TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Dr Raj Kamal *Department: Mathematics*

Subject/Course: Linear programming problems *Programme: M.Sc (P)*

Semester: 2nd Sem

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Simultanious linear equations, Basic Solution, Linear Transformation, Point Sets, Line and Hyper planes, Convex Set , Convex cone, Restatement of LPP, Slack and surplus variables, reduction of and feasible solution to basic feasible solution, Problems on chapters Revision of Unit-1 Test	*Jan -Feb*
2.	Improvement of basic feasible solution, bounded and unbounded solution, Simplex method, Initial basic feasible solution, Two phase method, Phase one, Phase two, Artificial variables, Solution space, degeneracy problem Revision of Unit 2 Test	*March*
3.	Selection of vector to be removed, order of vectors, use of perturbation, generalized simplex method, Revised simplex methods, Standard form IIcomparison of simplex and revised simplex method Revision of Unit-3	*April*
4.	Dual linear programming problems, fundamental properties of dual problems, other formulations of dual problems, complemantry slackness, Unbounded solution in primal, alternative derivative of the dual simplex algorithm *Revision and Test-3*	*May*

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Poonam Devi *Department: Mathematics*

Subject/Course: Ordinary differential equation *Programme: Msc*

Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
5.	Intial value problems & Equivalent integral Equation, E-approximate solution Equicontinous formily of function, Ascoli Arzela thm, Cauchy-Peano existance thm, Uniquenes of solution, Lipschitz Condition; Differential Inequalties and uniqueness, Picard-Lindelof thm for local existence and Uniquenen of solution .	31 Jan, 2024 & Feburary, 2024
6.	(assignment Ist) Solution of Intial value Problem By Picard-Method, Gronwell,s inequalities, Linear Diff. System, Definition & notations of linear Homogenious system, Fundamental Matrix : Adjoint system. reduction to Smaller Hemogenous system, Non- Homogenous Linear system, Variation of Constants Linear system with Constant Coefficients	March, 2024
7.	Floquet theory, Higher order equation, L.D. E of order n, Linear Combinations Linear dep. & Linear Indep. of solution, Wronakian theory, Definitions, Necessary & sufficient condition for Linear dep. & Indep. of Home L.D.E, Ables Identity , Fundamental set Assignment. 2nd & Test.	April, 2024
8.	Reduction of order, Non- Homogenous L.D.E . Variation of Parameters, adjoint Eq, Lagrange's Identity, Green's formulla, linear equation of Order in with Constant Coefficients.	May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Poonam Devi *Department: Mathematics*

Subject/Course: Programming in C *Programme: Bsc*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Programmer's model of a computer. Algorithms. Flow Charts. Data Types, Operators and expressions, Input/outputs functions.	31 Jan, 2024 & Feburary, 2024
2.	Decisions control structure :Decision statements, Logical and conditional statements, Implementation of Loops, Switch Statement and Case control structures. Functions, Proprocessors and Arrays, Strings: Character data type, Standard string handling functions,	March, 2024
3.	Arithmetic operations on characters. Structures Definition, using structures, use of structures in arrays and arrays in structures. Pointers: Pointers data type, Pointers and arrays, Pointers and functions, Solution of algebraic and Transcendental equations ,Bisection method, Regula-Falsi method, Secant method, Newton-Raphson's method. Newton's iterative method for finding pth root of a number, Order of convergence of above methods. Assignment. 2nd & Test.	April, 2024
4.	. Simultaneous linear algebraic equations Gauss-elimination method, Gauss-Jordan method, Triangularization method (LU decomposition method) Crout's method, Cholesky decomposition method. Iterative method, Jacobi's method, Gauss-Seidel's method, Relaxation method	May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Bhagwan Dass Department: Mathematics

Subject/Course: **Abstract Algebra-II** Programme: M.Sc (Maths)

