

GOVT. COLLEGE SAFIDON JIND
LESSON-PLAN (Session 2022-23) EVEN SEMESTER

Name of Teacher: SANYOGITA

Designation: EXTENSION LECTURER

Subject: Sequences and Series

Class: B.A 4th sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Feb-Mar	Boundedness of the set of real numbers, least upper bound, greatest lower bound of a set neighbourhood, interior points, isolated points, limit points, open sets, closed set, interior of a set, closure of a set in real numbers and their properties. Bolzano-weirstrass theorem . open covers. compact sets and Heine-Borel theorem.	Group discussion
2	Mar-Apr	Real sequences and their convergence, theorems on limits of sequence, bounded and monotonic sequences, Cauchy's sequence, Cauchy's general principle of convergence, subsequences, subsequential limits. convergence and divergence of infinite series, comparison test of positive terms in finite series, Cauchy's general principle of convergence of series, convergence and divergence of geometric series. Hyper harmonic series and p series.	Assignment
3	Apr-May	D'Alembert's ratio test, Raabes test, Logarithmic test, de Morgan and Bertrand's test, Cauchy's nth root test, Gauss test, Cauchy's integral test. Cauchy's condensation test. Leibnitz's test, absolute and conditional convergence.	Unit Test
4	May-June	Arbitrary series: Abel's lemma, Abel's test, Dirichlet's test, insertion and removal of Parentheses, rearrangement of terms in a series, Dirichlet's theorem, Riemann's rearrangement theorem. Multiplication of series, Cauchy product of series, convergence and absolute convergence of infinite products.	Revision

*Vacation as per university calendar

- 2 assignments and 01 unit test will be taken as per schedule.

GOVT.COLLEGE SAFIDON, JIND
LESSON-PLAN (Session 2022-23) EVEN SEMESTER

Name of Teacher: SANYOGITA
Designation: EXTENSION LECTURER
Subject: REAL & COMPLEX ANALYSIS
Class: B.A. 6th Sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Feb-Mar	Jacobians, Beta and Gama functions, Double and Triple integrals, Dirichlets integrals, change of order of integration in double integrals.	Group discussion
2	Mar-Apr	Fourier's series: Fourier expansion of piecewise monotonic functions, Properties of Fourier Coefficients, Dirichlet's conditions, Parseval's identity for Fourier series, Fourier series for even and odd functions, Half range series, Change of Intervals . Extended Complex Plane, Stereographic projection of complex numbers.	ASSIGNMENT
3	Apr-May	Continuity and differentiability of complex functions, Analytic functions, Cauchy-Riemann equations. Harmonic functions. Mappings by elementary functions: Translation, rotation, Magnification and Inversion.	UNIT TEST
4	May-June	Conformal Mappings, Mobius transformations. Fixed points, Cross ratio, Inverse Points and critical mappings.	REVISION

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GOVT. COLLEGE SAFIDON, JIND
LESSON-PLAN (Session 2022-23) EVEN SEMESTER

Name of Teacher : SANYOGITA
 Designation : EXTENSION LECTURER
 Subject : Business Mathematics
 Class : Bcom 1st

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Feb-Mar	Permutation and combinations, Binomial Theorem, Linear inequalities.	Group discussion
2	April	Linear Programming: Formulation of equations, graphical method of solutions, problem relating to two variables including the case of mixed constraints, cases having no solution, multiple solution, unbounded solution and redundant constraints.	Assignment
3	May	Data Representation and Interpretation : Introduction, Classification and Tabulation of data: Diagrammatic and graphical representation of data: Significance of diagrams and graphs.	Unit Test
4	June	Type of diagrams : Bar diagram, pie chart, pictographs, graphs of time series or line graphs, graphs of frequency distribution, histogram, frequency polygon, ogives or commulative frequency curves.	Revision

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GOVT.COLLEGE SAFIDON, JIND
LESSON-PLAN (Session 2022-23) EVEN SEMESTER

Name of Teacher: SANYOGITA
Designation: Extension Lecturer
Subject: Number Theory And Differential Equation
Class: B.Sc NM 2nd sem

Subject/Paper: Sr. No.	Months	Topics to be covered	Remarks if any,
1	Feb	Exact Differential Equation, Equation of first order but not of first degree, Orthogonal trajectories, Linear Differential equations with constant co-efficients	Group discussion
2	March	Homogeneous linear equation, linear differential equation of second order, Ordinary simultaneous differential equations, Total differential equations.	ASSIGNMENT
3	April	Divisibility, Congruences. Fermat's , Wilson's and chinese remainder theorem, Eulers functions of number theory.	UNIT TEST
4	May	Some function of number theory, quadratic residue and Quadratic Reciprocity Law.	REVISION

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