P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22)ODD SEMESTER

Name of Teacher: Jitender Kumar
Designation: Assistant professor
Subject: Mathematics
Class: Bsc III (NM) and BA Numerical Analysis

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Finite difference operators and their relations. Finding the missing terms and effect of error in a difference tabular values, Interpolation with equal intervals: Newton's forward and Newton's backward interpolation formulae. Interpolation with unequal intervals Newton's divided difference, Lagrange's Interpolation formulae, Hermite formula.	
2	November	Central Differences: Gauss forward and Gauss's backward interpolation formulae Sterling, Bessel formula. Probability distribution of random variables, Binomial distribution, Poisson's distribution, Normal distribution: Mean, Variance and Fitting.	
3	December	Numerical Differentiation: Derivative of a function using interpolation formulae as studied in sections 1 & 11. Eigen Value problems: Power method, Jacobi's method, Given's method, House Holder's method QR-method, Lanczo's method.	
4	January	Numerical Integration: Newton-Cote's Quadrature formula, Trapezoidal rule, Simpson's one-third and three-eighth rule, Chebychev formula, Gauss Quadrature formula. Numerical solution of ordinary differential equations: Single step method-Picard's method. Taylor's series method. Euler's method Runge-Kutta Methods. Multiple step methods, Predictor-corrector method. Modified Euler's method, Milne-Simpson's method.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22)ODD SEMESTER

Name of Teacher: Jitender Kumar
Designation: Associate professor
Subject: Mathematics
Class: Bsc III (NM) & BA III Numerical Analysis

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Finite difference operators and their relations. Finding the missing terms and effect of error in a difference tabular values, Interpolation with equal intervals: Newton's forward and Newton's backward interpolation formulae. Interpolation with unequal intervals Newton's divided difference, Lagrange's Interpolation formulae, Hermite formula.	
2	November	Central Differences: Gauss forward and Gauss's backward interpolation formulae Sterling, Bessel formula. Probability distribution of random variables, Binomial distribution, Poisson's distribution, Normal distribution: Mean, Variance and Fitting.	
3	December	Numerical Differentiation: Derivative of a function using interpolation formulae as studied in sections 1 & 11. Eigen Value problems: Power method, Jacobi's method, Given's method, House Holder's method QR-method, Lanczo's method.	
4	January	Numerical Integration: Newton-Cote's Quadrature formula, Trapezoidal rule, Simpson's one-third and three-eighth rule, Chebychev formula, Gauss Quadrature formula. Numerical solution of ordinary differential equations: Single step method-Picard's method. Taylor's series method. Euler's method Runge-Kutta Methods. Multiple step methods, Predictor-corrector method. Modified Euler's method, Milne-Simpson's method.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Alpana Sharma
Designation: Assistant Professor
Subject: Advanced Calculus
Class: B.A. 3rd sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Oct	Continuity, Sequential continuity, properties of continuous functions, Uniform continuity, Chain rule of differentiability. Mean value theorems, Rolle's theorem and Lagrange's mean value theorem and their geometrical interpretations. Taylor's Theorem with various form of remainders, Darboux intermediate value theorem for derivatives, Indeterminate forms.	Assignment 1
2	Nov	Limit and continuity of real valued functions of two variables. Partial differentiation, Total differentials; Composite functions and implicit functions. Change of variables. Homogeneous functions and Euler's theorem on homogeneous functions. Taylor's theorem for functions of two variables.	Class test, Group Discussion
3	Dec	Differentiability of real valued functions of two variables. Schwarz and Young's theorem. Implicit function theorem. Maxima, Minima and saddle points of two variables. Lagrange's method of multipliers.	Assignment 2
4	Jan	Curves: Tangents, Principal normals, Binormals, Serret-Frenet formulae. Locus of the centre of curvature, spherical curvature, locus of centre of spherical curvature, Involutes, Evolutes, Bertrand curves. Surfaces : Tangent planes , one parameter family of surfaces, envelopes.	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Alpana Sharma
Designation: Assistant professor
Subject: Mathematics **Paper : Groups and ring**
Class: Bsc III (NM) and BA III