Semester: 2nd

Unit	Name of Topic/Contents	Tentative Dates/Days
9.	Modules, Cyclic modules, Simple and semi-simple modules, Schur's lemma, Free modules, Fundamental structure theorem of finitely generated modules over principal ideal domain and its applications to finitely generated abelian groups.	Jan/Feb-2024
10.	Neotherian and Artininan modules and rings with simple properties and examples, Nil and Nilpotent ideals in Neotherian and Artinian rings, Hilbert Basis theorem.	March-2024
11.	Hom(R,R), Opposite rings, Wedderburn Artin theorem, Maschk's theorem, Equivalent statement for left Artinian rings having non-zero nilpotent ideals, Uniform modules, Primary modules, Canonical forms Similarity of linear transformations	April-2024
12.	Invariant subspaces, Reduction to triangular form, Nilpotent transformations, The primary decomposition theorem, Rational canonical forms, Jordan blocks and Jordan forms.	May-2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Bhagwan Dass Department: Mathematics

Subject/Course: **Linear Algebra** Programme: B.Sc III- A

Semester: 6th

Unit	Name of Topic/Contents	Tentative Dates/Days
1.	Vector spaces, subspaces, Sum and Direct sum of subspaces, Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space, Existence theorem for basis of a finitely generated vector space, Finite dimensional vector spaces, Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.	Jan/Feb-2024
2.	Homomorphism and isomorphism of vector spaces, Linear transformations and linear forms on vector spaces, Vector space of all the linear transformations Dual Spaces, Bidual spaces, annihilator of subspaces of finite dimensional vector spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem.	March-2024
3.	Algebra of Linear Transformation, Minimal Polynomial of a linear transformation, Singular and non-singular linear transformations, Matrix of a linear Transformation, Change of basis, Eigen values and Eigen vectors of linear transformations, Inner product spaces, Cauchy-Schwarz inequality, Inner product spaces, Cauchy-Schwarz inequality.	April-2024
4.	Orthogonal vectors, Orthogonal complements, Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces, Gram-Schmidt, Orthogonalization process, Adjoint of a linear transformation and its properties, Unitary linear transformations.	May-2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: AJAY SINGH *Department: MATHEMATICS*

Subject/Course: Probability distribution *Programme: MSc previous*

Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Bernoulli distribution and its moment , Binomial Distribution - moments , recurence relation ,mean ,mode,M.G.F.,additive prop. ,Characterstic function, cumulants- Recurence relation , P.G.F. and recurrence relation for probability of B.D. , numerical of B.D.. Poisons distribution - moment ,mode , recurence relation , M.G.F., P.G.F, additive prop. ,independent poison variate Assinmment -1	31 Jan, 2024 & Feburary, 2024
2.	Negative Binomial distribution, m.g.f. , commulant ,p.g.f., deduction of moment negative B.D. from those of B.D. numerical problems. Discrete uniform distribution , Geometric distribution ,lack of memory , moment & m.g.f. of Geom. Distribution, Mean & variance of Hypergeometric distribution (assignment 2nd)	March, 2024
3.	Countinous Uniform distribution , moment & m.g.f. , characterstic function &mean deviation. Normal distribution - mode , median .m.g.f., c.g.f. and moments linear combination of normal variate , point of inflexion, property of normal distribution and problems . Test	April, 2024
4.	Gamma Distribution - m.g.f. ,properties , Beta distribution of first &second kind , exponential distribution + Revision of Syllabus	May,2024(til 15 may)

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: *AJAY SINGH* *Department: mathematics*

