


LESSON PLAN WINTER(2025-26)

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| 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 $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$, $\lim_{x \rightarrow 0} \frac{\sin x}{x}$ |
| | 4th | $\lim_{x \rightarrow a} \frac{a^x - 1}{x}$, $\lim_{x \rightarrow a} (1 + x)^x$ |
| 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. |

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

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| 14 th | 1st | Problems on above |
| | 2 nd | Problems on above |
| | 3 rd | Revision |
| | 4 th | Revision |
| 15 th | 1st | Revision |
| | 2 nd | Revision |
| | 3 rd | Revision |
| | 4 th | Revision |

Saktiman Baraki
Faculty Signature


Signature of HOD

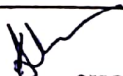
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| DISCIPLINE: Civil, Mechanical, Comp.Sc | SEMESTER: 1st | NAME OF THE TEACHING FACULTY: Mrs. Subhasree Swain |
| Subject: Mathematics-I | No. of Days/per week class allotted: 04classes | Semester From Date:06.08.2025 to Date:04.12.2025 |
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| | 2nd | Problems on above. |
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| | 3 rd | Revision |
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Subhasree Swain
Faculty Signature


Signature of HOD