Subject/Paper : Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Definition of a group with example and simple properties of groups, Subgroups and Subgroup criteria, Generation of groups, cyclic groups, Cosets, Left and right cosets, Index of a subgroup. Coset decomposition, Lagrange's theorem and its consequences, Normal subgroups. Quotient groups.	
2	November	Homomorphisms, isomorphisms, automorphisms and inner automorphisms of a group. Automorphisms of cyclic groups. Permutation groups. Even and odd permutations. Alternating groups, Cayley's theorem, Centre of a group and derived group of a group.	
3	December	Introduction to rings, subrings, integral domains and fields, Characteristics of a ring. Ring homomorphisms, ideals (principle, prime and Maximal) and Quotient rings, Field of quotients of an integral domain.	
4	January	Euclidean rings, Polynomial rings, Polynomials over the rational field. The Eisenstein's criterion of irreducibility. Polynomial rings over commutative rings. Unique factorization domain. R unique factorization domain implies so is R (X_1, XX)	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Alpana Sharma
Designation: Assistant professor
Subject: Mathematics **Paper : Groups and ring**
Class: Bsc III (NM) and BA III

Subject/Paper : Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Definition of a group with example and simple properties of groups, Subgroups and Subgroup criteria, Generation of groups, cyclic groups, Cosets, Left and right cosets, Index of a subgroup. Coset decomposition, Lagrange's theorem and its consequences, Normal subgroups. Quotient groups.	
2	November	Homomorphisms, isomorphisms, automorphisms and inner automorphisms of a group. Automorphisms of cyclic groups. Permutation groups. Even and odd permutations. Alternating groups, Cayley's theorem, Centre of a group and derived group of a group.	
3	December	Introduction to rings, subrings, integral domains and fields, Characteristics of a ring. Ring homomorphisms, ideals (principle, prime and Maximal) and Quotient rings, Field of quotients of an integral domain.	
4	January	Euclidean rings, Polynomial rings, Polynomials over the rational field. The Eisenstein's criterion of irreducibility. Polynomial rings over commutative rings. Unique factorization domain. R unique factorization domain implies so is R (X_1, XX)	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: -Dr. Sandeep Sharma
Designation: Extension Lecturer
Subject: Mathematics (Solid geometry)
Class: B.Sc. NM & BA 1st Sem.

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Sphere : Plane section of a sphere. Sphere through a given circle. Intersection of twospheres, radical plane of two spheres. Coaxal system of spheres. Cones: Right circular cone, enveloping cone and reciprocal cone. Cylinder: Right circular cylinder and enveloping cylinder.	Assignment 1
2	November	General equation of second degree. Tracing of conics. Tangent at any point to the conic, chord of contact, pole of line to the conic, director circle of conic. System of conics. Confocal conics. Polar equation of a conic, tangent and normal to the conic.	Class Test, Group Discussion
3	December	Central Conicoids : Equation of tangent plane. Director sphere. Normal to the conicoids. Polar plane of a point. Enveloping cone of a conicoid. Enveloping cylinder of a conicoid	Assignment 2
4	January	Paraboloids : Circular section, Plane sections of conicoids. Generating lines. Confocal conicoid. Reduction of second degree equations.	Group Discussion

*Vacation as per university calendar
2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Apoorva Sharma
Designation: Assistant Professor
Subject: Advanced Calculus
Class: B.Sc.(N.M) 3rd sem & B.Sc. (C.S.) 3rd sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Oct	Continuity, Sequential continuity, properties of continuous functions, Uniform continuity, Chain rule of differentiability. Mean value theorems, Rolle's theorem and Lagrange's mean value theorem and their geometrical interpretations. Taylor's Theorem with various form of remainders, Darboux intermediate value theorem for derivatives, Indeterminate forms.	Assignment 1
2	Nov	Limit and continuity of real valued functions of two variables. Partial differentiation, Total differentials; Composite functions and implicit functions. Change of variables. Homogeneous functions and Euler's theorem on homogeneous functions. Taylor's theorem for functions of two variables.	Class test, Group Discussion
3	Dec	Differentiability of real valued functions of two variables. Schwarz and Young's theorem. Implicit function theorem. Maxima, Minima and saddle points of two variables. Lagrange's method of multipliers.	Assignment 2
4	Jan	Curves: Tangents, Principal normals, Binormals, Serret-Frenet formulae. Locus of the centre of curvature, spherical curvature, locus of centre of spherical curvature, Involutes, Evolutes, Bertrand curves. Surfaces : Tangent planes , one parameter family of surfaces, envelopes.	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Apoorva Sharma
Designation: Assistant Professor
Subject: Real Analysis
Class: B.Sc. (N.M.) 5th sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Oct	Riemann integral, Integrability of continuous and monotonic functions, the Fundamental theorem of integral calculus, Mean value theorems of integral calculus.	Assignment 1
2	Nov	Improper integral and their convergence, Comparison tests, Abel's and Dirichlet's test Frullani's integral, Integral as a function of a parameter. Continuity, Differentiability and integrability of an integral of a function of a parameter	Class test, Group Discussion
3	Dec	Definition and examples of metric spaces, neighbourhoods, limit points, interior points, open and closed sets, closure and interior, boundary points, subspace of a metric space, equivalent metrics, Cauchy sequences, completeness, Cantor's intersection theorem, Baire's category theorem, Contraction principle.	Assignment 2
4	Jan	Continuous functions, uniform continuity, compactness for metric spaces, sequential compactness, Bolzano-Weirstrass property, total boundedness, finite intersection property, continuity in relation with compactness, connectedness, components, continuity in relation with connectedness	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) SEMESTER

