**Sample introduction,Sampling Meaning,Methods of sampling.** **Statistical interferences:Test of hypothesis,Types of hypothesis,** **Procedure of hypothesis Testing,Type I and Type II error,One tailed and two tailed test.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper-   COMPUTER ORIENTED STATISTICAL METHODS

Class-   B.C.A. SEM IV

April, 20 23 1st Week 1 April, 2023	Types of test of significance :Test of significance for attribute-test of No. of success and test of proportion of success, Test of significance for large samples- Test of significance for single mean and difference of mean
2 April, 2023	Sunday
2nd Week 3 April -8 April	Test of significance for small samples (t-test)-test the significance between the mean of a random sample between the mean of two independent samples
4 April, 2023 9 April, 2023	MahavirJayanti Sunday
3rd Week 10April - 15April	Student Problems Class Test
14 April, 2023 16 April, 2023	Vaisakhi/Dr. B.R. AmbedkarJayanti Sunday
4thWeek 17 April -21 April	Sessional Exams
22 April, 2023 23 April, 2023	ld-Ul-Fitr/ParshuramJayanti Sunday
5thWeek 24 April -29 April	Class test Student Problems REVISION
30 April, 2023	Sunday

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Ms. MEENU KALRA

Subject- MATHEMATICS

Paper-   COMPUTER ORIENTED STATISTICAL METHODS

Class-   B.C.A. SEM IV

May, 2023 **1st Week** **1 May -6 May**	**Students problems** **Class Test**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**REVISION**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathematics

Paper-   Real and Complex analysis

Class-   B.A/B.Sc VI Semester

February,2023 **1st Week** **1Feb-4 Feb**	**Introduction to Jacobians. Definition of Jacobian.** **Chain rule for Jacobian and some results based on Jacobians** **Examples to find jacobian of given functions** **Related Problems**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Functional dependence (or non independance)** **Examples related to functional dependency** **Definition of Beta function and two properties of beta function** **Property of Beta function** **Related Problems**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Introduction to Gamma function . recuurence formula for gamma function, Relation between Beta and Gamma function** **Examples to find Gamma function** **Duplication formula**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Legendre's formula** **Related Problems** **Introduction of Fourier Series, some important Results on Definite Integral** **Fourier series for even and odd functions**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Dirichlets conditions ,Properties of fourier coefficients and examples of Exercise 4.1**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathematics
Paper-   Real and Complex analysis
Class-   B.A/B.Sc VI Semester

March, 2023 **1ˢᵗWeek** **1March -4 March**	**Fourier expansion of functions having points of discontinuity** **Related Problems Change of Interval, half range series** **Parseval`s identity for Fourier Series, Examples of Exercise4.3** **Related Problems**
2ⁿᵈ Week **5 March -12 March, 2023**	**Holi Break**
3ʳᵈWeek **13 March-18 March**	**introduction to double integral,evaluation of double integrals** **some examples to evaluate double integral** **substitution method for double integrals and example based on it**
19 March,2023	**Sunday**
4ᵗʰWeek **20March-25 March**	**Explanation to triple integral with the help of some examples** **substitution method for triple integrals and examples** **Application of double and triple integrals for finding area and** **volume of surfaces with examples** **Dirichlet's integral** **liouvill's extension of Dirichlet's integral** **change of order of integration with examples**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat** **Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March- 31 March**	**calculus of complex functions introduction** **stereographic projection of complex numbers with examples** **complex function or functions of a complex variable , limit of a** **complex function** **continuity of a complex function, uniform continuity examples** **Differentiability of a complex function,theorem based on it, Rule of** **Differentiation, Geometric interpretation** **of the derivative** **Exercise**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Dr. Manju Sharma

Subject- Mathematics

Paper- Real and Complex analysis

Class- B.A/B.Sc VI Semester

April, 2023 **1st Week** **1 April, 2023**	**Introduction to analytic function, Cauchy-Riemann equations**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	some examples and doubt clearing session sufficient condition for f(z) to be analytic,C-R equations in polar form orthogonal system, introduction to Harmonic functions ,harmonic conjugate functions .examples construction of an analytic function- Milne's Thompson's method
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	examples based on Milne's Thompson's method Applications of Analytic functions to field and flow problems introduction to Multi- valued function ,Branch, Branch cut, Branch point Elementary functions- Exponential function, properties of exponential functions Trigonometrical functions sinz and cosz properties of trigonometrical (Euler's theorem, De-Morvre's theorem for complex numbers)
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	**Introduction to Hyperbolic functions, Properties of Hyperbolic functions ,the logarithmic function, properties of the logarithmic function,inverse trogonometric and hyperbolic functions** **Mapping by elementary functions and examples, conformal mappping,linear transformation**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Manju Sharma
Subject- Mathematics
Paper- Real and Complex analysis
Class- B.A/B.Sc VI Semester

