

GOVT. POLYTECHNIC KENDRAPARA
LESSON PLAN
Session(2024-2025)

Discipline: ELECT/ETC	Semester: 3 rd Winter/2022	Name of the Faculty:
		SMT MAMATA NAYAK(SR LECTURER) SMT SANGHAMITRA NATH(LECTURER)
Subject: Engg.Math-III, Theory-1	No.of Days/Week: 04	Start Date: 01/07/2024 End Date: 08/11/2024
WEEK	CLASS DAY	THEORY TOPICS
1st week 1st july to 6th july	1st	Introduction to syllabus and evaluation scheme
	2nd	Define real and Imaginary Numbers and power of i with related examples
	3rd	Define complex number, algebra of complex numbers, equality of two complex numbers, conjugate and modulus of a complex number with related problems
	4th	Properties of complex numbers, Determine Inverse of a complex number and express in the form of a+ib with related problems
2nd week 08th july to 13th july	1st	Determination of the cube roots of unity and their properties with related problems
	2nd	Explain Geometrical representation of a complex number, polar form and argument of a complex number with related problems
	3rd	Determine square root of a complex number, State Demoivre's Theorem and solve related problems
	4th	Assignment Discussion on Complex numbers
3rd week 15th july to 20th july	1st	Introduction of matrix and its basic concepts, Types of matrices, Addition, subtraction and multiplication by a scalar
	2nd	Transpose of a matrix, sub-matrix and minors, Rank of a matrix and its problems
	3rd	Elementary transformation and its uses in finding rank, Row Reduction Echelon matrix and related problems
	4th	State Rouché's theorem for consistency of a system of linear equations in n unknowns and solve related problems
4th week 22nd july to 27th july	1st	Solve more problems on test of consistency
	2nd	Assignment Discussion on Matrices
	3rd	Class Test -1 on Complex number and matrices
	4th	Define differential equation, Order and degree of differential equation with examples
5th week 29july to 3rd august	1st	Define Homogeneous and Non - Homogeneous Linear Differential Equations with constant coefficients with examples.
	2nd	Rules for finding complementary functions for real roots and related problems
	3rd	Rules for finding complementary functions for complex roots and
	4th	Define Inverse differential operator and rules of particular integral for exponential function with related problems

3rd week 14th oct to 19th oct	2nd	Assignment Discussion on Finite Difference , Newton's Forward and Backward interpolation
	3rd	State Lagrange's interpolation formula for unequal intervals and solve related problems
	4th	Quiz Test-2 on PDE , LT and FS
4th week 21st oct to 28th oct	1st	Explain numerical integration state Newton's Cote's formula and Trapezoidal rule, solve related problems on Trapezoidal rule
	2nd	State Simpson's 1/3rd rule and solve related problems
	3rd	Assignment Discussion on Lagrange's and Numerical Integration
	4th	Class Test-3on FS and Numerical Analysis
1st week 2nd Nov to 8th Nov	1st	Previous year question Discussion
	2nd	Previous year question Discussion
	3rd	Previous year question Discussion
	4th	Class Test-4on FS and Numerical Analysis