Name of Teacher: Apoorva
Designation: Assistant professor
Subject: Mathematics Paper: Algebra
Class: BA I

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Symmetric, Skew-symmetric, Hermitian and Skew-Hermitian matrices. Elementary operations on matrices. Rank of a matrix. Inverse of a matrix. Linear dependence and independence of rows and columns of matrices. Row rank and column rank of a matrix. Eigen values, eigen vectors and the characteristic equation of a matrix. Minimal polynomial of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix.	
2	November	Applications of matrices to a system of linear (both homogeneous and non-homogeneous) equations. Theorems on consistency of a system of linear equations. Unitary and Orthogonal Matrices, Bilinear and Quadratic forms.	
3	December	Relations between the roots and coefficients of general polynomial equation in one variable. Solutions of polynomial equations having conditions on roots. Common roots and multiple roots. Transformation of equations.	
4	January	Nature of the roots of an equation. Descarte's rule of signs. Solutions of cubic equations (Cardan's method). Biquadratic equations and their solutions.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22)ODD SEMESTER

Name of Teacher: Vikram Gupta
Designation: Assistant professor
Subject: Mathematics
Class: Bsc III (CS) Numerical Analysis

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Finite difference operators and their relations. Finding the missing terms and effect of error in a difference tabular values, Interpolation with equal intervals: Newton's forward and Newton's backward interpolation formulae. Interpolation with unequal intervals Newton's divided difference, Lagrange's Interpolation formulae, Hermite formula.	
2	November	Central Differences: Gauss forward and Gauss's backward interpolation formulae Sterling, Bessel formula. Probability distribution of random variables, Binomial distribution, Poisson's distribution, Normal distribution: Mean, Variance and Fitting.	
3	December	Numerical Differentiation: Derivative of a function using interpolation formulae as studied in sections 1 & 11. Eigen Value problems: Power method, Jacobi's method, Given's method, House Holder's method QR-method, Lanczo's method.	
4	January	Numerical Integration: Newton-Cote's Quadrature formula, Trapezoidal rule, Simpson's one-third and three-eighth rule, Chebychev formula, Gauss Quadrature formula. Numerical solution of ordinary differential equations: Single step method-Picard's method. Taylor's series method. Euler's method Runge-Kutta Methods. Multiple step methods, Predictor-corrector method. Modified Euler's method, Milne-Simpson's method.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Vikram Gupta
Designation: Assistant professor
Subject: Mathematics
Class: BSc III(CS) STATICS

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Composition and resolution of forces. Parallel forces. Moments and Couples	
2	November	Analytical conditions of equilibrium of coplanar forces. Friction. Centre of Gravity.	
3	December	Virtual work. Forces in three dimensions. Poinsots central axis.	
4	January I	Wrenches. Null lines and planes. Stable and unstable equilibrium.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Vikram Gupta
Designation: Assistant professor
Subject: Mathematics **Paper: Group and Ring**
Class: Bsc III (CS)

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Definition of a group with example and simple properties of groups, Subgroups and Subgroup criteria, Generation of groups, cyclic groups, Cosets, Left and right cosets, Index of a subgroup. Coset decomposition, Lagrange's theorem and its consequences, Normal subgroups. Quotient groups.	
2	November	Homomorphisms, isomorphisms, automorphisms and inner automorphisms of a group. Automorphisms of cyclic groups. Permutation groups. Even and odd permutations. Alternating groups, Cayley's theorem, Centre of a group and derived group of a group.	
3	December	Introduction to rings, subrings, integral domains and fields, Characteristics of a ring. Ring homomorphisms, ideals (principle, prime and Maximal) and Quotient rings, Field of quotients of an integral domain.	
4	January	Euclidean rings, Polynomial rings, Polynomials over the rational field. The Eisenstein's criterion of irreducibility. Polynomial rings over commutative rings. Unique factorization domain. R unique factorization domain implies so is R (X_1, XX)	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Parveen
Designation: Assistant professor
Subject: Mathematics Statics
Class: Bsc N.M 3rd Sem.

