LESSON PLAN

Discipline: Mechanical & Electrical ,Etc,CS	Semester: First(1st)	Name of the Faculty: Mr Sanjaya Ku. Pradhan
Subject: Engg. Mathematics-I	No of Days per week class allotted: Six(6)	Semester from Date: 25.10.22 to Date: 31.01.23 No. of Weeks: 15
WEEK	**CLASS DAY**	**THEORY TOPICS**
1st	1st	Matrices and Determinant: Introduction, Definition of matrix
	2nd	Types of matrices
	3rd	Algebra of matrices (Addition & Subtraction of matrices)
	4th	Algebra of matrices (Product of matrices)
	5th	Determinant (Introduction , Minors, cofactors)
	6th	Determinant(Introduction , Minors, cofactors)
2nd	1st	Determinant (Expansion of determinants)
	2nd	Properties of determinant
	3rd	Problems related to the properties of determinant
	4th	Inverse of a matrix (Transpose & Adjoin of a matrix)
	5th	Inverse of a matrix (second & third order)
	6th	Cramer's Rule
3rd	1st	Problems Based on above
	2nd	Solution of simultaneous linear equations by matrix inverse method
	3rd	Problems Based on above
	4th	**Review class**
	5th	Introduction, Measurement of an angle
	6th	Trigonometric Ratios (Definitions & Examples)
4th	1st	Trigonometric Ratios (Identities and Solved Problems)
	2nd	**Monthly Test-1**
	3rd	Trigonometric Ratios (Signs of T-Ratios & ASTC-Rule)
	4th	Trigonometric Ratios (Selected Angles)
	5th	Problems Based on above
	6th	Trigonometric Ratios (Values of T-ratios of allied angles)
5th	1st	Trigonometric Ratios (Even function & Odd function)
	2nd	Trigonometric Ratios (Theorem-1, Theorem-2, Theorem-3)
	3rd	Compound angles, multiple angles, submultiple angles
	4th	Problems Based on above
	5th	Define inverse circular functions its characteristics properties

	6th	Problems Based on above
6th	1st	Cont…..
	2nd	**Review class**
	3rd	Introduction, Derivation of Distance formula
	4th	Division formula, Area of triangle (only formulae)
	5th	Define Slope of line and angle between two lines (only formulae) Condition of parallelism and perpendicularity
	6th	Problems Based on above
7th	1st	**Monthly Test-2**
	2nd	Different forms of straight line-i) one point form ii) two-point form
	3rd	iii) Slope form, iv) Intercept form, v) Perpendicular form
	4th	Problems Based on above
	5th	Equation of a line passing through a point and (i) parallel to a line
	6th	Equation of a line passing through a point and (ii) perpendicular to a line
8th	1st	Problems Based on above
	2nd	Equation of a line passing through the intersection of two lines
	3rd	Problems Based on above
	4th	Distance of a point from a line
	5th	Problems Based on above
	6th	**Review class**
9th	1st	Introduction, Equation of circle (i) center radius form
	2nd	Equation of circle (ii) General equation of circle
	3rd	Equation of circle (iii) End point of diameter form
	4th	Problems based on above
	5th	**Review class**
	6th	Introduction of Co-Ordinate geometry in three dimensions.
10th	1st	**Monthly Test-3**
	2nd	Distance formula, Section formula
	3rd	Problems on above.
	4th	Direction ratio, direction cosine
	5th	Angle between two lines (Conditions of perpendicularity and parallelism)
	6th	Problems on above.
	1st	Equation of a plane (i) General form
	2nd	Problems based on above
	3rd	Angle between two planes

11th	4th	Perpendicular distance from a point to a plane
	5th	Equation of plane passing through a point (i) parallel to a plane
	6th	Equation of plane passing through a point (ii)Perpendicular to a plane, problems
12th	1st	Problems based on above
	2nd	**Review class**
	3rd	Introduction, Equation of sphere (i) Centre radius form
	4th	Problems based on above
	5th	Equation of sphere (ii) General form
	6th	Equation of sphere (iii) Two end points of a diameter form (only formulae)
13th	1st	Problems based on above
	2nd	**Review class**
	3rd	**Monthly Test-4**
	4th	Revision class
	5th	Revision class
	6th	Revision class
14th	1st	Revision class
	2nd	Revision class
	3rd	Revision class
	4th	Revision class
	5th	Revision class
	6th	Revision class
15th	1st	Revision class
	2nd	Revision class
	3rd	Revision class
	4th	Revision class
	5th	Revision class
	6th	Revision class