

LESSON PLAN-2021-22 (WINTER-2021)
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- ETC	Semester-3RD	Name of teaching faculty- SANGEETA SAHOO
SUBJECT- MATHEMATICS	No of days/ per week class allotted- 4	SEM From date- 01/10/2021 No of weeks-16
Week	Class day	Theory Topics
1st	1.10.2021	Real and imaginary number
	4.10.2021	Complex numbers, conjugate complex numbers, Modulus and Amplitude of a complex number
	5.10.2021	Problems based on it
	6.10.2021	Modulous complex number and amplitude of complex number
	07.10.2021	Modulous complex number and amplitude of complex number
2nd	08.10.2021	Geometrical representation of complex number
	09.10.2021	Geometrical representation of complex number
	11.10.2021	Properties of complex number
3rd	19.10.2021	Properties of Complex Numbers
	20.10.2021	Determination of three cube roots of unity and their properties
	21.10.2021	Determination of three cube roots of unity and their properties
4th	22.10.2021	De Moivre's theorem
	25.10.2021	De Moivre's theorem
	26.10.2021	Revision
	28.10.2021	Introduction to matrices
	29.10.2021	Addition and multiplication of matrices
	30.10.2021	Transpose ,sub matrix, minor,adjointetc of matrices
1st	01.11.2021	Problems of all above basic concepts of matrices
2nd	02.11.2021	Rank of matrix
	03.11.2021	Rank of matrix
	05.11.2021	Perform elementary row transformations to determine the rank of a matrix
	06.11.2021	Row reduced Echelon form
3rd	08.11.2021	State Rouche's theorem for consistency of a system of linear equations in n unknowns
	09.11.2021	State Rouche's theorem for consistency of a system of linear equations in n unknowns
	10.11.2021	Solve equations in three unknowns testing consistency

	11.11.2021	Solve equations in three unknowns testing consistency
4th	13.11.2021	Revision
	15.11.2021	Order and Degree of the differential equation
	16.11.2021	Solution of linear differential equation
5th	17.11.2021	Solution of linear differential equation of 1st order and 1st degree
	18.11.2021	Homogeneous equation ,Exact equation
	19.11.2021	1ST INTERNAL
1st	22.11.2021	1ST INTERNAL
	23.11.2021	1ST INTERNAL
	24.11.2021	Define Homogeneous and Non – Homogeneous Linear Differential Equations with
	26.11.2021	Find general solution of linear Differential Equations in terms of C.F. and P.I.
	27.11.2021	Find general solution of linear Differential Equations in terms of C.F. and P.I.
2nd	29.11.2021	Derive rules for finding C.F. And P.I. in terms of operator D
	30.11.2021	Derive rules for finding C.F. And P.I. in terms of operator D
	01.12.2021	Define partial differential equation
3rd	02.12.2021	Problems on it
	03.12.2021	Form partial differential equations by eliminating arbitrary constants and arbitrary functions
	04.12.2021	Solve partial differential equations of the form $Pp + Qq = R$
	06.12.2021	Solve partial differential equations of the form $Pp + Qq = R$
4th	07.12.2021	Problems on it
	08.12.2021	Define Gamma function
	10.12.2021	Define Laplace Transform of a function and Inverse Laplace Transform
	11.12.2021	Define Laplace Transform of a function and Inverse Laplace Transform
	13.12.2021	Define Laplace Transform of a function and Inverse Laplace Transform
1st	14.12.2021	Derive L.T. of standard functions and explain existence conditions of L.T.
	15.12.2021	Explain linear, shifting property of L.T.
	17.12.2021	Formulate L.T. of derivatives, integrals, multiplication by and division by .
2nd	18.12.2021	Derive formulae of inverse L.T. and explain method of partial fractions
	20.12.2021	Problems on it
	21.12.2021	Define periodic functions.
	22.12.2021	State Dirichlet's condition for the Fourier expansion of a function and it's convergence
3rd	24.12.2021	State Dirichlet's condition for the Fourier expansion of a function and it's convergence

	27.12.2021	Express periodic function satisfying Dirichlet's conditions as a Fourier series
	28.12.2021	State Euler's formulae
	29.12.2021	Define Even and Odd functions and find Fourier Series
4th	30.12.2021	Obtain F.S of continuous functions and functions having points of discontinuity
	03.01.2022	Revision
	04.01.2022	Appraise limitation of analytical methods of solution of Algebraic Equations : Bisection method
5th	05.01.2022	Problems on above two methods
	07.01.2022	Explain finite difference and form table of forward and backward difference
	08.01.2022	Problems on forward and backward difference operator
	10.01.2022	Define shift Operator and establish relation between & difference operator.
1st	11.01.2022	Derive Newton's forward and backward interpolation formula for equal intervals
	12.01.2022	Problems on N.F.D.I
	1/13/2022	State Lagrange's interpretation formula for unequal intervals
	14.01.2022	Problems on lagranges interpolation
	15.01.2022	Explain numerical integration and state: Newtons Cotes Method
2nd	17.01.2022	Trapezoidal rule.
	18.01.2022	Simpson's 1/3rd rule

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