


# LESSON PLAN(2025-26(W))

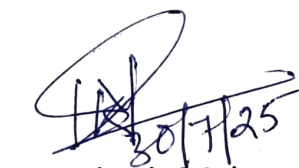
Discipline Civil / Elect / Meta		Name of the teaching faculty: - Sri Sarada Kumar Nayak, Sr. Lect. in Mathematics, Math. & Sc. Department., Govt. Polytechnic, Jajpur.	
Subject - Appl. Math-I		Semester from date:06.08.25 to 04.12.2025 No. of weeks: - 15 (excluding vacation & Holidays)	
Week	Class Day	Chapter	Theory
1st	1 <sup>st</sup> -01	Permutations & Combinations	General introduction, introduction to the Topic.
	2 <sup>nd</sup> -02		Fundamental Principle of Counting, Illustrative Examples.
	3 <sup>rd</sup> -03		Principles of multiplication, Addition, Illustrative examples.
	4 <sup>th</sup> -04		Permutations when all the objects are distinct.
2nd	1 <sup>st</sup> -05		Factorial Notation, illustrative examples.
	2 <sup>nd</sup> -06		Permutations under various cases.
	3 <sup>rd</sup> -07		Combinations of 'n' different objects.
	4 <sup>th</sup> -08		Problem discussion with doubt clearing, Exercise problem discussion
3rd	1 <sup>st</sup> -09	Trigonometry	Binomial Theorem for positive integral index.
	2 <sup>nd</sup> -10		Binomial Theorem for any index.
	3 <sup>rd</sup> -11		Problems on approximation by the Binomial Theorem.
	4 <sup>th</sup> -12		Problem discussion(Application on real life/Industrial)
4th	1 <sup>st</sup> -13		Class Test.
	2 <sup>nd</sup> -14		Concept of angles, Measurement of angle in degree, grades, radian
	3 <sup>rd</sup> -15		Conversion of degree, grade, radian
	4 <sup>th</sup> -16		Continue, illustrative examples.
5th	1 <sup>st</sup> -17		Introduction to Trigonometry & T-ratios.
	2 <sup>nd</sup> -18		Continue
	3 <sup>rd</sup> -19		Even function, odd function, periodic function
	4 <sup>th</sup> -20		Addition, differences formula of trigonometry and their transformations to products
6th	1 <sup>st</sup> -21		Problem discussion
	2 <sup>nd</sup> -22		Problem discussion
	3 <sup>rd</sup> -23		Trigonometrical ratios of angle 2A, 3A
	4 <sup>th</sup> -24		Trigonometrical ratios of sub-multiple angle i.e. A/2 Continue

7th	1 <sup>st</sup> -25	Differential Calculus	Illustrative examples
	2 <sup>nd</sup> -26		Graphs of Trigonometric Functions, Exponential & Logarithm functions.
	3 <sup>rd</sup> -27		Continue
	4 <sup>th</sup> -28		Problem discussion Exercise problem discussion
8th	1 <sup>st</sup> -29		continue
	2 <sup>nd</sup> -30		Class Test
	3 <sup>rd</sup> -31		Definition of function, different types of functions , illustrative examples
	4 <sup>th</sup> -32		continue
9th	1 <sup>st</sup> -33		Introduction to Limit. Limit of a function
	2 <sup>nd</sup> -34		Evaluation of L.H.L.& R.H.L., Existence of Limit
	3 <sup>rd</sup> -35		Methods of Evaluation of Limit ( direct substitution, factorization, rationalization,)
	4 <sup>th</sup> -36		dividing highest power of x by both Nr. & Dr. Evaluation using standard identities.
10th	1 <sup>st</sup> -37		Problem Discussion
	2 <sup>nd</sup> -38		Problem Discussion
	3 <sup>rd</sup> -39		Problem Discussion
	4 <sup>th</sup> -40		Introduction to differentiation, ab-initio method
11th	1 <sup>st</sup> -41	Algebra Complex numbers	Algebra of differentiation, Derivative of composite functions, illustrative examples
	2 <sup>nd</sup> -42		Derivatives of explicit/implicit function
	3 <sup>rd</sup> -43		Derivatives of trigonometry, inverse trigonometry, logarithm, exponential functions.
	4 <sup>th</sup> -44		Problem discussion
12th	1 <sup>st</sup> -45		Class test
	2 <sup>nd</sup> -46		Introduction, Geometrical Representation. iota
	3 <sup>rd</sup> -47		Conjugate, Modulus, addition, subtraction, multiplication, division of complex numbers and their properties.
	4 <sup>th</sup> -48		Square root, cube root and cube roots of unity of a complex number.
13th	1 <sup>st</sup> -49		De-Moivre's Theorem and its application
	2 <sup>nd</sup> -50		Problem Discussion
	3 <sup>rd</sup> -51		Class Test
	4 <sup>th</sup> -52	Partial Fractions	Definition of Polynomial fraction, Proper & Improper fraction, Conversion from Improper to proper fraction

14th	1 <sup>st</sup> -53		To resolve proper fraction into partial fraction with denominator containing non-repeated linear factors, illustrative examples.
	2 <sup>nd</sup> -54		To resolve proper fraction into partial fraction with denominator containing repeated linear factors, illustrative examples.
	3 <sup>rd</sup> -55		To resolve proper fraction into partial fraction with denominator containing irreducible non repeated quadratic factors, illustrative examples.
	4 <sup>th</sup> -56		To resolve proper fraction into partial fraction with denominator containing irreducible repeated quadratic factors, illustrative examples.
15th	1 <sup>st</sup> -57	probable questions answer discussion & VST	Class Test
	2 <sup>nd</sup> -58		Problem Practice & Doubt Clearing
	3 <sup>rd</sup> -59		Problem Practice & Doubt Clearing
	4 <sup>th</sup> -60		Problem Practice & Doubt Clearing

  
30/7/25

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