GOVT SHIVALIK COLLEGE,NAYA NANGAL

TEACHING PLAN (SESSION23-24)

PAPER-C-LANGUAGE

TEACHER NAME-RAMINDER JEET KAUR

Class-BCA Sem-I

Sr. no	Date	Subject Matter
1	01/08/2023-10/08/2023	**Programming Process**: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.
2	11/08/2023 20/09/2023	**Basic structure of C program**: History of C, Structure of a C program, Character set, Identifiers and keywords, constants, variables, data types.
3	21/082023-30/08/2023	**Operators and expressions**: Arithmetic, Unary, Logical, Relational operators, assignment operators, Conditional operators, Hierarchy of operations type conversion.
4	01/09/2023-10/09/2023	**Control statements**: branching statements (if, if else, switch), loop statements (for, while and do-while), jump statements (break, continue, goto), nested control structures.
5	11/09/2023-20/09/2023	**Functions**: Library functions and user defined functions, prototype, definition and call, formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion.
6	21/09/2023-30/09/2023	**I/O functions**:formatted & unformatted console I/O functions
7	01/10/2023-10/10/2023	**Storage Classes**: automatic, external, static and register variables.
8	11/10/2023-20/10/2023	**Arrays:** – One dimensional and two dimensional arrays, Declaration, initialization, reading values into an array, displaying array contents
9	21/10/2023-30/10/2023	**Strings**: input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat & strrev), table of strings.
10	01/11/2023-10/11/2023	**Structures and unions**: using structures and unions, comparison of structure with arrays and union.
11	11/11/2023-20/11/2023	**Pointers**: pointer data type, pointer declaration, initialization, accessing values using pointers, pointers and arrays.

12	21/11/23- 30/11/23	**Introduction to Files in C**: opening and closing files. Basic I/O operation on files.

GOVT SHIVALIK COLLEGE, NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

SUBJECT- DISCRETE MATHEMATICS

TEACHER NAME-RAMINDER JEET KAUR

CLASS-BCA 2ND YEAR SEMIII

Sr. no	Date	Subject Matter
1	01/08/2023-10/08/2023	**Set Theory:** Sets, Type of sets,Setoperations,PrincipleofInclusion-Exclusion,Cartesianprodouctofsets,Partitions.
2	11/8/2023 22/08/2023	**Logic:**Propositions,Implications,Precedenceoflogicaloperators,Translating Englishsentencesintologicalexpressions, Propositional equivalence
3	23/08/2023-30/08/2023	**Principle of Mathematical induction.**
4	01/09/2023-10/09/2023	**Relations:**Relationsanddiagraph,n-aryrelationsandtheirapplications,propertiesofrelations,representingrelations,
5	11/09/2023-18/09/2023	Closure of relation, equivalence relation, operation on relations, partial ordering.
6	19/09/2023-28/09/2023	**Functions:**Functions,One-to-oneFunctions,OntoFunctions,InverseandCompositionofFunctions
7	29/09/2023-7/10/2023	Floor Function, Ceiling Function.
8	01/11/2023-12/11/2023	**Basic Concepts (Only Definition):**Big-O Notation, Big-Omega and Big-Theta Notation.
9	13/11/2023-20/11/2023	**Graphs:**IntroductiontoGraph,Graphterminology,RepresentinggraphsandGraphIsomorphism,
10	21/11/2023-30/11/2023	Connectivity ,Euler Paths and Circuits, Shortest Path Problems,
11	1/12/2023-10/12/2023	Planar Graphs, Hamillonian paths and circuits,

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TEACHING PLAN (SESSION 23-24)

