LESSON PLAN FOR WINTER SEMESTER(2021-22)

Discipline : 1ST Semester(common)
Name of the Faculty: PADMINI PANIGRAHI (Lect. in Mathematics)

Subject: Engg. Mathematics-I	**5 therory & 1 tutorial classes per week**	**From: 01.11.2021 To: 31.01.2022 No. of Weeks: 13 Total no. periods : 79**	
Week	**Class Day**	**Theory**	**Range**
1st	1st	**Matrix and Determinant** a) Introduction and Tyoes of Matrix	01.11.2021 to 07.11.2021
	2nd	Tyoes of Matrix	
	3rd	Algebra of matrix	
	4th	Algebra of matrix	
	5th	Determinant	
	6th	*Tuitorial class*	
2nd	1st	Determinant	08.11.2021 to 14.11.2021
	2nd	Properties of determinant	
	3rd	Properties of determinant	
	4th	Properties of determinant	
	5th	Inverse of a matrix (second and third order)	
	6th	*Tuitorial class*	
3rd	1st	Inverse of a matrix (second and third order)	15.11.2021 to 21.11.2021
	2nd	Inverse of a matrix (second and third order)	
	3rd	Cramer's Rule (Question should be on two variables)	
	4th	Cramer's Rule (Question should be on two variables)	
	5th	Solution of simultaneous equations by matrix inverse method	
	6th	*Tuitorial class*	
4th	1st	Solution of simultaneous equations by matrix inverse method	22.11.2021 to 28.11.2021
	2nd	Solution of simultaneous equations by matrix inverse method	
	3rd	**TRIGONOMETRY** Trignometrical Ratios	
	4th	Trignometrical Ratios	
	5th	Trignometrical Ratios	
	6th	*Tuitorial class*	
5th	1st	Trignometrical Ratios	29.11.2021 to 05.12.2021
	2nd	Compound angles, multiple and sub-multiple angles	
	3rd	Compound angles, multiple and sub-multiple angles	
	4th	Compound angles, multiple and sub-multiple angles	
	5th	Compound angles, multiple and sub-multiple angles	
	6th	*Tuitorial class*	

6th	1st	Define inverse circular functions and its properties	06.12.2021 to 12.12.2021
	2nd	Define inverse circular functions and its properties	
	3rd	Define inverse circular functions and its properties	
	4th	Define inverse circular functions and its properties	
	5th	Define inverse circular functions and its properties	
	6th	*Tuitorial class*	
7th	1st	**CO-ORDINATE GEOMETRY IN TWO DIMENSIONS** Introduction of geometry in two dimension	13.12.2021 to 19.12.2021
	2nd	Distance formulae, division formulae, area of a triangle	
	3rd	Distance formulae, division formulae, area of a	
	4th	Define slope of a line, angle between two lines	
	5th	condition of perpendicularity and parallelism.	
	6th	*Tuitorial class*	
8th	1st	Different forms of straight lines (only formulae) i) One point form (ii) two point form (iii) slope form	20.12.2021 to 26.12.2021
	2nd	Different forms of straight lines (only formulae) (iv) intercept form (v) Perpendicular form	
	3rd	Equation of a line passing through a point and (i) parallel to a line	
	4th	Equation of a line passing through a point (ii) Perpendicular to a line	
	5th	Equation of a line passing through the intersection of two lines	
	6th	*Tuitorial class*	
9th	1st	Distance of a point from a line	27.12.2021 to 02.01.2022
	2nd	Distance of a point from a line	
	3rd	**CIRCLE** Equation of a circle center radius form	
	4th	Equation of a circle center radius form	
	5th	general equation of a circle	
	6th	*Tuitorial class*	
10th	1st	general equation of a circle	03.01.2022 to 09.01.2022
	2nd	Equation of a circle end point of diameter form	
	3rd	Equation of a circle passing through three points	
	4th	**CO-ORDINATE GEOMETRY IN THREE DIMENSIONS** INTRUDUCTION	
	5th	Distance formulae	
	6th	*Tuitorial class*	
11th	1st	section formulae	10.01.2021 to 16.01.2022
	2nd	direction ratio, direction cosine	
	3rd	angle between two lines	
	4th	condition of parallelism and perpendicularity	
	5th	Equation of a plane i) General form	
	6th	*Tuitorial class*	

12th	1st	angle between two planes	17.01.2022 to 23.01.2022
	2nd	angle between two planes	
	3rd	perpendicular distance of a point from a plane	
	4th	perpendicular distance of a point from a plane	
	5th	equation of a plane passing through a point and i) parallel to a plane	
	6th	*Tuitorial class*	
13th	1st	equation of a plane passing through a point and ii) perpendicular to a plane	24.01.2022 to 30.01.2022
	2nd	**SPHERE** Equation of a sphere i) center radius form	
	3rd	Equation of a sphere in General form	
	4th	Equation of a sphere in two end points of a diameter form	
	5th	Equation of a sphere passing through four points	
	6th	*Tuitorial class*	
14th	1st	Equation of a sphere passing through four points	31.01.2021

Sl. No.	Subject	Unit	Topic	Periods
A	Algebra	1	Matrices and Determinant	18
B	Trigonometry	2	Trigonometry	15
C	Two Dimensional Geometry	3	Co-ordinate Geometry in Two Dimensions (Straight Line)	13
		4	Circle	07
D	Three Dimensional Geometry	5	Co-ordinate Geometry in Three Dimensions	15
		6	Sphere	07
			TOTAL	**75**