GOVERNMENT POLYTECHNIC JAJPUR

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LESSON PLAN
2ND SEMESTER, MATH & SC

DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY: Pankaja Swain	
SUBJECT: ENGINEERING MATHEMATICS-II	NO.OF DAYS/PER WEEK	SEMESTER FROM DATE : 29/01/2024 TO DATE: 14/05/2024	
		NO.OF WEEKS: 15	

WEEKS	CLASS DAY	TOPIC
1st	1st	Introduction of vector algebra
	2nd	Types of vector
	3rd	Representation of vector
	4th	Magnitude and direction of vectors
	5th	Addition and Subtraction of vector
	6th	Tutorial Class
2nd	1st	Discussion of problems on addition and subtraction of two vectors
	2nd	Position vector
	3rd	Scalar product of two vectors
	4th	Geometrical meaning of dot Product
	5th	Angle between two vectors
	6th	Tutorial Class
3rd	1st	Discussion of problems on dot product
	2nd	Scalar and vector projection of two vectors
	3rd	Vector product and geometrical meaning
	4th	Area of triangle and parallelogram
	5th	Discussion of problems on cross product
	6th	Tutorial Class
4th	1st	Class Test-1
	2nd	Definition of function based on set theory
	3rd	Types of function: constant function, identity function
	4th	Absolute value function, greatest integer function
	5th	Exponential function, logaritmic function with example
	6th	Tutorial Class
5th	1st	Introduction of limit, Existence of limit with examples
	2nd	Methods of evaluation of limit
	3rd	Limit of Trigonometric function
	4th	Definition of continuity of a function at a point
	5th	continuity test of a function
	6th	Tutorial Class
6th	1st	Discintinuity test of a function
	2nd	Discuss exercise of Limit and continuity
	3rd	Introduction of derivative with defination
	4th	Importance of derivatives
	5th	Derivative of a function at a point
	6th	Tutorial Class
	1st	Algebra of derivative
	2nd	Derivative of standard functions

7th	3rd	Discuss exercise of standard function
	4th	Derivative of composite function (Chain Rule)
	5th	Discuss exercise of composite function (chain rule)
	6th	Tutorial Class
8th	1st	Methods of differentiation of Parametric function
	2nd	Discuss exercise of parametric function
	3rd	Differentiation of Implicit function
	4th	Differentiation of inverse Trigonometry function
	5th	Differentiation of Logarithmic function
	6th	Tutorial Class
9th	1st	Derivative of a function with respect to another function
	2nd	Applications of Derivative
	3rd	Successive Differentiation (up to second order)
	4th	Discuss exercise of Successive Differentiation
	5th	Partial Differentiation
	6th	Tutorial Class
10th	1st	Discuss exercise of Partial Differentiation
	2nd	Discuss exercise of Derivatives
	3rd	Introduction of Integration
	4th	Definition of integration as inverse of differentiation
	5th	Some standard formulae of integration
	6th	Tutorial Class
11th	1st	Methods of integration
	2nd	Integration by using standard formulae
	3rd	Discuss exercise of standard formulae
	4th	Integration by substitution
	5th	Integration by substitution
	6th	Tutorial Class
12 th	1st	Discuss exercise on Integration by substitution
	2nd	Integration by parts
	3rd	Discuss exercise of integration by parts
	4th	Discuss exercise of integration by parts
	5th	Definite integral
	6th	Tutorial Class
13th	1st	Properties of definite integrals
	2nd	Properties of definite integrals
	3rd	Area enclosed by a curve and X – axis
	4th	Discuss exercise of Area enclosed by a curve
	5th	Area of a circle with centre at origin
	6th	Tutorial Class
14th	1st	Class Test-II
	2nd	Introduction of Differential equation
	3rd	Order and degree of a differential equation
	4th	Solution of differential equation(General solution & Particular solution)
	5th	Solution of differential equation(1st order & 1st degree)
	6th	Tutorial Class
15th	1st	Linear equation
	2nd	Solution of linear differential equation
	3rd	Solution of linear differential equation
	4th	Discussion of exercise of differential equation

5th	Discussion of exercise of differential equation	
6th	Tutorial Class	

LERNING RESOURCES

SL.NO	AUTHOR	TITLE OF THE BOOK	PUBLISHER
1	CHITTARANJAN MALLICK & SUSMITA MALLICK	ENGINEERING MATHEMATICS PART -2	KALYANI
2	ODISHA STATE BUREAU EXPERTS	ELEMENTS MATHEMATICS - Vol.- 1 & 2	ODISHA STATE BUREAU
3	R.D SHARMA	MATHEMATICS PART- I & PART- II	NCERT PUBLICATION

Pankaja Swain
Signature of the Faculty