Dept. of Mathematics

Lesson Plan 2020-2021

Subject- Numerical Analysis **Class-B.A./B.Sc. 2nd**

Semester- 3rd sem

Name of Assistant Professor- Sh. Sukhdev Singh

Following topics will be covered under the syllabus of class B.A. First as per details given below:

Date	Topic
02/11/2020 to 09/11/2020	Finite difference operators and their relation.
10/11/2020 to 17/11/2020	Finding the missing terms and effect of error in a difference tabular values
18/11/2020 to 25/11/2020	Interpolation with equal intervals :Newton's forward and backward interpolation formula
26/11/2020 to 02/12/2020	Interpolation with unequal interval :Newton's divided difference ,Lanrange's
03/12/2020 to 10/12/2020	Lagrange's Interpolation formulae, Hermite formula.
11/12/2020 to 17/12/2020	Central Differences: Gauss forward and Gauss's backward interpolation formulae. Sterling, Bessel formula.
18/12/2020 to 25/12/2020	Numerical Differentiation : Derivative of a function using interpolation formulae as studied in sections I & II.
26/12/2020 to 02/01/2021	Bisection method, Regula-Fasi method ,Secant method, Newton- Raphsons method
04/01/2021to 11/01/2021	Gauss – Ellmination method, Gauss-Jordon method ,Simpsons one third rule and Simpson three eight rule
12/01/2021 to 19/01/2021	Eigen Value problems: Power method, Jacobi's method, Given's method,
20/01/2021 to 27/01/2021	House- Holder's method, QR-method, Lanczo's method
28/01/2021 to 03/02/2021	Numerical solution of ordinary differential equation, Single step method ,Picard's method,
04/02/2021 to 11/02/2021	Tayor's series method, Euler's series method' Modified Euler method
12/02/2021 to 19/02/2021	Runge- Kutta method, Milne- Simsons method
20/02/2021 to 27/02/2021	Revision

Tentative Date of Test: Between 04/01/2021 to 11/01/2021

Sukhdev

Dept. of Mathematics

Lesson Plan 2020-2021

Subject- Mathematics (Algebra) **Class-B.A./B.Sc. First**

Semester- First

Name of Assistant Professor- Sh. Sukhdev Singh

Following topics will be covered under the syllabus of class B.A. First as per details given below:

Date	Topic
16/11/2020 to 22/11/2020	Symmetric, Skew-symmetric, Hermitian and Skew-Hermitian matrices. Elementary operations on matrices.
23/11/2020 to 30/11/2020	Rank of matrix. Inverse of a matrix.
01/12/2020 to 07/12/2020	Linear dependence and independence of rows and columns of matrices.
08/12/2020 to 14/12/2020	Row rank and column rank of a matrix.
15/12/2020 to 21/12/2020	Eigen values, eigen vectors and the characteristic equation of a matrix.
22/12/2020 to 29/12/2020	Minima polynomial of a matrix.
30/12/2020 to 31/12/2020	Cayely Hamilton theorem and its use in finding inverse of a matrix.
01/01/2021to 07/01/2021	Applications of matrices to a system of linear equations.
08/01/2021to 15/01/2021	Theorems on consistency of a system of linear equations.
16/01/2021 to 22/01/2021	Unitary and Orthogonal Matrices, Bilinear and Quadratic forms.
23/01/2021 to 31/01/2021	Relations between the roots and coefficients of general polynomial
01/02/2021 to 07/02/2021	Solutions of polynomial equations having conditions on roots.
08/02/2021 to 12/02/2021	Common roots and multiple roots. Transformation of equations.
13/02/2021 to 19/02/2021	Nature of the roots of an equation. Descarte's rule of signs. Solutions of cubic equations.
20/02/2021 to 27/02/2021	Biquadratic equations and their solutions.

Tentative Date of Test: Between 04/01/2021 to 11/01/2021

Sukhdev

Dept. of Mathematics

Lesson Plan 2020-2021

Subject- Business Mathematics **Class-B.Com First**

Semester- First

Name of Assistant Professor- Sh. Sukhdev Singh

Following topics will be covered under the syllabus of class B.A. First as per details given below:

Date	Topic
16/11/2020 to 22/11/2020	Logarithms, Anti-logarithms.
23/11/2020 to 30/11/2020	Sequences and Series: Arithmetic & Geometric Progressions
01/12/2020 to 07/12/2020	Matrices and Determinants: Definition of a matrix, Types of matrices; Algebra of matrices; Properties of determinants:
08/12/2020 to 14/12/2020	Adjoint of a matrix, elementary row or column operations;
15/12/2020 to 21/12/2020	Finding inverse of a matrix through adjoint and elementary row or column operations;
22/12/2020 to 29/12/2020	Solution of a system of linear equations having unique solution
30/12/2020 to 31/12/2020	Compound Interest
01/01/2021to 07/01/2021	Annuities types of annuities present value and amount of an annuity,
08/01/2021to 15/01/2021	Differentiation : Idea of simple derivative of different functions
16/01/2021 to 22/01/2021	Rules of differentiation-
23/01/2021 to 31/01/2021	Maxima and Minnima of functions of one variable
01/02/2021 to 07/02/2021	Relating to cost,
08/02/2021 to 12/02/2021	Revenue and profit.
13/02/2021 to 19/02/2021	Revision
20/02/2021 to 27/02/2021	Revision

Tentative Date of Test: Between 04/01/2021 to 11/01/2021

Balinder