Government Polytechnic, Asthawan, Nalanda

Department of Mathematics

Semester –III (EE and EC)

Subject – Applied Mathematics-1

Lecture Plan Submitted by Prof. Satish Pandit

Theory: - 4-4 Lecture per week

Unit	Week	Lecturer	Topic	Mode of Teaching
01	01	1	Introduction of Integrations Definition of Integration as ant derivative and Nation of Integration.	What Sapp Group, Google Class Room App and YouTube Video Lin, Hand written notes (PDF)
		2	Rules of Integration f.e. Sum, Difference and Scalar Multiplication of Integration with suitable examples.	
		3	Method of Integration :- Integration by Substitution with suitable example and exercise	
		4	Integration of rational function with suitable example and exercise.	
	02	1	Method of Integration:- Integration of partial fraction examples and exercise.	
		2	Integration of Trigonometric Function.	
		3	Integration of Trigonometric Function in different form with suitable example and exercise	
		4	Integration by parts as ILATE principle.	
	03	1	Test and Assignment of Integration	
		2	Definite Integration:-Definition of definite integration with simple example	
		3	Properties of definite integration	
		4	Application of definite integration :-Area between curves	
	04	1	Mean and RMS Values	
		2	Unite Test and Assignment	
02		3	DEFERENTIAL EQUATION:-Defn.of Deferential equation .Order and degree of deferential equation.	
		4	Formation of deferential equation.	

	05	1	Solution of Deferential equation of first order and first degree by Variable-Separable Method	What Sapp Group, Google Class Room App and YouTube Video Link, Hand written notes (PDF)
		2	Reducible to variable- separable method	
		3	Homogeneous deferential equation	
		4	Exact deferential equation	
	06	1	Linear deferential equation	
		2	Bernoulli equation	
		3	Application of Deferential equation.	
		4	Test and assignment	
03	07	1	NUMERICAL ANALYSIS:-Introduction of algebraic equation and its solution , method	
		2	Bisection Method.	
		3	Regularfalsi Method or false Position Method	
		4	Newton-Raphson Method	
	08	1	Test and Assignment	
		2	Solution of simultaneous equation by Gauss elimination method.	
		3	Gauss – Seidal Method	
		4	Jacobi's Method	
	09	1	Test and Assignment	
04	10	1	LAPLACE TRANSFORM-Introduction of Laplace transform	
		2	Laplace transform of standard function	
		3	L.T.of standard function	
		4	Linearity Properties of Laplace transform	
	11	1	First shifting properties of Laplace Transform	
		2	Second shifting properties of Laplace transform	
		3	Multiplication by tn and division by t	
		4	Introduction of Inverse Laplace transform	
	12	1	First shifting properties	
	13	1	Second shifting Properties	
		2	Method of Partial Fraction	

	14	1	Convolution theorem.	What Sapp Group, Google Class Room App and YouTube Video Link, Hand written notes (PDF)
		2	Laplace Transform of Derivatives	
		3	Solution of deferential equation using Laplace Transform	
		4	Test and Assignment.	
05	15	1	FOURIER SERIES:-Introduction and definition of Fourier series	
		2	Series expansion of continuous function in intervals (0,2l) and (-l,l)	
		3	Series expansion of continuous function interval of (0,2pie) and (-pie,pie)	
		4	Series combination of even function .	
	16	1	Series combination of odd function .	
		2	Half range series.	
		3	Test and assignment.	
	17	1	Test of whole syllabus	
		2	Assignment of whole syllabus	
		3	Revision- Integration	
		4	Revision –Integration.	
	18	1	Revision –Definite Integration	
		2	Revision –Properties of Definite integration	
		3	Test	
		4	Revision –Deferential equation.	
	19	1	Revision-deferential equation	
		2	Test…….	