

GOVT SHIVALIK COLLEGE ,NAYA NANGAL

TEACHING PLAN (SESSION 23-24)

SUBJECT -MATHEMATICS

PAPER-ALGEBRA AND TRIGONOMETRY

TEACHER NAME-PRIYA WADHWA

Class- B.Sc. I

Sem-I

Sr.no	Date	Subject Matter
1	01/08/2023-10/08/2023	SECTION-B Hermitian and Skew-Hermitian matrices, linear dependence of row and column vectors.
2	11/08/2023-20/09/2023	row rank, column rank and rank of a matrix and their equivalence.
3	21/08/2023-30/08/2023	Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). CLASS TEST ON RANK OF MATRIX.
4	01/09/2023-10/09/2023	Eigen-value, eigen-vector and characteristic equation of a matrix.
5	11/09/2023-20/09/2023	Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization. ASSIGNMENT ON THE TOPIC OF RANK OF MATRIX, EIGEN-VALUE, EIGEN VECTOR.
6	21/09/2023-30/09/2023	SECTION-A Introduction to De Moivre's theorem, De Moivre's theorem
7	01/10/2023-10/10/2023	Application of De Moivre's theorem including primitive n^{th} root of unity.
8	11/10/2023-20/10/2023	Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n\theta \cos^n\theta$, ($n \in \mathbb{N}$).
9	21/10/2023-30/10/2023	The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable.
10	01/11/2023-10/11/2023	MST WILL BE HELD.
11	11/11/2023-20/11/2023	Summation of series including Gregory Series.
12	21/11/23-30/11/23	REVISION ON VARIOUS TOPICS.

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 22-23)

SUBJECT-MATHEMATICS

PAPER -ANALYSIS/MECHANICS

TEACHER NAME-PRIYA WADHWA

CLASS BSC II

SEM III

Sr.no	Date	Subject Matter
1	01/08/2023- 10/08/2023	ANALYSIS: Sequence: Definition of a sequence, Bounded and Monotonic sequences, Convergent sequence, Cauchy sequences, Cauchy's Convergence Criterion.
2	11/8/2023 22/08/2023	Infinite Series: Definition of a series, Tests of convergence, Comparison test. CLASS TEST ON THEOREM RELATED TO CONVERGENCE.
3	23/08/2023- 30/08/2023	Logarithmic test, Gauss test, Cauchy's root test, Alternating series. Cauchy's integral Ratio test, condensation test, Raabe's test.
4	01/09/2023- 10/09/2023	Leibnitz's test. Absolute convergence and conditional convergence. Weierstrass M-Test for Uniform convergence of sequence of functions and series of functions.
5	11/09/2023- 18/09/2023	Simple applications. Determination of Radius of convergence of power series. ASSIGMENT ON THE TOPIC OF TEST OF CONVERGENCE IN THE FORM OF PPT
6	19/09/2023- 28/09/2023	Improper integrals: Definition, statements of their conditions of existence. Test of the convergence of improper integral, beta and gamma functions and their convergence. Abel's and Dirichlet's tests.
7	29/09/2023- 7/10/2023	Motion of a particle with constant acceleration, acceleration of falling bodies, motion underground. DISCUSSION
8	01/11/2023- 12/11/2023	MST EXAMS WILL BE HELD
9	13/11/2023- 20/11/2023	Motion of a body projected vertically upward, motion of two particles connected by a string, motion along a smooth inclined plane.
10	21/11/2023- 30/11/2023	Constrained motion along a smooth inclined plane. Variable acceleration, Simple harmonic motion, Projectile.
11	1/12/2023- 10/12/2023	Revision of various topics.

GOVT SHIVALIK COLLEGE NAYA NANGAL

TEACHING PLAN (SESSION 22-23)

SUBJECT-MATHEMATICS

PAPER -ABSTRACT ALGEBRA/DISCRETE MATHEMATICS

TEACHER NAME-PRIYA WADHWA

CLASS BSC III

SEM 5

Sr.no	Date	Subject Matter
1	01/08/2023-06/08/2023	ALGEBRA: Group: definition, examples, subgroups, counting Principle, Lagrange's theorem
2	07/08/2023-12/08/2023	Normal subgroups, Quotient groups, Homomorphisms. ASSINGMENT ON THE TOPIC OF SUBGROUP & NORMAL SUBGROUP
3	14/08/2023-23/08/2023	Fundamental theorem of homomorphism and related theorems. Cyclic Groups. DISCUSSION ON HOMOMORPHISM
4	24/08/2023-05/09/2023	Rings: Definition and examples of Rings, Elementary properties of Rings.
5	06/09/2023-14/09/2023	Sub-rings, Homomorphism, ideals and Quotient Rings
6	15/09/2023-22/09/2023	Field of Quotient of Integral domain, division rings
7	23/09/2023-30/09/2023	Euclidean Rings, Principal ideals, examples.
8	01/10/2023-12/10/2023	Discrete Mathematics: Graphs and Planar Graphs-Basic Terminology.
9	13/10/2023-30/10/2023	Multigraphs. Weighted Graphs. Paths and Circuits Shortest paths. Eulerian Paths and Circuits. Travelling Salesman Problem.
10	01/10/2023-12/11/2023	MST EXAMS WILL BE HELD
11	12/11/2023-30/11/2023	Definition and Examples of Finite State Machines-Equivalent Machines and Finite State Machines as Language Recognizers.

GOVT SHIVALIK COLLEGE NAYA NANGAL
TEACHING PLAN (SESSION 23-24)
SUBJECT -MATHEMATICS
PAPER-BUSINESS STATISTICS
TEACHER NAME -PRIYA WADHWA

Class- B.COM-II

Sem-III

Sr.no	Date	Subject Matter
1	01/08/2023- 06/08/2023	Introduction to Statistics-Definition, Importance and Limitations, Functions and scope. Measures of Central Tendency: Mean.
2	07/08/2023 12/08/2023	Median, Mode Measures of dispersion: Range .
3	14/082023- 23/08/2023	Quartile deviation Mean deviationand Standard deviation CLASS TEST on mean, median, mode
4	24/08/2023- 05/09/2023	Analysis of Time Series: Causes of variations in time series multiplicative models.
5	06/09/2023- 14/09/2023	Determination of trends, moving averages method and method of least squares (including linear, second degree, parabolic and exponential trends)
6	15/09/2023- 22/09/2023	Computation of seasonal-indices by simple averages, ratio-trend, ratio-to-moving average, and link relative methods
7	23/09/2023- 30/09/2023	Correlation: Meaning, types and measurement of correlation (Karl Pearson's methods and Spearman's rank correlation). Regression: Meaning, Regression Equation of X on Y and Y on X
8	01/10/2023- 12/10/2023	Index numbers: Need, definition and limitations of index numbers-simple and weighted index numbers- Laspyer's, Paasche's and Fisher Index numbers.
9	13/10/2023- 27/10/2023	Criterion of ideal index numbers, problems involved in the construction of index numbers.
10	28/10/2023- 10/11/2023	MST WILL BE HELD
11	11/10/2023- 30/11/2023	Forecasting Methods: Forecasting Concept, types and importance; General approach to forecasting; Methods of forecasting; Forecasting demand; Industry Vs. Company sales forecasts; Factors affecting company sales.