

LESSON PLAN-2020
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline-ETC	Semester-3RD	Name of teaching faculty- Sangeeta Sahoo
SUBJECT-MATHEMATICS-III	No of days/ per week class allotted-	SEM From date- 01/09/2020 No of weeks-16
Week	Class day	Theory Topics
1st	01.09.20	Real and imaginary number
	02.09.20	Complex numbers, conjugate complex numbers, Modulus and Amplitude of a complex number
	03.09.20	Problems based on it
	05.09.20	Modulous complex number and amplitude of complex number
	08.09.20	Modulous complex number and amplitude of complex number
2nd	09.09.20	Geometrical representation of complex number
	10.09.20	Geometrical representation of complex number
	11.09.20	Properties of complex number
3rd	12.09.20	Properties of Complex Numbers
	16.09.20	Determination of three cube roots of unity and their properties
	18.09.20	Determination of three cube roots of unity and their properties
4th	22.09.20	De Moivre's theorem
	23.09.20	De Moivre's theorem
	26.09.20	Revision
	29.09.20	Introduction to matrices
	30.09.20	Addition and multiplication of matrices
	03.10.20	Transpose ,sub matrix, minor,adjoint etc of matrices
1st	06.10.20	Problems of all above basic concepts of matrices
2nd	07.10.20	Rank of matrix
	08.10.20	Rank of matrix
	09.10.20	Perform elementary row transformations to determine the rank of a matrix
	10.10.20	Row reduced Echelon form
3rd	12.10.20	State Rouche's theorem for consistency of a system of linear equations in n unknowns
	13.10.20	State Rouche's theorem for consistency of a system of linear equations in n unknowns
	14.10.20	Solve equations in three unknowns testing consistency
	16.10.20	Solve equations in three unknowns testing consistency
4th	19.10.20	Revision
	20.10.20	Order and Degree of the differential equation
	21.10.20	Solution of linear differential equation
5th	22.10.20	Solution of linear differential equation of 1st order and 1st degree
	26.10.20	Homogeneous equation ,Exact equation

	27.10.20	Define Homogeneous and Non – Homogeneous Linear Differential Equations with
1st	28.10.20	Define Homogeneous and Non – Homogeneous Linear Differential Equations with
	03.11.20	Find general solution of linear Differential Equations in terms of C.F. and P.I.
	04.11.20	Find general solution of linear Differential Equations in terms of C.F. and P.I.
	07.11.20	Derive rules for finding C.F. And P.I. in terms of operator D
2nd	09.11.20	Derive rules for finding C.F. And P.I. in terms of operator D
	10.11.20	Define partial differential equation
	11.11.20	Problems on it
3rd	17.11.20	Form partial differential equations by eliminating arbitrary constants and arbitrary functions
	18.11.20	Solve partial differential equations of the form $Pp + Qq = R$
	20.11.20	Solve partial differential equations of the form $Pp + Qq = R$
	23.11.20	Problems on it
4th	24.11.20	Define Gamma function
	25.11.20	Define Laplace Transform of a function and Inverse Laplace Transform
	27.11.20	Define Laplace Transform of a function and Inverse Laplace Transform
	28.11.20	1st INTERNAL
	30.11.20	Define Laplace Transform of a function and Inverse Laplace Transform
1st	01.12.20	Derive L.T. of standard functions and explain existence conditions of L.T.
	02.12.20	Explain linear, shifting property of L.T.
	03.12.20	Formulate L.T. of derivatives, integrals, multiplication by and division by .
2nd	04.12.20	Derive formulae of inverse L.T. and explain method of partial fractions
	05.12.20	Problems on it
	09.12.20	Define periodic functions.
	12.12.20	State Dirichlet's condition for the Fourier expansion of a function and it's convergence
3rd	14.12.20	State Dirichlet's condition for the Fourier expansion of a function and it's convergence
	15.12.20	Express periodic function satisfying Dirichlet's conditions as a Fourier series
	16.12.20	State Euler's formulae
	19.12.20	Define Even and Odd functions and find Fourier Series
4th	21.12.20	Obtain F.S of continuous functions and functions having points of discontinuity
	23.12.20	Revision
	26.12.20	Appraise limitation of analytical methods of solution of Algebraic Equations : Bisection method
5th	28.12.20	Derive Iterative formula for finding the solutions of Algebraic Equations by : Newton- Raphson method

	29.12.20	Problems on above two methods
	30.12.20	Explain finite difference and form table of forward and backward difference
	31.12.20	Problems on forward and backward difference operator
1st	02.01.21	Define shift Operator and establish relation between & difference operator.
	04.01.21	Derive Newton's forward and backward interpolation formula for equal intervals
	05.01.21	Problems on N.F.D.I
	06.01.21	State Lagrange's interpretation formula for unequal intervals
	07.01.21	Problems on lagranges interpolation
2nd	08.01.21	Explain numerical integration and state: Newtons Cotes Method
	09.01.21	Trapezoidal rule.
	11.01.21	Simpson's 1/3rd rule

HOD

PRINCIPAL