

LESSON PLAN

Name of Faculty : Mr Ravish
Discipline : Applied Science
Semester : 1st
Subject : Applied Mathematics
Lesson Plan Duration : October 2022 to January 2023
Work load (Lecture) per week (in hours) : Lectures—04

APPLIED MATHEMATICS (180012)		
week	Lecture day	Theory
1 st	1	Complex numbers: definition of complex number, real and imaginary parts of a complex number
	2	Polar and Cartesian Form and their inter conversion
	3	Conjugate of a complex number, modulus and amplitude
	4	Students will discuss mutually last three days class work
2 nd	5	Addition, subtraction of complex number
	6	Multiplication and division of complex number
	7	Logarithms and its basic properties
	8	Students will discuss mutually last three days class work
3 rd	9	Assignment 1
	10	Logarithms and its related questions.
	11	Permutation, combination formula and definition
	12	Students will discuss mutually last three days class work
4 th	13	Meaning and values of ${}^n P_r$ and ${}^n C_r$ and simple problems
	14	Binomial theorem for positive integral index , General terms, simple problems
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	16	Students will discuss mutually last three days class work

5 th	17	Sessional test 1
	18	Determinants and Matrices – Evaluation of determinants (up to 3 order)
	19	Solution of equations (up to 2 unknowns) by Cramer’s Rule
	20	Students will discuss mutually last three days class work
6 th	21	Definition of Matrices and its types
	22	Addition and subtraction of Matrices (up to 2 order)
	23	Multiplication of matrices (up to 2 order)
	24	Students will discuss mutually last three days class work
7 th	25	Assignment 2
	26	Concept of angle: measurement of angle in degrees, grades, radians and their conversions
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	28	Students will discuss mutually last three days class work)
8 th	29	T-Ratios of standard angle and fundamental Identities, Allied angles (without proof)
	30	Sum, Difference formulae and their applications (without proof).
	31	Product formulae (Transformation of product to sum, difference and vice versa)
	32	Students will discuss mutually last three days class work Applications of
9 th	33	Application of Trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc.
	34	Sessional test 2
	35	Point: Distance Formula, Mid-Point Formula
	36	Students will discuss mutually last three days class work
10 th	37	Centroid of triangle
	38	Straight line: Slope of a line, equation of straight line in various standards forms (without proof)

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	40	Students will discuss mutually last three days class work
11 th	41	Intersection of two straight lines, concurrency of lines
	42	Angle between two straight lines, parallel and perpendicular distance formula
	43	Conversion of general form of equation to the various forms.
	44	Students will discuss mutually last three days class work
12 th	45	Circle: General equation of a circle and identification of centre and radius of circle.
	46	To find the equation of a circle: given Centre and radius, To find the equation of a circle: three points lying on it
	47	Coordinates of end points of a diameter.
	48	Students will discuss mutually last three days class work
13 th	49	Introduction to Sci Lab, what is SciLab, how to install and what we do with SciLab
	50	SciLab as a simple calculator
	51	Basic Mathematics functions and logical operators in SciLab
	52	Trigonometric functions (sin, cos, tan, cot functions)