LESSON PLAN

Discipline / All Branches (Mechanical) (GTC–IV)	Semester-1st	Name of the teaching faculty:- Akankshya Joshi
Subject:- Engg. Math-I	No. of days/per week- 05	Semester from date : 16.08.2023 to 11.12.2023 No. of weeks :- 14 (excluding puja vacation)

Week	Class day	Theory
1st	1st	Introduction to Determinants and Matrices
	2nd	Minors, Cofactors and it's example
	3rd	Properties of Determinants
	4th	Solving Linear system of equations by Cramer's rule
	5th	Problem Discussion and Doubt Clearing
2nd	1st	Problem discussion
	2nd	matrix, it's order and Types
	3rd	Addition and Multiplication of matrices
	4th	Multiplicative inverse of a square matrix of order _____
	5th	Problem solving
3rd	1st	Solving of system of linear equations by matrix method
	2nd	Problem discussion with doubt clearing
	3rd	introduction to trigonometry and trigonometrical ratios by cross multiplication
	4th	ASTC rule and its application
	5th	Trigonometrical ratios and Angles
4th	1st	Solving Examples
	2nd	Addition Formula of Trigonometric ratio
	3rd	Problem discussion & doubt clearing
	4th	Transformation of Sums or difference in to products
	5th	Problem Discussion
5th	1st	Problem Discussion and Doubt Clearing
	2nd	Introduction to Inverse Trigonometric Function
	3rd	Properties of Principal inverse trigonometric functions

		4th	Solving Examples and Problem discussion
		5th	Problem discussion
	6th	1st	Introduction to Co-ordinate geometry in two dimensions
		2nd	Distance formula
		3rd	Area of a triangle in Co-ordinate geometry
		4th	Condition for collinearity of three points, Division Formula
		5th	Centroid of a Triangle, Incenter of a Triangle
	7th	1st	Locus, Slope of a line, Condition of parallelism and perpendicularity
		2nd	Problem discussion
		3rd	Equation of a Line in slope-intercept form, point-slope form,two-point form
		4th	Equation of a line in intercept form, normal form
		5th	Solving Example
	8th	1st	Equation of a line in General form
		2nd	Angle between two intersecting lines(slope form)
		3rd	Condition of parallelism, perpendicularity of two lines
		4th	Condition of concurrency of three lines
		5th	Perpendicular Distance of a point from a line
	9th	1st	Problem discussion and Doubt Clearing
		2nd	Introduction to Circle in Two Dimensions
		3rd	Equation of a Circle in Center-radius form
		4th	General equation of a Circle
		5th	Equation of a circle passing through three given points
	10th	1st	Problem discussion with doubt clearing
		2nd	Problem discussion
		3rd	Introduction to circle equation of circle in centre radius form
		4th	Equation of circle and point of diameter term
		5th	General equation of circle, illustrative examples
		1st	Problem discussion with doubt clearing

11th	2nd	Equation of a circle with given end points of a diameter
	3rd	Problem discussion
	4th	Introduction to three dimensional geometry
	5th	Distance formula, Division formula
12th	1st	Direction cosines of a line, Direction ratios
	2nd	Angle between two lines, condition of parallelism & perpendicularity
	3rd	Projection of a line segment
	4th	Problem discussion with doubt clearing
	5th	Introduction to plane in three dimensions, general equation at plane
13th	1st	Plane passing through three non-collinear points,intercept form,normal form of the equation of a plane
	2nd	Transformation of the general equation of a plane to the normal form, planes parallel to the co-ordinate planes
	3rd	Angle between two planes, Bisectors of the angles between two planes
	4th	Planes through the intersection of two given planes, Distance of a point from a plane
	5th	Problem discussion
14th	1st	Problem discussion with doubt clearing
	2nd	Introduction to Sphere in 3D
	3rd	General equation of a sphere
	4th	Exercise problem discussion
	5th	Problem discussion with doubt clearing

Akankshya Joshi