May, 2023 **1st Week** **1 May -6 May**	**Mobius transformation or Bilinear transformations, fixed points nature of mobius transformation** **Critical points, Critical Mappings**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Revision of the syllabus**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Subject- Mathemaics
Paper-   BM-362
Class-   B.A/B.Sc VI Semester-

February,2023 **1st Week** **1Feb-4 Feb**	**Vector Space, , examples, Subspace, Examples based on Subspaces, Linear Sum, Direct Sum and examples based on Direct Sum**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Linear Combination, Linear Dependence and Linear Independence, Examples, Linear Span, Basis of a vector Space, Theorems based on basis of vector spaces.**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Theorems based on basis of vector spaces continued..Dimension of Vector Space and based Examples, methods to find basis of Vector space and its Subspaces if spanning Sets of Subspace is given.**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Theorems based on basis of vector spaces continued..Dimension of Vector Space and based Examples, methods to find basis of Vector space and its Subspaces if spanning Sets of Subspace is given.** **Complementary Subspace and example based on it..Quotient Space..Dimension of Quotient Space, and based probles…**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Complementary Subspace and example based on it..Quotient Space..Dimension of Quotient Space, and based probles**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Subject- Mathemaics
Paper-   BM-362
Class-   B.A/B.Sc VI Semester

March, 2023 **1st Week** **1March -4 March**	**Linear Transformation and its Properties, example based on Linear Transformation, Types of Linear Transformation, Some important Theorems on Dimension of V.S using notion of Linear Transformation**
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rd Week **13 March-18 March**	**Method to find Linear transformation when its image on basis vectors is given, Null Space, Range Space, Rank of a linear Transformation, Nullity of a Linear Transformation, Fundamental Theorem of Vector Space Homomorphism**
19 March,2023	**Sunday**
4th Week **20March-25 March**	**Method to find Linear transformation when its image on basis vectors is given, Null Space, Range Space, Rank of a linear Transformation, Nullity of a Linear Transformation, Fundamental Theorem of Vector Space Homomorphism**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**Sylvester's Law (Rank- Nullity Theorem), Examples based on this Theorem and examples based on one-one and onto Linear Transformations..**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Dr. Shweta Dhawan
Subject- Mathemaics
Paper- BM-362
Class- B.A/B.Sc VI Semester
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April, 2023 **1st Week** **1 April, 2023**	**Sylvester's Law (Rank- Nullity Theorem), Examples based on this Theorem and examples based on one-one and onto Linear Transformations..**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Algebra of Linear Transformation, Minimal Polynomial, of a Linear Transformation, Singular and non-singular Linear Transformation, Matrix of Linear Transformatio**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	**Algebra of Linear Transformation, Minimal Polynomial, of a Linear Transformation, Singular and non-singular Linear Transformation, Matrix of Linear Transformatio**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29 April**	**Change of Basis, Eigen Values and Eigen vectors of Linear Transformation, Inner product Spaces, Cauchy-Schwarz inequality, orthogonal and orthonormal vectors, orthogonal sets and Basis**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Dr. Shweta Dhawan
Subject- Mathemaics
Paper-   BM-362
Class-   B.A/B.Sc VI Semester

May, 2023 **1st Week** **1 May -6 May**	**Bessel's inequality for finite dimensional vector spaces, Gram- Schmidt Orthogonalization Process, Adjoint of a Linear Transformation and its Properties, Unitary Linear Transformation and related concepts.**
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	**Bessel's inequality for finite dimensional vector spaces, Gram- Schmidt Orthogonalization Process, Adjoint of a Linear Transformation and its Properties, Unitary Linear Transformation and related concepts.**
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(1February to May, 2023)

Name of the Teacher – Ms.Meenu Kalra

Subject- Mathematics

Paper-Dynamics

Class- B.Sc.-III(SEM-6)

February,2023 **1st Week** **1Feb-4 Feb**	**Basic concepts and definitions-space,matter,particle,rigid body,** **Displacement of a particle** **Expression for a velocity at a point,relative velocity** **Accleration due to gravity,particle projected vertically downwards** **Components of velocity and acceleration along the coordinate axes**
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	**Motion of a particle along a plane curve with constant angular accelerationExamples related to above topics.Radial and transverse velocities and acceleration polar McoordinatesTangential and normal components of velocity of a particle. Tangential and normal components of acceleration**
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	**Examples related to above topics.Relative motion:relative displacement,relative velocity and their examples**
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	**Determination of relative velocity,magnitude of relative velocity and its examples.** **Simple harmonic motion(SHM),Velocity of a particleexecuting SHM** **Nature and amplitude of SHM,periodic motion,SHM is period** **Examples** **Student problems**
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	**Elastic string:-Hooke's law,Work done against the tension** **Horizontal and vertical elastic string** **Newton's first,second,third laws of motion** **Weight of a body and related examples** **Pressure of a body resting on a horizontal plane moving downwards**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Meenu Kalra
Subject- Mathematics
Paper-Dynamics
Class- B.Sc.-III(SEM-6)