Subject/Course: Computer Oriented statistical Method *Programme: BCA*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Probability : Probability rules , Random variables & probability functions , Expected values, Bivariate expected values. Data Types, Sources of Data, Data Summarization, Central Tendency Variance, Standard deviation, Correlation Analysis , Correlation Coefficient and Rank Correlation, Linear Regression, Weighted Least Square Regression, Log Linear Regression. Assinmment 1	Jan,feb.,2024
2.	Sampling: Simple Random Sampling. Systematic Sampling, Stratified Sampling, Cluster Sampling Quota Sampling, Minimax Sampling, Line Intercept Sampling, Panel Sampling. Snowball Sampling, Methods of Producing Random Samples, Random Walk Monte Carlo Methods, Training Based Markov Chain Monte Carlo Methods, Sample Size Determination. Sampling and Data Collection, Sampling Errors and Biases, Non Sampling Errors. Statistical Inference : parameters and likelihood s , point estimation: Bias , method of moment , least square , weighted least square, maximum likelihood. Assinmment 2	March,2024
3.	Interval Estimation: Confidence Intervals, Single Sample Interval for Gaussian Parameters, Two Sample Interval for Gaussian Parameters, Wald Intervals, Likelihood Intervals, Delta Method Intervals, Bootstrup Intervals. Testing Hypothesis : T-test , F test , chi square test , one way anova, two way anova , single sample test for Gaus parameters. Test	April,2024
4.	Two Samples Test for Gaussian Parameters, Wald Test, likelihood ratio test + revision of syllabus.	May,2024(till 15 may)

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Neeru Department: Mathematics

Subject/Course: Linear Algebra Programme: B.Sc. sec- A,C AND B.A

Semester: 6th

Unit	Name of Topic/Contents	Tentative Dates/Days
1.	Vector spaces, subspaces, Sum and Direct sum of subspaces, Linear span, linearly Independent and dependent subsets of a vector space. Finitely generated vector space, Existence Theorem for basis of a finitely generated vector space, Finite dimensional vector spaces, Invariance of the number of elements of basis sets, Dimensions, Quotient space of its dimension.	JANUARY& FEBRUARY
2.	Homomorphism and isomorphism of vector spaces, Linear transformations and linear Forms on vector spaces, Vector space of all the linear transformations. Duel Spaces, Bidual Spaces, annihilator of subspaces of finite dimensional vector spaces. Null space, Range space of a linear transformation, Rank and Nullity Theorem. Assignment 1	March
3.	Algebra of Linear Transformation, Minimal Polynomial of linear transformation, Singular and non- singular linear transformations, Matrix of a linear transformation, Change of basis, Eigen values and Eigen vectors of linear transformation. Class test+assignment 2	April
4.	Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements, Orthogonal sets nad Basis, Bessel's inequality for finite dimensional vector space, Gram-Schmidt Orthogonalization process, Adjoint of a linear transformation and its properties, Unitary Linear transformations.	May

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Neeru Department: Mathematics

Subject/Course: Special Functions & Integral Transforms Programme: B.A

Semester: 4th

Unit	Name of Topic/Contents	Tentative Dates/Days
1.	Power Series , Bessel's Equation and Function , Legendre's Equation + 1st Assignment	JANUARY& FEBRUARY
2.	Hermite's Equation , Laplace Transforms , Inverse Laplace Transforms + Test	March
3.	Use of Laplace Transforms in Integral Equations , Solution of Differential Equations by Laplace Transformation , Fourier Transforms + 2^{nd} Assignment	April
4.	Solution of Differential Equations by Fourier Transforms & Revision	May

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: GURDEEP *Department: MATHEMATICS*

Subject/Course: measure and integration theory *Programme: M.Sc previous*

Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Set function and intuitive idea of measure,elementry properties , measurable set and their fundamental properties,lebesgue measure of a set of real numbers ,algebra of measurable set,borel set equivalent formulation of measurable set in term of open closed ,non measurable set , measurable function and their equivalent formulation (Assignment 1st)	31 Jan, 2024 & Feburary, 2024
2.	Properties of measurable function,approximation by sequence of simple function measurable function as nearly continuous function,egorrof theorm ,lusin theorm,connnvergence , F.reiz theorem ,short coming of reimann integral ,lebesgue integral of bounded function its properties (Assignment 2nd)	March, 2024
3.	Lebesgue integral as generlization of reimann integral .Bounded convergence theorm ,lebesgue theorm regarding points of discontinue of reimann integrable function, integral of non negative function,Fatou lemma , monoton convergence theorm (Test.)	April, 2024
4.	General lebesgue integral ,lebesgue convergence theorm ,Revision of syllabus	*Till 15* May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: GURDEEP *Department: MATHEMATICS*

