Lesson Plan

2023 (W)

Subject :-MATHEMATICS- III (Code) TH-1 Name of faculty:- KAJAL PRIYA PANI

Semester :-3rd Class allotted 4p/w Branch :-ELECTRICAL ENGG.

Discipline	Semester:-3rd	From date:-01/08/23 To date:30/11/23	Teaching Aid
Subject:	No. of days/ per week 4p/w_____:	Theory/ Practical –Topics/Lesson	
Week	Date/Period		
1	01/08/23 to 05/08/23	**1. Complex Numbers** 1.1 Real and Imaginary numbers. 1.2 Complex numbers, conjugate complex numbers, Modulus and Amplitude of a complex number. 1.3 Geometrical Representation of Complex Numbers. 1.4 Properties of Complex Numbers.	White board & marker
2	07/08/23 to 12/08/23	1.5 Determination of three cube roots of unity and their properties 1.6 De Moivre's theorem and Solve problems on 1·1 – 1.6 **2.Matrices** 2.1. Define rank of a matrix. 2.2. Perform elementary row transformations to determine the rank of a matrix.	White board & marker
3	14/08/23 to 9/08/23	2.3. State Rouche's theorem for consistency of a system of linear equations in unknowns. 2.4. Solve equations in three unknowns testing consistency. And problems (2.1-2.4) **3. Linear Differential Equations** 3.1. Define Homogeneous and Non – Homogeneous Linear Differential Equations with constant coefficients with examples. 3.2. Find general solution of linear Differential Equations in terms of C	White board & marker
4	21/08/23 to 6/08/23	3.3. Derive rules for finding C.F. And P.I. in terms of operator D, excluding . 3.4. Define partial differential equation (P.D.E) . 3.5. Form partial differential equations by eliminating arbitrary constants. (a). Form partial differential equations by eliminating arbitrary functions.	White board & marker
5	28/08/23 to 2/09/23	3.6. Solve partial differential equations of the form Pp + Qq = R (a).problems 3.7. Solve problems on 3.1- 3.3 (a).Problems on (3.4-3.6)	White board & marker

6	04/09/23 to 09/09/23	4. **Laplace Transforms** 4.1. Define Gamma function 4.2. Define Laplace Transform of a function. And Inverse Laplace Transform 4.3. Derive L.T. of standard functions and explain existence conditions of L.T. 4	White board & marker
7	11/09/23 to 16/09/23	4.4. Explain linear, shifting property of L.T 4.5 Formulate L.T. of derivatives, integrals, multiplication by and division by . 4.6. Derive formulae of inverse L.T. and explain	White board & marker
8	18/09/23 to 23/09/23	4.7. solve problem on 4.1- 4.2 solve problem on 4.3-4.4 solve problem on 4.5 solve problem on 4.6	White board & marker
9	25/09/23 to 30/09/23	**5.Fourier Series** 5.1. Define periodic functions. 5.2. State Dirichlet's condition for the Fourier expansion of a function and it's convergence 5.3. Express periodic function satisfying Dirichlet's conditions as a Fourier series. 5.4. State Euler's formulae.	White board & marker
10	03/10/23 to 07/10/23	5.5. Define Even and Odd functions and find Fourier Series . 5.6. Obtain F.S of continuous functions and functions having points of discontinuity 5.7. Solve problems on 5.1 Solve problems on 5.2	
11	09/10/23 to 14/10/23	. solve problems on 5.3 . Solve problems on 5.4 . Solve problems on 5.5 . Solve problems on 5.6	White board & marker
12	16/10/23 to 20/10/23	**6.Numerical Methods** 6.1. Appraise limitation of analytical methods of solution of Algebraic Equations. 6.2. Derive Iterative formula for finding the solutions of Algebraic Equations by : 6.2.1 Bisection method 6.2.2. Newton- Raphson method 6.3. solve problems on 6.2 7	White board & marker & smart board
13	30/10/23 to 04/11/23	**7. Finite difference and interpolation** 7.1. Explain finite difference and form table of forward and backward difference. 7.2. Define shift Operator and establish relation between & difference operator . 7.3. Derive Newton's forward and backward interpolation formula for equal intervals.	White board & marker

		7.4. State Lagrange's interpretation formula .	
14	06/11/23 to 11/11/23	7.5. Explain numerical integration state: 7.5.1. Newton's Cote's formula. 7.5.2. Trapezoidal rule. 7.5.3. Simpson's 1/3rd rul	White board & marker
15	13/11/23 to 18/11/23	7.6. Solve problems on 7.1 Solve problems on 7.2 Solve problems on 7.3 Solve problems on 7.4 Solve problems on 7.5	White board & marker & smart board
16	20/11/23 to 25/11/23	REVISION	White board & marker
17	28/11/23 to 30/11/23	REVISION	White board & marker

Signature of HOD

Kajal priya pani
Signature of faculty