March, 2023 **1stWeek** **1March -4 March**	**Motion of a lift and examples.Motion of two bodies connected by a string,at wood's machine.** **Work done by a variable force,work done in stretching an elastic string.**
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	**Power and its examples.** **Principal of work and energy,principle of conservation of energy** **Impulse of a constant force & variable force** **Motion of a particle on a smooth and rough plane curves.** **Related Examples.**
19 March,2023	**Sunday**
4thWeek **20March-25 March**	**Motion on the outside of a smooth vertical circle and related examples.** **Motion on the inside of a smooth vertical circle and related examples** **Cycliodal motion: cycloid,result for a cycloid,motion on a cycloid Examples**
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	**Projectile:introduction –trajectory,angle of projection.** **Latus rectum,vertex.focus,directrix,axis of the trajectory of a particle.** **Time of flight,Horizontal range** **Greatest height of a projectile and to find the direction of a projectile.** **Velocity at any point of the trajectory and examples.**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May 2023)

Name of the Teacher – Ms.Meenu Kalra

Subject- Mathematics

Paper-Dynamics

Class- B.Sc.-III(SEM-6)

April, 2023 **1st Week** **1 April, 2023**	**Direction in which a particle be projected to pass through a given point** **Least velocity for a particle to hit a given point and time of flight.** **Related examples.** **Range and time of flight on inclined plane,max range up the plane** **Central orbits,central force,thm on central orbit,polar form**
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	**Areal velocity and its theorem.** **Elliptic orbit and theorem based on it.** **Hyperbolic orbit and its result** **Parabolic orbit and its theorem** **Velocity in agiven circle:to determine orbit** **Apse,apsidal distances and apsidal angle and theorem related examples**
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	**Kepler's laws of planetary motion,Newton's laws of gravitation** **Eqvivalence of kepler's law for planetary motion and newton's** **law.Motion under the inverse square law and examples.** **Motion of a particle in 3-D velocity of a particle along a curve.Motion of particle in terms of cylindrical polar coordinates**
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	**Velocity and acceleration of moving axes.To find acceleration when a point is moving along any curve in 3-D.**
30 April, 2023	**Sunday**

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Meenu Kalra
Subject- Mathematics
Paper-Dynamics
Class- B.Sc.-III(SEM-6)

May, 2023 **1ˢᵗ Week** **1 May -6 May**	**Sessional**
7 May, 2023	**Sunday**
2ⁿᵈ Week **8 May -13 May**	**Class Test & Revision**
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Vandana Sharma
Class- M.Sc. (MATHEMATICS)
Subject- Advanced Abstract Algebra-II
Paper- MM-407

3rd Week **13Feb -17 Feb**	Commutators and higher commutators. Commutators identities. Commutator subgroups. Derived group.
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	Three subgroups Lemma of P.Hall. Central series of a group G. Nilpotent groups. Centre of a nilpotent group. Subgroups and factor subgroups of nilpotent groups.
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Finite nilpotent groups. Upper and lower central series of a group G and their properties. Subgroups of finitely generated nilpotent groups. Sylow-subgroups of nilpotent groups.
March, 2023 **1stWeek** **1March -4 March**	Similar linear transformations. Invariant subspaces of vector spaces. Reduction of a linear transformation to triangular form. Nilpotent transformations.
2nd Week **5 March -12 March, 2023**	**Holi Break**

3rdWeek **13 March-18 March**	Nilpotent transformations. Index of nilpotency of a nilpotent transformation. Cyclic subspace with respect to a nilpotent transformation. Uniqueness of the invariants of a nilpotent transformation.
19 March,2023	**Sunday**
4thWeek **20March-25 March**	Primary decomposition theorem. Jordan blocks and Jordan canonical forms. Cyclic module relative to a linear transformation. Companion matrix of a polynomial f(x).
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Rational Canonicals form of a linear transformation and its elementary divisior. Uniqueness of the elementary divisior.

April, 2023 **1st Week** **1 April, 2023**	Modules, submodules and quotient modules. Module generated by a non-empty subset of an R-module. Finitely generated modules and cyclic modules. Idempotents.
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	Homomorphism of R-modules. Fundamental theorem of homomorphism of R-modules. Direct sum of modules. Endomorphism rings $End_Z(M)$ and $End_R(M)$ of a left R-module M.