Subject/Course: Algebra and number theory *Programme: B.A/BSc sec--A,B*

Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Matrices, orthogonal and unitary matrix Rank of matrix ,Eigen value ,eigen vector ,and characteristics equation of matrix (Assignment 1st)	(January/February 2024)
2.	Relation between roots and cofficient of an equation , Transformation of equation ,Descarte rule of sign (Assignment 2nd)	(MARCH 2024)
3.	Solution of cubic and biquadratic equation ,Divisblity , Congruence (Test)	(APRIL 2024)
4.	Fermat ,Euler Wilsons and chinese remailder theorm and revision	(Till 15 MAY 2024)

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Mannu Arya *Department: Mathematics*

Subject/Course: sequences and series *Programme: B.A*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1	Boundedness of the set of real numbers; least upper bound, greatest lower bound of a set, neighborhoods, interior points, isolated points, limit points, open sets, closed set, interior of a set, closure of a set in real numbers and their properties.	JANUARY& FEBRUARY
2	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	March
3	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	*April*
4	Alternating series, Leibnitz's test, absolute and conditional convergence, Arbitrary series: abel's lemma, Abel's test, Dirichlet's test, Insertion and removal of parenthesis, rearrangement of terms in a series, Dirichlet's theorem, Riemann's Re-arrangement theorem	*May*

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Mannu Arya *Department: Mathematics*

Subject/Course: Programming in C and numerical methods *Programme: B.A*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Programmer's model of a computer. Algorithms. Flow Charts. Data Types, Operators and expressions, Input/outputs functions.	JANUARY& FEBRUARY
2.	Decisions control structure :Decision statements, Logical and conditional statements, Implementation of Loops, Switch Statement and Case control structures. Functions, Proprocessors and Arrays, Strings: Character data type, Standard string handling functions	March
3.	Arithmetic operations on characters. Structures Definition, using structures, use of structures in arrays and arrays in structures. Pointers: Pointers data type, Pointers and arrays, Pointers and functions, Solution of algebraic and Transcendental equations ,Bisection method, Regula-Falsi method, Secant method, Newton-Raphson's method. Newton's iterative method for finding pth root of a number, Order of convergence of above methods.	*April*
4.	Simultaneous linear algebraic equations Gauss-elimination method, Gauss-Jordan method, Triangularization method (LU decomposition method) Crout's method, Cholesky decomposition method. Iterative method, Jacobi's	*May*

	method, Gauss-Seidel's method, Relaxation method	

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Mannu Arya *Department: Mathematics*

Subject/Course: sequences and series *Programme: B.sc sec-d*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
13.	Boundedness of the set of real numbers; least upper bound, greatest lower bound of a set, neighborhoods, interior points, isolated points, limit points, open sets, closed set, interior of a set, closure of a set in real numbers and their properties.	JANUARY& FEBRUARY
14.	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	March
15.	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	*April*
16.	Alternating series, Leibnitz's test, absolute and conditional convergence, Arbitrary series: abel's lemma, Abel's test, Dirichlet's test, Insertion and removal of parenthesis, rearrangement of terms in a series, Dirichlet's theorem, Riemann's Re-arrangement theorem	*May*

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Mannu Arya *Department: Mathematics*