SUBJECT-C-LANGUAGE

NAME-RAMINDER JEET KAUR

CLASS-PGDCA SEM-1

Sr. no	Date	Subject Matter
1	01/08/2023-06/08/2023	**Programming Process**: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.
2	07/08/2023 12/08/2023	**Basic structure of C program**: History of C, Structure of a C program, Character set, Identifiers and keywords, constants, variables, data types.
3	14/08/2023-23/08/2023	**Operators and expressions**: Arithmetic, Unary, Logical, Relational operators, assignment operators, Conditional operators, Hierarchy of operations type conversion.
4	24/08/2023-05/09/2023	**Control statements**: branching statements (if, if else, switch), loop statements (for, while and do-while), jump statements (break, continue, goto), nested control structures.
5	06/09/2023-14/09/2023	**Functions**: Library functions and user defined functions, prototype, definition and call, formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion.
6	15/09/2023-22/09/2023	**I/O functions**:formatted & unformatted console I/O functions
7	23/09/2023-30/09/2023	**Storage Classes**: automatic, external, static and register variables.
8	01/10/2023-12/10/2023	**Arrays:** – One dimensional and two dimensional arrays, Declaration, initialization, reading values into an array, displaying array contents
9	13/10/2023-30/10/2023	**Strings**: input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat & strrev), table of strings.
10	01/10/2023-12/11/2023	**Structures and unions**: using structures and unions, comparison of structure with arrays and union.
11	12/11/2023-30/11/2023	**Pointers**: pointer data type, pointer declaration, initialization, accessing values using pointers, pointers and arrays. **Introduction to Files in C**: opening and closing files. Basic I/O operation on files.

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

PAPER-COMPUTER APPLICATIONS FOR ECONOMICS-I

TEACHER NAME-RAMINDER JEET KAUR

Class-MA ECONOMICS Sem-VI

Sr. no	Date	Subject Matter
1	01/08/2023-06/08/2023	Computer Fundamentals : Basic Computer Organization
2	07/08/2023 12/08/2023	Evolution of computers; steps in problems solving on a computer and basic computer terminology: input and output devices.
3	14/082023-23/08/2023	Storage devices. Introduction to Software : Computer software and its types. Planning a computer program.
4	24/08/2023-05/09/2023	Computer programming languages. Operating system functions and types; Commonly used DOS Commands, Broad Structure of a Statistical/ econometric package
5	06/09/2023-14/09/2023	Algorithm and Interpretation of Result: Simple Karl Pearson's Correlation; Two Variable regression
6	15/09/2023-22/09/2023	Multivariate Regression
7	23/09/2023-30/09/2023	Analysis of Variance.
8	01/10/2023-12/10/2023	Multiple Regression Analysis: Meaning, Objective, Research design of multiple regression analysis,
9	13/10/2023-27/10/2023	Assumptions method and algorithm of estimation
10	28/10/2023-10/11/2023	Overall model fit; Interpretation of regression output
11	11/10/2023-30/11/2023	Validation of results

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

PAPER-BASIC MATHEMATICS

TEACHER NAME-RAMINDER JEET KAUR

Class-BCA 1ST YEAR Sem-II

Sr. no	Date	Subject Matter
1	**7-11 Jan**	**ComplexNumbers:**ComplexNumbersintheformofa+ib,RealandImaginaryp artsofacomplexnumber,
2	**13-18 Jan**	Complex conjugate, algebra of complex numbers, square roots of a complex number, cube roots of unity.
3	**20-25 Jan**	**Quadratic Equations:** Solutions of Quadratic equations(with real and complex coefficients),
4	**27 Jan-1Feb**	Relations between roots and coefficients, Nature of roots ,Equations reducible to quadratic equations.
5	**3-8 Feb**	**CartesianSystemofRectangularCoordinates:**Cartesiancoordinatesystem,d istanceformula,sectionformula,
6	**10-15 Feb**	Centroid and incentre, area of triangle, condition for collinear it is of three points in a plane.
7	**17-22 Feb**	**Straight Line:** Slope of a line, parallel and perpendicular lines,
8	**24Feb-1Mar**	Equation of line in different forms, distance of a point from a line.
9	**3-15 Mar**	**Circle:** Standard form of equation of circle, General form, diameter form, three point form, Intersection of a line and a circle. **Matrices:** Types of Matrices, Addition, Subtraction, Multiplication, Transpose, Conjugate and their properties, Symmetric, Skew-symmetric, Minor, co-factors, Adjoint, Inverse of matrices, Solution of linear system of equations using matrices.
10	**15-29 Mar**	**Determinants:** Expansion of determinants (uptoorder4), solution of linear system of equations using Cramer rule.