4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April –** **15April**	Simple modules and completely reducible modules, Finitely generated free modules. Rank of a finitely generated free module. Submodules of free modules of finite rank over a PID.
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	Endomorphism ring of a finite direct sum of modules. Finitely generated modules. Ascending and descending chains of sub modules of an R-module. Ascending and Descending change conditions.
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May -6 May**	Noetherian modules and Noetherian rings. Finitely co-generated modules. Artinian modules and Artinian rings.
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Nil and nilpotent ideals. Hilbert Basis Theorem. Structure theorem of finite Boolean rings. Wedeerburn-Artin theorem and its consequences.
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Rakhi
Class- M.Sc(P)
Subject- Mathematics
Paper-Real Analysis-II (MM-408)

3rd Week **15Feb -17 Feb**	Lebesgue outer measure Elementary properties of outer measure
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	Measurable sets and their properties Lebesgue measure of sets of real numbers,Algebra of measurable sets Borel sets and their measurability Characterization of measurable sets in terms of open,closed ,Fσ and Gδ sets Existence of a non measurable set
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Lebesgue measurable functions and their properties Characteristic functions
March, 2023 **1stWeek** **1March -4 March**	Simple functions,approximation of measurable function by a sequence of simple functions Functions as nearly continuous functions Borel measurability of a function Section-2 : Almost uniform convergence Egoroff's theorem
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	Lusin's theorem Convergence in measure F.Riesz theorem Shortcomings of Riemann integral Lebesgue integral of a bounded function over a set of finite measure and its properties
19 March,2023	**Sunday**
4thWeek	Lebesgue integral as a generalization of Riemann integral

20March-25 March	Bounded convergence theorem Lebesgue theorem regarding points of discontinuity of Riemann integrable funtions
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Section -3: Integral of a non negative function Fatou's lemma Monotone convergene theorem

April, 2023 **1st Week** **1 April, 2023**	Integration of series
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	The general Lebesgue integral Lebesgue convergence theorem Differentiation and Integration : Differentiation of monotone functions Vitali's covering lemma
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	The four Dini derivatives Lebesgue differentiation theorem Functions of bounded variation and their representation as a difference of monotone functions
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29 April**	Section-4: Differentiation of integral Absolutely continues function
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May -6 May**	Convex function Jensen's inequality The Lp spaces Minkowski Inequality Holder's inequality
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Completeness of Lp spaces Bounded Linear functional on Lp spaces Riesz representation theorem
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher –Ms.Rakhi
Class- M.sc(P)
Subject- Mathematics
Paper- Computer Programming Theory(MM-409)

3rd Week **15Feb -17 Feb**	Simple fortran 90 programs Input statements,some FORTRAN 90 Program examples Numeric constants and Variables: Constants,Scalar Variables Declaring variable names,Implicit declaration,Named constants
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	Arithmetic Operators and Modes of Expressions Integer Expressions,Realexpressions,Precedence of operators in expressions Examples of Arithmetic expressions Assignment statements,Defining variables Some problems due to rounding of real numbers,Mixed mode expressions
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Intrinsic Functions,Examples of use of functions List directed input statements List directed output statements Relational operators
March, 2023 **1stWeek** **1March -4 March**	The Block IF construct,Example program using IF structures The Block DO loop,count controlled DO loop Rules to be followed in writing DO loops Logical constants,Variables and Expressions Precedence rules for Logical Opeartors,Some examples of use of logical expressions
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	The CASE Statement Function subprograms,syntax rules for Function Subprogram

	Generic Functions Subroutines
19 March,2023	**Sunday**
4thWeek **20March-25 March**	Internal Procedures Array variables Use of multiple subscripts DO Type notation for input/output statements Initializing arrays
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Terminology used for multidimensional arrays Use of arrays in DO loopsWhole array operations Format description for numerical data;READstatement,Format description for PRINT statement

April, 2023 **1st Week** **1 April, 2023**	Multi record formats
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	Printing Character strings,Reading and writing logical quantities Generalized Input/Output statements,Some comments on formats The Character Data Type,Manipulatingstrings,comparing character strings Procedures with multidimensional aarays
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	Temporary arrays in procedures Function as dummy arguments Defining Derived Types,Using derived types Using derived types in procedures,Using derived types in arrays
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**

5thWeek **24 April -29 April**	Creating a Sequential file,searching a sequential file,Updating a sequential file Direct access files,The INQUIRE Statement The Pointer data type,Creating a list data structure,Manipulating a Linearly Linked List
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May -6 May**	Applications of Binary Trees Abstract Data Type with Modules Simulation and application of Stack,Abstract Data Type Complex Kind Specifications foe Reals,Integers and Characters,Use of complex quantities
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Array operations with a Mask,Namelist input/output FORALL Statement,PUREProcedures,Elemental Procedures Miscellaneous Features,Conclusions
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Monila Bansal
Class- M.sc.(Sem-II)
Subject- Mathematics
Paper- Complex Analysis-II(MM-410)

3rd Week **13 Feb - 17 Feb**	Spaces of analytic functions and their completeness Hurwitz's theorem
18 Feb, 2023 **19 Feb, 2023**	**Maha Shivaratri** **Sunday**
4th Week **20 Feb - 25 Feb**	Montel's theorem Riemann mapping theorem
26 Feb, 2023	**Sunday**
5th Week **27 Feb - 28 Feb**	infinite products
March, 2023 **1st Week** **1 March - 4 March**	Weierstrass factorization theorem Gamma function and its properties
2nd Week **5 March -** **12 March, 2023**	**Holi Break**
3rd Week **13 March -** **18 March**	Functional equation for gamma function Integral version of gamma function Reimann-zeta function
19 March, 2023	**Sunday**
4th Week	Riemann's functional equation

