**LESSON PLAN**

**Even Semester (2021-22)**

DR. Sarita Rani, Assistant professor

Deptt. of Mathematics

**B.Sc. -1 (Vector Calculus)**

April: Scalar and vector product of three vectors, product of four vectors, Vector differentiation

May: Scalar and vector valued point functions derivative along a curve, directional derivatives, Gradient of a scalar point function, geometrical interpretation of grad F , character of gradient as a point function. Divergence and curl of vector point function, Gradient, divergence and curl of sums and product and their related vector identities. Laplacian operator.

June: Orthogonal curvilinear coordinates Conditions for orthogonality, Gradient, Divergence, Curl and Laplacian operators in terms of orthogonal curvilinear coordinates, Cylindrical co-ordinates and Spherical coordinates, Vector integration; Line integral, Surface integral, Volume integral Theorems of Gauss.

July: Green & Stokes and problems based on these theorems and revision

**B.Sc.-II (Programming in C and Numerical Methods)**

April: Computers, Introduction to C, Data types

May: operators and Expressions, Decision control structures, Loops, functions, C-processor, Arrays, Puppetting of strings,

June: Structures and Unions, Pointers, Files in C, Solutions of algebraic and transcendental equations

July: Simultaneous linear algebraic equations, Revision.

**Bsc-III( Real and Complex analysis)**

April: Jacobians, Beta functions

May: Gamma Functions, Double and Triple Integral , Fourier Series

June: Calculus of Complex functions, Elementary functions, Mobius Transformations, Critical mappings

July: Revision

**B.Com.-I (Business Mathematics)**

April: Linear Inequalities in two variables, Data- Introduction

May: Classification and tabulation, Diagrammatic Representation of data, Graphical Representation of data

June: Data Interpretation, Binomial theorem, Permutations and Combinations

July: Linear Programming and Revision

**BCA-1 (Elements of Mathematical Foundation)**

April : Propositions and logical operators, Truth Tables

May : Propostions generated by a set, Equivalence and implications, Laws of logic

June : Mathematical system, Proposition over a universe, Mathematical Induction

July : Quantifiers and Revision

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