GOVERNMENT POLYTECHNIC JAJPUR

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LESSON PLAN

2ND SEMESTER,MATH & SC

DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY: Pragyan Priyadarsini
SUBJECT: ENGINEERING MATHEMATICS-II	NO.OF DAYS/PER WEEK	SEMESTER FROM DATE : 20/03/2023 TO DATE: 27/06/2-023 NO.OF WEEKS: 15

WEEKS	CLASS DAY	TOPIC
1st	1st	Introduction of vector algebra
	2nd	Types of vectors
	3rd	Representation of vector
	4th	Magnitude and direction of vectors
	5th	Addition and subtraction of vectors
	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
	3th	Vector product and geometrical meaning
	4rd	Area of triangle and parallelogram
	5th	Discussion of problems on cross product
	6th	Tutorial class
4th	1st	Class Test-I
	2nd	Definition of function, based on set theorem
	3rd	Types of function: Constant function, Identity function
	4th	Absolute value function, The Greatest integer function
	5th	Exponential function, Logarithmic function with examples
	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	Discontinuity 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	3th	Discuss exercise of standard function
	4rd	Derivative of composite function (Chain Rule)
	5th	Discuss exercise of composite function (chain rule)
	6th	Tutorial class
8th	1st	Derivative 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	Discuss 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
12th	1st	Discuss exercise on Integration by substitution
	2nd	Disscuss 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(first order and first degree)
	6th	Tutorial class
	1st	Linear equation
	2nd	Solution of Linear differential equation

15th	3rd	Solution of Linear differential equation
	4th	Discussion of exercises of differential equation
	5th	Discussion of exercises of differential equation
	6th	Tutorial class

Extra one week is needed to complete the syllabus, as 14 weeks are provided as per the acedemic calender

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

Signature of the Faculty

18/03/2023