20 March - 25 March	Runge's theorem Mittag-Leffler's theorem
23 March, 2023 26 March, 2023	**Shaheedi Diwas/Martyrdom Day of Bhagat Singh, Rajguru & Sukhdev Sunday**
30 March, 2023	**Ram Navmi**
5th Week 27 March - 31 March	Analytic continuation uniqueness of direct analytic continuation uniqueness of analytic continuation along a curve

April, 2023 1st Week 1 April, 2023	Power series method of analytic continuation Examples based on natural boundary condition Schwarz reflection principle
2 April, 2023	**Sunday**
2nd Week 3 April - 8 April	Monodromy theorem and its consequences Harmonic function as a disk Poisson'sKernel Harnack's inequality
4 April, 2023 9 April, 2023	**Mahavir Jayanti Sunday**
3rd Week 10 April - 15 April	Harnack's theorem Canonical product Jensen's formula Poisson-Jensen formula Hadamard's three circle theorem Dirichlet problem for a unitdisk
14 April, 2023 16 April, 2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti Sunday**
4th Week 17 April - 21 April	Dirichlet problem for a region Green's function Order of an entire function Borel theorem Hadamard'sfactorization theorem The range of an analytic function
22 April, 2023	**ld-Ul-Fitr/Parshuram Jayanti**

23 April, 2023	**Sunday**
5ᵗʰ Week **24 April -** **29 April**	Bloch's theorem Schottky's theorem Little-Picard theorem
30 April, 2023	**Sunday**

May, 2023 **1ˢᵗ Week** **1 May - 6 May**	Montel-Carathedory theorem Great Picard theorem Univalent functions Bieberbach's conjecture (Statement only), and 1/ 4 theorem
7 May, 2023	**Sunday**
2ⁿᵈ Week **8 May - 13 May**	**Sessional**
14 May, 2023	**Sunday**
17 May, 2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Rakhi
Class- M.Sc(P)
Subject- Mathematics
Paper- Differential Equations-II(MM-411)

3rd Week **15Feb -17 Feb**	Linear second order equations:Preliminaries Self adjoint equation of second order,basic facts Superposition principle
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	Riccati's equation Pruffer transformation Zero of a solution,Oscillatory and Non-Oscillatory equations
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Abel's formula Common zeros of solutions and their linear dependence
March, 2023 **1stWeek** **1March -4 March**	Sturm theory : Sturm separation theorem Sturm fundamental comparision theorem and their corollaries
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	Elementary linear oscillations Autonomous systems : the phase plane,paths and critical points ,types of critical points;Node,Centre,saddlepoint,Spiral point
19 March,2023	**Sunday**

4thWeek **20March-25 March**	Stability of critical points,Critical points and paths of linear systems : basic theorms and their applications
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Critical points and paths of non-linear system : basic theorems and their applications Liapunov function Liapunov's direct method for stability of critical points of non – linear systems

April, 2023 **1st Week** **1 April, 2023**	Limit cycles and periodic solutions : Limit cylecs , existence and non-existence of limit cycles
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	Benedixson's non-existence theorem Half-path or Semiorbit Limit set Poincare-Benedixon theorem Index of a critical point Second order boundary value problems : Linear problems
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	Periodic boundary conditions Regular linear BVP Singular linear BVP Non-linear BVP
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21 April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**

5thWeek **24 April -29 April**	Sturm-Liouville BVP : definitions , eigen values and eigen functions Orthogonality of functions , orthogonality of eigen functions corresponding to distinct eigen values
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May -6 May**	Green's function Applications of boundary value problems Use of implicit function theorem and fixed point theorems for periodic solutions of linear and non-linear equations
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Revision
14 May, 2023	**Sunday**
17 May,2023 Onwards	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Vandana sharma
Class- M.sc.(Mathematics)
Subject- General Measure and Integration theory
Paper- MM-507

February,2023 **1st Week** **1Feb-4 Feb**	Measures, some properties of measures.
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ndWeek **6Feb -11Feb**	Outer measures, extension of measures.
12Feb, 2023	**Sunday**
3rd Week **13Feb -17 Feb**	Uniqueness of extension, completion of a measure.
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4th Week **20Feb -25 Feb**	The LUB of an increasingly directed family of measures.
26 Feb, 2023	**Sunday**
5th Week **27 Feb -28 Feb**	Measurable functions, combinations of measurable functions,
March, 2023 **1stWeek**	Limits of measurable functions, localization of measurability, simple functions.

1March -4 March	
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rdWeek **13 March-18 March**	Measure spaces, almost everywhere convergence, fundamental almost everywhere. convergence in measure
19 March,2023	**Sunday**
4thWeek **20March-25 March**	Fundamental in measure, almost uniform convergence, Egoroff's theorem Riesz-Weyl theorem.
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	Integration with respect to a measure: Integrable simple functions, non-negative integrable functions.

