

Name Of the Faculty:-REENA / AJAY KUMAR

Discipline:-Applied Science

Semester:-IInd

Subject:-Mathematics

Lesson Plan Duration:-15 weeks(from FEB 2024 to JUNE 2024)

\*\* Work Load(Lecture/Practical) per week(in hours):-Lectures -04

Week	Theory	
	Lecture day	Topic (including assignment/ test)
1st	1st	Introduction to syllabus and evaluation scheme
	2nd	Definition of function ; concept of limits (Introduction)
	3rd	Problems related to four standard limits.
	4th	Continue to problem related to limits.
	5th	Concept of differentiation. Differentiation of $x^n$ and $e^x$ related problems by first principle method.
2nd	6th	Differentiation of $\sin x, \cos x, \tan x$ by first principle.
	7th	Differentiation of $e^x, a^x$ by first principle method.
	8th	Differentiation of sum of functions.
	9th	Differentiation of product of functions.
	10th	Differentiation of quotient of functions.
	11th	Differentiation of function of functions (Chain rule)
	12th	Revision /Problems/ doubts

3rd	13th	Differentiation of trigonometric functions.
	14th	Differentiation of Inverse trigonometric functions.
	15th	Differentiation of Explicit ,Implicit functions and parametric functions.
4th	16th	Logarithmic differentiation
	17th	Successive differentiation (up to 2nd order)
	18th	Students problems on differentiation
	19th	Application of differential calculus to calculate rate measure
	20th	Application of differential calculus to calculate Maxima & Minima of function
5th	21st	Revision of limits & functions.
	22nd	Revision of differentiation (sum,product,quotient of functions)
	23rd	Revision of successive, Logarithmic differentiation.
	24th	Revision of application of differential calculus.
	25th	Revision of differertiation of inverse trignometric functions.
Week	Theory	
	Lecture day	Topic (including assignment/
6th	26th	Concept of Integration.
	27th	Integration of simple functions as Inverse operation of differentiation.
	28th	Simple standard integral.

	29th	Problems related to standard integrals.
	30th	Integration of sum, difference of functions.
7th	31th	Integration by parts.
	32th	Revision of Indefinite Integral.
	33th	Evaluation of definite Integral of functions with given limits.
	34th	Evaluation of definite integral of $\sin x$ power $n$ and limit is $0$ to $\pi/2$
	35th	Evaluation of definite integral of $\cos x$ power $n$ and limit is $0$ to $\pi/2$
8th	36th	Evaluation of definite integral of product of $\sin x$ power $n$ and $\cos x$ power $n$ and limit is $0$ to $\pi/2$
	37th	Revision & problems
	38th	Class test of Indefinite integral
	39th	Class test of definite integral
	40th	Review of class test
9th	41th	Application of Integration :- for evaluation of area under the curve and area
	42th	Continuation of evaluation of area under curve and axes
	43th	Problems related to application of integration
	44th	Revision / doubts

	45th	Class test of application of integration
10th	46th	Numerical integration by Trapezoidal rule
	47th	Continuation of Trapezoidal rule
	48th	Numerical integration by Simpson's 1/3 rule
	49th	Continuation of Simpson's rule
	50th	Problems & doubts of students

Week	Theory	
	Lecture day	Topic (including assignment/
11th	51th	Concepts of Differential Equation
	52th	Order and degree of differential equation
	53th	Linearity of differential equation
	54th	Revision & doubts
	55th	Class test of Differential equation
	56th	Introduction to Statistics
	57th	Measure of central tendency by calculating mean

12th	58th	Measure of central tendency by calculating median
	59th	Measure of central tendency by calculating mode
	60th	Revision & class test
13th	61th	Measure of Dispersion by finding mean deviation about mean
	62th	Measure of Dispersion by finding mean deviation about median
	63th	Continuation of measure of dispersion
	64th	Revision & class test
	65th	Measure of Dispersion by calculating standard deviation of individual series
14th	66th	To calculate standard deviation for continuous frequency distribution
	67th	Problems and doubts of students relating standard deviation
	68th	Class Test
	69th	Coefficient of rank correlation
	70th	Continuation of rank correlation
15th	71st	Revision of Differential calculus
	72nd	Revision of Indefinite integral
	73rd	Revision of definite integral
	74th	Revision of Differential equation

	75th	Revision of Statistics
16th	71st	Revision
	72nd	Revision
	73rd	Revision
	74th	Revision
	75th	Revision

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