Subject/Course: Programming in C and numerical methods *Programme: B.sc sec-d*

Semester: 4th

Untt	*Name of Topic/Contents*	*Tentative Dates/Days*
1	Programmer's model of a computer. Algorithms. Flow Charts. Data Types, Operators and expressions, Input/outputs functions.	JANUARY& FEBRUARY
2	Decisions control structure :Decision statements, Logical and conditional statements, Implementation of Loops, Switch Statement and Case control structures. Functions, Proprocessors and Arrays, Strings: Character data type, Standard string handling functions	March
3	Arithmetic operations on characters. Structures Definition, using structures, use of structures in arrays and arrays in structures. Pointers: Pointers data type, Pointers and arrays, Pointers and functions, Solution of algebraic and Transcendental equations ,Bisection method, Regula-Falsi method, Secant method, Newton-Raphson's method. Newton's iterative method for finding pth root of a number, Order of convergence of above methods.	*April*
4	Simultaneous linear algebraic equations Gauss-elimination method, Gauss-Jordan method, Triangularization method (LU decomposition method) Crout's method, Cholesky decomposition method. Iterative method, Jacobi's method, Gauss-Seidel's method, Relaxation method	*May*

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Reena Devi *Department:* Mathematics

Subject/Course: : Real and Complex Analysis
Programme: : B.Sc.3 rd (A,B,C)& B.A.3rd

Semester: : 6 th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Jacobians , Beta and Gamma functions + 1st Assignment	January & February 2024
2.	Double and Triple integrals , Dirichlets integrals , Change of order of integration in double integrals. Fouriers series : Fourier expansion of piecewise monotonic functions , Properties of Fourier Coefficients , Dirichlets conditions, Parsevals identity for Fourier series , Fourier series for even and odd functions , Half range series , Change of intervals + Test	March 2024
3.	Extended Complex Plane , Stereographic projection of complex numbers , continuity and differentiability of complex functions , Analytic functions , Cauchy – Riemann equations. Harmonic functions.Mappings by elementary functions : Translation, Rotation,Magnification and Inversion, Conformal Mappings, Mobius Transformations. Fixed points , Cross ratio, Inverse Points + 2nd Assignment	April 2024
4.	Critical mappings + Revision	May 2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Reena Devi *Department:* : Mathematics

Subject/Course: Special Functions And Integral Transforms *Programme:* B.Sc. 2nd (B)

Semester: : 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	Series solution of differential equations: Power series method, Definitions of Beta and Gamma functions, Bessel equation and its solution : Bessel functions and their properties, Convergence , Recurrence relations and generating functions , Orthogonality of Bessel functions + 1 st Assignment	January & February 2024
2.	Legendre and Hermite differential equations and their solutions : Legendre and Hermite functions and their properties , Recurrence relations and generating functions. Orthogonality of Legendre and Hermite polynomials , Rodrigues Formula for Legendre and Hermite Polynomials , Laplace Integral Representation of Legendre polynomial. Laplace Transforms : Existence theorem for Laplace transform , Linearity of the Laplace transforms , Shifting theorems , Laplace transforms of derivatives and integrals , Differentiation and integration of Laplace transforms , Convolution theorem + Test	March 2024
3.	Inverse Laplace transforms , convolution theorem , Inverse Laplace transforms of derivatives and integrals , Solution of ordinary differential equations using Laplace transform , Fourier transforms : Linearity property , Shifting , Modulation , Convolution theorem , Fourier transform of derivatives , Relations between Fourier transform and Laplace transform , Parsevals identity for Fourier transforms + 2 nd assignment	April 2024
4.	Solution of differential equations using Fourier transforms + Revision	May 2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Reena Rani *Department: Mathematics*

Subject/Course: Mathematics for commerce and social sciences *Programme: MDC*
Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1	**Matrix and Determinants. Definition of a Matrix, order, Equality, Types of matrix, operation on matrix, addition and multiplication, Minors, co-factors, Determinant, Properties of determinant, Adjoint and Inverse, solution of simultaneous linear equations.**	31 Jan, 2024 & Feburary, 2024
2	**differentiation, Derivative of simple functions, maxima and minima of a function, cost, Demand, Production Profit functions and other function related to commercial and Social Problems. Integration of simple function and its application in commercial and economic problems (Assignment).**	March, 2024
3	**Simple and Compound Interest .Annuities: Types of annuities, Present Value and amount of an annuity, Valuation of simple loans and Problems related to sinking funds. Class Test.**	April, 2024
4	**Linear Programming: Formulation of LPP and their solution by graphical and simplex methods. Application of linear programming problem in solving social science, and business problems. Revision of syllabus.**	May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Reena Rani *Department: Mathematics*