April, 2023 **1st Week** **1 April, 2023**	Integrable functions, indefinite integrals, the monotone convergence theorem, mean convergence.
2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	Product Measures: Rectangles, Cartesian product of two measurable spaces, measurable rectangle, sections, the product of two finite measure spaces, the product of any two measure spaces.

4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	Product of two σ - finite measure spaces; iterated integrals, Fubini's theorem. a partial converse to the Fubini's theorem
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	Signed Measures: Absolute continuity, finite singed measure, contractions of a finite signed measure, purely positive and purely negative sets, comparison of finite measures. Lebesgue decomposition theorem, a preliminary Radon-Nikodym theorem,
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May -6 May**	Hahn decomposition, Jordan decomposition, upper variation, lower variation, total variation, domination of finite signed measures, the Radyon-Nikodym theorem for a finite measure space, the Radon-Nikodym theorem for a σ - finite measure space
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Integration over locally compact spaces: continuous functions with compact support, G_δ 's and F_σ's, Baire sets, Baire function, Baire-sandwich theorem, Baire measure, Borel sets, Regularity of Baire measures, Regular Borel measures, Integration of continuous functions with compact support, Riesz-Markoff's theorem.
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Monila Bansal
Class- M.Sc. (Sem-IV)
Subject- Mathematics
Paper- Partial Differential Equation(MM-508)

February, 2023 **1st Week** **1 Feb - 4 Feb**	PDE of kth order: Definition, examples and classifications. Initial value problems of Transport equations Homogeneous and non-homogeneous Transport equation
5 Feb, 2023	**Guru Ravidas Jayanti , Sunday**
2nd Week **6 Feb - 11 Feb**	Harmonic functions and their properties Fundamental solutions of Laplace's Equation Poisson's equation and its solution
12 Feb, 2023	**Sunday**
3rd Week **13 Feb - 17 Feb**	Mean value formula of Laplace's Equation Strong maximum principle Uniqueness theorem Local estimates for harmonic function
18 Feb, 2023 **19 Feb, 2023**	**Maha Shivaratri** **Sunday**
4th Week 20 Feb - 25 Feb	Liouville's theorem Harnack's inequality Green's function and its derivation
26 Feb, 2023	**Sunday**
5th Week **27 Feb - 28 Feb**	Representation formula using Green's function

March, 2023 **1st Week** **1 March - 4 March**	Symmetry of Green's function Green's function for a half space Green's function for a ball
2nd Week **5 March -** **12 March, 2023**	**Holi Break**
3rd Week **13 March -** **18 March**	Energy methods uniqueness theorem Dirichlet's principle Heat Equation and its physical interpretation Fundamental solution of heat equation
19 March, 2023	**Sunday**
4th Week **20 March -** **25 March**	Integral solution of heat equation Solution of initial value problem Duhamel's principle, non-homogeneousof heat equation Mean value formula for heat equation Strong maximum principle and uniqueness.
23 March, 2023 **26 March, 2023**	**Shaheedi Diwas/Martyrdom Day of Bhagat** **Singh, Rajguru & Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March -** **31 March**	Energy methods Wave equation- Physical interpretation. Solution for one dimentional wave equation. D'Alemberts formula and its applications reflection method Solution by spherical means Euler-Poisson_Darboux equation

April, 2023 **1st Week** **1 April, 2023**	Kirchhoff's formulas Poisson's formulas
2 April, 2023	**Sunday**

2nd Week **3 April - 8 April**	Solution of non–homogeneous wave equation for n=1,3 Energy method. Uniqueness of solution, finite propagation speed of wave equation. Non-linear first order PDE- complete integrals, envelopes Characteristics of (i) linear, (ii) quasilinera, (iii) fully non-linear first order partial differential equations
4 April, 2023 **9 April, 2023**	**Mahavir Jayanti** **Sunday**
3rd Week **10 April -** **15 April**	Hamilton Jacobi equations (calculus of variations Hamilton's ODE) Representation of Solutions- Separation of variables Similarity solutions (Plane and traveling waves, solitons, similarity under Scaling) Fourier Transform
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. Ambedkar Jayanti** **Sunday**
4th Week **17 April -** **21 April**	Laplace Transform Converting non linear into linear PDE Cole-Hop Transform, Potential functions, Hodograph and Legendre
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/Parshuram Jayanti** **Sunday**
5th Week **24 April -** **29 April**	Sessional
30 April, 2023	**Sunday**
May, 2023 **1st Week** **1 May - 6 May**	Sessional
7 May, 2023	**Sunday**
2nd Week **8 May - 13 May**	Revision of the syllabus
14 May, 2023	**Sunday**
17 May, 2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms. Vandana sharma
Class- M.sc.(Mathematics)
Subject- Mechanics of Solid
Paper- MM-509(OPT.I)