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Composition and resolution of forces. Parallel forces. Moments and Couples	Assignment 1
2	November	Analytical conditions of equilibrium of coplanar forces. Friction. Centre of Gravity.	Class Test, Group Discussion
3	December	Virtual work. Forces in three dimensions. Poinsots central axis.	Assignment 2
4	January I	Wrenches. Null lines and planes. Stable and unstable equilibrium.	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) SEMESTER

Name of Teacher: Parveen
Designation: Assistant professor
Subject: Mathematics Algebra
Class: Bsc 1st N.M

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Symmetric, Skew-symmetric, Hermitian and Skew-Hermitian matrices. Elementary operations on matrices. Rank of a matrix. Inverse of a matrix. Linear dependence and independence of rows and columns of matrices. Row rank and column rank of a matrix. Eigen values, eigen vectors and the characteristic equation of a matrix. Minimal polynomial of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix.	Assignment 1
2	November	Applications of matrices to a system of linear (both homogeneous and non-homogeneous) equations. Theorems on consistency of a system of linear equations. Unitary and Orthogonal Matrices, Bilinear and Quadratic forms.	Class Test, Group Discussion
3	December	Relations between the roots and coefficients of general polynomial equation in one variable. Solutions of polynomial equations having conditions on roots. Common roots and multiple roots. Transformation of equations.	Assignment 2
4	January	Nature of the roots of an equation. Descarte's rule of signs. Solutions of cubic equations (Cardan's method). Biquadratic equations and their solutions.	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

PiG.GOVT.COLLEGEFORWOMEN,JIND

LESSON-PLAN(Session2021-22) ODDSEMESTER

NameofTeacher: ManishaDevi
Designation:assistantprofessor
Subject:Business Mathematics
Class:B.Com first sem. Sec B & Hons.

Subject/Paper: Sr.No.	Months	Topicstobecovered	Remarksifany,
1	October	Logarithms. Sequences and Series: Arithmetic & Geometric Progressions Differentiation : Idea of simple derivative of different functions (Trigonometric functions need not be covered). Rules of differentiation - simple standard forms.	
2	November	Maxima and Minima of functions of one variable involving 2nd or 3rd order derivatives) relating to cost, revenue and profit. Matrices and Determinants: Definition of a matrix, Types of matrices; Algebra of matrices: Properties of determinants; calculation of values of determinants upto third order: Adjoint of a matrix, elementary row or column operations, Finding inverse of a matrix.	Firstassignment
3	December	Solution of a system of linear equations having unique solution and involving not more than three variables. Compound Interest and Annuities: Certain different types of interest rates,	Unittest
4	January	Compound Interest and Annuities: Certain different types of interest rates, concept. of present value and amount of a sum: Types of annuities; Present value and amount of an annuity, including the case of continuous compounding; Valuation of simple loans and debentures; Problems relating to sinking funds.	SecondAssignment

*Vacationasperuniversitycalendar
2assignmentsand01unittestwillbetakenasperschedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-2022) ODD SEMESTER

Name of Teacher: Manisha Devi
Designation: Assistant professor
Subject: Calculus
Class: B.A 1st Sem.,Bsc.N.M.1st Sem.

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Limits, continuity by €-$ definitiondefinition, Types of disconutinities and Differentiability of functions. Successive differentiation of functions in implicit, explicit and parametric form, Lebnitz theorem. Taylor's theorem with lagrange's form and cauchy form of remainder after n terms.	
2	November	Asymptotes parallel to coordinate axis and oblique asymptotes in Cartesian and Polar form. Radius of curvature for Cartesian curve, parametric curves, polar curves, pedal curves.	First assignment
3	December	Reduction formula, Singular points. Double points, points of inflexion, cusps, node and conjugate points. Tracing of curve with different type of equation.	Unit test
4	January	Rectification, length of curves in Cartesian, parametric and polar curves. Quadrature Sectorial area, volumes and surfaces of solids of revolution about x axis and about any line.	Second Assignment

*Vacation as per university calendar

- .2 assignments and 01 unit test will be taken as per schedule.

PiG.GOVT.COLLEGEFORWOMEN,JIND

LESSON-PLAN(Session2021-22) ODDSEMESTER

NameofTeacher:ManishaDevi
Designation:assistantprofessor
Subject:Business Mathematics
Class:B.Com first sem. Sec B & Hons.

