

TEACHING PLAN

K/ H	SYLLABUS TO BE COVERED	REMARKS
1700022	(Ist week) <u>Algebra</u> : Unit - I	
	<u>Complex Numbers</u> : Definition of complex no. with examples, Real and imaginary parts of a C.N. and numericals • Polar and Cartesian form and their inter conversion • Numerical and Problems Solved • Conjugate of a C.N., modulus and amplitude and numerical • Addition and subtraction of C.N. • Multiplication and division of C.N. and numericals. • Problems Solved related to C.N.	
	(IInd week) <u>Logarithms</u> : Definition of logarithms and its basic properties • System of log. → Natural log. → Common log. • Method of finding Antilogarithm of a No.	
	(3rd week) Unit - II V (Binomial Thm.) → Permutation formula, values of nPr → Combination formula, values of nCr → Numericals and exercise solved on Permutation and combination. → Numerical and Problem solved.	
	2) Binomial Thm. for Positive integral index. → General term and numericals	

PARTICULARS OF SYLLABUS

SYLLABUS TO BE COVERED

WEEK
MONTH

- First Binomial approximation with application to engineering problems

2.2. Determinants and Matrices

- Evaluation of det. (upto 2nd order)
- Solution of eqns (upto 2 unknowns) by Cramer's rule
- Definition of Matrices with examples
- Types of Matrices and exercise
- Addition and subtraction of matrices (up to 2nd order)
- Numerical and Problem Solved.

Unit - III Trigonometry

Concept of Angle

Measurement of angle in degree, grades, radians

- Angle in degrees, grades, radians and their conversions.
- Ratios of standard angle
- Fundamental Identities and numericals
- Allied angles and exercise
- Sum, difference formulae and their application (without proof)
- Application of Trigonometric term in engineering problems such as to find an angle of elevation, height, distance etc.

PARTICULARS OF SYLLABUS COVERED

SYLLABUS TO BE COVERED

REMARK

Unit - IV Co-ordinate Geometry

4.1 → Cartesian and polar coordinates (2 dimensional), Distance between 2 points,

4.2 → Slope of a line, equation of straight line in various standard forms.

Slope intercept form, Intercept form, one point form, two point form, Symmetric form, Normal form, general form

Intersection of 2 straight lines, concurrency of lines, angle between st. lines, parallel and perpendicular lines, perpendicular distance formula, conversion of general form of equation to the various forms.

Unit - V → Geometry of Circle and Software :

Circle : General eqn. of a circle and its characteristics
To find the eqn. of a circle given

- 1) Centre and radius
- 2) Three points lying on it
- 3) Coordinates of end pts. of a diameter

Software: Matlab or Scilab

Introduction, Matlab as a Simple Calculator (addition and subtraction of values - Trigonometric and inverse Tri. funcs.

General Practice.