Subject/Course:Calculation skills with Vedic Mathematics *Programme: SEC*

Semester: 2nd

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1	**History of vedic mathematics and introduction to its sutras and upsutras.** **Addition in vedic maths: without carrying, dot Meth method subtraction in vedic mathematics: Nikhilam navatashcaramam Dashatah.** **Fraction: Addition and Subtraction**	31 Jan, 2024 & Feburary, 2024
2	**Multiplicatuin of two numbers of two digits (ekadhikena Purvena method). Multiplication of two numbers of three digits(ekadhikena Purvena method, Urdhva Tiryagbhyam method), combined operation, generating tables (Nikhilam) Division: Nikhilam navatashcaramam Dashatah (Two digit divisor and three digit divisor) (Assignment).**	March, 2024
3	**Divisibility: (ekadhikena Purvena method) Two digits divisor, (Eknunern Purvena method) Two digit divisor, LCM,HCF.** **Squares of any two digit numbers : Base method, squares of numbers ending in 5. ekadhikena Purvena method. Class test.**	April, 2024
4	**Square roots : Dwandwa yoga (Duplex method) ,square root (four digit numbers) Cubing: Yavadunam Method, cube root(Six digit numbers) . Revision of syllabus.**	May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Reena Rani *Department: Mathematics*

Subject/Course: Element of business Mathematics *Programme: B.com* *Semester: 2nd*

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1.	**Differentiation, Derivative of simple functions and other function having application in business studies, maxima and minima of a function, cost, Demand, Production Profit functions and other function related to commerce and Business.**	31 Jan, 2024 & Feburary, 2024
2.	**Integration; Definite and indefinite, basic rules of integration ,Application of integration in commercial and business problems. assignment**	March, 2024
3.	**Binomial Theorem; permutation and combination.** **All problems related to these topics and discussion of theorems related to these topics .class test**	April, 2024
4.	**Linear Programming: Formulation of LPP and their solution by graphical and simplex methods. Application of linear programming problem in business and commerce. Revision of syllabus.**	May,2024

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Anil Kumari *Department: Mathematics*

Subject/Course: Dyanamics *Programme: B.SC/B.A, SEC-A,B,C*

Semester: 6th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1	*Velocity and acceleration along radial, transverse, tangential and normal directions. Relative velocity and acceleration.simple harmonic motion. Elastic strings.* *Problems on chapters*	JANUARY& FEBRUARY
2	*Mass, Momentum and Force. Newton's laws of motion. Work,power and energy.definitions of conservative forces and impulsive forces.*	March
3	Motion on smooth and rough plane curves. Projectile motion of a particle in a plane.Vector angular velocity.	April
4	in terms of different co- General motion of a rigid bboady : central orbits, Kepler's laws of motions. Motion of a particle in three dimensions. Acceleration ordinate systems. Problems on chapters	*May*

TENTATIVE LESSON PLAN (SEMESTERS)

SESSION: 2023-24

Name of the Teacher: Anil Kumari *Department: Mathematics*

Subject/Course: sequences and series *Programme: B.sc sec-A*

Semester: 4th

Unit	*Name of Topic/Contents*	*Tentative Dates/Days*
1	Boundedness of the set of real numbers; least upper bound, greatest lower bound of a set, neighborhoods, interior points, isolated points, limit points, open sets, closed set, interior of a set, closure of a set in real numbers and their properties.	JANUARY& FEBRUARY
2	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	March
3	Sequence: Real Sequences and their convergence, Theorem on limits of sequence, Bounded and monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, Subsequences, Subsequential limits.	*April*
4	Alternating series, Leibnitz's test, absolute and conditional convergence, Arbitrary series: abel's lemma, Abel's test, Dirichlet's test, Insertion and removal of parenthesis, rearrangement of terms in a series, Dirichlet's theorem, Riemann's Re-arrangement theorem	*May*