February,2023 **1ˢᵗ Week** **1Feb-4 Feb**	Two dimensional problems : Plane stress. Generalized plane stress. Airy stress function. General solution of biharmonic equation.
5Feb, 2023	**Guru RavidasJayanti, Sunday**
2ⁿᵈWeek **6Feb -11Feb**	Stresses and displacements in terms of complex potentials. The structure of functions of φ(z) and ψ(z). First and second boundary-value problems in plane elasticity.
12Feb, 2023	**Sunday**
3ʳᵈ Week **13Feb -17 Feb**	Existence and uniqueness of the solutions. Waves : Propagation of waves in an isotropic elastic solid medium.
18 Feb, 2023 **19 Feb,2023**	**MahaShivaratri** **Sunday**
4ᵗʰ Week **20Feb -25 Feb**	Waves of dilatation and distortion. Plane waves. Elastic surface waves : Rayleigh waves and Love waves.
26 Feb, 2023	**Sunday**

5th Week **27 Feb -28 Feb**	Extension : Extension of beams, bending of beams by own weight and terminal couples.
March, 2023 **1st Week** **1March -4 March**	bending of rectangular beams. Torsion : Torsion of cylindrical bars; Torsional rigidity.
2nd Week **5 March -12 March, 2023**	**Holi Break**
3rd Week **13 March-18 March**	Torsion and stress functions. Lines of shearing stress. Torsion of anisotropic beams.
19 March,2023	**Sunday**
4th Week **20March-25 March**	Simple problems related to circle and questions.
23 March, 2023 **26 March, 2023**	**ShaheediDiwas/Martyrdom Day of Bhagat Singh, Rajguru&Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March- 31 March**	ellipse and equilateral triangle and related questions.

April, 2023 **1st Week** **1 April, 2023**	Variational methods : Theorems of minimum potential energy. Theorems of minimum complementary energy

2 April, 2023	**Sunday**
2nd Week **3 April -8 April**	Problems discussion week.
4 April, 2023 **9 April, 2023**	**MahavirJayanti** **Sunday**
3rd Week **10April -** **15April**	Test of section 1 and section 2,3
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. AmbedkarJayanti** **Sunday**
4thWeek **17 April -21** **April**	**Sessional Exams**
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/ParshuramJayanti** **Sunday**
5thWeek **24 April -29** **April**	Reciprocal theorem of Betti and Rayleigh. Deflection of elastic string
30 April, 2023	**Sunday**
May, 2023 **1st Week** **1 May -6 May**	Deflection of a beam and elastic membrane. Solution of Euler's equation by Ritz.
7 May, 2023	**Sunday**
2nd Week **8 May -13 May**	Galerkin and Kantorovich methods and related questions.
14 May, 2023	**Sunday**
17 May,2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Monila Bansal
Class- M.sc. (Sem-IV)
Subject-Mathematics
Paper- Fluid Mechanics-II

February, 2023 **1ˢᵗ Week** **1 Feb - 4 Feb**	Equations of continuity in cylindrical and spherical coordinates Equation of motion in cylindrical and spherical coordinates
5 Feb, 2023	**Guru Ravidas Jayanti , Sunday**
2ⁿᵈ Week **6 Feb - 11 Feb**	Two–dimentional inviscid incompressible flows, Stream function Irrotatonal motion in two dimensions Complex velocity potential Sources and sinks in two dimension Doublets and their images
12 Feb, 2023	**Sunday**
3ʳᵈ Week **13 Feb - 17 Feb**	Milne-Thomson circle theorem Applications of circle theorem Two- dimensional irrotational motion produced by motion of circular cylinder
18 Feb, 2023 **19 Feb, 2023**	**Maha Shivaratri** **Sunday**
4ᵗʰ Week **20 Feb - 25 Feb**	Two dimensional motion : Motion due to elliptic cylinder in an infinite mass of liquid Continued Kinetic energy of liquid contained in rotating elliptic cylinder circulation about elliptic cylinder Theorem of Blasius Theorem of Kutta and Joukowski

26 Feb, 2023	**Sunday**
5th Week **27 Feb - 28 Feb**	Stoke's stream function
March, 2023 **1st Week** **1 March - 4 March**	Stoke's stream functions of some basic flows
2nd Week **5 March -** **12 March, 2023**	**Holi Break**
3rd Week **13 March -** **18 March**	Three –dimensional motion : Motion of a sphere through a liquid at rest at infinity Liquid streaming past a fixed sphere Equation of motion a sphere Continued Alembert's paradox impulsive motion
19 March, 2023	**Sunday**
4th Week **20 March -** **25 March**	initial motion of liquid contained in the intervening space between two concentric spheres Vortex motion and its elementary properties
23 March, 2023 **26 March, 2023**	**Shaheedi Diwas/Martyrdom Day of Bhagat Singh, Rajguru & Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5th Week **27 March -** **31 March**	Kelvin's proof ofpermanence Motions due to circular and rectilinear vortices Infinite rows of line vortices

