LESSON PLAN

SUBJECT: Th3. ENGINEERING MATHEMATICS – II

	CHAPTER WISE DISTRIBUTION OF PERIODS		
Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	Vector Algebra	15	21
2	Limits and Continuity	12	22
3	Derivatives	21	18
4	Integration	15	10
5	Differential Equation	12	04
	TOTAL	75	75

Discipline: COMMON TO ALL	Semester: 2nd	Name of the Teaching Faculty: Mr. SUBAS CHANDRA DASH
		Session:2023-24 **Examiantion-2024(S)**
Week	**Class Day**	**Theory / Practical Topics**
1ST	1st	1) VECTOR ALGEBRA a) Introduction
	2nd	b) Types of vectors (null vector, parallel vector , collinear vectors) (in component form)
	3rd	b) Types of vectors (null vector, parallel vector , collinear vectors) (in component form)
	4th	c) Representation of vector
	5th	c) Representation of vector
2ND	1st	d) Magnitude and direction of vectors
	2nd	d) Magnitude and direction of vectors
	3rd	e) Addition and subtraction of vectors
	4th	e) Addition and subtraction of vectors
	5th	f) Position vector
3RD	1st	f) Position vector
	2nd	f) Position vector
	3rd	g) Scalar product of two vectors
	4th	g) Scalar product of two vectors
	5th	h) Geometrical meaning of dot product

4TH	1st	h) Geometrical meaning of dot product
	2nd	i) Angle between two vectors
	3rd	j) Scalar and vector projection of two vectors
	4th	j) Scalar and vector projection of two vectors
	5th	k) Vector product and geometrical meaning (Area of triangle and parallelogram)
5TH	1st	k) Vector product and geometrical meaning (Area of triangle and parallelogram)
	2nd	LIMITS AND CONTINUITY a) Definition of function, based on set theory
	3rd	LIMITS AND CONTINUITY a) Definition of function, based on set theory
	4th	b) Types of functions
	5th	b) Types of functions
6TH	1st	i) Constant function
	2nd	i) Constant function
	3rd	i) Constant function
	4th	ii) Identity function
	5th	ii) Identity function

7TH	**1ˢᵗ**	ii) Identity function
	2ⁿᵈ	iii) Absolute value function
	3ʳᵈ	iii) Absolute value function
	4ᵗʰ	iii) Absolute value function
	5ᵗʰ	iv)The Greatest integer function
8TH	**1ˢᵗ**	iv)The Greatest integer function
	2ⁿᵈ	v) Trigonometric function
	3ʳᵈ	vi) Exponential function
	4ᵗʰ	vii) Logarithmic function
	5ᵗʰ	c) Introduction of limit
9TH	**1ˢᵗ**	d) Existence of limit
	2ⁿᵈ	e) Methods of evaluation of limit
	3ʳᵈ	e) Definition of continuity of a function at a point and problems based on it
	4ᵗʰ	DERIVATIVES a) Derivative of a function at a point
	5ᵗʰ	DERIVATIVES a) Derivative of a function at a point
10TH	**1ˢᵗ**	b) Algebra of derivative
	2ⁿᵈ	c) Derivative of standard functions
	3ʳᵈ	c) Derivative of standard functions
	4ᵗʰ	d) Derivative of composite function (Chain Rule)
	5ᵗʰ	d) Derivative of composite function (Chain Rule)

11TH	**1**st	e) Methods of differentiation of
	2nd	i) Parametric function ii) Implicit function
	3rd	i) Parametric function ii) Implicit function
	4th	iii) Logarithmic function iv) a function with respect to another function
	5th	iii) Logarithmic function iv) a function with respect to another function
12TH	**1**st	iii) Logarithmic function iv) a function with respect to another function
	2nd	f) Applications of Derivative
	3rd	f) Applications of Derivative
	4th	i) Successive Differentiation (up to second order) ii) Partial Differentiation (function of two variables up to second order)
	5th	i) Successive Differentiation (up to second order) ii) Partial Differentiation (function of two variables up to second order)
13TH	**1**st	g) Problems based on above
	2nd	INTEGRATION a) Definition of integration as inverse of differentiation
	3rd	INTEGRATION a) Definition of integration as inverse of differentiation
	4th	b) Integrals of standard functions
	5th	c) Methods of integration i) Integration by substitution ii) Integration by parts
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	1st	c) Methods of integration i) Integration by substitution ii) Integration by parts

14TH	**2nd**	d) Integration of the following forms
	3rd	e) Definite integral, properties of definite integrals
	4th	e) Definite integral, properties of definite integrals
	5th	f) Application of integration i) Area enclosed by a curve and X – axis ii) Area of a circle with centre at origin
15TH	**1st**	f) Application of integration i) Area enclosed by a curve and X – axis ii) Area of a circle with centre at origin
	2nd	5) DIFFERENTIAL EQUATION a) Order and degree of a differential equation
	3rd	5) DIFFERENTIAL EQUATION a) Order and degree of a differential equation
	4th	b) Solution of differential equation i) 1st order and 1st degree equation by the method of separation of variables
	5th	b) Solution of differential equation i) 1st order and 1st degree equation by the method of separation of variables