

(2023-2024)

B.Sc III (C)

Real & Complex Analysis

Semester - 6th

January:- Jacobians, Beta & gamma Functions, Double & Triple Integrals, Dirichlet's Integrals, Change of Order of Integration in double Integrals.

February:- Fourier's Series; Fourier expansion of piecewise monotonic functions, Properties of Fourier coefficients Dirichlet's conditions, Parseval's identity ~~for~~ for Fourier Series, Fourier Series for even & odd functions, Half range series, Change of Intervals

March:- Extended complex plane, Stereographic projection of Complex numbers, Continuity & differentiability of Complex functions, Analytic functions, Cauchy-Riemann equations. Harmonic functions.

April:- Mappings by elementary function: Translation, Rotation Magnification & Inversion, Conformal Mappings, Mobius Transformations. Fixed points, Cross ratio, Inverse points & critical mappings.

Revision & Test.

2023-2024

M.Sc (Previous) 2nd semester

Computer Programming in Fortran 90 & 95

January:- Evolution of Fortran, Simple Fortran 90 Programs, Numeric Constant & Variables

February:- Arithmetic Expressions, Input output statements, Conditional statements, Implementing Loops in Programs, Logical Expressions & More Control statements, Function and Subroutines - Basics.

March:- Defining & Manipulating arrays, Elementary Format Specification, Processing strings of characters, Program Examples, Procedure with array arguments, Derived types, Assignment 1, Revision Test

April:- Additional features in Procedures, Processing files in Fortran, Pointer data type & Applications, Use of Modules, Miscellaneous features of Fortran 90, Additional features of Fortran 95. Assignment 2, Sessional Test

B.Com - I

II<sup>nd</sup> SemesterBUSINESS MATHEMATICSSession - 2023-24Feb

Differentiation! - derivative of simple functions and other functions having applications in business studies; maxima and minima of Revenue, Cost, Demand, Production, Profit functions and other functions related to business and commerce.

March:-

Integration! - Definite and indefinite, basic rules of integration, application of integration in Commercial and business Problems.

April:-

Permutation and Combinations! - Factorial Notation, Difference between Permutation and Combination, Permutatic Restricted Permutations, Permutation with repetitions, Permutation of objects Not all different, Combination, Practical Problems on Combinations. Binomial Theorem.

May:-

Linear Programming! - Formulation of Linear Programming Problems and their solution by graphical and simplex methods, Application of Linear Programm. in Solving Problems related to business and commerce.