

Lesson Plan

Name of the Faculty: Ms. Kirti Sukhija

Department: Applied science and humanities (Diploma)

Semester: 1st

Subject: Applied mathematics-I

Work Load (Lectures) per week (in hours): Lectures- 4

Week	Theory	
	Lecture day	Topic (including assignment/test)
1 st	1 st	Complex Numbers: definition of complex number, real and imaginary parts of a complex number
	2 nd	Polar and Cartesian Form and their inter conversion
	3 rd	Practice of questions
	4 th	Conjugate of a complex number
2 nd	5 th	modulus and amplitude
	6 th	Addition, subtraction, multiplication and division of complex number
	7 th	REVISION
	8 th	TEST
3 rd	9 th	Logarithms
	10 th	Logarithms and its basic properties
	11 th	REVISION
	12 th	Meaning of ${}^n P_r$ & ${}^n C_r$ (mathematical expression).
4 th	13 th	Binomial theorem (without proof) for positive integral index (expansion and general form);
	14 th	binomial theorem for any index (expansion without proof)
	15 th	first binomial approximation with application to engineering problems
	16 th	REVISION
5 th	17 th	TEST
	18 th	Determinants and Matrices – Evaluation of determinants (upto 2 nd order),
	19 th	solution of equations (upto 2 unknowns) by Cramer's rule
	20 th	Practice of questions
6 th	21 st	definition of Matrices and its types
	22 nd	addition, subtraction and multiplication of matrices (upto 2 nd order).
	23 rd	REVISION
	24 th	TEST
7 th	25 th	Trigonometry: Concept of angle, measurement of angle in degrees, grades, radians and their conversions.
	26 th	T-Ratios of Allied angles (without proof)

	27 th	Sum, Difference formulae and their applications (without proof)
	28 th	Product formulae (Transformation of product to sum, difference and vice versa)
8 th	29 th	Applications of Trigonometric terms in engineering problems
	30 th	Applications of Trigonometric terms to find an angle of elevation, height, distance etc.
	31 st	REVISION
	32 nd	REVISION
9 th	33 rd	TEST
	34 th	Co-ordinate Geometry:
	35 th	Cartesian and Polar co-ordinates (two dimensional)
	36 th	conversion from Cartesian to polar co-ordinates and vice-versa
10 th	37 th	Slope of a line
	38 th	equation of straight line in various standards forms
	39 th	slope intercept form, intercept form, one-point form, two-point form
	40 th	Practice of questions
11 th	41 st	symmetric form, normal form, general form
	42 nd	Practice of questions
	43 rd	intersection of two straight lines
	44 th	concurrency of lines
12 th	45 th	angle between straight lines
	46 th	parallel and perpendicular lines
	47 th	perpendicular distance formula
	48 th	conversion of general form of equation to the various forms
13 th	49 th	Practice of questions
	50 th	General equation of a circle and its characteristics.
	51 st	To find the equation of a circle
	52 nd	REVISION
14 th	53 rd	Centre and radius
	54 th	Three points lying on it
	55 th	Practice of questions
	56 th	Coordinates of end points of a diameter
15 th	57 th	REVISION
	58 th	Practice of questions
	59 th	TEST
	60 th	TEST