BALASORE SCHOOL OF ENGINEERING , BALASORE

LESSON PLAN FOR 3rd SEMESTER – 2022

SUBJECT :- ENGINEERING MATHEMATICS -III SECTION :- E.T.C and ELE.- A,B

NAME OF THE FACULTY :- P.K. PANDA AND R. MOHANTY

Chapter	DATE	TOPICS TO BE COVERED	No. of classes	% of course
01	**September**	**Complex numbers** :- real and imaginary numbers.	05	9
	16.09.22			
	19.09.22	Conjugate complex numbers , modulus and amplitude of a complex numbers .		
	20.09.22	Geometrical representation of complex numbers and properties of complex numbers Determination of three cube roots of unity and their properties .		
	21.09.22	De Moivre's theorem and solve problem .		
	23.09.22	Solve Problem		
02	24.09.22	**Matrices** :- Define rank of matrix.	03	6
	26.09.22	Elementary raw transformation to determine the rank of matrix.		
	27.09.22	Roche's theorem for consistency system of equation and solve equation and three unknowns and solveproblem		
03	28.09.22	**Linear differential equations**:- Define homogeneous and non homogeneous L.D.E. with constant coefficients.	10	19
	30.09.22	Find the general solution of L.D.E in terms of C.F and P.I .		
	October	Solve problem		
	01.10.22			
	10.10.22	Derive rules for finding C.F and P.I in terms of operator D .		
	11.10.22	Solve problem		
	12.10.22	Define Partial Differential Equation (P.D.E.) .		
	14.10.22	Solve problem		
	15.10.22	Form P.D.E by eliminating arbitrary constants and arbitrary functions .		
	17.10.22	Solve problem		
	18.10.22	P.D.E of the form Pp + Qq = R and Solve problem.		
04	19.10.22	Laplace Transforms(L.T) :- Define Gamma function	11	21
	21.10.22	Define L .T of standard of function f(t) and inverse Laplace Transform .		
	22.10.22	Solve problem		
	25.10.22	Derive L . T of standard functions and explain existence condition s of L . T .		
	26.1022	Solve problem		

	28.10.22	Explain linear , shifting property of L.T .		
	29.10.22	Solve problem		
	31.10.22	Formulate L.T of derivatives , integrals , multiplication by t^n and division by t .		
	November	Solve problem		
	01.11.22			
	02.11.22	Derive formulae of inverse L.T and explain method of partial fractions .		
	04.11.22	Solve problems .		
05	05.11.22	**Numerical methods** :- Appraise limitation of analytical methods of solution of A.E .	04	07
	07.11.22	Derive iterative formula for finding solution by Bisection Method .		
	08.11.22	Problem solve .		
	09.11.22	Newton – Raphson Method and Problem solve		
06	11.11.22	**Finite difference and interpolation**:- finite difference and form table of forward and backward difference .	11	21
	12.11.22	Define shift operator (E)and relation between Δ .		
	21.11.22	Solve problem		
	22.11.22	Derive Newton's forward and backward interpolation formula .		
	23.11.22	Lagrange's interpolation formula.		
	25.11.22	Solve problem		
	26.11.22	Numerical integration and Newton's cote's formula .		
	28.11.22	Trapezoidal rule .		
	29.11.22	Solve problem		
	30.11.22	Simpson's 1/3 rule		
	December			
	02.12.22	Solve problem		
07	03.12.22	**Fourier Series** :- Define periodic functions .	09	17
	05.12.22	State Dirichlet's condition for F. S and it's convergence.		
	06.12.22	Periodic function f(x) satisfying Dirichlet's conditions as a F.S .		
	07.12.22	Define Euler's formulae .		
	09.12.22	Solve problem		
	10.12.22	Define Even function and Odd functions and find F.S .		
	12.12.22	Problem solve .		
	13.12.22	F. S of continuous function and functions having points of discontinuity .		
	14.12.22	Solve problem		
	16.12.22	Solve problem		
	17.12.22	Revision		

PKPanda 13/09/22

13.9.22

13/09/22