Subject/Paper: Sr.No.	Months	Topicstobecovered	Remarksifany,
1	October	Logarithms. Sequences and Series: Arithmetic & Geometric Progressions Differentiation : Idea of simple derivative of different functions (Trigonometric functions need not be covered). Rules of differentiation - simple standard forms.	
2	November	Maxima and Minima of functions of one variable involving 2nd or 3rd order derivatives) relating to cost, revenue and profit. Matrices and Determinants: Definition of a matrix, Types of matrices; Algebra of matrices: Properties of determinants; calculation of values of determinants upto third order: Adjoint of a matrix, elementary row or column operations, Finding inverse of a matrix.	Firstassignment
3	December	Solution of a system of linear equations having unique solution and involving not more than three variables. Compound Interest and Annuities: Certain different types of interest rates,	Unittest
4	January	Compound Interest and Annuities: Certain different types of interest rates, concept. of present value and amount of a sum: Types of annuities; Present value and amount of an annuity, including the case of continuous compounding; Valuation of simple loans and debentures; Problems relating to sinking funds.	SecondAssignment

*Vacationasperuniversitycalendar
2assignmentsand01unittestwillbetakenasperschedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-2022) ODD SEMESTER

Name of Teacher: Manisha Devi
Designation: Assistant professor
Subject: Calculus
Class: B.A 1st Sem.,Bsc.N.M.1st Sem.

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Limits, continuity by €-$ definitiondefinition, Types of disconutinities and Differentiability of functions. Successive differentiation of functions in implicit, explicit and parametric form, Lebnitz theorem. Taylor's theorem with lagrange's form and cauchy form of remainder after n terms.	
2	November	Asymptotes parallel to coordinate axis and oblique asymptotes in Cartesian and Polar form. Radius of curvature for Cartesian curve, parametric curves, polar curves, pedal curves.	First assignment
3	December	Reduction formula, Singular points. Double points, points of inflexion, cusps, node and conjugate points. Tracing of curve with different type of equation.	Unit test
4	January	Rectification, length of curves in Cartesian, parametric and polar curves. Quadrature Sectorial area, volumes and surfaces of solids of revolution about x axis and about any line.	Second Assignment

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Sonu Kansal
Designation: Assistant Professor
Subject: Real Analysis
Class: B.Sc. (C.S.) 5th sem & B.A. 5th sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Oct	Riemann integral, Integrability of continuous and monotonic functions, the Fundamental theorem of integral calculus, Mean value theorems of integral calculus.	Assignment 1
2	Nov	Improper integral and their convergence, Comparison tests, Abel's and Dirichlet's test Frullani's integral, Integral as a function of a parameter. Continuity, Differentiability and integrability of an integral of a function of a parameter	Class test, Group Discussion
3	Dec	Definition and examples of metric spaces, neighbourhoods, limit points, interior points, open and closed sets, closure and interior, boundary points, subspace of a metric space, equivalent metrics, Cauchy sequences, completeness, Cantor's intersection theorem, Baire's category theorem, Contraction principle.	Assignment 2
4	Jan	Continuous functions, uniform continuity, compactness for metric spaces, sequential compactness, Bolzano-Weirstrass property, total boundedness, finite intersection property, continuity in relation with compactness, connectedness, components, continuity in relation with connectedness	Group Discussion

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: Sonu Kansal
Designation: Assistant professor
Subject: Mathematics
Class: BA II STATICS

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Composition and resolution of forces. Parallel forces. Moments and Couples	
2	November	Analytical conditions of equilibrium of coplanar forces. Friction. Centre of Gravity.	
3	December	Virtual work. Forces in three dimensions. Poinsots central axis.	
4	January I	Wrenches. Null lines and planes. Stable and unstable equilibrium.	

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

P.I.G. GOVT. COLLEGE FOR WOMEN, JIND
LESSON-PLAN (Session 2021-22) ODD SEMESTER

Name of Teacher: -Dr. Sonu Kansal

Designation: Extension Lecturer

Subject: Mathematics (Solid geometry)

Class: B.Sc. CS 1st Sem.

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	October	Sphere : Plane section of a sphere. Sphere through a given circle. Intersection of twospheres, radical plane of two spheres. Coaxal system of spheres. Cones: Right circular cone, enveloping cone and reciprocal cone. Cylinder: Right circular cylinder and enveloping cylinder.	Assignment 1
2	November	General equation of second degree. Tracing of conics. Tangent at any point to the conic, chord of contact, pole of line to the conic, director circle of conic. System of conics. Confocal conics. Polar equation of a conic, tangent and normal to the conic.	Class Test, Group Discussion
3	December	Central Conicoids : Equation of tangent plane. Director sphere. Normal to the conicoids. Polar plane of a point. Enveloping cone of a conicoid. Enveloping cylinder of a conicoid	Assignment 2
4	January	Paraboloids : Circular section, Plane sections of conicoids. Generating lines. Confocal conicoid. Reduction of second degree equations.	Group Discussion

*Vacation as per university calendar

2 assignments and 01 unit test will be taken as per schedule.