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TEACHING PLAN (SESSION 23-24)

PAPER-COMPUTER ORIENTED STATISTICAL AND NUMERICAL METHODS

TEACHER NAME-RAMINDER JEET KAUR

Class-BCA 2ND YEAR Sem-IV

Sr. no	Date	Subject Matter
1	**7-11 Jan**	**Roots of Polynomials:** Conventional Methods-Muller's Method, Bairstow's Method.
2	**13-18 Jan**	**Algebraic Equations:** Gauss-Jordan method, LU Decomposition, Matrix Inverse-Gauss-Seidel.
3	**20-25 Jan**	**Numerical Differentiation -Integration:** Trapezoidal Rule, Simpson's Rule, Differential equations: Taylor's method, Euler's method
4	**27 Jan-1Feb**	Runge-Kuttamethodsoforder2and 4, Predictor-corrector methods. **Interpolation:** Newton's divided difference method, Lagrange's interpolation.
5	**3-8 Feb**	**Curve fitting:** Linear, Polynomial and Exponential curve fitting.
6	**10-15 Feb**	**Statistics:** Diagrammatic and Graphical representation of Numerical Data, Formation of frequency distribution. Histogram, Cumulative Frequency-Polygon and Ogives.
7	**17-22 Feb**	**Measures of Central tendency**: Mean, Median, Mode. Measures of Dispersion: Mean deviation, Standard deviation, variance,
8	**24Feb-1Mar**	Quartile deviation and coefficient of variation, Moments (upto 4th), Measures of Skewness and Kurtosis for grouped and ungrouped data.
9	**3-15 Mar**	**Correlation:** Meaning and types of correlation, correlation and causation, Methods of correlation: product moment correlation coefficient - rank correlation coefficient.
10	**15-29 Mar**	**Regression analysis:** Linear regression - method of least squares for estimationofregressioncoefficient.ConceptofsamplingandSamplingdistributionsChisquaretestsforgoodnessoffitand Test for independence of attributes incontingency table.

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

PAPER-OPERATIONAL RESEARCH

TEACHER NAME-RAMINDER JEET KAUR

Class-BCOM 2ND YEAR Sem-IV

Sr. no	Date	Subject Matter
1	**7-11 Jan**	Operational Research: Meaning Significance and Scope.
2	**13-18 Jan**	Introduction to Linear Programming,
3	**20-25 Jan**	Formulation of Linear Programming Problem,
4	**27 Jan-1Feb**	Graphical Method,
5	**3-8 Feb**	Simplex Method.
6	**10-15 Feb**	Duality in Linear Programming
7	**17-22 Feb**	Definition of Dual Problem General Rules in Convert Primal into its Dual,
8	**24Feb-1Mar**	Transportation Problem, Assignment Problem.
9	**3-15 Mar**	Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees
10	**15-29 Mar**	GamesTheory:TwoPersonsZeroSumGames,PureStrategies,MixedStrategies.Simulation;Meaning,Process, Advantages, Limitations and Applications

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

PAPER-QUANTITATIVE METHODS

TEACHER NAME-RAMINDER JEET KAUR

Class-BA 3RD YEAR Sem-VI

Sr. no	Date	Subject Matter
1	**7-11 Jan**	Elementary Idea of Sets and Functions
2	**13-18 Jan**	Differentiation of simple functions Polynomial (x), Exponential (ax , ex) Logarithm (log x) except ab-initio method and Trigonometric functions.
3	**20-25 Jan**	Maxima and Minima of functions of one variable only. Simple applications of derivative and Maxima and Minima in Economics
4	**27 Jan-1Feb**	. Matrices: Definition, Types, Operations (Sum, difference) Product and Transpose, Adjoint and inverse of a matrix (upto 3x3).
5	**3-8 Feb**	Solution of simultaneous equations (up to 3) by matrix methods. Measures of Central Tendency: Mean, Median, Partition Values, Mode
6	**10-15 Feb**	Measures of Dispersion (except Lorenz Curve) and Skewness. Correlation Analysis: Karl Pearson's (excluding grouped data) and Spearman's rank formula and Simple Regression Analysis.
7	**17-22 Feb**	Index Numbers: Concepts, Problems and Importance, Simple Index Numbers, Laspeyre's , Paasche's
8	**24Feb-1Mar**	Fisher's index numbers only (among weighted index numbers) and Reversibility Tests.
9	**3-15 Mar**	Time Series Analysis: Components of Time Series
10	**15-29 Mar**	Determination of Trend, Moving Average Method and Least Square method