PNS SCHOOL OF ENGINEERING & TECHNOLOGY
LESSON PLAN
DEPARTMENT:BASIC SCIENCE & HUMANITIES
SUBJECT: ENGINEERING MATH.II(TH-3)

DISCIPLINE:ME, EL,CI,CS &ETC	SEMESTER:2 ND.	NAME OF THE TEACHING FACULTY:MR.SUNAKAR SINGH	
WEEK	**NO.OF DAYS PER WEEK=06,CLASSES ALLOTTED=75**	SEMESTER FROM DATE. 20/03/2023 TO.27/06/2023 ,NO OF WEEKS=14	
	DAY	**PORTION TO BE COVERED**	
1st	1st.	VECTOR ALGEBRA: Introduction,directed line segment,scalar and vector quantity,representation of a vector	
	2nd.	Types of vector	
	3rd.	Vector addition and substraction	
	4th.	scalar multiplication of a vector, position vector,section formula	
	5th.	Components of a vector, magnitude and direction of a vector	
	6th	scalar product,geometrical meaning,Angle between two vectors,scalar and vector projections	
2nd.	1st.	Vector product,geometrical meaning i.e Area of triangle, parallelogram,condition of coplanarity	
	2nd.	problems on above section(cont.1)	
	3rd.	problems on above section(cont.2)	
	4th.	problems on above section(cont.3)	
	5th.	problems on above section(cont.4)	
	6th.	problems on above section(cont.5)	
3rd.	1st.	problems on above section(6)	
	2nd.	doubt clearing class(1)	
	3rd.	LIMIT AND CONTINUITY:Relation and function,types of function(cont.)	
	4th.	Types of function (cont.)	
	5th.	Types of function	
	6th.	Introduction to Limit, definition of Limit	
4th.	1st.	condition for existence of Limit,Algebra of Limit ,Limits of some standard functions	
	2nd.	Methods of evaluation of Limit	
	3rd.	Continuity of a function,Condition for Continuity of a function at a point	
	4th.	problems on above section(cont.7)	
	5th.	problems on above section(cont.8)	
	6th.	problems on above section(cont.9)	
5th.	1st.	MONTHLY CLASS TEST -I	
	2nd.	problems on above section(10)	
	3rd.	Doubt clearing class(2)	
	4th.	DERIVATIVES: Derivative of a function at a point,Algebra of derivative	

	5th.	Derivatives of standard function using 1st. principle
	6th.	Derivatives of composite function(chain rule), problems on it (cont.11)
6th.	1st.	problems on above section(cont.12)
	2nd.	problems on above section(13)
	3rd.	Derivatives of parametric function, problems on it(14)
	4th.	Derivative of a function w.r.t another function,problems on it(15)
	5th.	Derivatives of implicit function, problems on it (cont.16)
	6th.	problems on above section(17)
7th.	1st.	Derivatives using logarithm, problems on it (cont.18)
	2nd.	problems on above section(cont.19)
	3rd.	problems on above section(20)
	4th.	slope,equation of tangent and normal(geometrical meaning), problems on it(21)
	5th.	Successive derivatives up to 2nd.order, problems on it(cont.22)
	6th.	problems on above section(23)
8th.	1st.	Partial derivatives for function of two variables up to 2nd.order
	2nd.	Homogeneous function and Euler's theorem, problems on it(24)
	3rd.	problems on above section(25)
	4th.	doubt clearing class(3)
	5th.	INTEGRATION: Definition,constant of integration, Algebra of integration
	6th.	Integral of some standard function, problems (cont.26)
9th.	1st.	problems on above section(27)
	2nd.	MONTHLY CLASS TEST -II
	3rd.	Integration by substitution and by trigonometric identities
	4th.	problems on above section(cont.28)
	5th.	problems on above section(cont.29)
	6th.	Doubt clearing class(4)
10th.	1st.	Integration by parts
	2nd.	problems on above section(cont30)
	3rd.	problems on above section(31)
	4th.	Integration of forms $\quad$ i) $\int \frac{dx}{x^2+a^2}$ ii) $\int \frac{dx}{x^2-a^2}$ iii) $\int \frac{dx}{a^2-x^2}$ iv) $\int \frac{dx}{\sqrt{x^2+a^2}}$ v)) $\int \frac{dx}{\sqrt{x^2-a^2}}$
	5th.	Integration of forms $\quad$ vi)) $\int \frac{dx}{\sqrt{a^2-x^2}}$ vii) $\int \frac{dx}{x\sqrt{x^2-a^2}}$ viii) $\int \sqrt{a^2-x^2}$ dx ix))
	6th.	Integration of forms $\quad$ x) $\int \sqrt{x^2-a^2}$ dx xi) $\int e^{ax}\sin bx$ dx xii) $\int e^{ax}\cos bx$ dx
11th.	1st.	Definite integral: definition and properties
	2nd.	problems on above section(cont32)
	3rd.	problems on above section(cont.33)
	4th.	Doubt clearing class(5)
	5th.	Area of plane curves
	6th.	problems on above sectio(cont.34)
12th.	1st.	Doubt clearing class(6)
	2nd.	Differential equation: definition,ordinary and partial differential equations,order and
	3rd.	Linear and non linear differential equations,solution of differential equations
	4th.	problems on order and degree(35)
	5th.	Solution of 1st.order 1st.degree differential equations by variable separable method

	6th.	Integrating factor,Solution of Linear differential equations
13th.	1st.	problems on above section(comt.36)
	2nd.	problems on above section(cont.37)
	3rd.	Doubt clearing class(7)

Signature of

Signature of the Teacher