

LESSON PLAN WINTER(2024-25)

DISCIPLINE:	SEMESTER:	NAME OF THE TEACHING FACULTY:	
Mathematics	R: 1st	Smt Mamata Nayak ,Smt Sanghamitra Nath	
Subject:	No. of Days/per week class allotted:	Semester From date:02.09.2024 to Date 10.12.2024	
Mathematics-I	04classes		
Total period allotted: 60		No. of Weeks: 15	
Week	Class Day	Theory/Practical Topics	No of periods allotted
1ST	1st	UNIT-I: Trigonometry Concept of angles, measurement of angles in degrees,	1
	2nd	grades and radians and their conversions	1
	3rd	T-Ratios of Allied angles (without proof),	1
	4th	Sum, difference formulae and their applications (without proof).	1
2nd	1st	Product formulae (Transformation of product to sum, difference and vice versa)	1
	2nd	T-Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2).	1
	3rd	Graphs of $\sin x$, $\cos x$, $\tan x$ and e^x .	1
	4th	Exercise	1
3rd	1st	Exercise	1
	2nd	UNIT-II: Differential Calculus Definition of function; Concept of limits.	1
	3rd	Four standard limits	1
	4th	Differentiation by definition of x and y.	1
4th	1st	Differentiation of sum, product and quotient of functions. Differentiation of function of a function	1
	2nd	Differentiation of trigonometric and inverse trigonometric functions, Logarithmic differentiation, Exponential functions.	1
	3rd	Exercise	1
	4th	Exercise	1

5th	1st	UNIT - III: Algebra ComplexNumbers: Definition, real and imaginary parts of a Complex number	1
	2nd	polar and Cartesian, representation of a complex number and	1
	3rd	conjugate of a complex number, modulus and amplitude of a complex number Addition,	1
	4th	Subtraction, Multiplication and Division of a complex number. De-movier's theorem, its application.	1
6th	1st	Exercise	1
	2nd	Exercise	1
	3rd	Partial fractions: Definition of polynomial fraction proper & improper fractions and definition of partial fractions.	1
	4th	To resolve proper fraction into partial fraction with denominator containing non-repeated linear factors	1
7th	1st	repeated linear factors and irreducible non-repeated quadratic factors.	1
	2nd	To resolve improper fraction into partial fraction.	1
	3rd	Exercise	1
	4th	Exercise	1
8th	1st	Permutations and Combinations: Value of nPr and nCr	1
	2nd	Binomial theorem: Binomial theorem (without proof) for positive integral index (expansion and general form);	1
	3rd	binomial theorem for any index (expansion without proof)	1
	4th	first and second binomial approximation with applications to engineering problems	1
9th	1st	first and second binomial approximation with applications to engineering problems	1
	2nd	Exercise	1
	3rd	Exercise	1

	4th	Revision	1
10th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1
11th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1
12th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1
13th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1
14th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1
15th	1st	Revision	1
	2nd	Revision	1
	3rd	Revision	1
	4th	Revision	1