April, 2023 **1st Week** **1 April, 2023**	Dynamical similarity Buckingham pi- theorem
2 April, 2023	**Sunday**

2nd Week **3 April - 8 April**	Prandtl's boundary layer Reynolds number
4 April, 2023 **9 April, 2023**	**Mahavir Jayanti** **Sunday**
3rd Week **10 April -** **15 April**	boundary layer equations in two dimensions Blasius solution Boundary layer thickness. Displacement thickness
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. Ambedkar Jayanti** **Sunday**
4th Week **17 April -** **21 April**	Karman integral conditions Separation of boundary layer
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/Parshuram Jayanti** **Sunday**
5th Week **24 April -** **29 April**	Sessional
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May - 6 May**	Sessional
7 May, 2023	**Sunday**
2nd Week **8 May - 13 May**	Revision Of the Syllabus
14 May, 2023	**Sunday**
17 May, 2023 **Onwards**	**University Examinations**

KVA DAV College for Women, Karnal

Lesson Plan For The Even Semester
(February to May, 2023)

Name of the Teacher – Ms.Monila Bansal
Class- M.Sc.(Sem-IV)
Subject- Mathematics
Paper- Mathematical Aspects of Seismology

February, 2023 **1st Week** **1 Feb - 4 Feb**	Introduction of seismology General form of progressive waves
5 Feb, 2023	**Guru Ravidas Jayanti , Sunday**
2nd Week **6 Feb - 11 Feb**	Harmonic waves, Plane waves The wave equation Principle of superposition Special types of solutions: Progressive and Stationary type solutions of wave equation
12 Feb, 2023	**Sunday**
3rd Week **13 Feb - 17 Feb**	Equation of telegraphy Exponential form of harmonic waves D' Alembert's formula
18 Feb, 2023 **19 Feb, 2023**	**Maha Shivaratri** **Sunday**
4th Week **20 Feb - 25 Feb**	Inhomogeneous wave equation Dispersion: Group velocity, relation between phase velocity and group velocity Reduction of equation of motion to wave equations P and S waves and their characteristics Polarisation of plane P and S waves Snell's law of reflection and Refraction
26 Feb, 2023	**Sunday**
5th Week	Reflection of plane P and SV waves at a free surface

27 Feb - 28 Feb	
March, 2023 **1ˢᵗ Week** **1 March - 4 March**	Partition of reflected energy Reflection at critical angles
2ⁿᵈ Week **5 March -** **12 March, 2023**	**Holi Break**
3ʳᵈ Week **13 March -** **18 March**	Reflection and reflection of plane P,SV and SH waves at an interface Liquid-Liquid interface
19 March, 2023	**Sunday**
4ᵗʰ Week **20 March -** **25 March**	Liquid-Solid interface Solid-Solid interface Rayleigh Waves Love waves
23 March, 2023 **26 March, 2023**	**Shaheedi Diwas/Martyrdom Day of Bhagat** **Singh, Rajguru & Sukhdev** **Sunday**
30 March, 2023	**Ram Navmi**
5ᵗʰ Week **27 March -** **31 March**	Stoneley waves Two dimensional Lamb's problems in an isotropic elastic solid: Area sources and Line sources in an unlimited elastic solid A normal force acts on the surface of a semi-infinite elastic solid

April, 2023 **1ˢᵗ Week** **1 April, 2023**	Tangential forces acting on the surface of a semi-infinite elastic solid
2 April, 2023	**Sunday**
2ⁿᵈ Week **3 April - 8 April**	Three dimensional Lamb's problems in an isotropic elastic solid: Area sources and Point sources in an unlimited elastic solid Area source and Point source on the surface of semiinfinite elastic solid
4 April, 2023 **9 April, 2023**	**Mahavir Jayanti** **Sunday**
3ʳᵈ Week **10 April -** **15 April**	Haskell matrix method for Love waves in multilayered medium Spherical waves: Expansion of a spherical wave into plane waves: Sommerfield's Integral Kirchoff's solution of the wave equation

	Poissons's formula Helmholtz's formula
14 April, 2023 **16 April, 2023**	**Vaisakhi/Dr. B.R. Ambedkar Jayanti** **Sunday**
4th Week **17 April -** **21 April**	Introduction to Seismology: Location of earthquakes Aftershocks and Foreshocks,Earthquake magnitude
22 April, 2023 **23 April, 2023**	**ld-Ul-Fitr/Parshuram Jayanti** **Sunday**
5th Week **24 April -** **29 April**	**Sessional**
30 April, 2023	**Sunday**

May, 2023 **1st Week** **1 May - 6 May**	**Sessional**
7 May, 2023	**Sunday**
2nd Week **8 May - 13 May**	Revision Of the syllabus
14 May, 2023	**Sunday**
17 May, 2023 **Onwards**	**University Examinations**