LESSON PLAN WINTER(2025-26)

DISCIPLINE: Electrical, ETC, Comp.Sc	SEMESTER: 1st	NAME OF THE TEACHING FACULTY: Mr. Saktiman Bariki,
Subject: Mathematics-I	**No. of Days/per week class allotted: 04classes**	**Semester From Date:06.08.2025 to Date:04.12.2025**
		No. of Weeks: 15
Week	**Class Day**	**Theory/Practical Topics**
1st	1st	**UNIT-I: Trigonometry**: Concept of angles, measurement of angles in degrees, grades and radians and their conversions
	2nd	Problems on Conversion of angle one form to another two forms.
	3rd	T-Ratios of Allied angles (without proof)
	4th	Sum, difference formulae and their applications (without proof).
2nd	1st	Problems on above.
	2nd	Problems on above
	3rd	Product formulae (Transformation of product to sum, difference and vice versa
	4th	Problems on above
3rd	1st	T- Ratios of multiple angles(2A,3A)
	2nd	Problems on above.
	3rd	Problems on above.
	4th	sub-multiple angles (A/2)
4th	1st	Problems on above.
	2nd	Graphs of sin x, cos x
	3rd	Graphs of tan x and e^x
	4th	Discussion of question and answers
5th	1st	**UNIT-II: Differential Calculus**: Definition of function;.
	2nd	Concept of limits
	3rd	Four standard limits $\lim_{x\to a}\frac{x^n-a^n}{x-a}$, $\lim_{x\to 0}\frac{\sin x}{x}$
	4th	$\lim_{x\to a}\frac{a^x-1}{x}$, $\lim_{x\to a}(1+x)^{\frac{1}{x}}$
6th	1st	Differentiation by definition of sin x, cos x, tan x ,e^x,x^n,$\log x$
	2nd	Problems on above.
	3rd	Differentiation of sum, product and quotient of functions
	4th	Problems on above.
7th	1st	Differentiation of function of a function
	2nd	Differentiation of trigonometric functions
	3rd	Differentiation of inverse trigonometric functions,
	4th	Problems on above.
8th	1st	Problems on above.
	2nd	Differentiation of Logarithmic differentiation,
	3rd	Differentiation of Exponential functions.
	4th	Problems on above.

9th	1st	**UNIT-III : Algebra -Complex Number** :-definition,real & imaginary parts of a complex number
	2nd	Polar & Cartesian representation of a complex number & its conversion from one from to another
	3rd	Conjugate of a complex number,modulus,& amplitude of a complex number
	4th	Problems on above
10th	1st	Addition,subtraction,multiplication & division of a complex number
	2nd	Problems on above
	3rd	De-movire's theorem & its application
	4th	Problems on above.
11th	1st	**Partial Fraction :-** definition of polynomial fraction proper & improper fraction and definition of partial fraction
	2nd	To resolve proper fraction into partial fraction with denominator containing non repeated linear factors
	3rd	Problems on above.
	4th	To resolve proper fraction into partial fraction with denominator containing Repeated linear factors
12th	1st	and irreducible non-repeated quadratic factors
	2nd	To solve improper fraction into partial fraction
	3rd	Problems on above
	4th	**Permutation and combination :-** value of P (n,r) & C(n.r)
13th	1st	Binomial theorem: binomial theorem(without proof) for positive integral index(expansion & general form)
	2nd	binomial theorem for any index(expansion without proof)
	3rd	Problems on above
	4th	first & second binomial approximation with application to engineering problems.
14th	1st	Problems on above
	2nd	Problems on above
	3rd	Revision
	4th	Revision
15th	1st	. Revision
	2nd	Revision
	3rd	Revision
	4th	Revision

Saktiman Barik

Faculty Signature

Signature of HOD

LESSON PLAN WINTER(2025-26)

DISCIPLINE: Civil, Mechanical, Comp.Sc	SEMESTER: 1st	NAME OF THE TEACHING FACULTY: Mrs. Subhasree Swain
Subject: Mathematics-I	No. of Days/per week class allotted: 04classes	Semester From Date:06.08.2025 to Date:04.12.2025

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Subhasree Swain
Faculty Signature

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